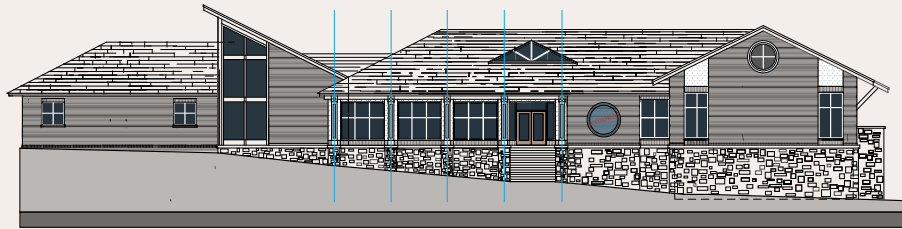


PROJECT MANUAL

A NEW CITY HALL
WEDOWEE, ALABAMA

GLYNN WILSON CLARK ARCHITECT



A NEW CITY HALL
WEDOWEE, ALABAMA



A N E W C I T Y H A L L

W E D O W E E A L A B A M A

PROJECT DIRECTORY

OWNER: THE CITY OF WEDOWEE, AL.
24 S. MAIN STREET
WEDOWEE, AL, 36278
PHONE: (256) 357-2122
TIM COE MAYOR
EMAIL: coetim@aol.com

ARCHITECT: GLYNN WILSON CLARK
P. O. BOX 532
MONTGOMERY, AL. 36101
PHONE: (334) 462-9882
EMAIL: gwcdesign2012@gmail.com

CIVIL ENGINEER: PROFESSIONAL ENGINEERING CONSULTANTS
822 S McDONOUGH ST.
MONTGOMERY, AL. 36104
PHONE: (334) 262-7307
TAYLOR WATSON
EMAIL: taylorw@pec-eng.net

STRUCTURAL ENGINEER: KEANO ENGINEERING
P. O. BOX 240092
ECLECTIC, AL. 36024
PHONE: (334) 467- 5132
REBECCA ANN SEALS
EMAIL: rebeccaann@keanoengineering.com

MECHANICAL ENGINEER: AMT DESIGN
P. O. BOX 142
AUBURN, AL. 36831
PHONE: (334) 444-0833
JOE ROSS
EMAIL: joerosspe@yahoo.com

ELECTRICAL ENGINEER: L+W ENGINEERING
1203 E. COMMERCE ST.
GREENVILLE, AL. 36037
(334) 850-5874
RANDY WITT
EMAIL: randrwitt@aol.com

A N E W C I T Y H A L L
W E D O W E E A L A B A M A

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A NEW CITY HALL
WEDOWEE ALABAMA

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A N E W C I T Y H A L L
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ATTACHMENT C TO PROPOSAL FORM

SUBMITTED BY GENERAL CONTRACTOR'S NAME HERE

1.1 ACCOUNTING OF SALES TAX

A. Pursuant to Act 2013-205, Section 1 (g), the Contractor accounts for the sales tax Not included in the Bid Proposal Form as follows below:

Failure to provide an accounting of sales tax shall render the Bid as Non-Responsive and it will be rejected. Other than determine responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive Bidder.

B. Refer to Section 01061 "Regulatory Requirements & Tax Exemptions", for additional information and requirements.

C. Submit the following "Estimated Sales Tax Amount" with the Proposal Form on Bid Date.

No.	Item Description:	Estimated Sales Tax Amount
1	Bid Package: A New City Hall Wedowee, Alabama	\$ _____

End of Attachment C to Proposal Form

A N E W C I T Y H A L L
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ADVERTISEMENT FOR BIDS

Sealed Bids for a **New City Hall** will be received by the City of Wedowee, Al. at the City Hall at 24 N. Main Street, Wedowee, Alabama 36278 until 2:00 P.M. local time on Thursday, July 17, 2025 at which time and place they will be opened and read aloud.

Work included but is not limited to: Site Work, Site Utilities, New Building Construction, new Mechanical, Plumbing and Electrical Systems, Co-ordination of the entire Project Construction and all related work as indicated in the Bid and Construction Documents.

Bid Documents may be examined during during normal business hours at the Wedowee City Hall, 24 N. Main Street, Wedowee, Al. 36278

Electronic Bid documents may be obtained from the Architect. Sets for Sub Contractors and suppliers may be obtained from General Contractors. Partial documents will not be available from the Architect.

A Cashier's Check or Bid Bond payable to City of Wedowee in an amount not less than five (5) percent of the amount of the Bid but in no event more than \$10,000 must accompany the bidders proposal. Workmen's Compensation, extended fire and tornado insurance, public liability and property damage insurance, performance and payment bond and builder's risk performance and statutory labor and material payment bonds, immigration certification and E verify enrollment (with bid) will be required the signing of the Contract.

AIA General Conditions,AIA Document A-201 "General Conditions of Contract for Construction",2007, issued by the American Institute of Architects is part of the specifications for this project except as modified in the Project Manual.

Bids must be submitted on proposal forms furnished by the Architect or copies thereof. All bidders bidding in amounts exceeding that established by the State Licensing Board for General Contractors must be licensed under the Provision of Title 34, Chapter 8, Code of Alabama, 1975 as amended, and must show such evidence of license before bidding or bid will not be received or considered by Architect or Owner. The bidder shall clearly indicate by displaying their current license number on the outside of the

sealed envelope in which the proposal is delivered. Bidders must include their current license number in the space provided on the proposal form. No bid may be withdrawn after scheduled closing time for receipt of bids for a period of SIXTY (60) days.

A mandatory pre-bid conference will be held at City Hall, 24 N. Main St. Wedowee, AL. 36278 on Thursday, July 10th at 11:00 a.m. for the purpose of reviewing the project and answering bidder's questions. Attendance at the pre bid conference is mandatory for all General Contractors intending to submit a bid and recommended for sub contractors.

The Owner reserves the right to reject any or all proposals and to waive technical errors if, in their judgement, the best interest of the Owner will thereby be promoted.

The City of Wedowee, Alabama
Tim Coe Mayor

Glynn Wilson Clark, Architect
P.O. Box 532
Montgomery, AL. 36101
(334) 462-9882
gwcdesign2012@gmail.com

A N E W C I T Y H A L L
W E D O W E E A L A B A M A

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The City of Wedowee, Alabama
Tim Coe Mayor

Glynn Wilson Clark, Architect
P.O. Box 532
Montgomery, Al. 36101
(334) 462-9882
gwcdesign2012@gmail.com

DRAFT

AIA Document A701[®] – 2018

Instructions to Bidders

for the following Project:

(Name, location, and detailed description)

A NEW CITY HALL WEDOWEE, AL.

THE OWNER:

(Name, legal status, address, and other information)

THE CITY OF WEDOWEE, ALABAMA

24 S. MAIN ST.

WEDOWEE, AL. 36278

THE ARCHITECT:

(Name, legal status, address, and other information)

GLYNN WILSON CLARK

P. O. BOX 532

MONTGOMERY, AL. 36101

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DRAFT

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

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

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

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

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

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

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

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

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

« »

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

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

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

« »

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

§ 3.3 Substitutions

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

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

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

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

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

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

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

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

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

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

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

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

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:
(Insert the form and amount of bid security.)

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that

Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning **<>** days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

<>

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

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

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

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:

(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

<>

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

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

§ 6.3 Submittals

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

- 1 a designation of the Work to be performed with the Bidder's own forces;
- 2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- 3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

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

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

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

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

« »

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.5 Drawings

Number	Title	Date
AS ENUMERATED ON INDEX OF DRAWINGS		DECEMBER. 3, 2024

.6 Specifications

Section	Title	Date	Pages
AS LISTED IN TABLE OF CONTENTS		December 3, 2024	

.7 Addenda:

Number	Date	Pages

.8 Other Exhibits:

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

- .9 Other documents listed below:
(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

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PROPOSAL FORM

A N E W C I T Y H A L L

W E D O W E E A L A B A M A

PROPOSAL FORM

To: City of Wedowee, Alabama

Date: _____

In compliance with your Advertisement for Bids and subject to all conditions thereof,
the undersigned,

(Legal Name of Bidder)

hereby proposes to furnish all labor and materials and perform all work required for the
construction of,

Work: *A New City Hall*, Wedowee, Alabama in accordance with documents dated
December 3, 2024, prepared by Glynn Wilson Clark, Architect

The bidder, which is organized and existing under the laws of the State of _____

Having it's principal offices in the Jurisdiction (City) of _____ is

_____ a Corporation _____ a Partnership _____ an Individual

_____ (Other) _____

Listing of Partners or Officers: If Bidder is a Partnership, list all partners and their
addresses; If Business is a Corporation, list the names, titles and business addresses of
it's officers:

Bidders Representation: The Bidder declares that it has examined the site of the work, having
become fully informed regarding all pertinent conditions, and that it has examined the
Documents (including all Addenda received) for the work and the other Bid and Contract
Documents relative thereto, and it has satisfied itself relative to the work to be
performed.

PROPOSAL FORM

As security for this condition, the undersigned further agrees that the funds represented by the bid bond (or Cashier's Check) attached hereto may be called and paid into the account of the Awarding Authority as liquidating damages for failure to so comply.

Attached hereto is a: (mark the appropriate box and provide the applicable information.)

☐ Bid Bond, executed by _____ as Surety

☐ Cashier's Check on the _____ Bank of _____

for the sum of _____ Dollars

(\$_____) made payable to the Awarding Authority.

Bidder's Alabama License for General Contracting:

_____	_____	_____
License Number	Bid Limit	Types(s) of Work

CERTIFICATIONS: The undersigned certifies that he or she is authorized to execute contracts on the behalf of the Bidder as legally named, that this proposal is submitted in good faith without fraud or collusion with any other Bidder, that the information indicated in this document is true and complete, and that the bid is made in full accord with State Law. Notice of acceptance may be sent to the undersigned at the address set forth below.

The bidder also declares that a list of all proposed major subcontractors and suppliers is included and attached to the Proposal Form, or will be submitted to the Owner within 24 hours after receipt of bids with a copy to the Architect.

Legal Name of Bidder _____

Mailing Address _____

* By (Legal Signature) _____

* Name (Type or Print) _____

*Title _____

(Seal)

PROPOSAL FORM

ADDENDA: The Bidder acknowledges receipt of Addenda No's. _____ thru _____

ALLOWANCES: Material Cost, Refer to Section 012100 "Allowances", and the Drawings for descriptions and requirements. Include in Base Bid

ALTERNATES: Alternate No. XXX

COMPLETION DATE: Time required for proper completion of the Work and opening the facilities is significant to the Owner; Time required for completion of the work will be a consideration in any award the Contract and any Alternate work included therein;
Bidder further proposes and agrees to commence work under the the contract with adequate work force and equipment within Ten (10) consecutive calendar days after being notified by Owner, by the earlier of either the receipt of the fully executed contract from the Owner and/or the Owner's written "Notice to Proceed" and to complete all Base Bid and any Alternate Work of the Contract within 360 consecutive calendar days thereafter

UNIT PRICES: Refer to "Attachment A of Proposal Form"
(Due along with Proposal Form on Bid Date).

MAJOR
SUBCONTRACTORS
& SUPPLIER LISTING Refer to "Attachment B of Proposal Form"
(Due along with Proposal Form on Bid Date, or submitted to Owner within 24 hours after receipt of Bids, with a copy to the Architect).

ACCOUNTING OF
SALES TAX: Refer to "Attachment C of Proposal Form"
(Due along with Proposal Form on Bid Date).

IMMIGRATION STATUS
VERIFICATION Refer to "General Conditions" portion of the Project Manual
(Due along with Proposal Form on Bid Date).

1. Executed E-VERIFY "Memorandum of Understanding"
2. IMMIGRATION STATUS CERTIFICATION
Alabama Immigration Law Certificate of Compliance
Letter

BID SECURITY: The undersigned agrees to enter into a Construction Contract and furnish the prescribed Performance and Payment Bonds and evidence of insurance within fifteen calendar days, or such other period stated in the Bid Documents, after the Contract Forms have been presented for signature, provided such presentation is made within 90 calendar days after the opening of the bids, or other period stated in the Bid Documents

PROPOSAL FORM

Telephone Number: _____

Email: _____

* If other than the Individual Proprietor, or an above named member of the Partnership or the above named President, Vice President, or Secretary of the Corporation, attach written authority to bind the Bidder. Any modification to a Bid shall be over the initials of the person signing the Bid or of an authorized representative.

The Contractor proposes to furnish all labor and materials and perform all work required for **A New City Hall for Wedowee Alabama** in accordance with Documents prepared by Glynn Wilson Clark, Architect for the sum of

_____ Dollars (\$ _____)

For Accounting Purposes Only the Owner request the Amount for construction of the Utility Building as described in the UT Documents be listed as a line item here and is to be equal to the amount included within the Base Bid.
Site Work is not to be included in this amount request.

_____ Dollars (\$ _____)

End of Proposal Form

ATTACHMENT B TO PROPOSAL FORM

[illegible]

A N E W C I T Y H A L L
W E D O W E E A L A B A M A
ATTACHMENT C TO PROPOSAL FORM

SUBMITTED BY GENERAL CONTRACTOR'S NAME HERE

1.1 ACCOUNTING OF SALES TAX

A. Pursuant to Act 2013-205, Section 1 (g), the Contractor accounts for the sales tax Not included in the Bid Proposal Form as follows below:

Failure to provide an accounting of sales tax shall render the Bid as Non-Responsive and it will be rejected. Other than determine responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive Bidder.

B. Refer to Section 01061 "Regulatory Requirements & Tax Exemptions", for additional information and requirements.

C. Submit the following "Estimated Sales Tax Amount" with the Proposal Form on Bid Date.

No.	Item Description:	Estimated Sales Tax Amount
1	Bid Package: A New City Hall Wedowee, Alabama	\$ _____

End of Attachment C to Proposal Form

DRAFT

AIA Document A310[™] – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

The City of Wedowee
24 S. Main Street
Wedowee AL 36278

BOND AMOUNT: \$

PROJECT:

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

A New City Hall
Wedowee, AL 36278

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

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

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

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User Notes:

(1398948395)

Signed and sealed this day of

_____	_____
(Witness)	(Contractor as Principal)
_____	_____
	(Seal)
_____	_____
(Witness)	(Title)
_____	_____
	(Surety)
_____	_____
(Witness)	(Seal)
_____	_____
	(Title)



DRAFT

AIA Document A101[®] – 2017

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

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

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

The City of Wedowee, Al.
24 S. Main St.
Wedowee, Al. 36278

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

T B D

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

A New City Hall
Wedowee, Alabama

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

Glynn Wilson Clark Architect
P. O. Box 532
Montgomery, Al. 36101

The Owner and Contractor agree as follows.

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User Notes:

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TABLE OF ARTICLES

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

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

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

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

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

(Check one of the following boxes.)

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

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

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

§ 3.3 Substantial Completion

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

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

Not later than (360) calendar days from the date of commencement of the Work.

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work

are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

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

ARTICLE 4 CONTRACT SUM

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

§ 4.2 Alternates

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

Item	Price

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

Item	Price	Conditions for Acceptance

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

Item	Price

§ 4.4 Unit prices, if any:

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

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

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

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

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

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

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

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

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

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

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

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

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

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

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

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

10 % Ten Percent

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

« »

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

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

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

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

§ 5.2 Final Payment

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

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

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

« »

§ 5.3 Interest

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

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

« » % « »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

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

« »

« »

« »

« »

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

[« »] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[« »] Litigation in a court of competent jurisdiction

[« »] Other (*Specify*)

« »

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

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner’s convenience.)

« »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

« »

« »

« »

« »

« »

« »

§ 8.3 The Contractor’s representative:

(Name, address, email address, and other information)

« »

« »

« »

« »

« »

« »

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

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance

with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

« »

.5 Drawings

Number	Title	Date
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.6 Specifications

Section	Title	Date	Pages
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.7 Addenda, if any:

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

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[« »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[« »] The Sustainability Plan:

Title	Date	Pages
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[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

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

« »

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

OWNER (Signature)

« »« »

(Printed name and title)

CONTRACTOR (Signature)

« »« »

(Printed name and title)

TE
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A
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D

DRAFT

AIA Document A312[®] – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

« »
« »

SURETY:

(Name, legal status and principal place of business)

« »
« »

OWNER:

(Name, legal status and address)

The City of Wedowee
24 S. Main St.
Wedowee, Al. 36278

CONSTRUCTION CONTRACT

Date: « »

Amount: \$ « »

Description:

(Name and location)

« »
« »

BOND

Date:

(Not earlier than Construction Contract Date)

« »

Amount: \$ « »

Modifications to this Bond:

« »

None

« »

See Section 18

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)

Signature:

Name and Title: « »
« »

SURETY

Company: (Corporate Seal)

Signature:

Name and Title: « »
« »

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

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

Glynn W. Clark, Architect



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THE
AIA
BOND

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of

any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

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

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

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

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

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

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

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

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

§ 18 Modifications to this bond are as follows:

« »

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

CONTRACTOR AS PRINCIPAL

SURETY

Company: (Corporate Seal)

Company: (Corporate Seal)

Signature:

Signature:

Name and Title: « »« »

Name and Title: « »« »

Address: « »

Address: « »



DRAFT

AIA Document A201[®] – 2007

General Conditions of the Contract for Construction

for the following PROJECT:

A NEW CITY HALL WEDOWEE, AL.

THE OWNER:

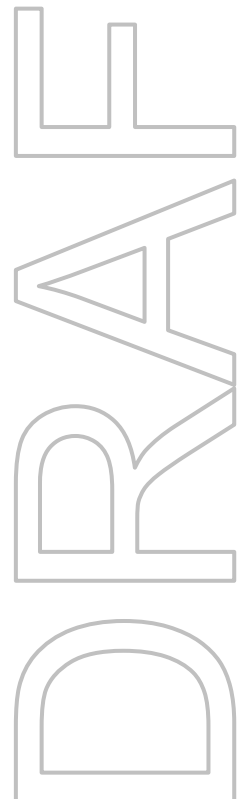
THE CITY OF WEDOWEE, ALABAMA
24 S. MAIN ST.
WEDOWEE, AL. 36278

THE ARCHITECT:

GLYNN WILSON CLARK
P.O BOX 532
MONTGOMERY, AL. 36101

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User Notes:

(913010033)

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DRAFT

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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.

§ 1.1.7 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.

§ 1.2.2 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.

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§ 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.

§ 1.6 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. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 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 as required by Section 12.2 or repeatedly 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 with requirements 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. 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.

§ 3.3 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'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.

§ 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.

§ 3.5 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.

§ 3.7.3 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.

§ 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.

§ 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 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.

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.

§ 4.2.8 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, as soon as practicable after award of the Contract, 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.

§ 5.2.2 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.

§ 7.2 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 knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by 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 an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; 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.

§ 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.

§ 9.3.2 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 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 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.

§ 10.2 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.

§ 10.3 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;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .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.

§ 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.

§ 11.1.3 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.

§ 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.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 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. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 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 except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 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.

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. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 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.

§ 15.1.5.2 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. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 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.

§ 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

GENERAL CONTRACTOR'S ROOFING GUARANTEE

--

Project Name & Address A NEW CITY HALL WEDOWEE, AL.	Project Owner Entity(ies) Name(s) & Address(es) THE CITY OF WEDOWEE 24 S. MAIN ST. WEDOWEE, AL. 36278 MAYOR TIM COE
---	---

General Contractor's Company Name, Address, & Telephone Number TBD	EFFECTIVE DATES OF GUARANTEE
	Date of Acceptance: TBD
	Date of Expiration:

1. The General Contractor does hereby certify that the roofing work included in this contract was installed in strict accordance with all requirements of the plans and specifications and in accordance with approved roofing manufacturers recommendations.
2. The General Contractor does hereby guarantee the roofing and associated work including but not limited to all flashing and counter flashing both composition and metal, roof decking and/or sheathing; all materials used as a roof substrate or insulation over which roof is applied; promenade decks or any other work on the surface of the roof; metal work; gravel stops and roof expansion joints to be absolutely watertight and free from all leaks, due to faulty or defective materials and workmanship for a period of five (5) years, starting on the date of substantial completion of the project. This guarantee does not include liability for damage to interior contents of building due to roof leaks, nor does it extend to any deficiency which was caused by the failure of work which the general contractor did not damage or did not accomplish or was not charged to accomplish.
3. Subject to the terms and conditions listed below, the General Contractor also guarantees that during the Guarantee Period he will, at his own cost and expense, make or cause to be made such repairs to, or replacements of said work, in accordance with the roofing manufacturers standards as are necessary to correct faulty and defective work and/or materials which may develop in the work including, but not limited to: blisters, delamination, exposed felts, ridges, wrinkles, splits, warped insulation and/or loose flashings, etc. in a manner pursuant to the total anticipated life of the roofing system and the best standards applicable to the particular roof type in value and in accordance with construction documents as are necessary to maintain said work in satisfactory condition, and further, to respond on or within three (3) calendar days upon proper notification or leaks or defects by the Owner or Architect.

- A. Specifically excluded from this Guarantee are damages to the work, other parts of the building and building contents caused by: (1) lightning, windstorm, hailstorm and other unusual phenomena of the elements; and (2) fire. When the work has been damaged by any of the foregoing causes, the Guarantee shall be null and void until such damage has been repaired by the General Contractor, and until the cost and expense thereof has been paid by the Owner or by the responsible party so designated.
- B. During the Guarantee Period, if the Owner allows alteration of the work by anyone other than the General Contractor, including cutting, patching and maintenance in connection with penetrations, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the owner engages the General Contractor to perform said alterations, the Guarantee shall not become null and void, unless the General Contractor, prior to proceeding with the said work, shall have notified the Owner in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the work, thereby reasonably justifying a termination of this Guarantee.
- C. Future building additions will not void this guarantee, except for that portion of the future addition that might affect the work under this contract at the point of connection of the roof areas, and any damage caused by such addition. If this contract is for roofing of an addition to an existing building, then this guarantee covers the work involved at the point of connection with the existing roof.
- D. During the Guarantee period, if the original use of the roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.
- E. The Owner shall promptly notify the General Contractor of observed, known or suspected leaks, defects or deterioration, and shall afford reasonable opportunity for the General Contractor to inspect the work, and to examine the evidence of such leaks, defects or deterioration.

IN WITNESS THEREOF, this instrument has been duly executed this _____ day
of _____, _____.

General Contractor's Authorized Signature

Typed Name and Title

Application and Certificate for Payment

TO OWNER:	PROJECT:	APPLICATION NO:	Distribution to:
		PERIOD TO:	OWNER ☐
		CONTRACT FOR:	ARCHITECT ☐
FROM CONTRACTOR:	VIA ARCHITECT:	CONTRACT DATE:	CONTRACTOR ☐
		PROJECT NOS: / /	FIELD ☐
			OTHER ☐

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703®, Continuation Sheet, is attached.

1. ORIGINAL CONTRACT SUM	\$
2. NET CHANGE BY CHANGE ORDERS	\$
3. CONTRACT SUM TO DATE (Line 1 ± 2)	\$
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)	\$
5. RETAINAGE:	
a. _____ % of Completed Work (Columns D + E on G703)	\$
b. _____ % of Stored Material (Column F on G703)	\$
Total Retainage (Lines 5a + 5b, or Total in Column I of G703)	
6. TOTAL EARNED LESS RETAINAGE	\$
(Line 4 minus Line 5 Total)	
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT	\$
(Line 6 from prior Certificate)	
8. CURRENT PAYMENT DUE	\$
9. BALANCE TO FINISH, INCLUDING RETAINAGE	\$
(Line 3 minus Line 6)	

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this month	\$	\$
TOTAL	\$	\$
NET CHANGES by Change Order	\$	

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

CONTRACTOR:

By: _____ Date: _____

State of: _____

County of: _____

Subscribed and sworn to before
me this _____ day of _____

Notary Public:

My commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

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

AMOUNT CERTIFIED \$

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____ Date: _____

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



AIA Document G702®, Application and Certificate for Payment, or G732™, Application and Certificate for Payment, Construction Manager as Adviser Edition, containing Contractor's signed certification is attached. Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO:

[illegible]



AIA® Document G701® – 2017

Change Order

PROJECT: *(name and address)*

CONTRACT INFORMATION:

Contract For:
Date:

CHANGE ORDER INFORMATION:

Change Order Number:
Date:

OWNER: *(name and address)*

ARCHITECT: *(name and address)*

CONTRACTOR: *(name and address)*

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

The original (Contract Sum) (Guaranteed Maximum Price) was \$ _____

The net change by previously authorized Change Orders \$ _____

The (Contract Sum) (Guaranteed Maximum Price) prior to this Change Order was \$ _____

The (Contract Sum) (Guaranteed Maximum Price) will be (increased) (decreased) (unchanged) by this Change Order in the amount of \$ _____

The new (Contract Sum) (Guaranteed Maximum Price), including this Change Order, will be \$ _____

The Contract Time will be (increased) (decreased) (unchanged) by () days.

The new date of Substantial Completion will be _____

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

ARCHITECT *(Firm name)*

CONTRACTOR *(Firm name)*

OWNER *(Firm name)*

SIGNATURE

SIGNATURE

SIGNATURE

PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

DATE

DATE

DATE



AIA® Document G704® – 2017

Certificate of Substantial Completion

PROJECT: *(name and address)*

CONTRACT INFORMATION:

Contract For:
Date:

CERTIFICATE INFORMATION:

Certificate Number:
Date:

OWNER: *(name and address)*

ARCHITECT: *(name and address)*

CONTRACTOR: *(name and address)*

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate.

(Identify the Work, or portion thereof, that is substantially complete.)

ARCHITECT *(Firm Name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE OF SUBSTANTIAL COMPLETION

WARRANTIES

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows:

(Identify the list of Work to be completed or corrected.)

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:

(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

CONTRACTOR *(Firm Name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE

OWNER *(Firm Name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE

ADVERTISEMENT FOR COMPLETION

LEGAL NOTICE

In accordance with Chapter 1, Title 39, Code of Alabama, 1975, as amended, notice is hereby given

that _____
(Contractor Company Name)

Contractor, has completed the Contract for ☐ (Construction) ☐ (Renovation) ☐ (Alteration)
☐ (Equipment) ☐ (Improvement) of _____
(Name of Project):

at _____

(Insert location data in County or City)
for the State of Alabama and the (County) (City) of _____,
Owner(s), and have made request for final settlement of said Contract. All persons having
any claim for labor, materials, or otherwise in connection with this project should immediately
notify

(Architect / Engineer)

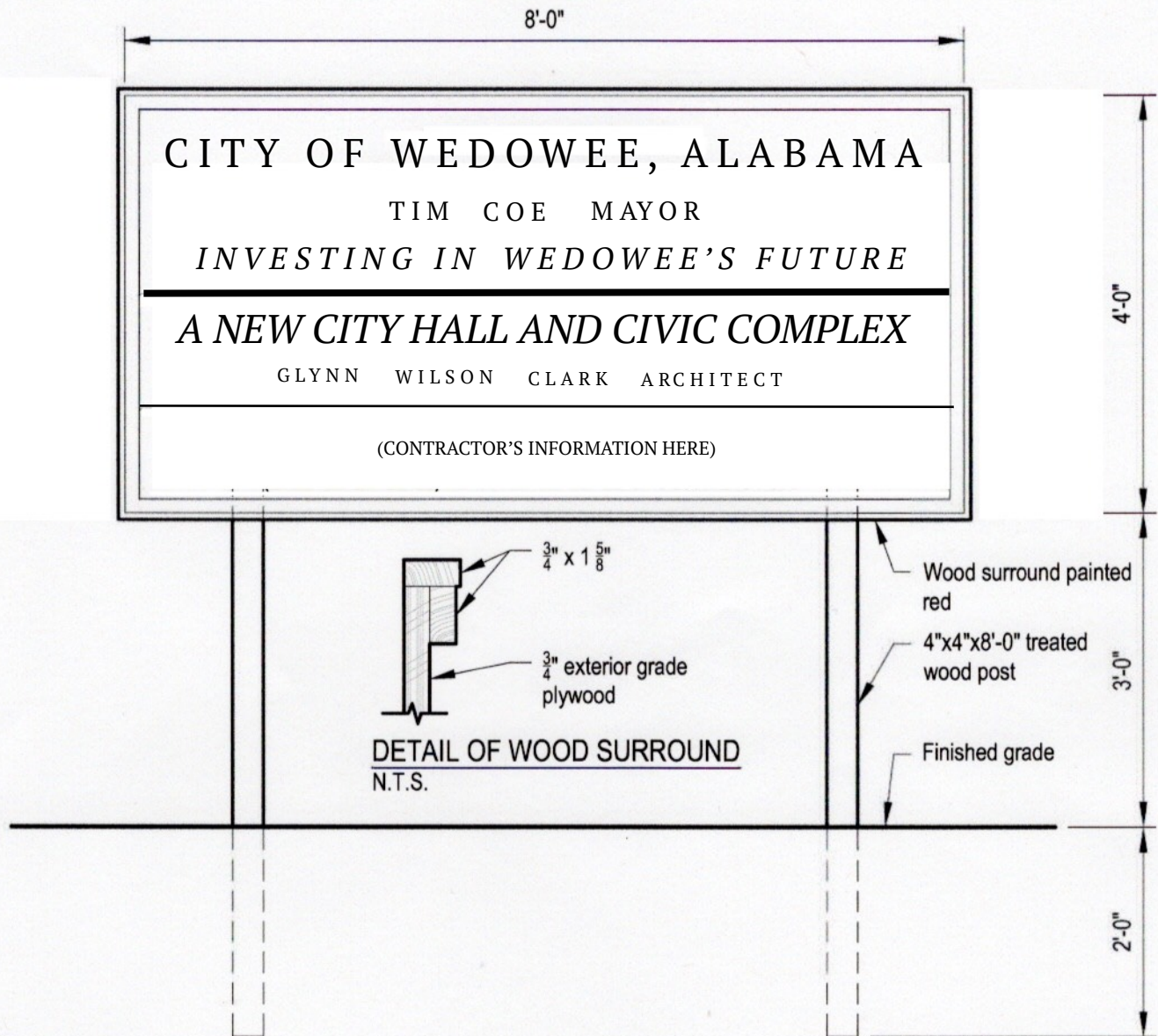
(Contractor)

(Business Address)

NOTE: This notice must be run once a week for four successive weeks for projects exceeding \$50,000.00. For projects of \$50,000.00 or less, run one time only. A copy of the publisher's affidavit of publication (including a copy of the advertisement) shall be submitted by the Contractor to the Design Professional for inclusion with DCM Form B-13: Final Payment Checklist for state agencies, PSCA-funded and other bond-funded projects.

DETAIL OF PROJECT SIGN

N.T.S.



Notes:

Sign to be constructed of 3/4" exterior grade plywood.

Paint with two coats best grade exterior paint before letters are painted.

Sign shall be placed in a prominent location and easily readable from existing street or roadway.

Sign shall be maintained in good condition until project completion.



Kay Ivey
Governor

Bill Poole
Director of Finance

STATE OF ALABAMA
DEPARTMENT OF FINANCE
REAL PROPERTY MANAGEMENT
Division of Construction Management

P.O. Box 301150, Montgomery, AL 36130-1150
770 Washington Avenue, Suite 444, Montgomery, AL 36104
Telephone: (334) 242-4082 Fax: (334) 242-4182



Mickey Allen
Assistant Finance Director
Real Property Management

Frank Barnes, Director
Construction Management

E-Verify Memorandum of Understanding

Per DCM's May 29, 2012 bulletin *Guidance on Act 2012-491 Amending the Alabama Immigration Law*: "Contractors (including architects and engineers) will ... be required to enroll in the E-Verify program and to provide documentation of enrollment in the E-Verify program with their contracts or agreements."

Upon completing enrollment in the E-Verify program available at <https://www.e-verify.gov/employers/enrolling-in-e-verify>, an E-Verify Memorandum of Understanding (MOU) is issued to the enrolled business. The same E-Verify MOU can be repeatedly used until any information in the business's E-Verify user profile is updated, at which time E-Verify updates the printable Company Information section of the MOU, while the original signatory information remains the same. Typically, an E-Verify MOU is 13-18 pages long depending on business type and number of employees.



State of Alabama Disclosure Statement

Required by Article 3B of Title 41, Code of Alabama 1975

ENTITY COMPLETING FORM

ADDRESS

CITY, STATE, ZIP

TELEPHONE NUMBER

STATE AGENCY/DEPARTMENT THAT WILL RECEIVE GOODS, SERVICES, OR IS RESPONSIBLE FOR GRANT AWARD

ADDRESS

CITY, STATE, ZIP

TELEPHONE NUMBER

This form is provided with:

☐ Contract ☐ Proposal ☐ Request for Proposal ☐ Invitation to Bid ☐ Grant Proposal

Have you or any of your partners, divisions, or any related business units previously performed work or provided goods to any State Agency/Department in the current or last fiscal year?

☐ Yes ☐ No

If yes, identify below the State Agency/Department that received the goods or services, the type(s) of goods or services previously provided, and the amount received for the provision of such goods or services.

STATE AGENCY/DEPARTMENT	TYPE OF GOODS/SERVICES	AMOUNT RECEIVED
-------------------------	------------------------	-----------------

Have you or any of your partners, divisions, or any related business units previously applied and received any grants from any State Agency/Department in the current or last fiscal year?

☐ Yes ☐ No

If yes, identify the State Agency/Department that awarded the grant, the date such grant was awarded, and the amount of the grant.

STATE AGENCY/DEPARTMENT	DATE GRANT AWARDED	AMOUNT OF GRANT
-------------------------	--------------------	-----------------

1. List below the name(s) and address(es) of all public officials/public employees with whom you, members of your immediate family, or any of your employees have a family relationship and who may directly personally benefit financially from the proposed transaction. Identify the State Department/Agency for which the public officials/public employees work. (Attach additional sheets if necessary.)

NAME OF PUBLIC OFFICIAL/EMPLOYEE	ADDRESS	STATE DEPARTMENT/AGENCY
----------------------------------	---------	-------------------------

2. List below the name(s) and address(es) of all family members of public officials/public employees with whom you, members of your immediate family, or any of your employees have a family relationship and who may directly personally benefit financially from the proposed transaction. Identify the public officials/public employees and State Department/Agency for which the public officials/public employees work. (Attach additional sheets if necessary.)

NAME OF FAMILY MEMBER	ADDRESS	NAME OF PUBLIC OFFICIAL/ PUBLIC EMPLOYEE	STATE DEPARTMENT/ AGENCY WHERE EMPLOYED
--------------------------	---------	---	--

If you identified individuals in items one and/or two above, describe in detail below the direct financial benefit to be gained by the public officials, public employees, and/or their family members as the result of the contract, proposal, request for proposal, invitation to bid, or grant proposal. (Attach additional sheets if necessary.)

Describe in detail below any indirect financial benefits to be gained by any public official, public employee, and/or family members of the public official or public employee as the result of the contract, proposal, request for proposal, invitation to bid, or grant proposal. (Attach additional sheets if necessary.)

List below the name(s) and address(es) of all paid consultants and/or lobbyists utilized to obtain the contract, proposal, request for proposal, invitation to bid, or grant proposal:

NAME OF PAID CONSULTANT/LOBBYIST	ADDRESS
----------------------------------	---------

By signing below, I certify under oath and penalty of perjury that all statements on or attached to this form are true and correct to the best of my knowledge. I further understand that a civil penalty of ten percent (10%) of the amount of the transaction, not to exceed \$10,000.00, is applied for knowingly providing incorrect or misleading information.

Signature _____ Date _____

Notary's Signature _____ Date _____ Date Notary Expires _____

Article 3B of Title 41, Code of Alabama 1975 requires the disclosure statement to be completed and filed with all proposals, bids, contracts, or grant proposals to the State of Alabama in excess of \$5,000.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010100 SUMMARY OF THE WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS AND GENERAL INFORMATION:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

1.2 PROJECT/WORK IDENTIFICATION:

- A. General: Project name is "A New City Hall" for the city of Wedowee, AL as shown on Contract Drawings prepared by Glynn Wilson Clark, Architect dated December 3, 2024.
- B. Contract Documents: Indicate the work of the Contract and related requirements and conditions that have an impact on the project. Related requirements and conditions that are indicated in the Contract Documents, Bid Items and any Alternates, include but are not necessarily limited to the following:
1. Existing site conditions and restrictions on use of the site.
 2. Selective demolition, sitework, site utilities, new building construction, , connections to existing improvements, and all related work.
 3. New mechanical, plumbing and electrical systems.
 4. Site maintenance.
 5. Coordination of the Work of the project, including in part, required coordination and cooperation with any Owner activities and schedule.
- C. Summary by References: Work of the Contract can be summarized by references to the Contract, General Conditions, Supplementary Conditions (if any), the Project Manual, Technical Specification Sections, Drawings, Addenda and modifications to the Contract Documents issued subsequent to the initial printing of this Project Manual and the Drawings, and including but not necessarily limited to printed material referenced by any of these. It is recognized that the Work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside the contract documents.
- D. Abbreviated Written Summary: Briefly and without force and effect upon the contract documents, the Work of the Contract can be summarized as follows:

The work is for construction of a new City Hall Complex including one building housing City Offices, Police Department, Council Chambers / Municipal Court and lower level Storm Shelter. On the same site is a separate building housing the City Utility Department. For bid purposes the entire site and both building are to be included in the base bid. For city accounting purposes only the cost of the Utility Department building from the footings to top of roof is to be included on the proposal form.

A NEW CITY HALL WEDOWEE, AL.

1.3

CONTRACTOR USE OF PREMISES:

A. General: During the construction period the Contractor shall have use of the premises for construction operations, including use of the site as shown on the Drawings.

1. Limitations of use of the site:

- a. Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to applicable rules and regulations affecting the work while engaged in project construction. See site plan for egress and ingress to site, or if not indicated, same shall be as designated by the Owner.
- b. Keep existing public roads, driveways and entrances serving the premises clear and available at all times. Do not use these areas for parking or storage of materials. Remove dirt, mud, debris, etc., from site, sidewalks, streets, and public right-of-way as it occurs.
- c. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain and pay for such storage off site in a fully bonded and insured facility acceptable to the Owner, with all items stored clearly identified as being assigned to this project.
- d. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running, or the ignition key in place.
- e. The Owner, and their representatives, the Architect and their Consultants, as well as authorities having jurisdiction will require site accessibility for inspections, observations, and perhaps other purposes, related to the planned new construction. The Contractor shall assist in such accessibility, to at least the point of providing and maintaining reasonably accessible dry paths to work in progress.
- f. Provide secure temporary barricades, fencing, etc., as indicated or otherwise required, to restrict pedestrian and vehicular traffic from construction operations, including in part, Owner's staff, the public, children, and users of the immediately adjacent facilities.
- g. Minimum construction fencing required shall be at locations indicated on the Drawings, or if not indicated, as required by the Contractor and with gates as required by the Contractor and/or authorities having jurisdiction, and all related safety and warning signs, etc. Removal of any temporary fencing, refilling post holes, etc., shall also be the responsibility of the Contractor.
- h. Construction operations shall not effect in any manner, the on-going operations of the Owner, immediately adjacent facilities, adjacent property owners or businesses, or others. Refer to Division 1 Section "Special Conditions" for additional information and requirements regarding coordination with Owner's activities, etc.

A NEW CITY HALL WEDOWEE, AL.

- i. Construction equipment shall not come in contact with or swing over existing facilities to remain, public areas, occupied buildings, right-of-ways, etc., which are to remain.
- j. The Contractor and their employees shall limit any discussion of the Work of this project to the Owner's representatives named in the front of this Project Manual, Consultants employed, inspecting authorities with jurisdiction, and the Architect. In no instance shall this project be discussed with others, except as may otherwise be indicated herein.
- k. Parking on-site, if any, shall be limited to the "staging areas" indicated on the Drawings, or if not indicated, as mutually agreed between the Owner, Architect, and Contractor at the Pre-Construction Conference.
- l. Smoking or other use of tobacco products shall not be permitted within the Owner's facilities or on roofs.
- m. The use or presence of alcohol and/or other debilitating substances shall not be permitted on the project site.
- n. Firearms and/or other weapons shall not be permitted on the project site.

END OF SUMMARY OF THE WORK

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

1.01 TIME FOR COMPLETION OF WORK:

- A. The Contractor may proceed to award sub-contracts, assemble materials, etc., at any time after award of Contract and "Notice To Proceed" with Work is given by the Owner. The Contractor's official time for construction to start on work shall be the earlier of either the date of the Owner's "Notice to Proceed" with Work or receipt of the fully executed Contract for the Work; and completion of the Work shall be within the number of consecutive calendar days or by the date(s) indicated on the Contractor's Proposal Form.
 - 1. Properly supervised work, per requirements, will be permitted on Saturdays and Sundays.
- B. Acceptance of the completed Work of this Contract will be at a single date, and not in phases, unless otherwise indicated.
- C. Nothing in the Contract Documents shall permit or be construed to permit payment to the Contractor for any extended overhead or profit due to completion of the project extending beyond the Contractual completion date. In no event shall the Owner or Architect be liable to the Contractor for damage due to any delay to any portion of the Work of this Contract.
- D. Delays due to inclement weather will be considered, only if the rain amount per month, is in excess of the National Weather Service 5-year average for this project's location, and proof of same is submitted along with any such claim.
 - 1. On-site records of daily rain and/or temperature readings kept by the Contractor may be accepted to verify weather and/or temperature variations which prevent earthwork, foundations and slabs, and/or roofing materials installation.

1.02 LIQUIDATED DAMAGES:

- A. Actual damages for delay in completion may be impossible to determine, and the Contractor shall be liable for and the Owner shall deduct as liquidated damages from the final payment due the Contractor, the following amount:
 - 1. For each calendar day of delay in completion of any part of the work beyond the number of days specified, the sum of \$200.00.
 - 2. In the event that work on this project is incomplete and ongoing after the contractual completion date, beginning at ten (10) additional days thereafter, the Owner will also charge the Contractor, an additional \$200.00 per day, for the Owner's nominal reimbursement to the Architect for continued work on the project, which charges will continue until "Substantial Completion" is accomplished.
- B. The submittal of a Bid and/or Proposal by any Contractor and their Subcontractors shall be construed as, in part, acknowledgement and acceptance of these provisions.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

1.03 SITE RESTRICTIONS:

- A. The limits of work and known restrictions are indicated on the Site Plan and various portions of the Drawings and the Project Manual.
 - 1. Refer also to Section 01100 - "Summary of The Work," for additional information and requirements.

1.04 PRE-BID CONFERENCE:

- A. Refer to "Advertisement for Bids" for additional information and requirements.

1.05 PRE-CONSTRUCTION CONFERENCES:

- A. Prior to commencing any work on the project, a pre-construction conference shall be held. Mandatory attendance will be required of the Contractors, and representatives of all specialty and principal subcontractors involved in the project. Time and date of said conference shall be established by the Contractor, subject to agreement with the Owner and Architect, after award of construction contract.
- B. Similarly, prior to commencing any major portion of the Work of the project, preconstruction conferences shall be held. Mandatory attendance will be required of the Contractors, and representatives of all specialty and principal subcontractors involved in the individual major portions of project. Time and date of said conferences shall be established by the Contractor, subject to agreement with the Owner and Architect, and notice to Architect, Owner, and appropriate Consultants shall be advised in writing of times and dates, by the Contractor.
 - 1. "Major portion" may be defined as work items for each Subcontractor working on site, and shall include in part, but not be limited to, earthwork, sitework, site utilities, concrete work, masonry, Division 5, roof framing and Division 6, insulation, roofing systems, finishes, specialties, casework, mechanical, plumbing, and electrical.
- C. Refer to Section 01300 - "Administrative Requirements" for additional information and requirements.

1.06 PRE-ROOFING CONFERENCE:

- A. A pre-roofing conference is required before any roofing materials are installed. This conference shall be conducted by a representative of the Architect and attended by representatives of the Owner, Roofing Contractor, Sheet Metal Contractor, Roof Deck Manufacturer (if applicable) and the Roofing Materials Manufacturer (if warranty is required of this manufacturer). If equipment of substantial size is to be placed on the roof, the Mechanical Contractor must also attend this meeting.
- B. The pre-roofing conference is intended to clarify demolition (for renovation or re-roofing projects) and application requirements for work to be completed before roofing operations can begin. This would include a detailed review of the specifications, roof plans, roof deck information, flashing details and approved shop drawings, submittal data, and samples. If conflict exists between the specifications and the Manufacturer's requirements, this shall be resolved. If this pre-roofing conference cannot be satisfactorily concluded without further inspection and investigation by any of the parties present, it shall be reconvened at the earliest possible time to avoid delay of the work. In no case should the work proceed without inspection of all roof deck areas and substantial agreement on all points.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

- C. The following are to be accomplished during the conference:
1. Review all Factory Mutual and Underwriters Laboratories requirements listed in the specifications and resolve any questions or conflicts that may arise.
 2. Establish trade-related job schedules, including the installation of roof-mounted mechanical equipment.
 3. Establish roofing schedule and work methods that will prevent roof damage.
 4. Require that all roof penetrations and walls be in place prior to installing the roof.
 5. Establish those areas on the job site that will be designated as work and storage areas for roofing operations.
 6. Establish weather and working temperature conditions to which all parties must agree.
 7. Establish acceptable methods of protecting the finished roof if any trades must travel across or work on or above any areas of the finished roof.
- D. The Architect shall prepare a written report indicating actions taken and decisions made at this pre-roofing conference. This report shall be made a part of the project record and copies furnished the Contractor and the Owner.
- E. Refer to Section 01300 - "Administrative Requirements" for additional information and requirements.

1.07 CONTRACTOR ACCESS TO SITE:

- A. The Contractor will have access to the site immediately upon issuance of Notice to Proceed with work. All routes of access to the site and gate locations by the Contractor or their subcontractors, are subject to approval by Owner, Architect, and other authorities having jurisdiction. Check site plan for location of work limits. Refer to Section 01100 - "Summary of The Work" and Section 01500 - "Temporary Facilities," for additional information and requirements.
- B. The Contractor shall be required to coordinate the Work of the project with the Owner's activities, to the extent that the Work of this Contract has little or no effect on normal operations.

1.08 CONTRACTOR'S PLAN FOR CONSTRUCTION OF PROJECT:

- A. Contractor shall prepare and submit within 7 days from award of contract to the Owner and Architect for review a Bar Graph, indicating his proposed plan and sequence of operations to complete each phase of this project, on schedule as required by contract. This Bar Graph is not expected to be a Critical Path graph.
1. Schedule shall identify project milestones and expected durations.

1.09 CONTRACTOR JOB MEETINGS:

- A. On-Site Meetings with Architect, and various trades, general contractors and subcontractors, shall be conducted by the Contractor as directed by the Owner and/or Architect for purpose of furthering the progress of the work, solving construction problems, and issuing instructions.
- B. Refer to "Pre-construction Conferences" paragraph above, "General Conditions of the Contract", and Section 01300 - "Administrative Requirements" for additional information and requirements.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

1.10 STORED MATERIALS:

- A. It is recognized that the size of the site is restrictive and that it may be necessary for the Contractor to store some materials for project at locations on the site, prior to removal or disposal. When such on site storage is necessary, comply with requirements of authorities having jurisdiction, including in part, on site retention of earth, storm water run-off, slopes of debris, earth, etc.
- B. Store items to be incorporated in the Work in stable and secure manner, off of ground, separated by hardwood or treated wood blocking, and under cover or in storage building.
 - 1. Any materials found stored directly on ground or paving, in standing water, etc., will be rejected, immediately removed from site, and replaced with new materials at the Contractor's expense.
 - 2. Distribute materials around framing and the roof in such manner as to prevent any damage to structure, construction, improvements, etc.
- C. Refer to Section 01600 - "Product Requirements", for additional information and requirements for any off-site stored materials.

1.11 PROTECTION:

- A. The Contractor shall provide and maintain adequate fencing and barricades, where indicated, and wherever required. Building entrances and exits shall remain unobstructed at all times when buildings are occupied.
- B. The Contractor shall provide suitable protection for all employees, the public, children, users of other adjacent facilities, and the occupants of existing buildings at all times during the execution of and until the completion of the Work.
 - 1. Construction equipment shall not come in contact with or swing over existing facilities to remain, public areas, occupied buildings, right-of-ways, etc., which are to remain.
- C. The Contractor shall avoid damage as a result of their operations, to the existing buildings, walks, pavement, curbs, grass, shrubbery, trees, utilities, adjoining property, etc., and shall at their own expense, completely repair any damage thereto caused by his operations. All repair work is subject to Architect's approval, and that of its Owner.
- D. Refer to Section 01500 - "Temporary Facilities and Controls" for additional information and requirements.

1.12 WORK LIMITS PROTECTION:

- A. The Contractor shall locate all temporary buildings, storage of equipment, materials, etc., within a protected area to protect the public, children, and others from the construction activities. Type and location of such protection shall be as existing at the site, or if not existing or complete, as proposed and furnished by the Contractor, but no less than 6' high x 11-1/2 gage chain link fence with posts at 10' o.c. and gates as required by the Contractor; subject to acceptance of the Architect, Owner, and authorities having jurisdiction.
- B. Refer to Section 01500 - "Temporary Facilities and Controls" for additional information and requirements.

A NEW CITY HALL WEDOWEE, AL.

**SECTION 010150
SPECIAL CONDITIONS**

1.13 EMPLOYMENT OF AND PAYMENT FOR TESTING SERVICES:

- A. The following information regarding Employment of and Payment for Testing Services under the work of Specifications shall take precedence over any conflicting statements otherwise, which may have remained in the Project Manual after editing:
1. Initial testing required by the Contract Documents for Divisions 2 through 5 (except not utility systems testing) shall be provided by an independent testing agency selected, employed and paid by the Owner.
 2. Initial testing required by the Contract Documents for all other testing and Divisions 6 through 16 shall be provided by a testing agency acceptable to the Owner, and selected, employed, and paid by the Contractor from their Contract amount.
 3. Any retesting required (due to failure of initial testing to meet the requirements of the Contract Documents) shall be at the Contractor's expense.
 4. Any retesting required (due to questionable materials or construction methods, for verification purposes, and etc.) shall be at the Contractor's expense when the results of such retesting indicate any work or materials do not comply with requirements of the Contract Documents. Otherwise, such retesting will be at Owner's expense.
 5. Any retesting under the above provisions shall be performed by the same Owner accepted testing agency.
 6. Nothing in the Contract Documents shall prevent the Contractor from performing any other or additional Quality Control testing at his/her own expense, to verify compliance with the Bid and Contract Documents.
- B. The Contractor shall be responsible for contacting and directions to the accepted testing agency and for any follow-up communications required, for all testing required by the Contract Documents.
- C. No unsuitable or unsatisfactory existing soils or building materials (other than work in Contract) shall be removed without either the presence of or concurrence of and prior approval of the Architect and the accepted testing agency, so as to assure quality of the Work is maintained, and to verify quantities of any additional work under bid "Unit Prices", for which the Contractor is due payment by the Owner.
- D. The Contractor shall be responsible for contacting and directions to the accepted testing agency and for any follow-up communications required, for all testing required by the Contract Documents.
- E. Refer to Section 01400 - "Quality Requirements" for additional information and requirements.

1.14 PROHIBITED MATERIALS:

- A. **ASBESTOS:** All materials, equipment, components, accessories, and etc., installed in the work of this contract, both field installed and bought-out manufactured items from any source shall be 100-percent free of asbestos.
- B. **LEAD CONTENT:** All water-bearing lines, water dispensing equipment, finish materials, and paint other than exposed exterior roof flashings, shall be 100-percent free of lead.
- C. **CALCIUM CHLORIDE:** Calcium chloride and/or derivatives or additives thereof shall not be permitted in any concrete, concrete product, grout, masonry and/or mortar.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

D. ENVIRONMENTAL REGULATIONS: All materials, their application, installation, and completion, shall comply with applicable environmental regulations, including in part, erosion, air-borne contaminants, and volatile organic compounds (VOC's).

E. FORMALDEHYDE: All insulation and other products shall be 100-percent free of urea formaldehyde.

1.15 PROHIBITED EQUIPMENT:

A. The elevated and framed floor slabs are not designed to accommodate heavy rolling point loads. Scissor lifts are not permitted on any elevated or framed slab during the construction of the project.

1.16 PROJECT SIGNS:

A. Provide, install, and maintain one (1) Project Sign, as per Detail at the "General Conditions" Section of the Project Manual, at location on site as directed by the Owner or Architect. Any statements elsewhere which may omit Project Sign(s) are hereby not withstanding.

1. Sign shall be in place within ten days from and including the day after date of Owner's "Notice to Proceed," and shall be removed within five days of the date all work on this project has been completed.

B. Provide, securely install and maintain prefinished metal signs on each side of each gate leaf and at 50'-0" o.c. maximum on street/public side of all construction fencing provided (if any).

1. Copy: "NO TRESPASSING - DANGER
CONSTRUCTION AREA"

2. Size: Approximately 1'-6" wide x 1'-0" high.

C. Provide other pedestrian and vehicular signs as necessary and required, in compliance with requirements of authorities having jurisdiction. Signs shall remain on site for duration of this Contract.

D. General Contractor may have a sign on his/her Construction Office and as needed for delivery directions only.

E. Subcontractors will not be allowed to post signs.

F. Refer to Section 01585 - "Project Signs" for additional information and requirements.

1.17 PERSONNEL EXPERIENCE AND SUPERINTENDENTS:

A. General Contractors and Subcontractors shall have no less than 5-years verifiable commercial experience in their trade and no less than 5-years verifiable commercial experience in their business enterprise contracting for work under this project; The type of work contracted or subcontracted for this project shall be the principal business of the Contractor or Subcontractor, respectively.

1. In addition, the General Contractor shall have completed no less than 5 verifiable commercial projects of similar scope, extent, complexity and dollar value during the last 3 years.

2. Failure to comply with these requirements will result in rejection of non-compliant bids.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

- B. Superintendents and foremen, or other individual in the lead or supervisory position for any portion of the Work under this Contract shall have no less than **10-years** verifiable experience in performing the type of work they are responsible for.
1. The Contractor shall submit resumes of work and project experience for their Superintendent and foremen, as soon as possible and at least within five calendar days of receipt of the Contract to be executed for the work, for review and acceptance by the Owner and Architect.
 2. If the Superintendent is replaced on the job after work begins, the same qualifications as above apply. Submit for prior review and acceptance by the Owner and Architect.

1.18 SUBMITTALS:

- A. Submittal requirements are indicated throughout the Contract Documents, and the following supplements those requirements.
1. Contractor will be required to make submittals for every item and product so indicated; Also upon request, for any additional or other item or products intended for use or incorporation in the Work.
 - a. The Contractor shall submit to the Owner's Representative and Architect within 30 days of "Notice to Proceed", a complete listing of all required submittals, warranties, guarantees, close-out documents, and materials requiring extra or "attic" stock delivered to the Owner, for review and acceptance. Include for each item, the anticipated date of Submittal to the Architect. Re-submit until accepted or approved.
 - b. NOTE THAT RECEIPT OF THIS LIST BY THE ARCHITECT IS PREREQUISITE TO PROPER PROCECESSING, REVIEW AND RETURN OF SUBMITTALS, AS INDICATED IN GENERAL CONDITIONS AND THE FOLLOWING PARAGRAPHS.
 2. The Contractor shall review, mark all necessary changes, revisions, and questions; and then stamp, sign, approve, and submit to the Architect, all Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, and shall do so 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.
 - a. The Contractor shall not make submittals which they have not reviewed, stamped, signed and approved by the Contractor; or in such case, no action will be taken by the Architect or their Consultants regarding that or those submittals.
 3. In general, the Contractor shall submit 4-more copies for review than he needs returned. These copies will be retained for the Owner's Representative, Architect, Owner, and the appropriate Consultant.
 - a. Review time will be limited to two weeks, except for more complex submittals, such as Structural, Division 15 and Division 16.
 - b. NOTE: Submittals held and submitted in bulk (i.e.: 3 or more submittals) by the Contractor, shall be prioritized by the Contractor as to their importance and order in which they need to be reviewed. Such bulk submittals will be reviewed as soon as possible, but will not and cannot be reviewed simultaneously in two weeks.
 - c. Colors will not be selected until most or all submittals required have been received and reviewed.
 4. Submit no less than 4 each of any sample or color chart which is required or otherwise requested.

A NEW CITY HALL WEDOWEE, AL.

SECTION 010150 SPECIAL CONDITIONS

5. Submit test reports as required or otherwise requested, in the same quantity as other submittal data.
 6. Contractor shall provide letter from Mechanical Contractor stating the Mechanical Contractor has coordinated all power requirements with the Electrical Contractor. Mechanical submittals will not be reviewed without receipt of this letter.
 7. Contractor shall distribute reviewed submittals to all concerned and appropriate Subcontractors and Suppliers.
 - a. Contractor shall maintain 1-set of reviewed submittals at their on-site job office.
- B. Review and/or approval of submittals by the Architect, Owner and/or their Consultants shall not relieve the Contractor of his responsibility to comply with the requirements of the Contract Documents.
1. Any proposed change in the Work shall be submitted separate from any other item during construction, with same documentation as pre-bid requests, or they will not be considered.
 2. No actual or proposed change shall be included in Shop Drawings or other Construction submittals, and none so included will be considered approved under any circumstances.
 3. Shop Drawings are communications between the Contractor and various suppliers, fabricators, and subcontractors. The design professional's role is to review the drawings to answer questions that arise about design intent.
 4. Even if a reviewed Shop Drawing or other Submittal has deviations from the original design and the Contract Documents, it in itself is not a Change Order and it is not, IN ITSELF, an approval of the change. Changes can only be approved by Change Order.
 5. Dimensions, quantities, and coordination remain the Contractor's responsibility.
- C. Refer to Section 01300 - "Administrative Requirements" for additional information and requirements.

1.19 SUBSTITUTIONS, PRE-BID QUALIFICATIONS AND PRE-QUALIFIED SUPPLIERS:

- A. Several areas of the Bid and Contract Documents pre-qualify suppliers, manufacturers, and/or products, subject to compliance with requirements also stated.
- B. Acceptance of additional suppliers, manufacturers, and/or products in such instances shall be limited to those named, unless others are properly submitted at least 10-days prior to the Original Bid Date and subsequently accepted.
1. Where more or less days were originally stated in individual Sections of the Project Manual, the time limits for such submittals shall be as originally stated. Where no time limit was originally stated, the above 10-day limit shall apply.
 2. Acceptance will only be in writing, by letter and/or Addendum.
 3. Submittals during construction other than those pre-qualified or pre-accepted will not be reviewed, but instead, returned for re-submittal, without exception.
- C. A proper pre-bid submittal for "pre-qualified" or "pre-accepted" consideration and review, shall be one which includes at least the following:
1. A cover letter signed by authorized person(s) which outlines the purpose of the submittal, Architect's specifications which apply, and each variation from the original specification.
 2. Three copies of request for substitution, using Substitution Request form found in Section 01600. Limit each request to one proposed substitution.

SPECIAL CONDITIONS

SPECIAL CONDITIONS
SECTION 010150

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SECTION 010150 SPECIAL CONDITIONS

3. All current and relevant manufacturer's published data, and additional information as required so that a review can be quickly made by comparing the submittal item for item to the original specification.
 - a. Include shop drawings, product data, and certified test results attesting to proposed product equivalence.
 4. Samples and other data as required for the original item, as a minimum.
- D. Refer to Section 01600 - "Product Requirements" for additional information and requirements.

1.20 SITE MAINTENANCE:

- A. The Owner will require all mud or debris resulting from this construction to be removed from streets, sidewalks, etc., by the Contractor as it appears, one or more times daily.
- B. Trash, debris, etc., must be removed from the site as Contractor's trash cans, waste receptacles, etc., are filled. Same will not be allowed to accumulate or blow around the site, within the buildings, etc.
- C. The Contractor shall be responsible for maintaining existing landscaping and lawns within and below any construction fencing, for the duration of the Work of the Contract, or until any such fencing is removed.
- D. Refer to Sections 01100, 01500, 01700 and other locations in the Bid and Contract Documents for additional information and requirements.

1.21 INSURANCE AND SPECIAL PROVISIONS:

- A. The Contractor and their insurer, by execution of the Contract, shall waive all rights of subrogation against "*the Owner, the Architect, and their Consultants*", and same shall be indicated on all insurance provided by the Contractor and each Subcontractor.
- B. The Contractor and their insurer, and each Subcontractor, shall name "*the Owner, the Architect, and their Consultants*", as additional named primary insureds on all insurance provided by the Contractor and each Subcontractor, except not for "Workers Compensation and Employers Liability".
- C. Refer to "General Conditions" and other portions of the Bid and Contract Documents, for additional information and insurance requirements. Note that Builder's Risk insurance is required, as described in "General Conditions".
 1. Extent of coverage required and/or any approval or acceptance of the insurance carried shall not act to modify the liability of the Contractor, nor to imply that the limits, features and/or coverages described are adequate to protect the interests or exposures of the Contractor.
- D. The Contractor shall "hold harmless" and indemnify "*the Owner, the Architect, and their Consultants*" from any claim or legal action resulting from any circumstances related to the Work of this project, including in part, payment of any legal or other expenses, fines, judgments, etc.
- E. Insurance policies required by the Contract Documents shall not be canceled, altered, or changed, without first having given thirty (30) days written notice to the Owner, with a copy sent to the Architect, except ten(10) days written notice for non-payment of premium.

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1. Copies of all policies, endorsements, and insurance certificates, including new, renewed, altered, and/or changed during this Contract shall be delivered to the Owner within ten (10) days of effective date(s), with a copy sent to the Architect, by the Contractor.
- F. Refer to General Conditions of the Contract for additional information and requirements regarding minimum insurance and indemnity requirements.
- G. Special Provision: Nothing in this or other paragraphs of the Contract Documents shall create or give to third parties any claim or right of action beyond such as may legally exist irrespective of the Contract.

1.22 ACCESSIBILITY OF ALL COMPLETED WORK:

- A. All products and installations of the Work of this Contract, shall be as designed by the fabricator, manufacturer, etc., and installed by the Contractor, Subcontractors, etc., so as to provide full accessibility to the handicapped and/or disabled, unless specifically indicated otherwise. This shall include in part, the following:
 1. Mounting heights of all electrical devices, switches, etc., all designated plumbing fixtures, and their operation, in all areas except mechanical and electrical rooms, and service areas which are not accessible at any time to the public or Owner's administrative (not service or maintenance) personnel.
 2. Signage.
 3. Door operation and hardware.
 4. Elevator (if any).
 5. Slip resistance of all completed flooring and walkway surfaces both interior and exterior.
- B. Comply with the more stringent requirements of at least the following, either the latest edition or latest adopted edition of the locality, and all revisions and amendments thereto:
 1. Americans With Disabilities Act of 1990 (ADA) "Accessibility Guidelines" (ADA-AG).
 2. "2010 ADA Standards for Accessible Design", Published in the Federal Register September 15, 2010.
 3. American National Standards Institute (ANSI), ANSI A 117.1, 2009.
 4. "Uniform Federal Accessibility Standards" (UFAS);
 5. International Building Code, either the latest edition or latest adopted edition of the locality as applicable at the project locale.

1.23 CONTRACTOR PROGRAMS AND CONDUCT OF PERSONNEL:

- A. The Contractor shall implement programs and make literature available to all construction and administration personnel to encourage making this project a safe place to work, including in part the following requirements: A project site free of any substance abuse, which does not allow any consumption of alcohol, and which does not allow any work to be performed while under the influence of any debilitating substance.
 1. The Contractor and every Subcontractor shall have as part of their personnel, safety, substance abuse prevention, and/or quality programs, mandatory drug testing at pre-employment, post-accident, and at random during employees' tenure with their firms. Each such entity shall be prepared to provide non-confidential verification to the Owner that such testing is consistently ongoing, upon Owner's request for same.

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- B. Programs shall be as acceptable to or recommended by one or more of the following:
1. Contractor's Underwriter for Worker's Compensation or liability insurance.
 2. OSHA.
 3. Associated General Contractors.
 4. U.S. Department of Defense, Corps of Engineers, or Veterans Administration.
- C. Conduct of all personnel employed for the Work of this project shall be held to a high standard and shall not be offensive to others on or around the site, including in part, pedestrians, the public, the Owner, Owner's Consultants, etc.
1. The Contractor and their employees shall limit any discussion of the Work of this project to the Owner's representative named in the front of this Project Manual, inspecting authorities with jurisdiction, and the Architect; In no instance shall this project be discussed with others, except as may otherwise be indicated herein.
 2. The Contractor's personnel and Subcontractors shall not enter the Owner's building, nor use the Owner's telephones (except in emergencies), or the Owner's restrooms.
- D. The Contractor shall immediately dismiss and escort off of the project site, any personnel who are obviously under the influence of alcohol or other debilitating substance, and any personnel exhibiting offensive behavior as described above or by law or by local statute or regulations of authorities having jurisdiction.

1.24 WORK BY OTHERS:

- A. The following items of work are to be provided by others, and are Not in Contract (N.I.C.). The Contractor will be required to coordinate with the Owner as necessary to accommodate provisions for these items.
1. Movable furniture, furnishings, office equipment, library equipment, and movable library shelving unless otherwise indicated.
 2. Listed Equipment, residential appliances, and items of Alternate work not accepted at this time, and/or indicated "Not In Contract", "N.I.C.", "Future", and/or similar indication.
 - a. Unless otherwise indicated, coordination, locating, and providing rough-ins for all power, water supply, gas, drains, drain lines, condensate drain outlet, and other utilities required for such equipment, casework, etc., and preparation required for the addition of future finishes (same as level of finish required for the finishes included in Bid, just prior to finishes being added), shall be included in Base Bid;
- B. Refer to Section 01010 - "Summary of The Work" for additional information and requirements.

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1.25 NPDES PERMIT:

- A. The Contractor shall apply for a storm water permit with the Alabama Department of Environmental Management (ADEM), for the work of this project, and pay all related costs from their contract amount.
- B. It shall be solely the Contractor's responsibility to establish and maintain erosion and storm water controls, and to comply with requirements of ADEM and other authorities having jurisdiction, for the duration of the Work of this project."

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SECTION 010610 REGULATORY REQUIREMENTS AND TAX EXEMPTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections apply to work of this Section.
- B. References, Websites for additional information and requirements:
 - 1. Alabama Building Commission, Memo on Sales Tax Certificate 10-28-2013: <http://www.bc.state.al.us/>, and ADOR references included therein.

1.2 DESCRIPTION OF REQUIREMENTS:

- A. This project is being bid **EXCLUDING TAXES**, and requires the Contractor comply with the requirements of Act 2013-205, which was signed into law on May 9, 2013. The Contractor and the Owner will be required to apply for Certificates of Exemption with the Alabama Department of Revenue (ADOR) which will handle administration of the Certificates. The Contractor shall account for the tax savings for Base Bid / Bid Package bid and Alternates on "Attachment C To Proposal Form", and as otherwise may be required by the Alabama Department of Revenue during the course of the project.
- B. Base Bid / Bid Package bid and all Alternate Bids ~~shall exclude~~ the cost of all required taxes, including in part, sales and use tax, and/or as otherwise required by the Alabama Department of Revenue.
- C. Forms required to be completed and submitted shall be those included in the Bid and Contract Documents, those required by the Alabama Department of Revenue; and any others is required by the financing authority and/or Owner.
 - 1. The previously used "Agency Agreement" and/or similar provisions in the Construction Contract are not required.
- D. The purchase of tools, equipment and similar items, which do not become the Owner's property, are specifically excluded from the Owner's tax exemptions, and any additional exclusions as required by the Alabama Department of Revenue's Rules and Regulations for implementation of this new law.

1.3 GENERAL PROCEDURES:

- A. The provisions of this Section shall take precedence over applicable portions of the Contract and Bid Documents, including in part, "Instructions to Bidders," "General Conditions of the Contract," and "Supplementary Conditions"; Unaltered provisions of those documents shall remain in effect.
- B. The Contractor, subcontractors, and all material dealers are hereby made aware of the Intent of the Owner to reduce the cost of the project by the purchase of property, materials, etc., in the manner

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described herein, and neither they nor the Contractor shall withhold their consent to this arrangement.

- C. **Administrative Costs:** Any and all administrative costs incurred by the Contractor's administering the tax savings shall be considered to be included in the Base Bid / Bid Package Proposal and each Alternate for the Work. No additional amount shall be added to the Contract because of the service provided by Contractor in the purchase of property, materials, etc., in the name of the Contractor, Owner, or as otherwise described herein.
- D. **Administration:** The administration of the sale and use tax savings shall be in accordance with the terms indicated. The procedure will be administered as indicated herein and as otherwise required or directed by the Alabama Department of Revenue.
- E. **Limitations and Liability:**
 - 1. **Responsibility:** The Contractor, notwithstanding this special purchase arrangement, shall select, describe, order, obtain approvals, submit samples, coordinate, process, prepare shop drawings, pursue, receive, inspect, store, protect, insure, guarantee, warrantee, provide, and otherwise be responsible for all materials and systems, the same as if this tax savings procedure were not implemented.
 - 2. Any necessary or required Purchase Orders shall be used only for materials for the Work of this project.
 - 3. The Contractor shall be liable for any taxes due to failure to implement this procedure and due to any unauthorized use of Purchase Orders.

PART 2 - PRODUCTS

NOT APPLICABLE

PART 3 - EXECUTION

NOT APPLICABLE

END OF REGULATORY REQUIREMENTS & TAX EXEMPTIONS

**REGULATORY REQUIREMENTS
AND TAX EXEMPTION
SECTION 010610**

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SECTION 010950 REFERENCE STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

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

1.2 DEFINITIONS:

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. Indicated: The term "indicated" refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.
- C. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect," "requested by the Architect," and similar phrases.
- D. Approve: The term "approved," where used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."
- G. Install: The term "install" is used to describe operations at project site including the actual "unloading, temporary storage, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."
- H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
- I. Installer:
 - 1. An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 2. The term "experienced," when used with the term "Installer," means having a minimum of five previous projects similar in size and scope to this Project, being familiar with the

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special requirements indicated, and having complied with requirements of the authority having jurisdiction.

3. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
- J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land on which the Project is to be built.
 1. If areas available are not indicated, they will be as mutually agreed by Owner and Contractor at Preconstruction Conference and as modified during construction.
- K. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION:

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16-Division format and MASTERFORMAT numbering system.
- B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 1. Abbreviated Language:
 - a. Language used in Specifications and other Contract Documents is the abbreviated type. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated shall be interpolated as the sense required. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so indicates.
 2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.

1.4 INDUSTRY STANDARDS:

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with the standard in effect as of the date of the Contract Documents.

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C. Conflicting Requirements:

1. Where compliance with two or more standards is specified, and the standards may establish different or conflicting requirements for minimum quantities or quality levels. Refer requirements that are different, but apparently equal, and uncertainties to the Architect for a decision before proceeding.
2. 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. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

D. Copies of Standards:

1. Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
2. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

1.5 DRAWING SYMBOLS:

- A. General: Except as otherwise indicated, graphic symbols used on drawings are those symbols recognized in the construction industry for purposes indicated. Where not otherwise noted, symbols are defined by "Architectural Graphic Standards", published by John Wiley & Sons, Inc., seventh edition.
- B. Mechanical/Electrical Drawings: Graphic symbols used on mechanical and electrical drawings are generally aligned with symbols recommended by ASHRAE. Where appropriate, these symbols are supplemented by more specific symbols as recommended by other recognized technical associations including ASME, ASPE, IEEE and similar organizations. Refer instances of uncertainty to the Architect/Engineer for clarification before proceeding.

1.6 SUBMITTALS:

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

PART 2 - PRODUCTS: Not Applicable.

PART 3 - EXECUTION Not Applicable.

END OF REFERENCE STANDARDS AND DEFINITIONS

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SECTION 012000 PRICE AND PAYMENT PROCEEDURES

PART 1- GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

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

1.03 DEFINITIONS

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

1.04 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate 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. Submittals Schedule.
 - c. 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 the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Contractor's name and address.
 - c. Date of submittal.
 - 2. Submit draft of Schedule of Values that will accompany Application for Payment.
 - 3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.

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- c. Name of subcontractor.
- d. Name of manufacturer or fabricator.
- e. Name of supplier.
- f. Change Orders (numbers) that affect value.
- g. Dollar value.

- 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
- 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate. Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training in the amount of 5 percent of the Contract Sum.
- 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
- 6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
- 7. 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.
- 8. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
- 9. 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.
- 10. 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.

1.05 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by approving authority and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

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- C. **Payment Application Forms:** Use Application and Certificate for Payment form stipulated in front-end documents as form for Applications for Payment.
- D. **Application Preparation:** Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Approving authority 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.
- E. **Transmittal:** Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. **Waivers of Mechanic's Lien:** With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
 - 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- G. **Initial Application for Payment:** Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule (preliminary if not final).
 - 4. Products list.
 - 5. Schedule of unit prices.
 - 6. Submittals Schedule (preliminary if not final).
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of building permits.
 - 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 - 11. Initial progress report.
 - 12. Report of preconstruction conference.
 - 13. Certificates of insurance and insurance policies.
 - 14. Performance and payment bonds.
 - 15. Data needed to acquire Owner's insurance.

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16. Initial settlement survey and damage report if required.
- H. Application for Payment at Substantial Completion: After issuing 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.
- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Contractor's Affidavits of Payment of Debts and Claims, Release of Liens, and Consent of Surety to Final Payment.
 5. Evidence that claims have been settled.
 6. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

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SECTION 012100

ALLOWANCES AND UNIT PRICES

PART 1- GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions and Division-1 Specifications sections, apply to work of this section.
 - 1. Coordinate allowance work with related work to ensure that it is completely integrated and interfaced with related work.
 - 2. **Include in Base Bid.**
 - 3. Include 10% overhead and profit for allowances in base bid and not as a part of the allowance.
 - 4. Installation for allowances and applicable taxes shall be included in base bid.
 - 5. Costs for delivery to job site shall not be included. This cost to be determined based upon direct shipping cost from point of origin and shall be added as change order. Contractor shall not add for overhead and profit of shipping costs.

1.2 DESCRIPTION OF REQUIREMENTS

- A. Definitions and Explanations: Certain requirements of the work related to each allowance are shown and specified in contract documents. The allowance has been established in lieu of additional requirements for that work, and further requirements thereof (if any) will be issued by change order.
- B. Types of allowances scheduled herein for the work included the following:
 - 1. Unit cost allowances.
 - 2. Lump sum allowances.
- C. Selection and Purchase
 - 1. At earliest feasible date after award of Contract, advise Architect/Engineer of scheduled date when final selection and purchase of each product or system described by each allowance must be accomplished in order to avoid delays in performance of work.
 - 2. As requested by the Architect/Engineer, obtain and submit proposals for the work of each allowance for use in making final selections; include recommendations for selection which are relevant to the proper performance of the work.

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3. Purchase products and systems as specified, and as selected (in writing) by the Architect/Engineer.
 4. Submit proposals and recommendations, for purchase of products or systems of allowances in form specified for change orders
- D. **Change Order Data:** Include in each change order proposal both the quantities of products being purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey-of-requirements data to substantiate quantities. Indicate applicable taxes, delivery charges, amounts of applicable trade discounts, and other relevant details as requested by the Architect.
1. Each change order amount for allowances shall be based on the unit price difference between the actual purchase amount and the allowance, multiplied by the final measure or count of work-in-place, with reasonable allowances, where applicable, for cutting losses, tolerances, mixing wastes, normal product imperfections and similar margins.
 2. When requested, prepare explanations and documentations to substantiate the quantities, costs, and margins as claimed.
- E. **Change Order Mark-Up:**
1. Except as otherwise indicated, comply with provisions of General Conditions. For each allowance, Contractor's claims for increased costs (for either purchase amount or Contractor's handling, labor, installation, overhead, and profit), because of a change in scope or nature of the allowance work as described in contract documents, must be submitted within 30 days of initial change order authorizing work to proceed on that allowance; otherwise, such claims will be rejected.
 2. Where it is not economically feasible to return unused material to the manufacturer/supplier for credit, prepare unused material for the Owner's storage, and deliver to the Owner's storage space as directed. Otherwise, disposal of excess material is the Contractor's responsibility.
- F. **Time and Allowance Amounts:**
1. Nothing in the Bid or Contract Documents shall be so constructed or interpreted as to provide a Contract time extension, due to use or non-use of any Allowance amount.
 2. Nothing in the Bid or Contract documents shall be so constructed or interpreted as to allow unused Allowances or any portion thereof, nor any overhead and profit therefore to be retained by or paid to the Contractor.
 - a. Amount of unused allowances to be returned shall include unused amount plus 10% overhead and profit.

PART 2 - PRODUCTS

Not Applicable.

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PART 3 – EXECUTION

3.1 SCHEDULE OF ALLOWANCES – INCLUDE IN BASE BID

A. ELECTRICAL LIGHTING FIXTURES

1. **Allow the following costs for the purchase of lighting fixtures, including purchase and applicable sales taxes. Installation is to be included in Base Bid.**

A. FIXTURE DB/DBA/DBB ALLOW ALLOW \$425 EA. FIXTURE

B. FIXTURE LP ALLOW \$1,200 PER FIXTURE

C. FIXTURE PA ALLOW \$1,200 PER FIXTURE

D. FIXTURE PC ALLOW \$2,800 PER FIXTURE

E. FIXTURE PL ALLOW \$3,200 PER FIXTURE

B. KITCHEN BACKSPLASH AND COUNTERTOPS

1. **Allow the following costs for the purchase of Kitchen Backsplash and Countertop. Allow 10% coverage for material waste.**

A. ALLOW \$35.00 FOR KITCHEN BACKSPLASH AT LOCATIONS SHOWN ON PLANS AND ELEVATIONS. APPROX. SIZE OF TILE TO BE 3" X 6", SHEET SIZE APPROX. 12" X 12"

B. ALLOW \$100.00 PER SF FOR MILLWORK COUNTERTOPS

C. BATHROOMS

1. **Allow the following costs for the purchase of Bathroom Flooring and Wall Tile. Allow 10% coverage for material waste.**

A. FOR RESTROOMS 123 AND 124 ALLOW \$40.00 PER SF FOR FLOOR AND WALL TILE.

B. FOR RESTROOMS 116, 117, 127 AND 124 ALLOW \$30.00 PER SF FOR FLOOR AND WALL TILE.

C. FOR DRESSING ROOMS 112 AND 113 ALLOW \$40.00 PER SF FOR FLOOR AND WALL TILE.

D. EXTERIOR FINISHES

A. BRICK ALLOW \$650.00 PER THOUSAND QUEEN SIZE AND \$18.00 PER BAG FOR TYPE N MORTAR

B. NATURAL STONE ALLOW \$10.00 PER SF AND \$18.00 PER BAG FOR TYPE N MORTAR

C. PORCH AND PLAZA PAVERS ALLOW \$20.00 PER SF AND \$18.00 PER BAG FOR MORTAR.

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Electronic document submittal service.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Submittals for review, information, and project closeout.
- E. Number of copies of submittals.
- F. Requests For Information
- G. Submittal procedures (Including Submittal Numbering/Tracking Guide and form for Transmittal).

1.02 RELATED SECTIONS

- A. Section 01700 - Execution Requirements: Additional coordination requirements.
- B. Section 01780 - Closeout Submittals: Project record documents.

1.03 PROJECT COORDINATION

- A. Project Coordinator: Architect.
- B. Cooperate with the Project Coordinator and Owner in allocation of mobilization areas of site; for field offices and sheds, for traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator and Owner.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator and Owner for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions specified in Project Manual.
- G. Make the following types of submittals to Architect:
 - 1. Requests for interpretation.
 - 2. Requests for substitution.

3. Shop drawings, product data, and samples.
4. Test and inspection reports.
5. Manufacturer's instructions and field reports.
6. Applications for payment and change order requests.
7. Progress schedules.
8. Coordination drawings.
9. Closeout submittals.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
 1. Besides submittals for review, information, and closeout, this procedure applies to requests for information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, and any other document any participant wishes to make part of the project record.
 2. Contractor and Architect are required to use this service.
 3. It is Contractor's responsibility to submit documents in PDF format.
 4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
 5. Users of the service need an email address, Internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 6. Paper document transmittals will not be reviewed; emailed PDF documents will not be reviewed.
 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements to not apply to samples or color selection charts.
- B. Cost: The cost of the service is to be paid by Contractor; include the cost of the service in the contract sum.
- C. Submittal Service: The selected service is:
 1. Submittal Exchange (Phone: 1-800-714-0024): www.submittalexchange.com.
- D. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of Architect and Contractor participating; further training is the responsibility of the user of the service.
- E. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

3.02 PRECONSTRUCTION MEETING

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

3.03 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Architect, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to Work.

- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to Architect, using the submittal numbering tracking system, for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01780 - CLOSEOUT SUBMITTALS.

3.05 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- B. Submit for Owner's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:

1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit three more copies than Contractor needs returned: the Contractor shall make their own copies from original returned by the Architect; three copies will be retained by the Architect.
 2. Larger Sheets, Not Larger Than 36 x 48 inches: Submit four opaque reproductions; the Contractor shall make their own copies from original returned by the Architect; three copies will be retained by the Architect.
- B. Documents for Information: Submit three copies.
- C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
1. After review, produce duplicates.
 2. Retained samples will not be returned to Contractor unless specifically so stated.
- E. Refer to Section 01015 - "Special Conditions" for additional information and requirements.

3.08 REQUEST FOR INFORMATION

- A. Send requests for information (RFIs) to Architect following the example form included at the end of this section.
- B. Sequentially number the Requests for Information.

3.09 SUBMITTAL PROCEDURES

- A. Approved form.
- B. Transmit each submittal. Sequentially number each transmittal form according to the example shown on the sample Transmittal form provided at the end of this Section. Include the date, project number and name along with number of copies submitted.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to Architect at business address.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

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- I. Provide space for Contractor and Architect review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

END OF SECTION 013000

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SECTION 014000 QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Quality assurance submittals.
- B. Mock-ups.
- C. Control of installation.
- D. Tolerances.
- E. Testing and inspection services.
- F. Manufacturers' field services.

1.02 RELATED REQUIREMENTS

- A. Section 01095 - Reference Standards and Definitions.
- B. Section 01300 - Administrative Requirements: Submittal procedures.
- C. Section 01600 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008.
- B. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2011.
- C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2009.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2010.
- E. ASTM E329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2011.
- F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2009.

1.04 SUBMITTALS

- A. Testing Agency Qualifications:

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1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Conformance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

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- G. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
 2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.05 TESTING AND INSPECTION AGENCIES

- A. As indicated in individual specification sections, Owner or Contractor shall employ and pay for services of an independent testing agency to perform specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Contractor Employed Agency:
1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM C1021, ASTM C1077, and ASTM C1093.
 2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.
 3. Laboratory: Authorized to operate in the State in which the Project is located.
 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 CONTROL OF INSTALLATION

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

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3.02 MOCK-UPS

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.03 TOLERANCES

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

3.04 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 - 6. Perform additional tests and inspections required by Architect.
 - 7. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.

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2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Price.

3.05 MANUFACTURERS' FIELD SERVICES

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

3.06 DEFECT ASSESSMENT

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

END OF SECTION

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**SECTION 015000
TEMPORARY FACILITIES**

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers, enclosures, and fencing.
- E. Security requirements.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Field offices.

1.02 RELATED REQUIREMENTS

- A. Section 01585 - Project Signs.

1.03 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Existing facilities may not be used.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.04 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
- B. Telecommunications services shall include:
 - 1. Telephone Land Lines: One line, minimum; one handset per line.
 - 2. Internet Connections: Minimum of one; DSL modem or faster.
 - 3. Cellular phones are an acceptable substitute for items 1 & 2, provided they fulfill requirements of same.

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1.05 TEMPORARY SANITARY FACILITIES

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

1.06 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.07 FENCING

- A. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks. Provide gates as required by Contractor and/or authorities having jurisdiction, with all related safety and warning signs.
 - 1. Fencing shall be at least 11-1/2 gauge galvanized chain-link fencing, securely held in place by posts, braces, rails, etc.
- B. Fence shall be approximately 30-feet from perimeter of buildings, unless Drawings indicate otherwise. Extent of fencing shall be as required to maintain a secure worksite.
- C. All such fencing shall be removed upon completion of the work of this project, removed from the site, and any post holes filled and compacted same as adjacent grade or paving, by the Contractor.
- D. Responsibility and maintenance of such fencing and areas within such fencing shall be held by this Contractor beginning at the date of its erection and until its removal, close to the date of project completion.

1.08 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.09 SECURITY

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

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1.10 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic.
- F. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.11 WASTE REMOVAL

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

1.12 PROJECT SIGNS - See Section 01585

1.13 FIELD OFFICES

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.
- C. Locate offices a minimum distance of 30 feet from existing and new structures.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.
- B. Remove underground installations to a minimum depth of 2 feet.
- C. Clean and repair damage caused by installation or use of temporary work.

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D. Restore existing facilities used during construction to original condition.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

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SECTION 016000 PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Procedures for Owner-supplied products.
- F. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01400 - Quality Requirements: Product quality monitoring.

1.03 SUBMITTALS

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

PART 2 - PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

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- B. Do not use products having any of the following characteristics:
 - 1. Made of wood from newly cut old growth timber.
- C. Where all other criteria are met, Contractor shall give preference to products that:
 - 1. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 2. Have longer documented life span under normal use.
 - 3. Result in less construction waste.
 - 4. Are made of vegetable materials that are rapidly renewable.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 - EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

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D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

E. Substitution Submittal Procedure:

1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - a. Use Substitution Request form attached at end of this Section.
2. Submit with cover letter signed by authorized person(s) which outlines the purpose of the submittal, Architect's specifications which apply, and each variation from the original specification.
3. Submit shop drawings, product data (all current and relevant manufacturer's published data), certified test results attesting to the proposed product equivalence, and additional information as required so that a review can be quickly made by comparing the submittal item for item to the original specification. Include samples and other data as required for the original item, as a minimum. Burden of proof is on proposer.
4. The Architect will notify Contractor in writing of decision to accept or reject request.

3.02 OWNER-SUPPLIED PRODUCTS

A. Owner's Responsibilities:

1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
2. Arrange and pay for product delivery to site.
3. On delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
5. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:

1. Review Owner reviewed shop drawings, product data, and samples.
2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

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- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

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SUBSTITUTION REQUEST

Project: _____ Substitution Request Number: _____

From: _____
To: _____ Date: _____
Attn: _____ A/E Project No.: _____
Re: _____ Contract For: _____

Specification Title: _____ Description: _____
Section: _____ Page and Paragraph: _____

Proposed Substitution: _____

Trade Name: _____

Manufacturer: _____ Model No.: _____

Mfg. Address _____ City, State, zip: _____ Phone: _____

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

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

The Undersigned certifies:

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

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Submitted by: _____

_____, Signed by: _____, Firm: _____

Address: _____

Telephone: _____ E-mail: _____

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specifications, Substitution
- ☐ Procedures. Substitution approved as noted - Make submittals in accordance with
- ☐ Specifications Substitution Procedures. Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____

Date: _____

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

INCOMPLETE INFORMATION WILL BE GROUNDS FOR REJECTION

PRODUCT REQUIREMENTS

SECTION 016000

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**SECTION 017000
EXECUTION AND CLOSEOUT REQUIREMENTS**

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 078400 - Firestopping.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. **New Materials:** As specified in product sections; match existing products and work for patching and extending work.
- B. **Type and Quality of Existing Products:** Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. **Product Substitution:** For any proposed change in materials, submit request for substitution described in Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. **Prior to Cutting:** Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.

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3. Provide openings for penetration of mechanical, electrical, and other services.
 4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-complying work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 078400, to full thickness of the penetrated element.
- I. Patching:
1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

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3.07 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.08 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems, and _____.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.09 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION

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SECTION 017419 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Contractor Reporting Responsibilities: Submit periodic Waste Disposal Reports; report landfill disposal, incineration, recycling, salvage, and reuse regardless of to whom the cost or savings accrues; use the same units of measure on required reports.
- E. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- F. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. Section 015000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- C. Section 016000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- D. Section 017000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.

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- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
 - 1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
 - 2. Submit Report on a form acceptable to Owner.
 - 3. Landfill Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
 - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - 4. Incinerator Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
 - c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - 5. Recycled and Salvaged Materials: Include the following information for each:
 - a. Identification of material, including those retrieved by installer for use on other projects.
 - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
 - c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
 - 6. Material Reused on Project: Include the following information for each:
 - a. Identification of material and how it was used in the project.
 - b. Amount, in tons or cubic yards.
 - c. Include weight tickets as evidence of quantity.
 - 7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

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PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 013000 for additional requirements for project meetings, reports, submittal procedures, and project documentation
- B. See Section 015000 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 016000 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 017000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning

2.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
 - 1. Prebid meeting.
 - 2. Preconstruction meeting.
 - 3. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
 - 1. Provide containers as required.
 - 2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
 - 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site

END OF SECTION

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SECTION 019113 GENERAL COMMISSIONING REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Commissioning is intended to achieve the following specific objectives; this section specifies the Contractor's responsibilities for commissioning:
 - 1. Verify that the work is installed in accordance with Contract Documents and the manufacturer's recommendations and instructions, and that it receives adequate operational checkout prior to startup: Startup reports and Prefunctional Checklists executed by Contractor are utilized to achieve this.
 - 2. Verify and document that functional performance is in accordance with Contract Documents: Functional Tests executed by Contractor and witnessed by the Commissioning Authority are utilized to achieve this.
 - 3. Verify that operation and maintenance manuals submitted to Owner are complete: Detailed operation and maintenance (O&M) data submittals by Contractor are utilized to achieve this.
 - 4. Verify that the Owner's operating personnel are adequately trained: Formal training conducted by Contractor is utilized to achieve this.
- B. The Commissioning Authority directs and coordinates all commissioning activities; this section describes some but not all of the Commissioning Authority's responsibilities.

1.02 RELATED REQUIREMENTS

- A. Section 017800 - Closeout Submittals: Scope and procedures for operation and maintenance manuals and project record documents.

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required Functional Testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Calibration Tolerances: Provide testing equipment of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified. If not otherwise noted, the following minimum requirements apply:
 - 1. Temperature Sensors and Digital Thermometers: Certified calibration within past year to accuracy of 0.5 degree F and resolution of plus/minus 0.1 degree F.
 - 2. Pressure Sensors: Accuracy of plus/minus 2.0 percent of the value range being measured (not full range of meter), calibrated within the last year.
 - 3. Calibration: According to the manufacturer's recommended intervals and when dropped or damaged; affix calibration tags or keep certificates readily available for inspection.
- C. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.
- D. Dataloggers: Independent equipment and software for monitoring flows, currents, status, pressures, etc. of equipment.
 - 1. Dataloggers required to for Functional Tests will be provided by the Commissioning Authority and will not become the property of Owner

PART 3 EXECUTION

3.01 COMMISSIONING PLAN

- A. Commissioning Authority has prepared the Commissioning Plan.
 - 1. Attend meetings called by the Commissioning Authority for purposes of completing the commissioning plan

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2. Require attendance and participation of relevant subcontractors, installers, suppliers, and manufacturer representatives.
- B. Contractor is responsible for compliance with the Commissioning Plan.
- C. Commissioning Plan: The commissioning schedule, procedures, and coordination requirements for all parties in the commissioning process.
- D. Commissioning Schedule.
 1. Submit anticipated dates of startup of each item of equipment and system to Commissioning Authority within 60 days after award of Contract.
 2. Re-submit anticipated startup dates monthly, but not less than 4 weeks prior to startup.
 3. Prefunctional Checklists and Functional Tests are to be performed in sequence from components, to subsystems, to systems.
 4. Provide sufficient notice to Commissioning Authority for delivery of relevant Checklists and Functional Test procedures, to avoid delay.

3.02 STARTUP PLANS AND REPORTS

- A. Startup Plans: For each item of equipment and system for which the manufacturer provides a startup plan, submit the plan not less than 8 weeks prior to startup.
- B. Startup Reports: For each item of equipment and system for which the manufacturer provides a startup checklist (or startup plan or field checkout sheet), document compliance by submitting the completed startup checklist prior to startup, signed and dated by responsible entity.
- C. Submit directly to the Commissioning Authority.

3.03 PREFUNCTIONAL CHECKLISTS

- A. A Prefunctional Checklist is required to be filled out for each item of equipment or other assembly specified to be commissioned.
 1. No sampling of identical or near-identical items is allowed.
 2. These checklists do not replace manufacturers' recommended startup checklists, regardless of apparent redundancy.
 3. Prefunctional Checklist forms will not be complete until after award of the contract; the following types of information will be gathered via the completed Checklist forms:
 - a. Certification by installing contractor that the unit is properly installed, started up, and operating and ready for Functional Testing.
 - b. Confirmation of receipt of each shop drawing and commissioning submittal specified, itemized by unit.
 - c. Manufacturer, model number, and relevant capacity information; list information "as specified," "as submitted," and "as installed."
 - d. Serial number of installed unit.
 - e. List of inspections to be conducted to document proper installation prior to startup and Functional Testing; these will be primarily static inspections and procedures; for equipment and systems may include normal manufacturer's start-up checklist items and minor testing.
 - f. Sensor and actuator calibration information.
- B. Contractor is responsible for filling out Prefunctional Checklists, after completion of installation and before startup; witnessing by the Commissioning Authority is not required unless otherwise specified.
 1. Each line item without deficiency is to be witnessed, initialed, and dated by the actual witness; checklists are not complete until all line items are initialed and dated complete without deficiencies.
 2. Checklists with incomplete items may be submitted for approval provided the Contractor attests that incomplete items do not preclude the performance of safe and reliable Functional Testing; re-submission of the Checklist is required upon completion of remaining items.
 3. Individual Checklists may contain line items that are the responsibility of more than one installer. Contractor shall assign responsibility to appropriate installers or subcontractors with identification recorded on the form.

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4. If any Checklist line item is not relevant, record reasons on the form.
 5. Contractor may independently perform startup inspections and/or tests, at Contractor's option.
 6. Regardless of these reporting requirements, Contractor is responsible for correct startup and operation.
 7. Submit completed Checklists to Commissioning Authority within two days of completion.
- C. Commissioning Authority is responsible for furnishing the Prefunctional Checklists to Contractor.
1. Initial Drafts: Contractor is responsible for initial draft of Prefunctional Checklist where so indicated in Contract Documents.
 2. Provide all additional information requested by Commissioning Authority to aid in preparation of checklists, such as shop drawing submittals, manufacturers' startup checklists, and O&M data.
 3. Commissioning Authority may add any relevant items deemed necessary regardless of whether they are explicitly mentioned in Contract Documents or not.
 4. When asked to review the proposed Checklists, do so in a timely manner.
- D. Commissioning Authority Witnessing: Required for:
1. Each piece of primary equipment, unless sampling of multiple similar units is allowed by the commissioning plan.
 2. A sampling of non-primary equipment, as allowed by the commissioning plan.
- E. Deficiencies: Correct deficiencies and re-inspect or re-test, as applicable, at no extra cost to Owner.
1. If difficulty in correction would delay progress, report deficiency to the Commissioning Authority immediately.

3.04 FUNCTIONAL TESTS

- A. A Functional Test is required for each item of equipment, system, or other assembly specified to be commissioned, unless sampling of multiple identical or near-identical units is allowed by the final test procedures.
- B. Contractor is responsible for execution of required Functional Tests, after completion of Prefunctional Checklist and before closeout.
- C. Commissioning Authority is responsible for witnessing and reporting results of Functional Tests, including preparation and completion of forms for that purpose.
- D. Contractor is responsible for correction of deficiencies and re-testing at no extra cost to Owner; if a deficiency is not corrected and re-tested immediately, the Commissioning Authority will document the deficiency and the Contractor's stated intentions regarding correction.
1. Deficiencies are any condition in the installation or function of a component, piece of equipment or system that is not in compliance with Contract Documents or does not perform properly.
 2. When the deficiency has been corrected, the Contractor completes the form certifying that the item is ready to be re-tested and returns the form to the Commissioning Authority; the Commissioning Authority will reschedule the test and the Contractor shall re-test.
 3. Identical or Near-Identical Items: If 10 percent, or three, whichever is greater, of identical or near-identical items fail to perform due to material or manufacturing defect, all items will be considered defective; provide a proposal for correction within 2 weeks after notification of defect, including provision for testing sample installations prior to replacement of all items.
 4. Contractor shall bear the cost of Owner and Commissioning Authority personnel time witnessing re-testing.
 5. Contractor shall bear the cost of Owner and Commissioning Authority personnel time witnessing re-testing if the test failed due to failure to execute the relevant Prefunctional Checklist correctly, if the test failed for reasons that would not have been identified in the Prefunctional Checklist process. Contractor shall bear the cost of the second and subsequent re-tests.

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- E. Functional Test Procedures:
 - 1. Some test procedures are included in Contract Documents; where Functional Test procedures are not included in Contract Documents test procedures will be determined by the Commissioning Authority with input by and coordination with Contractor
 - 2. Examples of Functional Testing
 - a. Test the dynamic function and operation of equipment and systems (rather than just components) using manual (direct observation) or monitoring methods under full operation (e.g., the chiller pump is tested interactively with the chiller functions to see if the pump ramps up and down to maintain the differential pressure setpoint).
 - b. Systems are tested under various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, fire alarm, power failure, etc.
 - c. Systems are run through all the HVAC control system's sequences of operation and components are verified to be responding as the sequence's state.
 - d. Traditional air or water test and balancing (TAB) is not Functional Testing; spot checking of TAB by demonstration to the Commissioning Authority is Functional Testing.
- F. Deferred Functional Tests: Some tests may need to be performed later, after substantial completion, due to partial occupancy, equipment, seasonal requirements, design or other site conditions; performance of these tests remains the Contractor's responsibility regardless of timing.

3.05 SENSOR AND ACTUATOR CALIBRATION

- A. Calibrate all field-installed temperature, relative humidity, carbon monoxide, carbon dioxide, and pressure sensors and gauges, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. Sensors installed in the unit at the factory with calibration certification provided need not be field calibrated.
- B. Calibrate using the methods described below; alternate methods may be used, if approved by Commissioning Authority and Owner beforehand. See PART 2 for test instrument requirements. Record methods used on the relevant Prefunctional Checklist or other suitable forms, documenting initial, intermediate and final results.
- C. All Sensors:
 - 1. Verify that sensor location is appropriate and away from potential causes of erratic operation.
 - 2. Verify that sensors with shielded cable are grounded only at one end.
 - 3. For sensor pairs that are used to determine a temperature or pressure difference, for temperature make sure they are reading within 0.2 degree F of each other, and for pressure, within tolerance equal to 2 percent of the reading, of each other.
 - 4. Tolerances for critical applications may be tighter.
- D. Sensors Without Transmitters - Standard Application:
 - 1. Make a reading with a calibrated test instrument within 6 inches of the site sensor.
 - 2. Verify that the sensor reading, via the permanent thermostat, gauge or building automation system, is within the tolerances in the table below of the instrument-measured value.
 - 3. If not, install offset, calibrate or replace sensor.
- E. Sensors With Transmitters - Standard Application:
 - 1. Disconnect sensor.
 - 2. Connect a signal generator in place of sensor
 - 3. Connect ammeter in series between transmitter and building automation system control panel.
 - 4. Using manufacturer's resistance-temperature data, simulate minimum desired temperature.
 - 5. Adjust transmitter potentiometer zero until 4 mA is read by the ammeter

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6. Repeat for the maximum temperature matching 20 mA to the potentiometer span or maximum and verify at the building automation system.
 7. Record all values and recalibrate controller as necessary to comply with specified control ramps, reset schedules, proportional relationship, reset relationship and P/I reaction.
 8. Reconnect sensor.
 9. Make a reading with a calibrated test instrument within 6 inches of the site sensor.
 10. Verify that the sensor reading, via the permanent thermostat, gauge or building automation system, is within the tolerances in the table below of the instrument-measured value.
 11. If not, replace sensor and repeat.
 12. For pressure sensors, perform a similar process with a suitable signal generator.
- F. Sensor Tolerances for Standard Applications: Plus/minus the following maximums
1. Watthour, Voltage, Amperage: 1 percent of design.
 2. Pressure, Air, Water, Gas: 3 percent of design.
 3. Air Temperatures (Outside Air, Space Air, Duct Air): 0.4 degrees F.
 4. Relative Humidity: 4 percent of design.
 5. Barometric Pressure: 0.1 inch of Hg.
 6. Flow Rate, Air: 10 percent of design.
 7. Flow Rate, Water: 4 percent of design.
 8. AHU Wet Bulb and Dew Point: 2.0 degrees F.
- G. Critical Applications: For some applications more rigorous calibration techniques may be required for selected sensors. Describe any such methods used on an attached sheet.
- H. Valve/Damper Stroke Setup and Check:
1. For all valve/damper actuator positions checked, verify the actual position against the control system readout.
 2. Set pump/fan to normal operating mode.
 3. Command valve/damper closed; visually verify that valve/damper is closed and adjust output zero signal as required.
 4. Command valve/damper to open; verify position is full open and adjust output signal as required.
 5. Command valve/damper to a few intermediate positions.
 6. If actual valve/damper position does not reasonably correspond, replace actuator or add pilot positioner (for pneumatics).
- I. Isolation Valve or System Valve Leak Check: For valves not associated with coils.
1. With full pressure in the system, command valve closed.
 2. Use an ultra-sonic flow meter to detect flow or leakage.

3.06 TEST PROCEDURES - GENERAL

- A. Provide skilled technicians to execute starting of equipment and to execute the Functional Tests. Ensure that they are available and present during the agreed upon schedules and for sufficient duration to complete the necessary tests, adjustments and problem-solving.
- B. Provide all necessary materials and system modifications required to produce the flows, pressures, temperatures, and conditions necessary to execute the test according to the specified conditions. At completion of the test, return all affected equipment and systems to their pre-test condition.
- C. Sampling: Where Functional Testing of fewer than the total number of multiple identical or near-identical items is explicitly permitted, perform sampling as follows:
1. Identical Units: Defined as units with same application and sequence of operation; only minor size or capacity difference.
 2. Sampling is not allowed for:
 - a. Major equipment.
 - b. Life-safety-critical equipment
 - c. Prefunctional Checklist execution

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3. XX = the percent of the group of identical equipment to be included in each sample, defined for specific type of equipment.
 4. YY = the percent of the sample that if failed will require another sample to be tested, defined for specific type of equipment.
 5. Randomly test at least XX percent of each group of identical equipment, but not less than three units. This constitutes the "first sample."
 6. If YY percent of the units in the first sample fail, test another XX percent of the remaining identical units.
 7. If YY percent of the units in the second sample fail, test all remaining identical units.
 8. If frequent failures occur, resulting in more troubleshooting than testing, the Commissioning Authority may stop the testing and require Contractor to perform and document a checkout of the remaining units prior to continuing testing.
- D. **Manual Testing:** Use hand-held instruments, immediate control system readouts, or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation").
- E. **Simulating Conditions:** Artificially create the necessary condition for the purpose of testing the response of a system; for example apply hot air to a space sensor using a hair dryer to see the response in a VAV box.
- F. **Simulating Signals:** Disconnect the sensor and use a signal generator to send an amperage, resistance or pressure to the transducer and control system to simulate the sensor value.
- G. **Over-Writing Values:** Change the sensor value known to the control system in the control system to see the response of the system; for example, change the outside air temperature value from 50 degrees F to 75 degrees F to verify economizer operation.
- H. **Indirect Indicators:** Remote indicators of a response or condition, such as a reading from a control system screen reporting a damper to be 100 percent closed, are considered indirect indicators.
- I. **Monitoring:** Record parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of the relevant control systems; where monitoring of specific points is called for in Functional Test Procedures:
1. All points that are monitored by the relevant control system shall be trended by Contractor; at the Commissioning Authority's request, Contractor shall trend up to 20 percent more points than specified at no extra charge.
 2. Other points will be monitored by the Commissioning Authority using dataloggers.
 3. At the option of the Commissioning Authority, some control system monitoring may be replaced with datalogger monitoring.
 4. Provide hard copies of monitored data in columnar format with time down left column and at least 5 columns of point values on same page.
 5. Graphical output is desirable and is required for all output if the system can produce it.
 6. Monitoring may be used to augment manual testing.

3.07 OPERATION AND MAINTENANCE MANUALS

- A. See Section 017800 - Closeout Submittals for additional requirements.
- B. Add design intent documentation furnished by Architect to manuals prior to submission to Owner.
- C. Submit manuals related to items that were commissioned to Commissioning Authority for review, make changes recommended by Commissioning Authority.
- D. Commissioning Authority will add commissioning records to manuals after submission to Owner.

END OF SECTION

SECTION 03 30 00
CAST-IN-PLACE-CONCRETE

1.GENERAL

1.1. SUMMARY

- A. Provide cast-in-place concrete, reinforcing and accessories.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
- C. Mix Design: Submit for approval mix design proposed for use.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Testing: Employ an independent testing agency acceptable to Owner to design concrete mixes and to perform material evaluation tests. Provide 7 and 28 day cylinder tests. Comply with ASTM C 143, C 173, C 31 and C 39.
- C. Standards:
1. ACI 301, Specifications for structural Concrete for Buildings.
2. ACI 318, Building Code Requirements for Reinforced Concrete, and CRSI Manual of Standard Practice.
- D. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
- E. Floor Flatness and Levelness Tolerances:
1. Subfloors Under Materials Such as Concrete Toppings, Ceramic Tile, and Sand Bed Terrazzo: ACI 302.1R and ASTM E 1155, floor flatness (Ff) of 15, floor levelness (Fl) of 13.
2. Subfloors Under Materials Such As Vinyl Tile, Epoxy Toppings, Paint, and Carpet: ACI 302.1R and ASTM E 1155, floor flatness (Ff) of 20, floor levelness (Fl) of 17.

2.PRODUCTS

2.1. MATERIALS

- A. Cast-In-Place Concrete:
1. Manufacturers: Concrete Color Additives: [Davis Colors](#); [Solomon Colors](#) .
2. Manufacturers: Concrete Forming and Accessories: [Ceme-Tube LLC](#); [MAPEI](#); [Solomon Colors](#); [Spec Formliners, Inc.](#); [US Formliner](#) .
3. Manufacturers: Concrete Formliners for Embedding Brick in Cast-In-Place Concrete: Refer to www.arcata.com/divs/sec/sec03300.html
4. Manufacturers: Concrete Anchoring: Refer to www.arcata.com/divs/sec/sec03300.html
5. Manufacturers: Colored and Imprinted Concrete: Refer to www.arcata.com/divs/sec/

- [sec03300.html](#)
6. Manufacturers: Integral Waterproofing of Concrete: [Xypex Chemical Corp.](#) .
 7. Manufacturers: High Tolerance Floor Treatment: Refer to [www.arcata.com/divs/sec/sec03300.html](#)
 8. Manufacturers: Concrete Finishes: [EPMAR Corporation](#); [RetroPlate Concrete Polishing System](#) .
 9. Manufacturers: Concrete Curing, Sealing and Hardening: [Ashford Formula](#). By [Curecrete](#); [ISE Logik Industries](#); [RetroPlate Concrete Polishing System](#) .
 10. Manufacturers: Cement Grouts, Adhesives and Sealants: Refer to [www.arcata.com/divs/sec/sec03300.html](#)
 11. Manufacturers: Concrete Resurfacing and Rehabilitation: Refer to [www.arcata.com/divs/sec/sec03300.html](#)
 12. Application: Foundations and footings.
 13. Application: Concrete on metal deck.
 14. Application: Exterior site concrete and pads.
 15. Finish for Vertical Surfaces Exposed To View: Smooth rubbed finish.
 16. Finish for Vertical Surfaces Not Exposed To View: As-cast form finish.
 17. Finish for Horizontal Surfaces To Receive Concrete or Mortar Setting Bed: Scratch finish.
 18. Finish for Surfaces to be Exposed to View or Covered with Resilient Flooring, Carpet Tile or Other Thin Finish System: Trowel finish.
 19. Cast-In-Place Concrete Reinforcing and Accessories:
 - a. Concrete Design Mixes: ASTM C 94, 28 day compressive strength suitable for project requirements and site conditions.
 - b. Formwork: Plywood or metal panel formwork sufficient for structural and visual requirements.
 - c. Reinforcing Bars: ASTM A 767, Class II, galvanized.
 - d. Steel Wire: ASTM A 82.
 - e. Steel Wire Fabric: ASTM A 497, welded, deformed.
 - f. Concrete Materials: ASTM C 150, Type I, Portland cement; potable water.
 - g. Concrete Admixtures: Containing less than 0.1 percent chloride ions.
 - h. Reglets: Galvanized sheet steel reglets, minimum 26 gauge (.018 inch).
 - i. Waterstops: Rubber, PVC or self expanding butyl/bentonite waterstops.
 - j. Vapor Retarder: ASTM D 4397 polyethylene sheet, 10 mils.
 - k. Liquid Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class A.
 - l. Underlayment Compound: Free-flowing, self-leveling cement-based compound.
 - m. Bonding Compound: Polyvinyl acetate or acrylic base.
 - n. Epoxy Adhesive: ASTM C 881, two-component material.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with ASTM C 94. Do not change mix design without approval. Calcium chloride admixtures are not permitted.
- B. Chamfer exposed edges/corners to provide straight lines.
- C. Tolerance: Plus 1/8" in 10" for grade, alignment, and straightness.
- D. Construction Joints: Use keyways, continue reinforcement through joint.
- E. Expansion Joints: For exterior work locate 30' o.c. at approved locations. Provide smooth dowels across joint which permit 1" horizontal movement and no vertical shear movement.
- F. Isolation Joints: Provide between slabs and vertical elements such as columns and structural walls.

- G. Control Joints: Provide sawn or tooled joints or removeable insert strips; depth equal to 1/4 slab thickness. Spacing as required and approved.
- H. Wall Finishes: As-cast and patched for concealed work; rubbed smooth, filled and cement paste coated for exposed work.
- I. Slab Finishes: Obtain sample approval before beginning work.
 - 1. Scratch: For surfaces to receive mortar setting beds or cementitious flooring materials.
 - 2. Trowel: Hard, smooth, uniform surface for areas to receive resilient flooring, carpet, or other thin finish material.
 - 3. Broom: After trowel finishing, roughen surface by fine brooming perpendicular to traffic direction for exposed exterior walks, steps and ramps.
 - 4. Non-Slip Aggregate: After trowel finishing, uniformly trowel 25-lbs./100 s. f. of damp non-slip aggregate into surface. Cure, then rub lightly to expose aggregate. Use for interior exposed concrete stairs and ramps.
 - 5. Exposed Aggregate: Use chemical retarder or tamp aggregate into wet concrete and expose by brushing with water. Use where indicated.
 - 6. Hardener Finish: For exposed interior concrete floors. Follow manufacturer's directions.
- J. Cure and protect work. Report defective work in writing.

END OF SECTION

SECTION 04 20 00
UNIT MASONRY

1.GENERAL

1.1. SUMMARY

- A. Provide unit masonry construction.

2.PRODUCTS

2.1. MATERIALS

- A. Clay Masonry Units:
1. Manufacturers: [Belden Brick Company \(The\); Corporate Office & Bowerston Plant; Glen-Gery Corporation; Old Carolina Brick Co.](#) .
 2. Application: Brick veneer on sheathing and wood studs.
 3. Application: Brick and concrete block composite walls.
 4. Application: Brick and concrete block cavity walls.
 5. Size: Queen, 3 inches thick by 2-3/4 inches high by 7 5/8 inches long.
 6. Grade: ASTM C 216, Grade SW, severe weathering type for areas subject to freeze-thaw.
 7. Grade: ASTM C 216, Grade MW, moderate weathering type.
 8. Type: ASTM C 216, Type FBS, for general exposed use.
 9. Type: ASTM C 216, Type FBX, for general use in exposed masonry requiring minimum variations in size and color ranges.
 10. Special Shapes: As required by building configuration.
 11. Bond Pattern: Running bond.
- B. Concrete Masonry Units:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec04800.html
 2. Application: Concrete masonry bearing walls.
 3. Application: Concrete masonry non-bearing partitions.
 4. Concrete Masonry Units: ASTM C 90, 1500 f'm compressive strength:
 - a. Light weight.
 - b. Medium weight.
 - c. Normal weight.
 5. Size: Face dimension of 7-5/8 inches high by 15-5/8 inches long by width required for application.
 6. Concrete Facing Brick: ASTM C 1634.
 7. Special Shapes: As required by building configuration.
 8. Bond Pattern: Running Bond.
 9. Integral Water Repellent: Liquid polymeric admixture.
- C. Limestone Trim Units:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec04800.html
 2. Grade and Color: Select, buff.
 3. Finish: Smooth.
- D. Mortar and Grout for Brick and Concrete Masonry Unit Assemblies:
1. Manufacturers: [Solomon Colors](#) .
 2. Mortar Mix: ASTM C 270, Type S, for reinforced masonry, masonry below grade and masonry in contact with earth and ASTM C 270, Type N, for above-grade loadbearing and nonloadbearing walls and parapet walls and for interior loadbearing and nonloadbearing partitions.
 3. Mortar Materials: Portland cement, ASTM C 150, Type I or II.
 4. Mortar Materials: Masonry cement, ASTM C 91.
 5. Mortar Materials: Ready mixed, ASTM C 207, Type S.

6. Mortar Aggregate: Natural color, ASTM C 144.
 7. Grout Aggregate: ASTM C 404.
 8. Hydrated Lime: ASTM C 207, Type S.
 9. Color: Natural color.
 10. Color: Colored pigmented mortar where exposed at building exterior and natural color elsewhere.
- E. Reinforcing Steel:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec04800.html
 2. Reinforcing Bars: ASTM A 615, Grade 60.
 3. Reinforcing Bars: ASTM A 615, and ASTM A 775, Grade 60 epoxy-coated.
 4. Deformed Reinforcing Wire: ASTM A 496.
 5. Welded Wire Fabric: ASTM A 185, plain.
 6. Welded Wire Fabric: ASTM A 497, deformed.
- F. Reinforcing: Welded wire with deformed side rods.
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec04800.html
 2. Steel Wire: 9 gauge (.1875 inch) galvanized steel.
 3. Steel Wire: 9 gauge (.1875 inch) stainless steel.
 4. Type: Ladder type.
 5. Type: Ladder or truss type.
- G. Ties and Anchors:
1. Manufacturers: [TRUFAST Walls](#) .
 2. Bent Wire Ties: Galvanized steel.
 3. Rigid Anchors: Galvanized steel straps.
 4. Masonry to Concrete Frame: Two-piece galvanized steel anchor.
 5. Masonry to Steel Frame: Anchor with crimped wire anchor section for welding to steel.
 6. Adjustable Masonry Veneer Anchors: Screw-attached two-piece galvanized triangular or rectangular wire tie and metal anchor.
 7. Screws for Steel Studs: ASTM C 954 organic polymer coated steel drill screws.
 8. Screws for Steel Studs: ASTM C 954 stainless steel.
 9. Unit Type Masonry Inserts in Concrete: Malleable iron.
 10. Dovetail Slots: Galvanized sheet metal.
 11. Anchor Bolts: ASTM A 307, Grade A, galvanized.
 12. Post-installed Anchors: Chemical or expansion anchors.
- H. Masonry Accessories:
1. Manufacturers: [TRUFAST Walls](#) .
 2. Cavity Drainage Material
 3. Rubberized-Asphalt or EPDM Flashing with stainless steel drip edge.
 4. Stainless steel or copper-laminated flashing.
 5. Loose-Granular Fill Insulation.
 6. Nonmetallic expansion joint strips.
 7. Preformed control joint gaskets.
 8. Bond breaker strips.
 9. Plastic tubing for weeps.
 10. Cotton sash cord for weeps.
 11. Open head-joint weeps.
 12. Cavity vents.

SECTION 04 42 00
EXTERIOR STONE CLADDING

1.GENERAL

1.1. SUMMARY

- A. Provide exterior cut stonework.

2.PRODUCTS

2.1. MATERIALS

A. Granite:

1. Manufacturers: Refer to www.arcata.com/divs/sec/sec04400.html
2. Application: Window sills.
3. Application: Wall panels.
4. Building Stone Standard: ASTM C 615.
5. Type: Light gray granite with medium grain.
6. Type: Colored granite.
7. Finish: Thermal.
8. Finish: Honed.
9. Finish of Paving, Steps, and Risers: Thermal.
10. Joints: Sealant.
11. Joints: Mortar, ASTM C270, Type S.
 - a. Portland Cement: ASTM C 150, Type I or II.
 - b. Hydrated Lime: ASTM C 207, Type S.
 - c. Aggregate: ASTM C 144.
 - d. Colored Mortar Pigments: Iron oxides and chromium oxides.
 - e. Latex Additive: Water emulsion type.
12. Anchors and Attachments: Stainless steel, ASTM A 666, Type 304.
13. Anchors and Attachments: Hot-dip galvanized steel, ASTM A 36, and ASTM A 153 galvanizing.
14. Framing Support System: Pre-engineered panelized galvanized steel metal grid and stainless.
15. Framing Support System: Galvanized steel framing.
16. Paving Support System: Fixed-height and adjustable pedestals, shims, and spacers.

B. Limestone:

1. Manufacturers: Refer to www.arcata.com/divs/sec/sec04400.html
2. Application: Window sills.
3. Application: Lintels.
4. Building Stone Standard: ASTM C 568.
5. Type: Medium or high density oolitic limestone.
6. Grade and Color: Select, buff.
7. Finish: Smooth.
8. Finish: Plucked.
9. Joints: Sealant.
10. Joints: Mortar, ASTM C270, Type S.
 - a. Portland Cement: ASTM C 150, Type I or II.
 - b. Hydrated Lime: ASTM C 207, Type S.
 - c. Aggregate: ASTM C 144.
 - d. Colored Mortar Pigments: Iron oxides and chromium oxides.
 - e. Latex Additive: Water emulsion type.
11. Anchors and Attachments: Stainless steel, ASTM A 666, Type 304.
12. Anchors and Attachments: Hot-dip galvanized steel, ASTM A 36, and ASTM A 153 galvanizing.
13. Framing Support System: Pre-engineered panelized galvanized steel metal grid and

stainless.

14. Framing Support System: Galvanized steel framing.
15. Paving Support System: Fixed-height and adjustable pedestals, shims, and spacers.

SECTION 04 72 00
CAST STONE MASONRY

1.GENERAL

1.1. SUMMARY

- A. Provide cast stone fabrications.

2.PRODUCTS

2.1. MATERIALS

- A. Cast Stone Applications:
1. Manufacturers: Environmental StoneWorks .
 2. Application: Window sills.
 3. Application: Coping.
 4. Application: Column covers.
 5. Concrete Materials:
 - a. Portland Cement: Portland cement, ASTM C 150, Type I.
 - b. Fine Aggregate for Facing Mixes: ASTM C 33 and colors as needed to produce required cast stone colors.
 - c. Coarse Aggregate: Granite, quartz, or limestone complying with ASTM C 33; gradation as needed to produce required textures and colors as needed to produce required cast stone colors.
 - d. Pigments: ASTM C 979, synthetic mineral-oxide pigments, color stable, nonfading, and resistant to lime and other alkalis.
 6. Concrete Admixtures:
 - a. Chloride Content: Containing less than 0.1 percent chloride ions.
 - b. Air-Entraining Admixture: ASTM C 260.
 - c. Water-Reducing Admixture: ASTM C 494, Type A.
 - d. Water-Reducing, Retarding Admixture: ASTM C 494, Type D.
 - e. Water-Reducing, Accelerating Admixture: ASTM C 494, Type E.
 7. Reinforcement:
 - a. Steel Bars: Deformed steel bars complying with ASTM A 615; galvanized or epoxy-coated reinforcement when covered with less than 1-1/2 inches of cast stone material.
 - b. Epoxy Coating: ASTM A 775.
 - c. Galvanized Coating: ASTM A 767.
 8. Embedded Anchors and Inserts:
 - a. Stainless Steel: ASTM A 240, Type 304.
 - b. Steel: ASTM A 36 and hot-dip galvanized: ASTM A 123.
 9. Mortar and Grout:
 - a. Mortar Mix: ASTM C 270, Type S, for reinforced masonry, masonry below grade and masonry in contact with earth and ASTM C 270, Type N, for above-grade loadbearing and nonloadbearing walls and parapet walls and for interior loadbearing and nonloadbearing partitions.
 - b. Mortar Materials: Portland cement, ASTM C 150, Type I or II.
 - c. Mortar Aggregate: Natural color, ASTM C 144.
 - d. Grout Aggregate: ASTM C 404.
 - e. Hydrated Lime: ASTM C 207, Type S.
 - f. Color: Colored pigmented mortar where exposed at building exterior and natural color elsewhere.
 10. Fabrication Tolerances:
 - a. Variation in Cross Section: Do not exceed 1/8 inch.
 - b. Variation in Length: Do not exceed 1/360 of the length of unit or 1/8 inch.
 - c. Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or 1/8 inch.
 - d. Location of Grooves or Anchorages: Not greater than 1/8 inch on formed

surfaces or 3/8 inch on unformed surfaces.

SECTION 05 12 00
STRUCTURAL STEEL FRAMING

1.GENERAL

1.1. SUMMARY

- A. Provide structural steel assemblies and accessories.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
 - 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
- C. Submit for approval test reports.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Standards: AISC, Code of Standard Practice for Steel Buildings and Bridges, and applicable regulations.
- C. Architecturally Exposed Structural Steel: Comply with fabrication requirements, including tolerance limits, and installation tolerances of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for structural steel identified as architecturally exposed structural steel.
- D. Testing: Independent testing laboratory.
- E. Erection Tolerances: AISC standards.

2.PRODUCTS

2.1. MATERIALS

- A. Structural Steel:
 - 1. Manufacturers: CAST CONNEX; Hayn Enterprises, LLC .
 - 2. Application: Building structure.
 - 3. Application: Architecturally exposed structural steel.
 - 4. Application: Remodeling of existing structural steel systems.
 - 5. Structural Steel Shapes, Plates, and Bars: ASTM A 572.
 - 6. Cold-Formed Steel Tubing: ASTM A 500, Grade B.
 - 7. Hot-Formed Steel Tubing: ASTM A 501.
 - 8. Steel Pipe: ASTM A 53, Type E or S, Grade B; or ASTM A 501.
 - 9. Steel Castings: ASTM A 27, Grade 65-35.
 - 10. Headed Stud-Type Shear Connectors: ASTM A 108, Grade 1015 or 1020.
 - 11. Anchor Bolts: ASTM A 307, nonheaded type.
 - 12. Unfinished Threaded Fasteners: ASTM A 307, Grade A.
 - 13. High-Strength Threaded Fasteners: ASTM A 325 or ASTM A 490, as applicable.
 - 14. Auxiliary Materials:

- a. Direct Tension Indicators: ASTM A 959.
- b. Electrodes for Welding: AWS Code.
- 15. Structural Steel Primer Paint: SSPC - Paint 13, compatible with topcoats.
 - a. Cement Grout: Portland cement, sand.
 - b. Metallic Shrinkage-Resistant Grout: Premixed ferrous aggregate grouting compound ASTM C 1107.
 - c. Nonmetallic Shrinkage-Resistant Grout: Premixed nonmetallic grouting compound, ASTM C 1107.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with AISC codes and specifications, and with AWS "Structural Welding Code".
- B. Employ a registered engineer to check elevations and plumb and level tolerances; certify that installed work is within AISC Standards. Owner may engage testing/inspection agency to inspect welded and bolted connections.
- C. Architecturally exposed steel: Fabricate with special care using materials carefully selected for best appearance. Store materials off ground and keep clean. Cut, fit and assemble work with surfaces smooth, square and with complete contact at joints. Set all cambers up. Weld all work continuously; grind smooth and flush to make seams not visible after priming. Prepare surfaces to comply with SSPC-SP6; apply prime coat within 24 hours after cleaning.
- D. Touch-up field welds and abraded areas with shop primer.

END OF SECTION

SECTION 05 40 00
COLD-FORMED METAL FRAMING

1.GENERAL

1.1. SUMMARY

- A. Provide cold-formed metal framing.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
 - 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
- C. Engineering Certification: Submit for approval engineering certification of deflection criteria.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Standards: AISI, Specification for Design of Cold-Formed Steel Structural Members.
- C. Deflection Criteria for Exterior Masonry Veneer: $L/600$.
- D. Fabrication Tolerances: 1/8 inch in 10 feet.
- E. Erection Tolerances: 1/16 inch from true position.

2.PRODUCTS

2.1. MATERIALS

- A. Cold-Formed Metal Framing:
 - 1. Manufacturers: [Fortress Framing Products](#); [MBA Metal Framing](#); [Mill Steel Framing](#); [Steel Stud Manufacturers Association \(SSMA\)](#); [Super Stud Building Products](#); [Supreme Steel Framing System Association - SSFSA](#); [Telling Industries, LLC](#).
 - 2. Application: Exterior load-bearing steel-stud walls.
 - 3. Application: Interior load-bearing steel-stud walls.
 - 4. Wall Framing: C-shaped load-bearing steel studs.
 - 5. Finish: Galvanized, ASTM A 653, G60.
 - 6. Framing Accessories:
 - a. Supplementary framing.
 - b. Bracing, bridging, and solid blocking.
 - c. Web stiffeners.
 - d. Gusset plates.
 - e. Deflection track and vertical side clips.
 - f. Stud kickers and girts.
 - g. Joist hangers and end closures.
 - h. Reinforcement plates.
 - i. Anchors, clips, and fasteners.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- B. Comply with requirements of ASTM C 1007 for installation of steel studs and accessories and Metal Lath/Steel Framing Association Lightweight Steel Framing Systems Manual.
- C. Restore damaged components. Protect work from damage.

END OF SECTION

SECTION 05 50 00
METAL FABRICATIONS

1.GENERAL

1.1. SUMMARY

- A. Provide metal fabrications.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
 - 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Manufacturers:
 - 1. Metal Fastenings: [Centerline Brackets](#); [Steel Design Solutions](#); [TRUFAST Walls](#) .
 - 2. Metal Ladders: [ALACO Ladder Co.](#); [FIXFAST USA](#); [O'Keeffe's, Inc.](#); [Precision Ladders, LLC](#) .
- B. Metal Fabrication Applications:
 - 1. Application: Rough hardware.
 - 2. Application: Loose steel lintels.
 - 3. Application: Shelf and relieving angles.
 - 4. Application: Miscellaneous framing and supports for suspended toilet partitions.
 - 5. Application: Steel framing and supports for countertops.
 - 6. Application: Prefabricated building columns.
 - 7. Application: Miscellaneous steel trim.
 - 8. Application: Steel angle corner guards.
 - 9. Application: Edgings.
 - 10. Application: Structural steel door frames.
 - 11. Application: Floor plate and supports.
 - 12. Application: Tread plate and supports.
 - 13. Application: Cast nosings, treads, and thresholds.
 - 14. Application: Extruded nosings and treads.
 - 15. Application: Pipe guards.
 - 16. Application: Wheel guards.
 - 17. Application: Pipe bollards.
- C. Stainless Steel Materials:
 - 1. Bar Stock: ASTM A 276, Type 302 or 304.

2. Plate: ASTM A 666, Type 302 or 304.
 3. Rolled-Steel Floor Plate: ASTM A 786.
- D. Aluminum Materials:
1. Extruded Bars and Shapes: ASTM B 221 aluminum alloy.
 2. Rolled Tread Plate: ASTM B 632 aluminum alloy.
 3. Rivets: ASTM B 316, aluminum alloy.
 4. Sheet for Expanded Aluminum Grating: ASTM B 209.
 5. Fasteners: ASTM A 153.
 6. Finish: Clear anodized.
- E. Bronze Materials:
1. Bronze Plate, Sheet, Strip, and Bars: ASTM B 36, Alloy UNS No. C28000.
 2. Bronze Extrusions: ASTM B 455, Alloy UNS No. C38500 84400 (lead semi red brass).
- F. Fasteners:
1. Bolts and Nuts: Hexagon head type, ASTM A 307, Grade A.
 2. Lag Bolts: Square head, FS FF-B-561.
 3. Machine Screws: Cadmium plated steel, FS FF-S-92.
 4. Wood Screws: Flat head carbon steel, FS FF-S-111.
 5. Plain Washers: Round carbon steel, FS FF-W-92.
 6. Drilled-In Expansion Anchors: FS FF-S-325.
 7. Toggle Bolts: Tumble-wing type, FS FF-B-588.
 8. Lock Washers: Spring type carbon steel, FS FF-W-84.
 9. Zinc-Coating: Fasteners in exterior assemblies or exterior walls.
- G. Auxiliary Materials:
1. Nonshrink Metallic Grout: ASTM C 1107.
 2. Nonshrink Nonmetallic Grout: ASTM C 1107.
 3. Interior Anchoring Cement: Hydraulic expansion cement.
 4. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement.
 5. Shop Primer: Fast curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79, compatible with topcoats.
 6. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
 7. Galvanizing Repair Paint: SSPC - Paint 20.
 8. Bituminous Paint: Asphalt mastic, SSPC - Paint 12.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements prior to preparation of shop drawings and fabrication. Do not delay job; allow for cutting and fitting if field measurement not practical.
- B. Form work true to line with sharp angles and edges. Weld continuously, grind flush and make smooth on exposed surfaces.
- C. Install work plumb and level with hairline joints and ground flush welds.
- D. Lintels: Provide sizes indicated with 8" bearing at each end.
- E. Touch-up damaged coatings with shop primer and galvanize repair paint.
- F. Paint items scheduled in accordance with painting section.

END OF SECTION

SECTION 05 51 00
METAL STAIRS

1. GENERAL

1.1. SUMMARY

- A. Provide metal stair systems.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Structural Performance: In accordance with applicable Building Code.

2. PRODUCTS

2.1. MATERIALS

- A. Metal Stairs:
1. Manufacturers: [G & A Manufacturing Inc.](#); [MWE North America](#); [Pacific Stair Corporation](#); [Precision Ladders, LLC](#); [Safe-T-Nose](#); [Wooster Products, Inc.](#) .
 2. Application: Interior stairs.
 3. Application: Exterior stairs.
 4. Treads: Steel plate treads.
 5. Treads: Concrete filled treads.
 6. Auxiliary Materials:
 - a. Steel Plates, Shapes, and Bars: ASTM A 36.
 - b. Cold-Formed Steel Tubing: ASTM A 500.
 - c. Hot-Formed Steel Tubing: ASTM A 501.
 - d. Steel Pipe: ASTM A 53, standard weight (Schedule 40).
 - e. Rolled Steel Floor Plate: ASTM A 786.
 - f. Cold-Rolled Structural Steel Sheet: ASTM A 611, Grade A.
 - g. Hot-Rolled Structural Steel Sheet: ASTM A 570, Grade 30.
 - h. Cold-Rolled Steel Sheet: ASTM A 366.
 - i. Hot-Rolled Steel Sheet: ASTM A 569.
 - j. Galvanized Steel Sheet: ASTM A 653, G 90; Grade A coating designation.
 - k. Expanded Metal, Carbon Steel: ASTM F 1267, Class 1 (uncoated).
 - l. Woven-Wire Mesh: Intermediate-crimp, 2-inch wire complying with ASTM A 510.
 - m. Fasteners: Plated fasteners, ASTM B 633, zinc-coated.
 - n. Abrasive Nosings: Cast units with an integral abrasive grit.
 - o. Abrasive Nosings: Extruded aluminum units with abrasive filler in epoxy-resin binder.
 - p. Grout: Factory-packaged, nonshrink, nonmetallic, ASTM C 1107.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
- B. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
- C. Stairs: Control access to and use of stair systems. Do not permit use of stairs until stairs and railing systems are complete and ready to assume design loading. Do not permit overloading of stair systems. Make connections lightproof tight by welding or bolting; conceal fastenings as much as possible. Grind flush and smooth all exposed welds. Fill pans with 3000 psi concrete with welded wire fabric and provide broom finish.
- D. Railings: provide sizes, profiles and dimensions indicated. Provide mitered joints at 90 degree turns and smooth sweeps at bends. Provide wall returns, end caps, brackets, fittings, and toe boards.
- E. Restore damaged finishes and protect work.

END OF SECTION

SECTION 05 52 00
METAL RAILINGS

1. GENERAL

1.1. SUMMARY

- A. Provide pipe and tube handrails and railing systems.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Handrail and Railing Structural Performance: In accordance with applicable Building Code.

2. PRODUCTS

2.1. MATERIALS

- A. Metal Railings:
 - 1. Application: Exterior metal railings.
 - 2. Application: Interior metal railings.
 - 3. Aluminum Pipe and Tube Railing Systems:
 - a. Extruded Bar and Tube: ASTM B 221, alloy 6063 T5/T52.
 - b. Extruded Structural Pipe and Tube: ASTM B 429, alloy 6063 T5/T52.
 - c. Drawn Seamless Tube: ASTM B 210, alloy 6063 T832.
 - d. Plate and Sheet: ASTM B 209, alloy 6061 T6.
 - e. Die and Hand Forgings: ASTM B 247, alloy 6061 T6.
 - f. Castings: ASTM B 26, alloy A356 T6.
 - 4. Aluminum Finish: Clear anodized.
 - 5. Aluminum Finish: Color anodized.
 - 6. Stainless Steel Finish: 180 grit polished.
 - 7. Stainless Steel Finish: 320 grit polished.
 - 8. Stainless Steel Finish: AISI No. 4 bright directional polish.
 - 9. Steel Finish: Primed.
 - 10. Steel Finish: Baked enamel.
 - 11. Auxiliary Materials:
 - a. Nonshrink Nonmetallic Grout: CE CRD-C621.
 - b. Interior Anchoring Cement: Hydraulic expansion cement.
 - c. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement.
 - d. Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79, compatible with topcoats.
 - e. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
 - f. Galvanizing Repair Paint: SSPC - Paint 20.
 - g. Bituminous Paint: Asphalt mastic, SSPC - Paint 12.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- C. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
- D. Restore damaged finishes and protect work.

END OF SECTION

SECTION 05 53 00
METAL GRATINGS

1.GENERAL

1.1. SUMMARY

- A. Provide metal gratings, frames and supports.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Metal Bar Grating Standard: NAAMM MBG 531 "Metal Bar Grating Manual."
- C. Heavy-Duty Metal Bar Grating Standard: NAAMM MBG 532 "Heavy Duty Metal Bar Grating Manual."

2.PRODUCTS

2.1. MATERIALS

- A. Expanded Metal Gratings:
 - 1. Application: Exterior.
 - 2. Application: Interior.
 - 3. Material: Unfinished, oiled steel, ASTM A 36.
 - 4. Material: Shop primed steel, ASTM A 36.
 - 5. Material: Hot-dip galvanized steel. ASTM A 653, G 90 coating designation.
 - 6. Material: Shop painted hot-dip galvanized steel. ASTM A 653, G 90 coating designation.
 - 7. Material: Mill finish stainless steel, ASTM A 666.
- B. Formed Metal Plank Gratings:
 - 1. Application: Exterior.
 - 2. Application: Interior.
 - 3. Material: Shop primed steel, ASTM A 36.
 - 4. Material: Hot-dip galvanized steel. ASTM A 653, G 90 coating designation.
 - 5. Material: Shop painted hot-dip galvanized steel. ASTM A 653, G 90 coating designation.
 - 6. Material: Mill finish aluminum, ASTM B 221.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles.

- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- C. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
- D. Restore damaged finishes and protect work.

END OF SECTION

SECTION 05 70 00
ORNAMENTAL METAL

1.GENERAL

1.1. SUMMARY

- A. Provide ornamental metalwork.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.PRODUCTS

2.1. MATERIALS

- A. Ornamental Metalwork:
 - 1. Manufacturers, Custom Metal Fabrications
 - 2. Manufacturers, Metal Column Covers: [Nelson Industrial Inc.](#) .
 - 3. Manufacturers, Ornamental Metal Grilles: [Architectural Grille](#); [SteelCrest Corporation](#).
 - 4. Manufacturers, Ornamental Metal: [SteelCrest Corporation](#) .
 - 5. Application: Ornamental railings fabricated from custom shapes.
 - 6. Aluminum Finish: Baked enamel.
 - 7. Auxiliary Materials:
 - a. Nonshrink Nonmetallic Grout: ASTM C 1107.
 - b. Welding Electrodes and Filler Metal: AWS specifications.
 - c. Fasteners, Anchors, and Inserts: Non-corrosive.
 - d. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.
 - e. Zinc-Rich Primer: Comply with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
 - f. Galvanizing Repair Paint: SSPC - Paint 20.
 - g. Bituminous Paint: Asphalt mastic, SSPC - Paint 12.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements prior to fabrication. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.

- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- C. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
- D. Restore damaged finishes and protect work.

END OF SECTION

SECTION 05 73 00
ORNAMENTAL HANDRAILS AND RAILINGS

1. GENERAL

1.1. SUMMARY

- A. Provide ornamental handrails and railings.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Design Engineering: Registered Engineer.
- C. Handrail and Railing Structural Performance: In accordance with Building Code as applicable.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100.
- E. Safety Glazing Standard: ANSI Z97.1.

2. PRODUCTS

2.1. MATERIALS

- A. Ornamental Handrail and Railings:
 - 1. Manufacturers, Ornamental Handrails and Railings: [AGS Stainless, Inc. - Cable Rail](#); [Cable Connection \(The\) - Ultra-Tec Cable Railings](#); [Fortress Railing Products](#); [Hollaender Mfg. Co.](#); [Johnson Architectural Hardware, Div. of C. Sherman Johnson Co., Inc.](#); [Morse Industries](#); [Seco South Railing & Cable Assemblies](#); [Stainless Cable & Railing Inc.](#); [Superior Plastic Products, Inc.](#); [Trex Company, Inc.](#).
 - 2. Manufacturers, Ornamental Stairs and Railings: [Jakob Rope Systems](#); [Stainless Cable & Railing Inc.](#).
 - 3. Manufacturers, Tempered Glass Railing Assemblies: [AGS Stainless, Inc. - Cable Rail](#); [Fortress Railing Products](#).
 - 4. Manufacturers, Cable Railing Systems: [AGS Stainless, Inc. - Cable Rail](#); [Cable Connection \(The\) - Ultra-Tec Cable Railings](#); [Feeney Inc. \(CableRail, DesignRail\)](#); [Hayn Enterprises, LLC](#); [Jakob Rope Systems](#); [Johnson Architectural Hardware, Div. of C. Sherman Johnson Co., Inc.](#); [Seco South Railing & Cable Assemblies](#); [Stainless Cable & Railing Inc.](#).
 - 5. Application: Metal ornamental handrails and railing systems.
 - 6. Application: Illuminated ornamental handrails and railing systems.
 - 7. Aluminum Finish: Mill finish.

8. Aluminum Finish: Baked enamel.
 - a. Tubing: ASTM A 554, Grade MT 301, 302 or 304.
 - b. Pipe: ASTM A 312, Grade TP 304.
 - c. Castings: ASTM A 743, Grade CF 8 or CF 20.
 - d. Plate: ASTM A 666, Type 301, 302 or 304.
 - e. Cable: ASTM A 666, Type 316.
9. Steel:
 - a. Steel Tubing: ASTM A 500 or A 501.
 - b. Steel Plates, Shapes, and Bars: ASTM A 36.
10. Steel Finish: Baked enamel.
11. Steel Finish: Galvanized and shop primed.
12. Iron Castings:
 - a. Gray Iron Castings: ASTM A 48, Class 30.
 - b. Malleable Iron Castings: ASTM A 47.
13. Auxiliary Materials:
 - a. Nonshrink Nonmetallic Grout: ASTM C 1107.
 - b. Welding Electrodes and Filler Metal: AWS specifications.
 - c. Fasteners, Anchors, and Inserts: Non-corrosive.
 - d. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement.
 - e. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 compatible with topcoats.
 - f. Zinc-Rich Primer: Comply with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
 - g. Galvanizing Repair Paint: SSPC - Paint 20.
 - h. Bituminous Paint: Asphalt mastic, SSPC - Paint 12.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- C. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
- D. Restore damaged finishes and protect work.

END OF SECTION

SECTION 06 10 00
ROUGH CARPENTRY

1.GENERAL

1.1. SUMMARY

- A. Provide rough carpentry.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Lumber Standards and Grade Stamps: DOC PS 20, American Softwood Lumber Standard and inspection agency grade stamps.
- C. Construction Panel Standards: DOC PS 1, U.S. Product Standard for Construction and Industrial Plywood; APA PRP-108.
- D. Wood Framing Standards: NFPA House Framing Manual.
 - 1. Exterior Wall Framing: 2 inch by 6-inch nominal (38 mm by 140 mm actual) studs, 24 inches (61 cm) on center.
 - 2. Exterior Wall Framing: 2 inch by 4-inch nominal (38 mm by 89 mm actual) studs, 16 inches (40 cm) on center.
 - 3. Interior Wall Framing: 2 inch by 4-inch (38 mm by 89 mm actual) studs, 16 inches (40 cm) on center.
- E. Preservative Treatment: AWPAC2 for lumber and AWPAC9 for plywood; waterborne pressure treatment. Provide for wood in contact with soil, concrete, masonry, roofing, flashing, dampproofing and waterproofing.
- F. Fire-Retardant Treatment: AWPAC20 for lumber and AWPAC27 for plywood; noncorrosive type. Provide at building interior where required by code.

2.PRODUCTS

2.1. MATERIALS

- A. Rough Carpentry Applications:
 - 1. Manufacturers, Dimensional Lumber: [Humboldt Sawmill](#) .
 - 2. Manufacturers, Timbers: [Humboldt Sawmill](#) .
 - 3. Manufacturers, Pressure-Treated Wood Products: [Viance - Treated Wood Solutions](#) .
 - 4. Manufacturers, Wood Sheathing: Refer to www.arcat.com/divs/sec/sec06100.html
 - 5. Application: Framing with dimension lumber.
 - 6. Application: Framing with engineered wood products.
 - 7. Application: Framing with timbers.
 - 8. Application: Rooftop equipment bases and support curbs.
 - 9. Application: Wood grounds, nailers, and blocking.
 - 10. Application: Wood furring.
 - 11. Application: Backing panels.
 - 12. Application: Wood sheathing.

13. Application: Subflooring.
14. Application: Underlayment.
15. Application: Building wrap.
16. Timbers:
 - a. Species and Grade: WCLIB/WWPA select structural Douglas fir.
 - b. Type: Free of heart center.
17. Boards:
 - a. Exposed Boards: 15 percent moisture content.
 - b. Concealed Boards: 19 percent moisture content.
18. Miscellaneous Lumber:
 - a. Moisture Content: 19 percent.
 - b. Grade: Standard grade light framing.
19. Engineered Wood Products:
 - a. Laminated-Veneer Lumber: A composite of wood veneers with grain primarily parallel to member lengths, manufactured with an exterior-type adhesive complying with ASTM D 2559.
 - b. Parallel-Strand Lumber: A composite of wood strand elements with grain primarily parallel to member lengths, manufactured with an exterior-type adhesive complying with ASTM D 2559.
 - c. Prefabricated Wood I Joists: Stress-graded lumber bonded to APA performance rated panel with exterior type adhesive; design stresses for use intended.
 - d. Composite Joists and Headers: Laminated lumber veneers; design stresses for use intended.
20. Construction Panels:
 - a. Combination Subfloor-Underlayment: Exposure 1, Structural I, Underlayment.
 - b. Oriented-Strand-Board, Combination Subfloor-Underlayment: Exposure 1.
 - c. Plywood Subflooring: Exposure 1, Structural I.
 - d. Plywood Wall Sheathing: Exposure 1, Structural I sheathing.
 - e. Oriented-Strand-Board Wall Sheathing: Exposure 1, Structural sheathing.
 - f. Plywood Roof Sheathing: Exposure 1, Structural I. Sheathing.
 - g. Oriented-Strand-Board Roof Sheathing: Exposure 1, Structural I sheathing.
 - h. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated.
 - i. Plywood Underlayment for Resilient Flooring: DOC PS 1, Exterior A-C with fully sanded face.
 - j. Plywood Underlayment for Ceramic Tile: DOC PS 1, Exterior, C-C Plugged.
 - k. Plywood Underlayment for Carpet: DOC PS 1, Interior Underlayment.
21. Fibrous Felted Boards:
 - a. Hardboard Underlayment: AHA A135.4, Class 4 (Service), Surface S1S; with back side sanded.
 - b. Fiberboard Wall Sheathing: AHA A194.1, Type IV, Class 1 (regular density).
22. Particleboard:
 - a. Underlayment: ANSI A 208.1, Grade PBU, grade marked.
23. Building Paper:
 - a. Material: Asphalt-saturated organic felt, ASTM D 226, Type I, No. 15 felt, unperforated.
24. Building Wrap:
 - a. Material: Air-retarder sheeting made from polyolefins; cross-laminated films, woven strands, or spun-bonded fibers; coated or uncoated; with or without perforations; ASTM E 1677, Type I.
25. Sill Sealer Gaskets:
 - a. Material: Glass fiber strip resilient insulation.
26. Framing Anchors and Fasteners:
 - a. Material: Non-corrosive, suitable for load and exposure. Drywall screws are not acceptable.

3.EXECUTION

3.1. INSTALLATION

- A. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated.
- B. Plywood: Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial"
- C. Provide nailers, blocking and grounds where required. Set work plumb, level and accurately cut.
- D. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.
- E. Comply with manufacturer's requirements for cutting, handling, fastening and working treated materials.
- F. Restore damaged components. Protect work from damage.

END OF SECTION

SECTION 06 17 53
SHOP-FABRICATED WOOD TRUSSES

1.GENERAL

1.1. SUMMARY

- A. Provide prefabricated and pre-engineered wood trusses.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
 - 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Standards: TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction." and fabricate wood trusses within manufacturing tolerances in TPI 1
- C. Design Engineering: Registered engineer.
- D. Fire-Retardant Treatment: AWPAC20 for lumber; noncorrosive type.

2.PRODUCTS

2.1. MATERIALS

- A. Wood Trusses:
 - 1. Manufacturers: **PreBuck**.
 - 2. Lumber Standard: PS 20 American Softwood Lumber Standard.
 - 3. Dressing: Dressed four sides.
 - 4. Species: Softwood species of specified grade.
 - 5. Species: Manufacturer's option.
 - 6. Design Values: Modulus of elasticity at least 1,800,000 psi; extreme fiber stress in bending of at least 1800 psi.
 - 7. Moisture Content: Seasoned, 15 percent maximum.
 - 8. Grade for Chord members: Select structural.
 - 9. Grade for Chord Members: No. 1.
 - 10. Grade for Chord members: No. 2.
 - 11. Grade for Web Members: No. 3 or Stud Grade.
 - 12. Grade for Web Members: Same as chord grade.
 - 13. Connectors, Fasteners, and Metal Framing Anchors:
 - a. Connectors: Hot-dip galvanized steel sheet, ASTM A 653, G60.
 - b. Connectors: Electrolytic zinc-coated steel sheet, ASTM A 653; ASTM A 591, Coating Class C.
 - c. Connectors: Aluminum-zinc, alloy-coated steel sheet, ASTM A 653; ASTM A 792, Coating Designation AZ 50.
 - d. Connectors: Stainless steel sheet, ASTM A 653; ASTM A 666, Type 304.

3.EXECUTION

3.1. INSTALLATION

- A. Install and brace trusses according to TPI recommendations and within installation tolerances in TPI 1.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- C. Install trusses plumb, square, and true to line and securely fasten to supporting construction.
- D. Restore damaged components. Clean and protect work from damage.

END OF SECTION

SECTION 06 20 13
EXTERIOR FINISH CARPENTRY

1.GENERAL

1.1. SUMMARY

- A. Provide exterior finish carpentry.

2.PRODUCTS

2.1. MATERIALS

- A. Exterior Standing and Running Trim and Rails:
1. Manufacturers: [Versatex](#) .
 2. Species for Transparent Finish: Western Red Cedar.
 3. Species for Opaque Finish: Any closed-grain hardwood.
 4. Finish: Semi-transparent stain.
 5. Finish: Opaque stain.
 6. Finish: Paint.
 7. Material and Finish: Polyurethane with painted finish.
- B. Exterior Door Frames:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06201.html
 2. Species for Transparent Finish: Clear heart redwood, quarter sawn.
 3. Species for Transparent Finish: Clear heart redwood.
 4. Species for Opaque Finish: Clear heart redwood.
 5. Species for Opaque Finish: White pine or sugar pine.
 6. Species for Opaque Finish: Any closed-grain hardwood.
 7. Finish: Semi-transparent stain.
 8. Finish: Opaque stain.
 9. Finish: Paint.
- C. Exterior Glass Fiber Reinforced Cement Fabrications:
1. Manufacturers: [Resysta North America, Inc.](#) .
 2. Material: Cast or molded GFRP.
 3. Type: Columns.
 4. Type: Mouldings and trim.
 5. Type: Custom fabrications.
 6. Finish: Unfinished to receive field finish.
- D. Exterior Plastic Fabrications:
1. Manufacturers: [AZEK Building Products, Inc.](#); [Stromberg Architectural](#); [Superior Plastic Products, Inc.](#); [Wolf Home Products](#) .
 2. Type: Columns.
 3. Type: Mouldings and trim.
 4. Type: Custom fabrications.
 5. Finish: Unfinished to receive field finish.
- E. Exterior Fasteners:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06201.html
 2. Nails: Stainless steel, aluminum or hot-dip galvanized siding nails.
 3. Screws and Anchors: Noncorrosive, type required for secure anchorage.

SECTION 06 40 23
INTERIOR ARCHITECTURAL WOODWORK

1.GENERAL

1.1. SUMMARY

- A. Provide interior finish carpentry, architectural woodwork and countertops.

2.PRODUCTS

2.1. MATERIALS

- A. Interior Standing and Running Trim and Rails:
1. Manufacturers: [Versatex](#) .
 2. Species for Transparent Finish: As selected.
 3. Species for Opaque Finish: As selected.
 4. Grade: Premium.
 5. Site Finish: Transparent finish.
 6. Site Finish: Opaque finish.
- B. Interior Wood Casework:
1. Manufacturers: [Roseburg](#) .
 2. Species for Transparent Finish: As selected.
 3. Species for Opaque Finish: As selected.
 4. Grade: Premium.
 5. Face Style: Reveal overlay.
 6. Face Style: Flush overlay.
 7. Face Style: Flush.
 8. Frame Fabrication: Face frame.
 9. Factory Finish: Transparent finish.
 10. Factory Finish: Opaque finish.
 11. Site Finish: Transparent finish.
 12. Site Finish: Opaque finish.
- C. Interior Plastic Laminate Clad Casework:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Laminate: High pressure decorative laminate, NEMA LD-3.
 3. Grade: Premium.
 4. Face Style: Reveal overlay.
 5. Face Style: Flush overlay.
 6. Face Style: Flush.
 7. Frame Fabrication: Face frame.
 8. Frame Fabrication: Frameless.
- D. Interior Casework Hardware and Auxiliary Materials:
1. Manufacturers: [Knape & Vogt Mfg. Co.](#) .
 2. Hardware Finish and Base Metal: Dark oxidized satin bronze.
 3. Glass: Clear float glass, ASTM C 1036.
 4. Glass: Clear tempered glass, ASTM C 1048.
- E. Interior Plastic Laminate Clad Countertops:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Laminate: High pressure decorative laminate, NEMA LD-3.
 3. Grade: Premium.
 4. Core: Plywood.
 5. Core: Particleboard.
 6. Core: As allowed by grade.

7. Edge: Laminate.
 8. Edge: Lumber.
 9. Edge: Decorative.
- F. Interior Solid Surfacing Material Countertops:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Type: Homogeneous solid sheets ANSI Z124.3, for Type 5 or Type 6, without a precoated finish.
 3. Grade: Premium.
 4. Edge: Decorative.
 5. Special Fabrication: Integral bowls.
 6. Special Fabrication: Decorative assemblies.
- G. Interior Ornamental Items:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Species for Transparent Finish: As selected.
 3. Species for Opaque Finish: Closed grain hardwood.
 4. Grade: Premium.
 5. Site Finish: Transparent finish.
 6. Site Finish: Opaque finish.
- H. Interior Frames and Jambs:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Species for Transparent Finish: As selected.
 3. Species for Opaque Finish: Closed grain hardwood.
 4. Grade: Premium.
 5. Site Finish: Transparent finish.
 6. Site Finish: Opaque finish.
- I. Interior Shelving and Closet Specialties:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Shelving: Plywood with hardwood edgeband.
 3. Shelving: PVC coated wire shelving system.
 4. Closet Rods: Chrome plated steel.
- J. Interior Auxiliary Materials:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec06200.html
 2. Screws: FS FF-S-111.
 3. Nails: FS FF-N-105.
 4. Anchors: Type required for secure anchorage.

SECTION 07 11 00
DAMPPROOFING

1.GENERAL

1.1. SUMMARY

- A. Provide bituminous dampproofing.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Foundation Wall Dampproofing:
 - 1. Manufacturers: KARNAK.
 - 2. Type: Hot-applied asphalt.
 - a. Standard: ASTM D 449, Type 1, mopped on.
 - 3. Type: Cold-applied cut-back asphalt.
 - a. Standard: ASTM D 4479, Type 1, sprayed on.
 - 4. Type: Cold-applied fibered asphalt emulsion.
 - a. Standard: ASTM D 1227, Type II, Class 1, troweled on.
 - 5. Type: Cold-applied nonfibered asphalt emulsion.
 - a. Standard: ASTM D 1227, Type III, Class 1, sprayed on.
 - 6. Protection Course: Compatible with dampproofing.

3.EXECUTION

3.1. INSTALLATION

- A. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrate. Begin work only after substrate construction and penetrating work is complete.
- B. Clean and prepare substrate; prime if recommended by dampproofing manufacturer. Protect adjacent work and surfaces from spillage, migration, and damage.
- C. Comply with manufacturer's instructions and recommendations including weather and temperature limitations. Install cant strips, reinforcing strips and other accessories as recommended by dampproofing manufacturer.
- D. Apply dampproofing to achieve 60 mils dry film thickness, unless greater thickness is recommended by manufacturer based on project conditions.

END OF SECTION

SECTION 07 13 00
SHEET WATERPROOFING

1.GENERAL

1.1. SUMMARY

- A. Provide sheet membrane waterproofing.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 5 years.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Testing: Flood testing of horizontal applications.

2.PRODUCTS

2.1. MATERIALS

- A. Foundation Wall Waterproofing:
 - 1. Manufacturers: [MAPEI](#) .
 - 2. Type: Self-adhering rubberized asphalt and polyethylene sheet membrane, 60 mils thick, and tensile strength 250 psi.
 - 3. Type: Butyl sheet, ASTM D 6134, Type II, 60-mil- thick flexible sheet, unreinforced.
 - 4. Type: EPDM Rubber Sheet: ASTM D 6134, Type I, 60-mil-thick flexible sheet, unreinforced.
 - 5. Accessories: Primers, surface conditioners, termination bars, and protection board.
- B. Geotextile-Faced Drainage Panels:
 - 1. Manufacturers: [Stuc-O-Flex](#) .
 - 2. Type: Geotextile faced 3-dimensional, nonbiodegradable, molded-plastic-sheet drainage cores.
- C. Insulating Drainage Panels:
 - 1. Manufacturers: [Plastic Components, Inc.](#) .
 - 2. Type: Extruded-polystyrene board ASTM C 578; Type IV, 1.6-lb/cu. ft. 25-psi compressive strength; shiplap or tongue-and-groove edges and with drainage channels one side, faced with geotextile fabric.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.

- B. Restore damaged components and test waterproofing for leaks. Clean and protect work from damage.

END OF SECTION

SECTION 07 14 00
FLUID-APPLIED WATERPROOFING

1. GENERAL

1.1. SUMMARY

- A. Provide fluid-applied membrane waterproofing.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 10 years for hot rubberized waterproofing.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Testing: Flood testing of horizontal applications.

2. PRODUCTS

2.1. MATERIALS

- A. Foundation Wall Waterproofing:
 - 1. Manufacturers: [Kemper System America, Inc.](#) .
 - 2. Type: One-part modified polyurethane-based liquid membrane waterproofing, 90 percent solids, ASTM C 836, 60 mil thick coating.
 - 3. Type: Two-part modified polyurethane-based liquid membrane waterproofing, 90 percent solids, ASTM C 836, 60 mil thick coating.
 - 4. Type: Non-reinforced hot rubberized asphalt, single-component, 100 percent solids, 180 mil thick coating.
 - 5. Type: Reinforced hot rubberized asphalt, single-component, 100 percent solids, 215 mils mil thick coating.
 - 6. Accessories: Primers, surface conditioners, termination bars, and protection board.
- B. Geotextile-Faced Drainage Panels:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec07140.html
 - 2. Type: Geotextile faced 3-dimensional, nonbiodegradable, molded-plastic-sheet drainage cores.
- C. Insulating Drainage Panels:
 - 1. Manufacturers: [Kemper System America, Inc.](#) .
 - 2. Type: Extruded-polystyrene board ASTM C 578; Type IV, 1.6-lb/cu. ft. 25-psi compressive strength; shiplap or tongue-and-groove edges and with drainage channels one side, faced with geotextile fabric.

3. EXECUTION

3.1. INSTALLATION

- A. Modified Polyurethane Waterproofing: Install materials and systems in accordance with

manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.

- B. Hot-Rubberized Asphalt Waterproofing: Install materials and systems according to CAN/CGSB-37.51 and in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- C. Restore damaged components and test waterproofing. Clean and protect work from damage.

END OF SECTION

SECTION 07 17 00
BENTONITE WATERPROOFING

1.GENERAL

1.1. SUMMARY

- A. Provide bentonite waterproofing.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 5 years.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Foundation Wall Waterproofing:
 - 1. Manufacturers: MAPEI.
 - 2. Type: Coated bentonite panels, 3/16-inch-thick corrugated kraft-paper panels with coating to prevent early moisture damage; containing 1.0 lb/sq. ft. of bentonite.
 - 3. Type: Geotextile/bentonite panels, minimum of 1.1-lb/sq. ft. of bentonite clay granules between 2 layers of heat fused geotextile polypropylene fabric.
 - 4. Type: Composite HDPE/bentoniite membrane, minimum 90-mil-thick membrane consisting of a 20-mil- thick, HDPE geo-membrane liner bonded with butyl rubber to a layer of bentonite clay granules 78 mils thick, and with 1.5-mil- thick siliconized release liner.
 - 5. Type: Bentonite mastic, trowelable consistency, bentonite compound, specifically formulated for application at joints and penetrations.
 - 6. Accessory Materials:
 - a. Bentonite Tubes: 2-inch-diameter, water-soluble tube with 1.5 lb/ft. of bentonite; hermetically sealed; designed specifically for placing on wall footings at line of joint with exterior base of wall.
 - b. Preformed Waterstops: Flexible strip of bentonite waterproofing compound in cartridge or coil form; designed specifically for vertical and horizontal joints in concrete construction.
 - c. Protection Board: Compatible with bentonite waterproofing.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- B. Restore damaged components and test waterproofing. Clean and protect work from

damage.

END OF SECTION

SECTION 07 21 00
THERMAL INSULATION

1.GENERAL

1.1. SUMMARY

- A. Provide thermal insulation and vapor retarders.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Submit for approval test reports.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Board Insulation:
 - 1. Manufacturer: [Kingspan Insulation LLC](#); [Rmax - A Business Unit of the Sika Corporation](#); [ROCKWOOL](#); [TRUFAST Walls](#) .
 - 2. Application: Foundation walls.
 - 3. Application: Under slabs-on-grade.
 - 4. Application: Exterior cavity walls, outboard of sheathing.
 - 5. Type: Extruded polystyrene, rigid.
 - a. Standard: ASTM C 578.
 - 6. Type: Unfaced, slag-wool-/rock-wool-fiber.
 - a. Standard: ASTM C 612, semi-rigid or rigid, ASTM C 612.
 - b. Accessories: Mechanical anchors.
- B. Blanket/Batt Insulation:
 - 1. Manufacturer: [BASF Corporation - Mat Insulation](#); [ROCKWOOL](#); [TRUFAST Walls](#) .
 - 2. Application: Thermal insulation in studs in exterior walls.
 - 3. Application: Thermal insulation at underside of roofs, over heated spaces and soffits.
 - 4. Application: Thermal insulation over unheated areas.
 - 5. Type: Unfaced mineral fiber.
 - a. Standard: ASTM C 665, Type I (unfaced).
 - 6. Type: Foil-faced mineral fiber.
 - a. Standard: ASTM C 665, Type III (foil-scrim-kraft vapor-retarder membrane).
 - b. Accessories: Fasteners and tapes.
- C. Loose Fill Insulation:
 - 1. Manufacturer: Refer to www.arcat.com/divs/sec/sec07210.html
 - 2. Application: Thermal insulation.
 - 3. Type: Cellulosic-fiber.
 - a. Standard: ASTM C 739.
 - 4. Type: Loose glass fiber insulation.
 - a. Standard: ASTM C 764.
- D. Radiant Barriers:

1. Manufacturer: Refer to www.arcat.com/divs/sec/sec07210.html
 2. Application: Exterior walls.
 3. Interior Radiation Control Coating: Surface emittance value of 0.1 or less per ASTM C 1371.
 4. Sheet Radiant Barriers: ASTM C 1313.
- E. Vapor Retarder (Not Integral with Insulation):
1. Manufacturer: [Wolf Home Products](#) .
 2. Application: Exterior walls.
 3. Type: Reinforced 2-ply polyethylene, 6 to 10 mils.
 - a. Accessories: Seam tapes.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Provide full thickness in one layer over entire area, tightly fitting around penetrations.
- B. Pour loose insulation into cavities indicated; provide uniform coverage at correct density and thickness.
- C. Install vapor retarder over entire area of inside face of exterior walls and elsewhere as indicated. Seal all seams and around perimeter and penetrations with duct tape to form a continuous vapor retarder free of holes.
- D. Protect installed insulation and vapor retarder.

END OF SECTION

SECTION 07 24 00
EXTERIOR INSULATION AND FINISH SYSTEMS

1.GENERAL

1.1. SUMMARY

- A. Provide exterior insulation and finish systems.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- D. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 5 years.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.PRODUCTS

2.1. MATERIALS

- A. EIFS:
 - 1. Manufacturers: [STO Corp.](#); [TRUEFAST Walls](#) .
 - 2. Type: EIMA Class PB.
 - 3. Base Coat: Portland cement and polymer adhesive.
 - 4. Finish Coat: Integrally colored polymer emulsion.
 - 5. Drainage Layer: Manufacturer's standard drainage mat.
 - 6. Thermal Insulation: Molded rigid cellular polystyrene [with drainage channels].
 - 7. Reinforcing Mesh: Standard weight with high-impact type at areas subject to damage.
 - 8. Insulation Attachment: Adhesive.
 - 9. Trim Accessories: PVC.

3.EXECUTION

3.1. INSTALLATION

- A. Inspect substrate and report unsatisfactory conditions in writing; beginning work means acceptance of substrate.
- B. Comply with ASTM C 1397 and EIFS manufacturers written instructions for installation of EIFS as applicable to each type of substrate indicated.
- C. Comply with system manufacturer's instructions and recommendations; admixtures shall not

be used. Provide reinforced base and finish coats to provide a uniform appearance. Completely cover all insulation board including edges. Provide soft joints at all changes of substrate and at intervals suggested by manufacturers and at approved locations. Install areas of special patterns where indicated on drawings. Clean and protect work.

END OF SECTION

SECTION 07 25 00
WEATHER BARRIERS

1.GENERAL

1.1. SUMMARY

- A. Provide air and moisture barriers.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction at foundation, walls, roof, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Air and Moisture Barriers:
 - 1. Manufacturers: 3M Air Barrier Products; Custom Building Products; GE Silicones; Griffolyn, Division of Reef Industries, Inc.; KARNAK; Kemper System America, Inc.; Kingspan Insulation LLC; National Shelter Products, Inc.; STO Corp.; TRUFAST Walls; TYPAR.
 - 2. Type: Self-adhering, vapor retarding, 40 mils.
 - 3. Type: Self-adhering, vapor permeable, 40 mils.
 - 4. Type: Fluid-applied, vapor retarding, 60 mils dry film thickness.
 - 5. Transition Materials: Silicone sheet.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Install over entire area, tightly fitting around penetrations and at perimeters.
- B. Protect installed air and moisture barriers.

END OF SECTION

SECTION 07 31 00
SHINGLES AND SHAKES

1.GENERAL

1.1. SUMMARY

- A. Provide roof shingles.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- C. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 20 years.
 - 2. Warranty Period: 25 years.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.PRODUCTS

2.1. MATERIALS

- A. Asphalt Shingles:
 - 1. Manufacturer: [GAF Residential Roofing Products; IKO Industries Inc.](#) .
 - 2. Type: Architectural grade, fiberglass strip shingles.
 - 3. Accessories:
 - a. Hip and ridge shingles.
 - b. Underlayment felt, ASTM D 226.
 - c. Self-adhering sheet underlayment, granular or polyethylene Surfaced: ASTM D 1970 perimeter underlayment.
 - d. Metal flashing and drip edge.
 - e. Mechanically fastened snow guards.
 - f. Mechanically fastened snow guards.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with recommendations of NRCA Steep Roofing Manual.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- C. Install water protection sheet at valleys, ridges, and eaves.

- D. Restore damaged components. Clean and protect work from damage.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

1.GENERAL

1.1. SUMMARY

- A. Provide flashing and sheet metal.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Flashing and Sheet Metal:
 - 1. Manufacturers: Architectural Metal Specialties Inc.; Petersen Aluminum Corp.; TYPAR.
 - 2. Application: Metal counterflashing and base flashing.
 - 3. Application: Exterior wall flashing and expansion joints.
 - 4. Application: Built-in metal valleys, gutters, and scuppers.
 - 5. Application: Gutters and downspouts.
 - 6. Application: Exposed metal trim and fascia units.
 - 7. Application: Elastic flashing.
 - 8. Application: Elastic roof and wall expansion joint systems.
 - 9. Application: Laminated composition flashing.
 - 10. Application: Ridge and soffit vents.
 - 11. Metal: Zinc-coated steel.
 - a. Standard: ASTM A 653, G90 hot-dip galvanized, 2-Coat 70% Fluoropolymer, 20-gauge (.0359 inch).
 - 12. Metal: Stainless steel.
 - a. Standard: AISI Type 302/304, ASTM A 666, 2D annealed finish, 28 gauge (.0156 inch).
 - 13. Flexible Sheet Membrane Flashing: Nonreinforced flexible black elastic sheet, 50 to 65 mils thick, synthetic rubber.
 - 14. Laminated Composition Sheet Flashing: 5 ounce copper sheet laminated between 2 layers of bituminous impregnated Kraft paper or saturated fabric.
 - 15. Elastic Expansion Joints: Factory-fabricated metal-flanged edges to fit curbs and curb substrate.
 - 16. Ridge Vents: Baffled ridge vent suitable for direct application of shingles.
 - 17. Auxiliary Materials:
 - a. Solder compatible with metal.
 - b. Bituminous isolation coating.

- c. Mastic and elastomeric sealants.
- d. Epoxy seam sealer.
- e. Rosin-sized building paper slip sheet.
- f. Polyethylene underlayment.
- g. Reglets and metal accessories.
- h. Gutter and conductor head guards.
- i. Asphaltic roofing cement.

3.EXECUTION

3.1. INSTALLATION

- A. Follow recommendations of SMACNA Sheet Metal Manual. Allow for expansion. Isolate dissimilar materials.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- C. Restore damaged components and finishes. Clean and protect work from damage.

END OF SECTION

SECTION 07 71 00
ROOF SPECIALTIES

1.GENERAL

1.1. SUMMARY

- A. Provide manufactured roof specialties.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Insurance Requirements: FM approval or acceptance.

2.PRODUCTS

2.1. MATERIALS

- A. Fascia and Gravel Stops, Aluminum Sheet:
 - 1. Manufacturers: [Architectural Products Co. Inc.](#)
 - 2. Aluminum sheet, 0.050 inch thick interlocking with 28 gauge (.018 inch) formed zinc-coated steel water dam/hold down clip, compression clamp, and compression pad.
- B. Fascia Panel Support Systems:
 - 1. Manufacturers: Refer to www.arcat.com/divs/sec/sec07710.html
 - 2. Horizontal girts and vertical framing members sized for required wind pressure loading.
 - 3. Manufacturers: Refer to www.arcat.com/divs/sec/sec07710.html
 - 4. Metal flanged elastic-sheet bellows-type joint system, membrane, and metal flanges compatible with substrate.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with accessory manufacturers' instructions and recommendations. Coordinate installation with roofing system to ensure weathertight performance. Anchor securely to structure to withstand inward and outward loads.
- B. Isolate dissimilar metals to prevent galvanic corrosion.
- C. Test and operate units; clean, lubricate and adjust moving parts.

END OF SECTION

SECTION 07 72 00
ROOF ACCESSORIES

1.GENERAL

1.1. SUMMARY

- A. Provide roof accessories.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Heat and Smoke Vent Insurance Requirements: UL and FM approval or acceptance.

2.PRODUCTS

2.1. MATERIALS

- A. Prefabricated Curb and Equipment Support Units:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec07720.html
 - 2. Material: Steel, 14 gauge (.0747 inch), hot dip galvanized.
- B. Curb-Mounted Low Profile Gravity Ventilators:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec07720.html
 - 2. Material: Galvanized steel, manual operation, screens.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with accessory manufacturers' instructions and recommendations. Coordinate installation with roofing system to ensure weathertight performance. Anchor securely to structure to withstand inward and outward loads.
- B. Isolate dissimilar metals to prevent galvanic corrosion.
- C. Test and operate units; clean, lubricate and adjust moving parts. Leave units ready for field painting.

END OF SECTION

SECTION 07 92 00
JOINT SEALANTS

1.GENERAL

1.1. SUMMARY

- A. Provide joint sealers and fillers.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - 1. Include manufacturers full range of color and finish options if additional selection is required.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Field-Constructed Mock-Ups: Each joint type.

2.PRODUCTS

2.1. MATERIALS

- A. Exterior Joints in Vertical Surfaces, Silicone:
 - 1. Manufacturers: [Tower Sealants](#) .
 - 2. Materials: Two component silicone sealant.
- B. Exterior Joints in Vertical Surfaces, Urethane:
 - 1. Manufacturers: [Backer Rod Mfg. Inc.](#); [Sherwin-Williams](#); [Tower Sealants](#) .
 - 2. Materials: Two-component urethane sealant.
- C. Exterior Joints in Vertical Surfaces, Preformed Compression Seals:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec07900.html
 - 2. Materials: Preformed precompressed foam sealant.
- D. Exterior Joints in Horizontal Surfaces, Urethane:
 - 1. Manufacturers: [Sherwin-Williams](#); [Tower Sealants](#) .
 - 2. Materials: Self-leveling urethane sealant, ASTM C 920.
- E. Exterior Paving Joint Fillers, Bituminous:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec07900.html
 - 2. Materials: Bituminous fiber.
- F. Interior Joints, Limited Movement, Acrylic:
 - 1. Manufacturers: [Tower Sealants](#) .
 - 2. Materials: Acrylic-emulsion, ASTM C 834.
- G. Interior Joints, Sanitary Silicone:
 - 1. Manufacturers: [GE Silicones](#) .
 - 2. Materials: One-part mildew-resistant silicone sealant, ASTM C 920.

3.EXECUTION

3.1. INSTALLATION

- A. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.
- B. Provide sealants in colors as selected from manufacturer's standards.
- C. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Clean and prime joints, and install bond breakers, backer rods and sealant as recommended by manufacturers.
- D. Depth shall equal width up to 1/2 inch wide; depth shall equal 1/2 width for joints over 1/2 inch wide.
- E. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove spillage.

END OF SECTION

SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

1.GENERAL

1.1. SUMMARY

- A. Provide steel doors and frames.

2.PRODUCTS

2.1. MATERIALS

- A. Interior Steel Doors:
1. Manufacturers: [AMBICO LIMITED](#); [Door Systems](#); [Galaxy Metal Products](#) .
 2. Material: Minimum 18 gauge steel sheet.
 3. Thickness: 1-3/4 inches.
 4. Finish: Factory primed and field painted.
 5. Finish: Factory finished.
 6. Accessories:
 - a. Sightproof stationary louvers.
 - b. Glazing stops.
 - c. Silencers.
- B. Interior Steel Frames:
1. Manufacturers: [AMBICO LIMITED](#); [Door Systems](#); [Dunbarton Corporation](#); [Galaxy Metal Products](#) .
 2. Material: Minimum 16 gauge steel sheet.
 3. Corners: Mitered or coped.
 4. Type: Welded.
 5. Type: Knockdown.
 6. Type: Drywall slip-on.
 7. Finish: Factory primed and field painted.
 8. Finish: Factory finished.
- C. Exterior Steel Doors:
1. Manufacturers: [AMBICO LIMITED](#); [Galaxy Metal Products](#); [MITTEN Building Products](#) .
 2. Material: Minimum 16 gauge galvanized steel sheet.
 3. Door Thickness: 1-3/4 inches, thermally insulated.
 4. Finish: Factory primed and field painted.
 5. Finish: Factory finished.
 6. Accessories:
 - a. Sightproof stationary louvers.
 - b. Glazing stops.
 - c. Silencers.
- D. Exterior Steel Frames:
1. Manufacturers: [AMBICO LIMITED](#); [Dunbarton Corporation](#); [Galaxy Metal Products](#) .
 2. Material: Minimum 14 gauge galvanized steel sheet.
 3. Corners: Mitered or coped.
 4. Type: Welded.
 5. Type: Knockdown.
 6. Finish: Factory primed and field painted.
 7. Finish: Factory finished.
 8. Material: Minimum 22 gage galvanized steel sheet.
 9. Door Thickness: 1-3/4 inches, thermally insulated.
 10. Type: Two-piece adjustable split jamb.
 11. Finish: Factory finished.

SECTION 08 14 00
FLUSH WOOD DOORS

1.GENERAL

1.1. SUMMARY

- A. Provide flush wood doors.

2.PRODUCTS

2.1. MATERIALS

- A. Interior Flush Wood Doors:
1. Manufacturers: [Trimlite, L.L.C.](#) .
 2. Type: Solid core.
 3. Thickness: 1-3/4 inches thick.
 4. Grade: Premium.
 5. Frames: Metal.
 6. Face: Plastic laminate.
 7. Face: As selected.
 8. Finish: Transparent.
 9. Finish: Opaque.
 10. Finish Application: Shop primed and site finished.
 11. Finish Application: Site finished.
 12. Auxiliary Materials:
 - a. Glazed panels.
 - b. Transom panels.
 - c. Louvered panels.
- B. Exterior Flush Wood Doors:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec08210.html
 2. Type: Solid core.
 3. Thickness: 1-3/4 inches thick.
 4. Grade: Premium.
 5. Frames: Metal.
 6. Face: As selected.
 7. Finish: Transparent.
 8. Finish: Opaque.
 9. Finish Application: Shop primed and site finished.
 10. Finish Application: Site finished.
 11. Auxiliary Materials:
 - a. Glazed panels.
 - b. Transom panels.

SECTION 08 14 33
STILE AND RAIL WOOD DOORS

1.GENERAL

1.1. SUMMARY

- A. Provide stile and rail wood doors.

2.PRODUCTS

2.1. MATERIALS

- A. Interior Paneled Wood Doors:
1. Manufacturers: Trimlite, L.L.C. .
 2. Type: Solid core.
 3. Thickness: 1-3/4 inches thick.
 4. Grade: Custom.
 5. Frames: Metal.
 6. Frames: Wood.
 7. Face: As selected.
 8. Finish: Transparent.
 9. Finish: Opaque.
 10. Finish Application: Shop primed and site finished.
 11. Finish Application: Site finished.
 12. Auxiliary Materials:
 - a. Glazed panels.
 - b. Transom panels.
- B. Interior Stile and Rail Wood Doors:
1. Manufacturers: Trimlite, L.L.C. .
 2. Type: Glazed stile and rail.
 3. Type: Wood panel stile and rail.
 4. Thickness: 1-3/4 inches thick.
 5. Grade: Custom.
 6. Frames: Metal.
 7. Frames: Wood.
 8. Face: As selected.
 9. Face: Match existing.
 10. Finish: Transparent.
 11. Finish: Opaque.
 12. Finish Application: Shop primed and site finished.
 13. Finish Application: Site finished.
 14. Auxiliary Materials:
 - a. Glazed panels.
 - b. Transom panels.

SECTION 08349 – TORNADO-RESISTANT ASSEMBLIES

PART 1 - GENERAL

1. RELATED DOCUMENTS

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

2. SUMMARY

- A. Section includes:
 - 1. Hollow metal Tornado Doors
 - 2. Hollow metal Doors with Glass Lights
 - 3. Hollow metal Tornado Frames
 - 4. Hollow metal Tornado Shutters
- B. Exclusions: Metal for the following is not provided under the scope of this section:
 - 1. Structural steel
 - 2. Headers and lintels
 - 3. Framing
 - 4. Steel channel frames
 - 5. Access panels
 - 6. Door hardware
- C. Related Sections:
 - 1. Division 01 Section "Alternates" for alternates affecting the work of this section.
 - 2. Division 03 Section "Precast Structural Concrete"
 - 3. Division 04 Section "Unit Masonry"
 - 4. Division 07 Section "Joint Sealants"
 - 5. Division 08 Section "Steel Doors and Frames"
 - 6. Division 08 Section "Door Hardware"
 - 7. Division 08 Section "Glass and Glazing"
 - 8. Division 09 Sections for touchup finishing or refinishing of existing openings modified by the work of this section.
 - 9. Division 26 Sections for connections to electrical power system and for low-voltage wiring work.
 - 10. Division 28 Sections for coordination with other components of other components of electronic access control system.

3. REFERENCES

- A. Tornado Resistant Assemblies
 - 1. IBC – International Building Code
 - a. 2021 Edition, Section 423 – Building types or functions and geographic locations to be built with a storm shelter
 - 2. ICC/NSSA - International Code Council / National Storm Shelter Association
 - a. ICC 500-2020 Standard for the Design and Construction of Storm Shelters
 - b. Highlights of ICC 500-2020
 - 3. FEMA – Federal Emergency Management Agency
 - a. FEMA P-361, Third Edition / March 2015 – Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms

- b. FEMA P-320, December 2020 – Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business
- B. Fire/Life Safety
 - 1. NFPA - National Fire Protection Association
 - a. NFPA 70 – National Electric Code
 - b. NFPA 80 - Standard for Fire Doors and Fire Windows
 - c. NFPA 101 - Life Safety Code
 - d. NFPA 105 - Smoke and Draft Control Door Assemblies
 - 2. State Fire Safety Code.
- C. UL - Underwriters Laboratories
 - 1. UL 10C - Positive Pressure Test of Fire Door Assemblies
 - 2. UL 1784 - Air Leakage Tests of Door Assemblies
- D. Accessibility
 - 1. ADA - Americans with Disabilities Act.
 - 2. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
- E. SDI – Steel Door Institute
 - 1. SDI 100/ANSI A250.8 - Recommended Specifications - Standard Steel Doors and Frames.
 - a. SDI Certified <https://www.steeldoor.org/sdicertified.php>
 - 2. SDI 105 - Recommended Erection Instructions for Steel frames.
 - 3. SDI 111 - Recommended Details and Guidelines for Standard Steel Doors and Frames and Accessories.
 - 4. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames.
 - 5. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames.
 - 6. SDI 118 - Basic Fire Door Requirements.
 - 7. SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
 - 8. SDI 124 - Maintenance of Standard Steel Doors and Frames.
- F. ANSI - American National Standards Institute (refers to most current versions of standards)
 - 1. ANSI/DHI A115.IG - Installation Guide for Doors and Hardware.
 - 2. ANSI/BHMA A156.1 - A156.29, and ANSI A156.31 - Standards for Hardware and Specialties
 - 3. ANSI A250.3 - Test Procedure and Acceptance Criteria for - Factory Applied Finish Painted Steel Surfaces for Steel Doors and Frames.
 - 4. ANSI A250.4 - Test Procedure and Acceptance Criteria for - Physical Endurance for Steel Doors, Frames, Frame Anchors, and Hardware Reinforcements. Product is tested and provided as Level “A”, 1,000,000 cycle test criteria and other requirements as listed in these specifications.
 - 5. ANSI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
 - 6. ANSI/SDI A250.8/SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
 - 7. ANSI A250.10 - Test Procedures and Acceptance Criteria for – Prime Painted Steel Surfaces for Steel Doors and Frames.
 - 8. ANSI A250.11 - Recommended Erection Instructions for Steel Frames.
- G. NAAMM - National Association of Architectural Metal Manufacturers
 - 1. NAAMM/HMMA-840 - Guide Specification for Installation and Storage of Hollow Metal Doors and Frames.

4. **SUBMITTALS**

A. General:

1. Submit the following in accordance with conditions of contract and Division 01 requirements.
2. Advise Architect within the submittal package of incompatibility or issues which may detrimentally affect the work of this section.
3. Prior to forwarding submittal: Comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.

B. Action Submittals:

1. Product Data: Provide illustrations from manufacturer's catalogs and data in brochure form for all products, including model, function, reinforcements, anchoring, design, finish, and options.
2. Door and Hardware Schedule: Organize schedule into spreadsheet format indicating complete designations of every item required for each door and frame. Door and hardware schedule shall clearly indicate architect's door number, elevations, and notes.
3. Shop Drawings: Drawings of openings aligning with the Door, frame, and hardware schedule in accordance with SDI 111D. Show types, quantities, dimensions, specified performance, design criteria, materials and similar data for each opening required.
 - a. Indicate frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcement, to ensure doors and frames are properly prepared and coordinated to receive specified hardware.
 - b. Indicate all door elevations, internal reinforcements and closure methods.
 - c. Indicate all hardware and accessories.
4. Templates: After final approval of the door and hardware schedule, provide listing of manufacturer's hardware locations for each item of hardware.

C. Informational Submittals:

1. Qualification Data: For manufacturer, supplier, installer and Certified Door Consultant.
 - a. Supplier: A direct account of the manufacturer who has on permanent staff, an Architectural Hardware Consultant (AHC), a Certified Door Consultant (CDC) or an Architectural Openings Consultant (AOC), who will be available to consult with the Architect and Contractor regarding matters affecting the door and frame openings.
2. Product Certificates and Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by the manufacturer and witnessed by a qualified, accredited testing agency for doors and frames located in accessible routes.
 - a. Evidence of manufacturer as "SDI Certified" from the Steel Door Institute.
 - b. Manufacturer evidence of compliance with standards shown in 1.03 "References" section of this document.
 - c. Listing Report number from an accredited testing and labeling facility (Intertek / UL) for the AHJ's reference to the tornado approval. Listing Report shall communicate design wind pressure and missile impact tests in accordance with FEMA 361 / ICC 500-2020 requirements
 - d. Report with calculations of anchoring requirements including locations and minimum required capacity from a third-party PE based on accepted engineering practice shall be made available upon request.
 - e. Certificate or signed letter stating 5 years minimum experience installing labeled tornado products
 - f. Certificates of compliance and installation instructions shall be made available upon request of Architect or authority having jurisdiction.
3. Warranty: As specified in this section pertaining to manufacturer, supplier and installer.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include the following:

- a. Complete information on care, maintenance, and adjustment; data on repair and replacement.
- b. Catalog pages for each product.
- c. Name, address, and phone number of local representative for each manufacturer.
- d. Copy of final approved door and frame schedule, edited to reflect conditions as-installed.
- e. Copy of warranties including appropriate reference numbers for manufacturers to identify the project.

5. **QUALITY ASSURANCE**

- A. **Product Substitutions:** For the purpose of performing the work of this section, comply with product requirements stated in Division 01 and as specified herein.
 - 1. Where a specific manufacturer's product is named and accompanied by the words "No Substitute," including make or model number or other designation, provide the product exactly as specified. (Note: Certain products have been selected for their unique characteristics and particular project suitability.)
 - a. Where no additional products or manufacturers are listed in a product category, requirements for "No Substitute" govern product selection.
 - 2. Where products indicate "acceptable substitute" or "acceptable manufacturer", provide product from specified manufacturers, subject to compliance with specified requirements and "Single Source Responsibility" requirements stated herein.
 - 3. Substitutions: Refer to Division 01 for additional information regarding substitutions and submittals.
- B. **Supplier Qualifications and Responsibilities:** A direct account of the manufacturer. A recognized hollow metal door and frame supplier of tornado-resistant approved systems, with warehousing facilities in the project's vicinity, that has a record of successful in-service performance for supplying hollow metal doors and frames similar in quantity, type, and quality to that indicated for this project.
 - 1. **Engineering Responsibility:** Preparation of data for field spliced or field modified units, including shop drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this project.
 - 2. **Coordination Responsibility:** Coordinate preparation of the door hardware and provide installation and technical data to the Architect and other related subcontractors.
 - a. Upon completion of hollow metal door and frame installation, inspect and verify that all components are working properly.
- C. **Manufacturer:** Member of Steel Door Institute and is SDI Certified, with specialized capabilities manufacturing tornado-resistant opening systems complying with ICC 500-2020 and FEMA 361, and provides labeled doors and frames from a qualified, accredited testing agency, including hardware and accessories as specified in this section with minimum five years documented experience manufacturing tornado labeled systems.
 - 1. **Manufacturer Installation Instructions:** Contractor shall maintain a current copy of tornado shelter storm door, frame and hardware manufacturer published installation instructions and FEMA 361/ICC 500-2020 requirements in Project Field Office and refer to installation instructions at all times during installation.
 - 2. **Tornado-Resistant Openings Systems:** Provide complete door systems for tornado-resistant storm shelters and other areas of refuge complying and tested according to FEMA 361, Second Edition (2008), Design and Construction Guidance for Community Safe Rooms; and ICC 500 (2020), ICC/NSSA Standard for the Design and Construction of Storm Shelters.
 - 3. **Label tornado-resistant doors and frames with permanently affixed metal labels (non-Mylar) to clearly denote compliance with FEMA 361 and ICC 500-2020.**
 - a. Each door and frame will have its own permanent label showing what criteria the door and frame was tested in accordance with. The label will show what independent laboratory tested this assembly. The label will show test pressures both positive and negative in pounds per square foot and the design pressure both positive and negative.
 - b. Doors with glass shall be etched or similarly labeled.

- D. Installer Qualifications: Qualified tradesmen, skilled in the application of tornado hollow metal doors and frames that has a record of successful in-service performance for installing hollow metal doors and frames similar in quantity, type, and quality to that indicated for this project.
- E. Single Source Responsibility: Obtain each type of hollow metal door and frame from a single manufacturer.
- F. Fire-Rated Openings: Provide doors and frames for fire-rated openings that complies with NFPA Standard No. 80, UL10C, Category "A", Positive Pressure Test of Fire Door Assemblies, and requirements of authorities having jurisdiction. Provide only doors and frames that are labeled and listed for ratings indicated by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to the authority having jurisdiction.
 - 1. Affix a physical label or approved marking to each fire door or fire door frame, at an authorized facility as evidence of compliance with procedures of the labeling agency. Label embossment is not permitted.
 - 2. Conform to applicable codes for fire ratings. It is the intent of this specification that hardware and its application comply or exceed the standards for labeled openings. In case of conflict between types required for fire protection, furnish type required by NFPA and UL.
 - 3. Fire door assemblies in exit enclosures and exit passageways; maximum transmitted temperature end point rating of not more than 250 degrees F (121 degrees C) above ambient at the end of 30 minutes of the standard fire test exposure.
- G. Refer to Division 01 Section "Special Conditions" for additional information and minimum experience requirements.

6. DELIVERY, STORAGE, AND HANDLING

- A. Tag each item or package separately with identification related to the final door and frame schedule, and include installation instructions with each delivery.
- B. Comply with manufacturer's current written instructions and recommendations.
- C. Deliver doors in manufacturer's standard labeled protective packaging.
- D. Accept products on site in manufacturer's packaging. Inspect for damage. Return damaged Products and replace with undamaged products.
- E. Project field superintendent shall inspect products immediately upon delivery to project site, determine Product conformance with specified requirements and reject Products not complying with specifications. Project field superintendent shall direct that non-complying products be removed from project site immediately.
- F. Handle, store and protect products in accordance with the manufacturers printed instructions and ANSI/SDI A250.10 and NAAMM/HMMA 840.
- G. Project Conditions:
 - 1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
- H. Protection and Damage:
 - 1. Promptly replace products damaged during shipping with exactly the same products.
 - 2. Handle doors and frames in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during the course of the Work.
 - 3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- I. Refer to Division 01 Sections "Summary of Work" and "Special Conditions" for additional information and requirements regarding stored materials.

7. COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. See Division 03 for concrete, reinforcement, and formwork requirements, and Division 04 2000 "Unit Masonry".
- B. Coordinate work with frame opening construction, door and hardware installation. Coordinate work with Section 08 11 00 Steel Doors and Frames, Section 08 71 00 Finish Hardware, and other directly affected sections involving manufacture or fabrication of internal cutouts and reinforcement for door hardware, electric devices and recessed items.

- C. Verify field dimensions for factory assembled frames prior to fabrication.
- D. Installation: Sequence installation to accommodate required door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing doors and frames to comply with indicated requirements.
- E. Electrical System Roughing-In: Coordinate layout and installation of doors and frames with electrified door hardware connections.

8. WARRANTY

- A. Provide manufacturer's warranties as specified in Division 01 and as follows:
 - 1. Hollow Metal Doors and Frames: 1 year.
 - 2. Warranty does not cover damage or faulty operation due to improper installation, improper use, or abuse.

9. MAINTENANCE

- A. Maintenance Instructions: Furnish a complete set of maintenance instructions as needed for Owner's continued maintenance of doors and frames.

PART 2 - PRODUCTS

1. MANUFACTURERS

- A. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
- B. Acceptable Manufacturer: Steelcraft, Paladin Series PW doors and FP frames.

2. MATERIALS

- A. Fasteners
 - 1. Provide fastenings, anchors and clips as required to secure hollow metal work in place. Provide and install manufacturers standard screws. Dimple metal work to receive screw heads. Set stops and other non-structural fastenings with manufacturer's standard self-tapping screws.

3. STEEL FRAMES – PALADIN FP14 SERIES FRAMES

- A. Manufacturer:
 - 1. Scheduled Manufacturer: Steelcraft.
 - 2. Acceptable Substitute: Republic, AMBICO
- B. Provide 14 Gauge A60 galvanized steel.
- C. Provide tornado-resistant hollow metal frames as scheduled, and drawn and detailed on plans, with the provisions below.
- D. Provided die-mitered corner connections to ensure tight/closed miters at head and jambs.
- E. Factory prep: Welded.
- F. Provide patented universal hinge preparations.
- G. Provide beveled hinge and strike edges.
- H. Provide 7 gauge hinge reinforcement. Provide 14 gauge full length reinforcement for continuous hinges.
- I. Provide 12 gauge steel center strike reinforcement with 14 gauge head/sill strike reinforcement.
- J. Provide adjustable base anchors to allow for adjustment in installation when the floor is not level.
- K. Provide factory applied baked-on rust-inhibiting primer.
- L. When supported by the proper signed, third party PE reports calculating approved anchoring, provide frames anchored with or without grout fill. When using 4" face, provide frames grouted full utilizing proper grout fill protocols per SDI/ANSI 250.8.
- M. Provide 14 gauge steel closer reinforcements when specified.

- N. Opening sizes: Shall not exceed the smallest and largest sizes tested and approved per ICC 500-2020. Available sizes shall be publicly available on Intertek or UL listing websites.
- O. Fire Rating: Where called for by the door and hardware schedules, tornado-resistant doors, frames, shutter, and glass lights shall be identified by an official metal label or etching (for glass) to signify tested approval from ITS – Warnock Hersey or Underwriters' Laboratories, to UL 10C protocols.

4. STEEL FRAMES – PALADIN FP14 SHUTTER SYSTEMS

- A. Provide hollow metal frames as scheduled, and drawn and detailed on plans, with the provisions below.
- B. Glass: Non-impact resistant glass (provided by others) can be installed in exterior (storm side) rabbet of frame.
- C. Instructions for the installation or deployment of shutters shall be made available from the manufacturer.

5. STEEL FRAMES – ANCHORING

- A. Provide hollow metal frames as scheduled, and drawn and detailed on plans, with the provisions below.
- B. Approved frame anchors and any necessary anchor bolts certified by third party PE reports shall be provided from the factory for concrete walls (tilt-up/pre-fab/poured in place) or concrete-filled CMU block walls.
- C. Provide installation instructions.
- D. Provide anchoring approved by UL or Intertek Testing Services / Warnock Hershey (ITS/WHI), supported by testing and third-party PE reports.
- E. Grout new masonry frames full.
- F. Provide frames to be used in existing masonry with tube and strap anchors welded from the factory.

6. STEEL DOORS – PALADIN PW14 SERIES DOORS

- A. Provide tornado-resistant hollow metal doors as scheduled, and drawn and detailed on plans, with the provisions below.
- B. Provide standard 14 gauge, A-60 galvanized steel face skins for resistance against corrosion.
- C. Steel stiffened core construction: Provide stiffeners welded to one face sheet and bonded to the opposite face sheet
- D. Seamless, full height, mechanical interlock edges: Provide lock and hinge edges intermittently welded and filled smooth for structural support and stability the full height of the door
- E. Provide full height lock side continuous 12 gage steel reinforcement channels at lock rails.
- F. Provide 12 gauge top channel and 14 gauge bottom channel steel reinforcement.
- G. Provide doors with beveled hinge and lock edges.
- H. Provide universal hinge preparations.
- I. Provide 7 gauge hinge reinforcements.
- J. Provide 14 gauge closer reinforcements.
- K. Provide factory applied baked-on rust-inhibiting primer in accordance with ANSI A250-10, with finish paint options available.
- L. Provide 1-3/4 inch thick doors.
- M. Opening sizes shall not exceed the smallest and largest sizes tested and approved per ICC 500-2020. Available sizes shall be publicly available on Intertek or UL listing websites.
- N. Provide handed doors and frames.
- O. Provide doors beveled both hinge and lock sides.
- P. Custom door undercuts shall be made available, provided they meet with the labelling agencies requirements.

- Q. Follow installation instructions provided by the manufacturer. The hardware manufacturer's strike must be used. Anchor or grout bottom strikes into the foundation slab.

7. TORNADO GLASS LIGHTS, LABELED AND NON-LABELED GLAZING

- A. Provide approved tornado trim and glazing pre-installed from the factory.
- B. Provide installation and care instructions to maintain tornado ratings.
- C. Provide glass with an etching to signify compliance from ITS – Warnock Hersey or Underwriters' Laboratories. Embossed labels are not acceptable.
- D. For fire rated assemblies with glass, a UL classified fire rated sealant must be used.

8. FINISHES

- A. Chemical Treatment: Treat steel surfaces to promote proper paint adhesion per ANSI/SDI A250.3, Test Procedure and Acceptance Criteria for Factory Applied Finished Painted Steel Surfaces for Steel Doors and Frames.
- B. Factory Prime Finish: Meet requirements of ANSI A 250.10., Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

9. TORNADO-RESISTANT DOOR HARDWARE AND ACCESSORIES

- A. Provide approved hardware and accessories under Section 08700 as part of the complete prescriptive door assembly opening by Intertek or UL public listing for the labeled tornado-resistant assembly, communicating compliance with FEMA 361 guidelines and ICC 500-2020 standards.

10. FABRICATION

- A. Fabricate doors and frames in accordance with requirements of ANSI A250.8-2003/SDI 100.
- B. Fabricate fire rated doors and frames in accordance with requirements of ITS – Warnock Hersey or Underwriters' Laboratories, with metal label on each door and frame signifying UL-10C compliance.
- C. Typical Frame Reinforcing: Provide steel reinforcement as required for hardware items per manufacturers templates. Provide reinforcing per ANSI-A250.6.
- D. Mortar Guards in Frames: For hinge and strike plate cutouts, provide fully enclosed pressed steel cover boxes spot welded to frames behind mortises. Additionally, for frames in masonry walls and frames being grout filled, provide metal mortar guards for any mortised cutouts.
- E. Hardware Preparation at Frames: Mortise, reinforce, drill and tap as required for all mortised hardware furnished under Division 8 Finish Hardware and/or Division 26 Security in accordance with a final approved hardware schedule and templates provided by the hardware supplier and/or security supplier (including electric hinges and/or power transfers, door position switches, and other electrified hardware). Drilling and tapping for surface door closers, door closer brackets, and adjusters shall be done in field by hardware installer. Obtain templates from hardware and security suppliers. Provide hardware preparation per ANSI-A250.6.
- F. Joining at Frames:
 - 1. At welded frames with equal width jambs and head, neatly miter on face and cope and butt stops. At other welded frames, provide same mitered joint wherever possible (at intersection of jamb-head or jamb-sill) and at other locations butt metal neat. Full profile weld as specified. Fabricate so no grind marks, hollow or other out-of-plane areas are visible. At joints of intermediate members (such as mullions), provide tight joining, neatly accomplished without holes, burned out spots, weld build up or other defacing work. Fill to close cracks and to preserve shapes. Tightly fit loose stops, to hairline joints. Joints shall be finished and primed.
- G. Typical Door Reinforcement: Provide galvanized steel reinforcement as required for hardware items per manufacturers' templates. Provide reinforcing per ANSI-A250.6.
- H. Hardware Preparation at Doors: Mortise, reinforce, drill and tap as required for all mortised hardware furnished under Division 08 Finish Hardware and/or Division 28 Access Control in accordance with a final approved hardware schedule and templates provided by the hardware supplier and/or security supplier (including a minimum 1/2 inch raceway for electrical hardware, electric hinges and/or power transfers, door position switches, and other electrified hardware). Obtain templates from hardware and security suppliers. Provide hardware preparation per ANSI-A250.6.

PART 3 - EXECUTION

1. EXAMINATION

- A. Prior to installation of any doors and frames, examine supporting structure and conditions under which hollow metal doors and frames are to be installed. Correct all defects prior to proceeding with installation.
- B. Correct unacceptable conditions or defer to the architect or responsible building contractor to fix unacceptable conditions prior to hollow metal installation or at any point where unacceptable conditions are discovered.

2. PREPARATION

- A. Where on-site modification of doors and frames is required, prepare hardware locations in accordance with the following:
 - 1. Tornado assemblies shall not be unduly modified. Consult with the manufacturer or the Authority Having Jurisdiction as needed to maintain the labeled approval of the tornado door system, complying with ICC 500-2020.
 - 2. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
 - 3. Where doors are in rated assemblies, comply with NFPA 80 for restrictions on on-site door hardware preparation.

3. INSTALLATION

- A. Install hollow metal in accordance with reviewed shop drawings and manufacturer's printed instructions. Securely fasten and anchor work in place without twists, warps, bulges or other unsatisfactory or defacing workmanship. Set hollow metal plumb, level, square to proper elevations, true to line and eye. Set clips and other anchors with Ramset "shot" anchors or drill in anchors as approved. Units and trim shall be fastened tightly together, with neat, uniform and tight joints.
- B. Placing Frames: Remove manufacturer's shipping spreader-bars prior to installation. These shall not be used for setting of proper frame tolerances. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set in accordance with ANSI A250.11. After wall construction is complete, remove temporary braces and/or installation spreaders leaving surfaces smooth and undamaged. In masonry construction, building-in of anchors and grouting of frames with mortar is specified in Division 04 Section - Unit Masonry. At in-place concrete or masonry construction, set frames and secure in place using countersunk bolts and expansion shields, with bolt heads neatly filled with metallic putty, ground smooth and primed.
- C. Place fire-rated frames in accordance with NFPA 80, and/or manufacturer's follow-up procedure requirements.
- D. Consult Hollow Metal technical data and installation instruction. The hardware manufacturer's installation instructions must be followed to maintain tornado-resistant assembly approval.
- E. Where continuous hinges are specified, provide full height 3/8 inch (9.5 mm) to 1-1/2 inch (38 mm) thick strip of polystyrene foam blocking at frames requiring grouting. Apply the strip to the back of the frame, where the hinge is to be installed, to facilitate field drilling or tapping.
- F. Doors with internal concealed rods and associated latches shall be installed at the factory by the door manufacturer prior to shipment to the job site. Base installation upon FEMA lock manufacturer's template and install instructions. Field installation, or supplier shop installation, of FEMA concealed internal rods and rod latches will not be accepted.
- G. Door Installation: Fit hollow metal doors accurately in their respective frames, within following clearances: Jambs and head 1/8 inch, meeting edges pair of doors 1/8 inch, sill where no threshold or carpet 1/4 inch above finished floor, sill at threshold 3/4 inch maximum above finished floor, sill at carpet 1/4 inch above carpet. Place fire-rated doors with clearances as specified in NFPA 80.
- H. Apply hardware in accordance with hardware manufacturers' instructions and Section 08 71 00 of these specifications. Install hardware with only factory-provided fasteners. Install silencers. Adjust door installation to provide uniform clearance at head and jambs, to achieve maximum operational effectiveness and appearance.
- I. Drill and tap for surface door closers, door closer brackets, and other surface applied hardware.

4. FIELD QUALITY CONTROL

- A. After installation of frames has been completed, a qualified person from the hardware installation company is to check the project to confirm the proper installation of frames to allow for the proper installation of doors and finish hardware scheduled.
- B. Installer shall deliver to owner, upon completion, one set of installation and maintenance instructions for doors and frames.
- C. Regular field inspection and adjustment is accepted and recommended to ensure proper latching throughout the life of the product.

5. ADJUSTING

- A. Final Adjustments: Adjust doors and hardware prior to final inspection and acceptance by the Architect and Owner. Replace defective items including doors or frames that are damaged or unacceptable to the Architect and Owner. Regular field inspection and adjustment is accepted and recommended to ensure proper latching throughout the life of the product.
 - 1. Adjust doors for proper operation, free from binding or other defects.
 - 2. Clean and restore soiled surfaces. Remove scraps and debris and leave site in a clean condition.
 - 3. Prime Coat / Touch up immediately after erection, sand smooth rusted or damaged areas of prime coat, and apply touch-up of compatible, approved air-drying primer
- B. Fire Door Assembly Inspection and Testing: Upon completion of the installation, provide functional testing and inspection of each fire door assembly on the project to confirm proper operation and that it meets all criteria of a fire door assembly as per NFPA 80. Inspections shall be performed by individuals who are certified by Intertek as a Fire Door Assembly Inspector (FDAI) or a credentialed Architectural Hardware Consultant (AHC). A written report using reporting forms provided by the Door and Hardware Institute shall be maintained and transmitted to the Owner and made available to the authority having jurisdiction (AHJ). The report shall list each fire door throughout the project, and include each door number, location, hardware set used and summary of deficiencies.
 - 1. Schedule fire door assembly inspection within 90 days of substantial completion of the project.
 - 2. Correct all deficiencies and schedule a re-inspection of fire door assemblies which were noted as deficient on the inspection report.
 - 3. Inspector shall re-inspect fire door assemblies after repairs are made.
 - 4. Additional re-inspections which are required due to incomplete repairs will be performed by the inspector at the expense of the Contractor.
- C. Prime Coat Touch-Up: Immediately after installation, sand smooth rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

6. PROTECTION

- A. Provide for the proper protection of doors and frames until the Owner accepts the project as complete. Damaged or disfigured doors and frames shall be replaced or repaired by the responsible party. Some repairs may not be allowed in the field in order to maintain the labeled tornado approval. Consult with the manufacturer or the Authority Having Jurisdiction.
- B. Advise General Contractor on measures necessary to protect installed products and finished surfaces from damage during construction.

END OF SECTION

SECTION 08 41 13
ENTRANCES AND STOREFRONTS

1.GENERAL

1.1. SUMMARY

- A. Provide entrances and storefront.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 5 years.
- D. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Aluminum Entrances and Storefront:
 - 1. Manufacturers: [Nana Wall Systems, Inc.](#); [PRL Glass Systems, Inc.](#); [ZippyGrid](#) .
 - 2. Aluminum Members: ASTM B 209, ASTM B 221, ASTM B 429.
 - 3. Steel Reinforcement: ASTM A 36, ASTM A 1008, and ASTM A 1011.
 - 4. Door Style: Medium stile and rail doors.
 - 5. Storefront Style: Aluminum framed.
 - 6. Storefront Style: Aluminum framed, butt glazed vertical joints.
 - 7. Glass and Glazing: Insulating glazing, tempered.
 - 8. Glazing Color: Tinted glass.
 - 9. Door Hanging Devices: Offset pivot sets.
 - 10. Door Hanging Devices: Center pivot sets.
 - 11. Door Hanging Devices: Ball bearing butts.
 - 12. Closers: Concealed mounted.
 - 13. Closers: Surface mounted.
 - 14. Closer Operation: Single acting closers.
 - 15. Closer Operation: Double acting closers.
 - 16. Aluminum Finish: Baked enamel.
 - 17. Auxiliary Materials:
 - a. Aluminum infill panels.
 - b. Push/pulls, doorstops, overhead holders, and deadlocks.
 - c. Weatherstripping and thresholds.
 - d. Exit devices.
 - e. Electric-strike release.

3.EXECUTION

3.1. INSTALLATION

- A. Take field measurements before fabrication where possible; do not delay job progress.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- C. Anchor securely in place; install plumb, level and in true alignment. Isolate dissimilar materials to prevent corrosion.
- D. Coordinate with glass and glazing work; install hardware and adjust for smooth, proper operation.
- E. Clean and protect completed system; repair damage.

END OF SECTION

SECTION 08 44 00
CURTAIN WALL AND GLAZED ASSEMBLIES

1.GENERAL

1.1. SUMMARY

- A. Provide curtain wall and glazed assemblies.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
 - 1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- D. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 5 years.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.PRODUCTS

2.1. MATERIALS

- A. Glazed Aluminum Curtain Walls:
 - 1. Manufacturers: [AluminTechno JLLC](#); [PRL Glass Systems, Inc.](#); [Western Window Systems](#).
 - 2. Type: Aluminum stick-type glazed aluminum curtain wall with interior and exterior exposed metal framing.
 - 3. Type: Aluminum stick-type glazed aluminum curtain wall with non-metal structural gaskets at exterior and interior exposed metal framing.
 - 4. Primary Components: Extruded aluminum framing, internal reinforcement, insulated spandrel panels, trim, and filler units, sealants, and gaskets.
 - 5. Construction: Thermal-break type.
 - 6. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or galvanized steel.
 - 7. Glazing: Single pane glass.
 - 8. Glazing: Insulating glass with low-e coating.
 - 9. Glazing Color: Clear glass.
 - 10. Glazing Color: Tinted glass.
 - 11. Aluminum Finish: Clear anodized.
 - 12. Aluminum Finish: Color anodized.
 - 13. Aluminum Finish: Baked enamel.
 - 14. Aluminum Finish: Fluoropolymer, 2-coat.

- 15. Aluminum Finish: Fluoropolymer, 3-coat.
- 16. Auxiliary Materials:
 - a. Window cleaner attachments.
 - b. Window washing rail.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with AAMA guide specification for window walls, and install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- B. Tolerances: Not more than plus or minus 1/8" in 20' from true plumb, level, alignment, and location. Flush joints shall be within plus or minus 1/32" of true flush.
- C. Anchor framing members securely in place; coordinate work with glass and glazing, sealants, and firestopping work specified elsewhere.
- D. Clean and touch-up entire systems inside and out and protect until final acceptance.

END OF SECTION

SECTION 08 51 13
ALUMINUM WINDOWS

1.GENERAL

1.1. SUMMARY

- A. Provide aluminum windows.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- D. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Warranty Period: 5 years.
- E. Maintenance Data: Submit manufacturer's maintenance data, including maintenance schedule.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
- C. Performance: Comply with AAMA/NWWDA 101/I.S.2 for grade of window required.

2.PRODUCTS

2.1. MATERIALS

- A. Aluminum Windows:
 - 1. Manufacturers: [AluminTechno JLLC](#); [DeSCo Architectural Inc.](#); [Western Window Systems](#); [Wintech Inc.](#) .
 - 2. Construction: Thermal-break type.
 - 3. Aluminum Window Members: Aluminum extrusions.
 - 4. Anchors, Clips, and Window Accessories: Aluminum, nonmagnetic stainless steel, or galvanized steel.
 - 5. Window Operation: Fixed windows.
 - 6. Grade: Commercial.
 - a. Standard: AAMA/NWWDA 101/I.S. 2, Grade 40.
 - 7. Grade: Heavy commercial.
 - 8. Glazing: Insulating glass with low-e coating.
 - 9. Glazing Color: Tinted glass.
 - 10. Aluminum Finish: Baked enamel.
 - 11. Auxiliary Materials:
 - a. Ventilator opening limit device.
 - b. Window cleaner's bolts.

- c. Operating hardware.
- d. Insect screening.
- e. Integral venetian blinds.
- f. Nonglazed vent bar.
- g. Exterior louver units.
- h. Group operating system, manual operation.
- i. Group operating system, power driven operation.

3.EXECUTION

3.1. INSTALLATION

- A. Fabricate windows to conform to AAMA standards and accept glass specified.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- C. Operation: Provide locking units with manual operation; provide pole for out of reach hardware.
- D. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 087100

FINISH HARDWARE

PART 1 - GENERAL

1.1 WORK INCLUDED:

- A. The work in this section shall include the furnishing of all items of finish hardware as hereinafter specified, or obviously necessary to complete the building, except those items which are specifically excluded from this section of the specification.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 RELATED WORK:

- A. The following section of this specification should be examined in order to identify materials or equipment which may be obtained through this section.
 - 1. Section 08212 - "Stile and Rail Wood Doors"

1.3 DESCRIPTION OF WORK:

- A. Finish Hardware: Hardware used in building construction but particularly that used on or in connection with doors, frames, cabinets and other movable members. It also has a finished appearance as well as functional purpose and may be considered as a part of the decorative treatment of a room or building.

1.4 QUALITY ASSURANCE:

- A. Hardware has been specified herein by manufacturers' name, brand and catalog numbers for the purpose of establishing a basis for quality, finish, design and operational function. No other products will be furnished unless approved by means of 1.4 Paragraph "D".
- B. To insure a uniform basis of acceptable materials, it is the intention that only manufacturers' item specified as "acceptable and approved" be furnished for use on this project.
- C. Deviation from or modification of items will be permitted only for special instances caused by reason of construction characteristics and for the purpose of providing proper operational function. The contractor shall be responsible for checking any necessary deviations in order that hardware shall fit and function properly.
- D. Substitutions: Request for substitutions of items of hardware other than those listed as "acceptable and approved" shall be made to the architect no later than ten (10) days prior to bid opening. Approval of substitutions will only be given in writing or by Addenda. Requests for substitutions shall be accompanied by samples and/or detailed information for each manufacturer of each product showing design, functions, material thickness and any other pertinent information needed to compare your product with that specified. Substitution requests for mortise locks, door closers and exit devices shall include a physical sample. Lack of this information will result in a refusal.
- E. Supplier: A recognized builders hardware supplier whose principal office and place of business is located within 150 miles of the project site, who has been furnishing hardware in the project's

vicinity for a period of not less than five (5) years; and who is, or has in full time employment an Architectural Hardware Consultant (AHC) in good standing as certified by the American Society of Architectural Hardware Consultants, or equivalent, and who is a direct distributor of the products approved, for warranty purposes. This paragraph will be strictly enforced. All schedules shall be signed by an AHC.

The supplier must have demonstrated willingness to coordinate field problems, and (upon reasonable compensation) to assist the Owner in re-keying and service operations. He must have a reputation for supplying quality material. Pre-bid approval is required; the following are accorded such approval in advance:

1. Mullins Building Products; Montgomery, AL
 2. Brabner & Hollon; Mobile, AL
 3. Builders Door & Hardware; Dothan, AL
 4. Building Specialties; Birmingham, AL
 5. Commercial Door Products; Montgomery, AL
 6. Contract Hardware and Specialty Co.; Columbus, GA
 7. Dothan Commercial Door; Dothan, AL
 8. Mullins Building Products; Birmingham, AL
 9. Rayford & Associates, Inc., Mobile, AL
 10. Scarborough Door & Hardware; Florence, AL
 11. Southern Sash; Montgomery, AL
 12. U. S. Security Systems; Montgomery, AL
 13. Wagstaff Taylor; Birmingham, AL
 14. Kelley Brothers, Daphne, AL
 15. Alabama Door & Hardware, Vance, AL
- F. Refer to Division 1 Section "Special Conditions" for additional information and minimum experience requirements.
- G. Products and installation under the work of this Section shall be in compliance with, in part, at least the more stringent provisions of the following, either the latest edition or latest adopted edition of the locality, and all revisions and amendments thereto:
1. Americans With Disabilities Act of 1990 (ADA) "Accessibility Guidelines" (ADA-AG), and all revisions and amendments thereto.
 2. "2010 ADA Standards for Accessible Design", Published in the Federal Register September 15, 2010.
 3. American National Standards Institute (ANSI), ANSI A 117.1, 2009.
 4. Uniform Federal Accessibility Standards (UFAS).
 5. International Building Code, either the latest edition or latest adopted edition of the locality as applicable at the project locale.
 6. Where this requires any substitution of products specified herein, advise Architect in writing for necessary approvals.

1.5 SUBMITTALS:

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. The finish hardware supplier shall, after award of a formal contract submit to the architect, six (6) complete computerized or typewritten (handwritten are not acceptable) copies of the proposed finish hardware schedule for approval. The schedule shall be prepared using the "sequence and format" for the Door and Hardware Institute (DHI). After approval of the schedule the hardware supplier shall provide three (3) copies of this approved schedule to the

contractor for file and distribution purposes. Hardware will not be ordered by the hardware supplier until an approved schedule has been received. Horizontal schedules will not be acceptable. Provide vertical format.

- C. When submitting schedules for approval, include two manufacturers' cut sheets on each hardware item proposed. Index it with the use of number or letters or a combination of both, with the hardware schedule. The index numbers/letters are to be in right hand column on the same line as the respective manufacturers' numbers. All manufacturers' numbers shall be indexed even when appearing more than once.
- D. Templates: The hardware supplier shall provide necessary templates and/or physical hardware to all trades requiring them in order that they may cut, reinforce or otherwise prepare their material or product to receive the hardware item. If physical hardware is required by any manufacturer the hardware supplier shall ship to them such hardware via prepaid freight in sufficient time to prevent any delay in the execution of their work.

1.6 DELIVERY, STORAGE, AND HANDLING:

- A. Comply with manufacturer's current written instructions and recommendations.
- B. All items of hardware to be delivered to the job site shall be of completely packaged with all necessary screws, bolts, miscellaneous parts, instructions and where necessary installation templates for manufacturers' suggested installation. All boxes are to have a typed label with door hand, room location, item number and keying to conveniently identify them and their intended location in the building.
- C. A representative of the general contractor shall receive the hardware when delivered at the job site. A dry locked storage space complete with shelving, shall be set aside for the purpose of unpacking, sorting, checking and storage.
- D. Finish hardware shall be delivered to the general contractor by the hardware supplier. Direct factory shipments to the job site are not acceptable.
- E. The hardware shall be jointly inventoried by the representative of the general contractor and the hardware supplier.
- F. Items damaged in shipment shall be replaced promptly and with proper material without additional cost to the general contractor.
- G. All hardware shall be handled in a manner to minimize marring, scratching or damage.
- H. Refer to Division 1 Sections "Summary of Work" and "Special Conditions" for additional information and requirements regarding stored materials.

1.7 WARRANTY:

- A. Provide manufacturers warranties from hardware supplier as follows:
 - 1. Surface Door Closers: Thirty years.
 - 2. Exit Devices: Mechanical: three years, Electro-Mechanical: one year.
 - 3. Locksets: Mortise: three years.
 - 4. All other Hardware: One year.

- B. The above warranties shall be in addition to, shall be in effect simultaneously with, and shall not alter other project or product warranties or guarantees, nor shall they serve as a limitation to other remedies available to the Owner.

PART 2 - SPECIFIC REQUIREMENTS

2.1 ACCEPTABLE MANUFACTURERS:

- A. Requirements for design, grade, function, finish, size and other distinctive qualities of each type of finish hardware is indicated in the hardware schedule at the end of this section.

2.2 FINISH OF HARDWARE:

- A. Finish of hardware items shall conform to ANSI A156.18 and unless otherwise specified otherwise in the door hardware sets, shall be as listed below:
1. Butts -Exterior 630, Interior 652.
 2. Locksets & Cylinders - 626, satin chrome.
 3. Exit Devices - US26D, satin chrome, except exit device touch pads shall be satin stainless steel.
 4. Deadlocks – 626.
 5. Exterior Door Pulls – 629-316, polished stainless steel.
 6. Closers - 689, painted aluminum
 7. Kick, mop and armor plates - 630, satin stainless steel
 8. Miscellaneous Items - 626 or 630
 9. Continuous Gear Hinges – 628 at wood and hollow metal doors. Aluminum doors provide custom anodized aluminum or custom Kynar paint finish as required to match the specified door and frame finish.
 10. Interior Door Push and Pull Plates – 630, satin stainless steel.
 11. Thresholds and Metal Retainer Weather Stripping – 628, clear anodized aluminum.

2.3 HINGES & PIVOTS:

- A. Templates Hinges at new frames and doors: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template hinges which conform to ANSI whenever applicable. Provide special template hinges where required for use on existing door frames scheduled to be re-used. Hinges sizes at existing frames and doors shall match existing preparation sizes.
- B. Hinge pins, except as otherwise indicated, shall be as follows:
1. Steel Hinges: Steel Pins.
 2. Non-Ferrous Hinges: Stainless Steel Pins
 3. Exterior Doors: Non-Removable Pins (NRP) or Security Stud
 4. Out-Swing Corridor Doors: Non-Removable Pins (NRP), whether specified in the hardware sets or not.
 5. Interior Doors: Non-Rising Pins
 6. Tips: Flat button and matching plug, finished to match leaves, except where hospital tip indicated.
 7. Five Knuckle.
- C. Where projection of door trim is such as to prevent desired degree of opening, the proper hinge width shall be provided to allow the door to clear the trim.

D. Acceptable and approved only as follows:

1. Ives
2. Hager
3. Lawrence

E. Substitutions allowed only as described under paragraph 1.4.D of this section.

2.4 CYLINDERS, KEYS AND KEYING:

- A. Provide 7-pin, large format, Everest key removable cores as manufactured by Schlage Lock Company. Establish a new grand master key system for the project. Cylinders shall be controlled access, utility patented, owner letter of authorization required for order of additional keys and cores from Schlage. All new cores shall be factory keyed by Schlage. All new operating keys shall be factory cut by Schlage. All new cylinder cores and keys shall be keyed as directed by the owner. General contractor shall schedule a lock cylinder keying meeting after the door hardware submittal is approved. Permanent keys and cores shall be ordered on a timely basis so as to not delay the project. New key bittings shall be an extension of factory records. Provide for future expansion of key biting list by 100%.
- B. Provide temporary brass construction cores for all keyed cylinders and locks. General contractor shall remove temporary brass construction cores and install permanent cores at completion of project. General contractor shall coordinate date of removal of construction cores with the owner.
- C. Key Quantities:
1. 4 Operating keys per cylinder, 10 for keyed alike groups.
 2. 5 Master keys for each new master key group created.
 3. 12 Construction master keys and 2 Construction Control Keys.
 4. 150 key blanks
 5. 2 Permanent Control Keys.
- D. Key Stamping: All operating keys shall be stamped with their assigned key set symbol. All operating keys except one of each cut shall be stamped "Do Not Duplicate. All permanent cores shall be stamped or engraved with their assigned key set symbol in a concealed location.
- E. Provide one wall mounted key control cabinet; Lund deluxe 1200 Series, 150% capacity for the project. Hardware Supplier shall permanently tag one operating key of each cut and hang in key cabinet for use by owner in future key duplication.

2.5 MORTISE LOCKSETS & LATCHSETS:

A. Accepted and approved as follows:

1. Schlage L Series, 17A Design
2. Sargent 8200 Series, LP Design
3. Corbin ML2000, Series, PZD Design

B. Provide the lock series and function specified in the door hardware sets. All locks shall be equipped with strike dust boxes. Strike size shall be curved lip type, ASA 4 7/8", unless specified otherwise in the door hardware sets. All locks shall be ANSI grade 1, UL listed for fire door use.

- C. Lock lever handles and lock escutcheons shall be forged or cast brass, bronze or stainless steel. Wrought roses, escutcheons or filled levers will not be acceptable. All locksets shall be UL listed for life safety and fire. All locksets shall meet requirements of NFPA 80.
- D. Electrified locksets shall be same manufacturer as mechanical locksets.
- E. Substitutions allowed only as described in paragraph 1.4.D of this section.

2.6 CYLINDRICAL LOCKSETS & LATCHSETS:

- F. Accepted and approved as follows:
 - 1. Schlage ND Series, SPA Design
 - 2. Sargent 11 Line Series, LP Design
 - 3. Corbin CL3100 Series, PSA Design
- G. Provide the lock series and function specified in the door hardware sets. All locks shall be equipped with strike dust boxes. Strike size shall be curved lip type, ASA 4 7/8", unless specified otherwise in the door hardware sets. All locks shall be ANSI grade 1, UL listed for fire door use.
- H. Lock lever handles and lock escutcheons shall be forged or cast brass, bronze or stainless steel. Wrought roses, escutcheons or filled levers will not be acceptable. All locksets shall be UL listed for life safety and fire. All locksets shall meet requirements of NFPA 80.
- I. Electrified locksets shall be same manufacturer as mechanical locksets.
- J. Substitutions allowed only as described in paragraph 1.4.D of this section.

2.7 SURFACE DOOR CLOSERS

- A. Accepted and approved as follows:
 - 1. LCN 4000/1460 Series
 - 2. Corbin DC8000/DC6000 Series
 - 3. Norton 9500 Series
 - 4. Provide the closer series specified in the door hardware sets.
- B. Requirements:
 - 1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. Certify surface mounted mechanical closers to meet fifteen million (10,000,000) full load cycles. ISO 9000 certify closers. Stamp units with date of manufacture code.
 - 2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
 - 3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 11/16 inch (17 mm) diameter double heat-treated pinion journal.
 - 4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.

5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and back check.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coat finish which has been certified to exceed 100 hours salt spray testing as described in ANSI/BHMA Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Supplier shall provide special templates, drop plates, mounting brackets, or adapters for closer bodies, closer arms as required for details, overhead stops, and other door hardware items interfering with closer mounting. Provide whether specified in the door hardware sets or not.

2.8 FLAT GOODS:

- A. Accepted and approved only as follows:
1. Ives *
 2. Burns
 3. Trimco
- B. It is the responsibility of the hardware supplier to provide proper screw attachments per wall or floor conditions for door stops.
- C. Provide stops for each and every interior and exterior opening. Wall stops shall be of cast brass or bronze plated finish to match lock trim finish.
- D. Kickplates and armor plates shall be equal to Ives "8400 series" and shall be mounted by sheet metal screws where indicated in hardware sets. All kick plates shall be .050" satin stainless steel, with screw holes drilled.
- E. Substitutions allowed only as described under paragraph 1.4.D of this section.

2.9 THRESHOLDS AND WEATHERSTRIPPING:

- A. Accepted and approved as follows:
1. Zero
 2. National Guard
 3. K.N. Crowder
- B. Substitutions allowed only as described under paragraph 1.4.D of this section.

2.10 EXIT DEVICES

- A. Accepted and approved only as follows:
1. Von Duprin 35A/98 Series
 2. Precision Apex 2000 Series

3. Detex 10 Series

B. Requirements:

1. All exit devices to be of one manufacturer and provided in same finish design as locksets.
2. Provide sex nuts and bolts for attachment of surface applied items to doors.
3. Devices shall be UL listed. Devices for fire rated openings shall bear factory installed UL markings that indicate approval for fire rated openings.
4. All exit devices shall be touch-bar type design.
5. All exit devices shall comply with ANSI A156.3, Grade 1.
6. All exit devices shall be tested for structural integrity in accordance with ASTM E330.
7. Exit device lever trim shall be equal to Von Duprin break away vandal resistant #996L.
8. All exit devices shall be equipped with flush end caps.
9. All exit devices shall be equipped with guarded (deadlocking) latch bolts.
10. All exit devices shall be provided with anti-microbial coated stainless steel touch bars. Plastic touch pads or plastic covered touch pads will not be accepted.
11. Exit device power supplies shall be same manufacturer as exit device.
12. Security Indicators for "Keyed Cylinder Dogging" - Provide Von Duprin "CDSI", dogging indicator provides from a distance, an at-a-glance verification of the status of the door from inside of the room. Visible "LOCKED" and "UNLOCKED" indicators show whether the device is undogged or dogged.
13. Icc500 rated exit devices are to be compatible with the specified Tornado-Resistant Assemblies specified in specification Section 083490.
14. All exit devices are to be installed using through-bolts. All exit devices and exit device strikes shall be installed using manufacturer's supplied fasteners. Substitution of manufacturer's fasteners will not be allowed.

2.11 OVERHEAD HOLDERS AND STOPS

A. Accepted and approved only as follows:

1. Glynn Johnson
2. Rixson
3. Sargent

2.12 CONTINUOUS GEAR HINGES

A. Accepted and approved only as follows:

1. Ives
2. Markar
3. Select Products

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. Mount hardware units at heights indicated in "recommended locations for builders hardware" for (standard steel doors and frames), (custom steel doors and frames), (wood doors and frames) by the Door and Hardware Institute (DHI), except if otherwise specifically indicated or to comply with requirements of governing regulations, requirements for the disabled or handicapped, or if otherwise directed by the Architect.
- B. Degree of opening for doors with overhead holders, closers, etc., shall be included in the hardware schedule for the Architect's approval.

- C. All hardware shall be installed by tradesmen skilled in the application of commercial grade hardware.
- D. Install each hardware item in compliance with the instructions and recommendations. Securely fasten all parts to be attached. Fit faces of mortised parts snug and flush. Make sure all operating parts move freely and smoothly without binding, sticking or excessive clearance. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted and finished in another way, the hardware shall be removed and stored prior to the painting or finishing. Items shall then be reinstalled only when the finishes have been completed on the surface to which the hardware is to be applied.
- E. General contractor shall install all door hardware with the manufacturers fasteners supplied with each type of door hardware. Substitution of manufacturer's fasteners will not be allowed.
- E. After installation, representative templates, instruction sheets and installation details shall be placed in a file folder to be turned over to the owner when the building is accepted. Included shall be at least five each of any special adjusting and/or installation tools furnished with the hardware by the manufacturers.

3.2 ADJUSTING AND CLEANING:

- A. Adjust and check each operating item of hardware to ensure correct operation and function. Units which cannot be adjusted to operate as intended for the application made shall be replaced.
- B. Final Adjustment: Wherever hardware installation is made more than one month prior to building acceptance or occupancy of a space or area. The installer shall return to the work during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items. Hardware shall be cleaned as necessary to restore current operation, function and finish. Door control devices shall be adjusted to compensate for final operation of heating and ventilating equipment.

3.3 PROTECTION:

- A. Whenever hardware is located in areas where it may be subject to damage during construction by handling, cleaning, etc., (e.g., painting, cleaning of bricks) it shall be protected and/or removed from its location until the hazardous condition is terminated.

3.4 GENERAL NOTES:

- A. Before installation of any hardware begins the contractor's installer shall contact the hardware supplier to discuss any special installation requirements for all hardware items. Their discussion shall include, but not be limited to such items as proper closer mounting, proper fasteners to be used for hardware, locksets and exit device backsets, etc.
- B. Electric power tools should be used on hardware fasteners so as to prevent damage to screw heads.
- C. Hardware supplier should verify all quantities in the following schedule.

3.5 SCHEDULES:

- A. The following is a general listing of hardware requirements and is not intended for use as a final hardware schedule. Any items of hardware required by established standards of practice, or to

A NEW CITY HALL
WEDOWEE, ALABAMA

meet state and local codes shall be furnished whether or not specifically called out in the following listed groups.

- B. Supplier shall supply hardware for every numbered opening, whether specified in the above hardware sets or not. Hardware shall be same as similar openings.

NEW CITY HALL BUILDING

HARDWARE SET: C-01

DOOR NUMBER:

114

EACH TO HAVE:

1	CONTINUOUS GEAR HINGE	224XY EPT NOTCH	IVE
1	POWER TRANSFER	EPT10-CON	IVE
1	DELAYED EGRESS EXIT DEVICE	CX-98-L-996L-17-24VCD	VON
1	RIM CYLINDER	20-079 ICX	SCH
1	MORTISE CYLINDER	26-094 ICX	SCH
2	FSIC CORES	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	4040XP SCUSH TBSRT	LCN
1	KICK PLATES	8400 8" X 2" LDW B-CS	IVE
1	THRESHOLD	65A	ZER
1	SWEEP	8198AA	ZER
1	WEATHER STRIP	8144S-BK	ZER
1	OVERHEAD DRIP CAP	142A	ZER
1	WIRE HARNESS	ALLEGION CONNECT "CON" SERIES, LENGTH, QUANTITY, AND PIN CONNECTORS AS REQUIRED. HARNESS TO CONNECT ELECTRIFIED EXIT TO POWER TRANSFER, THEN POWER TRANSFER TO ABOVE DROP CEILING	VON
1	EXIT DEVICE POWER SUPPLY	PS902-FA	VON
2	KEYPADS	DKP-165	LKN
1	RISER DIAGRAM	PROVIDED BY DOOR HARDWARE SUPPLIER	
1	POINT TO POINT WIRE DIAGRAM	PROVIDED BY DOOR HARDWARE SUPPLIER	

OPERATION: DEVICE ACTIVATED WHEN TOUCH PAD DEPRESSES FOR MORE THAN ONE SECOND. DELAYED EGRESS EXIT DEVICE SET AT 15 SECOND. FIRE ALARM ACTIVATION UNLOCKS DOOR IMMEDIATELY. KEYPADS EXTERIOR AND INTERIOR SHUNT DELAYED EGRESS EXIT DEVICE FOR ADJUSTABLE TIME PERIOD TO ALLOW FACILITY STAFF TO PASS THROUGH DOOR WITHOUT DELAY. CH EXIT DEVICE SIGNAGE APPLIED TO DOOR DESCRIBES DELAYED EGRESS PROCESS.

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HARDWARE SET: C-02

DOOR NUMBER:

112

113

119

120

103.1

104

121

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5	IVE
1	ENTRY LOCKSET	ND53TD 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	MOP PLATE	8400 6" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

HARDWARE SET: C-03

DOOR NUMBER:

102.1

103

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5	IVE
1	ENTRY LOCKSET	ND53TD 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	MOP PLATE	8400 6" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	OVERHEAD STOP	90S SNB	GLY
3	SILENCERS	SR64	IVE

HARDWARE SET: C-04

DOOR NUMBER:

109.1

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5 NRP	IVE
1	ENTRY LOCKSET	ND53TD 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC RW/PA TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	GASKET SEAL	188S-BK-PSA	ZER

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HARDWARE SET: C-05

DOOR NUMBER:

102

108

125

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5 NRP	IVE
1	BATTERY POWERED KEYPAD LOCKSET	CO-100-CY-70-KP-SPA-J (LFIC) W/CONST/ CORE	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC RW/PA TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	GASKET SEAL	188S-BK-PSA	ZER

HARDWARE SET: C-06

DOOR NUMBER:

107

118

131

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5 NRP	IVE
1	STOREROOM LOCKSET	ND80T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC RW/PA TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

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HARDWARE SET: C-07

DOOR NUMBER:

LL02

LL03

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5	IVE
1	STOREROOM LOCKSET	ND80T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC RW/PA TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

HARDWARE SET: C-08

DOOR NUMBER:

123

124

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5	IVE
1	PASSAGE SET	ND10S 10-025	SCH
1	SURFACE CLOSER	1461 FC EDA DEL TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	GASKET	188S-BK-PSA	ZER

HARDWARE SET: C-09

DOOR NUMBER:

110

111

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5	IVE
1	PUSH PLATE	8200 8" X 16"	IVE
1	PULL PLATE	8303-8" PULL, 4" X 16"	IVE
1	SURFACE CLOSER	1461 FC EDA DEL TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

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HARDWARE SET: C-10

DOOR NUMBER:

116

117

127

LL04

LL05

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5	IVE
1	PIVACY SET W/OUTSIDE OCCUPANCY INDICATOR	ND40 OS-OCC 10-025	SCH
1	SURFACE CLOSER	1461 FC RW/PA DEL TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

HARDWARE SET: C-11

DOOR NUMBER:

126

EACH TO HAVE:

6	BUTT HINGES	3CB1HW 4.5 X 4.5 NRP	IVE
2	SURFACE VERTICAL ROD EXIT DEVICES W/ QUIET MOTION DAMPER CONTROLLED LEVER TRIM, LESS BOTTOM ROD	9827-L-F-LBR-QM-996L-17-SNB	SCH
2	RIM CYLINDER	20-079 ICX	SCH
2	FSIC CORES	23-030 CKC EV29 S	SCH
2	SURFACE CLOSERS	1461 FC SCUSH TBSRT	LCN
2	KICK PLATES	8400 8" X 2" LDW B-CS	IVE
2	MOP PLATES	8400 6" X 1" LDW B-CS	IVE
2	CONCEALED/MORTISED AUTO DOOR BOTTOMS	369AA	ZER
1	GASKET SEAL	8150S-BK-PSA	ZER
2	MEETING EDGE SEALS	326AA	ZER

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HARDWARE SET: C-12

DOOR NUMBER:

128

129

EACH TO HAVE:

6	BUTT HINGES	3CB1 4.5 X 4.5	IVE
2	MANUAL FLUSH BOLTS	458-12"	IVE
1	DUST PROOF STRIKE	DP2	IVE
1	DUMMY LEVER TRIM	ND170	SCH
1	ENTRY LOCKSET	ND53T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
2	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
2	OVERHEAD STOP	90S SNB	GLY
2	SILENCERS	SR64	IVE

HARDWARE SET: C-13

DOOR NUMBER:

126.1

EACH TO HAVE:

6	BUTT HINGES	3CB1 4.5 X 4.5	IVE
2	MANUAL FLUSH BOLTS	458-12"	IVE
1	DUST PROOF STRIKE	DP2	IVE
1	DOUBLE CYLINDER DEADLOCK	L462T	SCH
2	FSIC CORE	23-030 CKC EV29 S	SCH
2	PUSH/PULL PLATES	1820-3.5" X 16.5" (TRIMCO)	TRI
2	PULL PLATES	8303-8" PULL, 4" X 16" PLATE	SCH
2	SURFACE CLOSER	1461 REG ARM W/HOLD OPEN TBSRT	LCN
2	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
2	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
2	SILENCERS	SR64	IVE

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WEDOWEE, ALABAMA

HARDWARE SET: C-14

DOOR NUMBER:

130

130.1

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5 NRP	IVE
1	EXIT DEVICE	98-L-F-996L-SNB	VON
1	RIM CYL. HOUSING	80-159	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 REG ARM TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

HARDWARE SET: C-WS-01 (ICC500-WIND STORM SHELTER OPENING)

DOOR NUMBER:

LL01

LL01.1

EACH TO HAVE:

1	CONTINUOUS HINGES	224XY	IVE
1	ICC500 MULTI-POINT EXIT DEVICE	WS-CDSI-9857-TL-990DT-SNB	VON
1	RIM CYLINDER	26-094 ICX	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	ADA THUMB TURN CYLINDER FOR DOGGING	09-905 XB11-720 W/STRAIGHT CAM	SCH
1	SURFACE CLOSER	4040XP SCUSH TBSRT	LCN
1	LATCH GUARD ONLY EXTENDED, WINDSTORM	WS-LGO-SIZE AS REQ'D	VON
1	REBATED THRESHOLD	566A (https://www.steelcraft.com/content/dam/steelcraft/documents/product-documents/Grouting_WS_Strikes_in_Rabbeted_Thresholds.pdf)	ZER
1	SWEEP	8198AA	ZER
1	WEATHER STRIP	8144S-BK	ZER
1	OVERHEAD DRIP CAP	142A	ZER

A NEW CITY HALL
WEDOWEE, ALABAMA

HARDWARE SET: C-AL-01

DOOR NUMBER:

101

101.1

EACH TO HAVE:

2	CONTINUOUS GEAR HINGES	112XY	IVE
1	CONCEALED VERTICAL ROD EXIT DEVICE	CD-35A47-EO	VON
1	CONCEALED VERTICAL ROD EXIT DEVICE	CD-35A47-TL	VON
1	RIM CYLINDER	20-079 ICX	SCH
2	MORTISE CYLINDER	26-094 ICX	SCH
3	FSIC CORES	23-030 CKC EV29 S	SCH
2	SPECIAL OFFSET PULLS	8190EZHD-18-O	IVE
2	CONCEALED OVERHEAD STOPS	100S	GLY
2	SURFACE CLOSERS	4021 W/DROP PLATE 18G TBSRT	LCN
1	MULLION SEAL	139N PSA	ZER
1	THRESHOLD	2006 STC X Q380	PEM
1	WEATHER SEALS	PROVIDED BY FRAME/DOOR SUPPLIER	ZER

HARDWARE SUPPLIER TO COORDINATE HARDWARE WITH ALUMINUM DOOR SUPPLIER.

HARDWARE SET: C-AL-02

DOOR NUMBER:

105.1

126.2

EACH TO HAVE:

1	CONTINUOUS GEAR HINGE	112XY	IVE
1	EXIT DEVICE	CD-35A-NL-OP-388	VON
1	RIM CYLINDER	20-079 ICX	SCH
1	MORTISE CYLINDER	26-094 ICX	SCH
1	FSIC CORES	23-030 CKC EV29 S	SCH
1	SPECIAL OFFSET PULL	8190EZHD-18-O	IVE
1	CONCEALED OVERHEAD STOP	100S	GLY
1	SURFACE CLOSER	4021 2/DROP PLATE 18G TBSRT	LCN
1	THRESHOLD	2006 STC X Q380	PEM
1	WEATHER SEALS	PROVIDED BY FRAME/DOOR SUPPLIER	ZER

HARDWARE SUPPLIER TO COORDINATE HARDWARE WITH ALUMINUM DOOR SUPPLIER.

A NEW CITY HALL
WEDOWEE, ALABAMA

HARDWARE SET: C-AL-03

DOOR NUMBER:

105

EACH TO HAVE:

3	BUTT HINGES	3CB1-4.5 X 4.5	IVE
1	ENTRY OCKSET	L9456T 10-072	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC REG ARM W/HOLD OPEN TBSRT	LCN
1	WALL STOP	WS401/402CVX	IVE
1	GASKETING	PROVIDED BY FRAME/DOOR SUPPLIER	ZER

HARDWARE SUPPLIER TO COORDINATE HARDWARE WITH ALUMINUM DOOR SUPPLIER.

HARDWARE SET: C-AL-04

DOOR NUMBER:

104.1

EACH TO HAVE:

1	CONTINUOUS GEAR HINGE	112XY	IVE
1	ENTRY OCKSET	L9456T 10-072	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	CONCEALED CLOSER	2030B	LCN
1	THRESHOLD	2006 STC X Q380	PEM
1	GASKETING	PROVIDED BY FRAME/DOOR SUPPLIER	ZER

HARDWARE SUPPLIER TO COORDINATE HARDWARE WITH ALUMINUM DOOR SUPPLIER.

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HARDWARE SET: C-AL-05

DOOR NUMBER:

109

EACH TO HAVE:

2	CONTINUOUS GEAR HINGES	112XY	IVE
2	MANUAL FLUSH BOLTS	458	IVE
1	MORTISE DEADLOCK	MS1850	ADA
3	MORTISE CYLINDER	20-062 ICX	SCH
2	FSIC CORES	23-030 CKC EV29 S	SCH
2	SPECIAL OFFSET PULLS	9190EZHD-18" CTC PULL, HORIZONTAL CTC AS REQ'D	IVE
2	CONCEALED OVERHEAD STOPS	100S	GLY
2	SURFACE CLOSERS	4021 W/DROP PLATE 18G TBSRT	LCN
1	THRESHOLD	2006 STC X Q380	PEM
1	WEATHER SEALS	PROVIDED BY FRAME/DOOR SUPPLIER	ZER

HARDWARE SUPPLIER TO COORDINATE HARDWARE WITH ALUMINUM DOOR SUPPLIER.

NEW UT BUILDING

HARDWARE SET: UT-01

DOOR NUMBER:

109.1

EACH TO HAVE:

1	CONTINUOUS GEAR HINGE	224XY	IVE
1	ENTRANCE/OFFICE LOCK W/DEADBOLT	L9453T 10-072	SCH
1	FSIC CORES	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	4040XP SCUSH TBSRT	LCN
1	KICK PLATES	8400 8" X 6" LDW B-CS	IVE
1	THRESHOLD	65A	ZER
1	SWEEP	8198AA	ZER
1	WEATHER STRIP	8144S-BK	ZER
1	OVERHEAD DRIP CAP	142A	ZER

A NEW CITY HALL
WEDOWEE, ALABAMA

HARDWARE SET: UT-02

DOOR NUMBER:

103 104 105 106

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5	IVE
1	ENTRY LOCKSET	ND53T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	MOP PLATE	8400 6" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

A NEW CITY HALL
WEDOWEE, ALABAMA

HARDWARE SET: UT-03

DOOR NUMBER:

102

111

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5	IVE
1	BATTERY POWERED KEYPAD LOCKSET	CO-100-CY-70-KP-SPA-J (LFIC) W/CONST/ CORE (DR 102 ONLY)	SCH
1	ENTRY LOCKSET	ND53T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC RW/PA TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	CONCEALED AUTOMATIC DOOR BOTTOM	364AA (DOOR 111 ONLY)	ZER
1	GASKET SEAL	188S-BK-PSA (DOOR 111 ONLY)	ZER

HARDWARE SET: UT-04

DOOR NUMBER:

107

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5	IVE
1	STOREROOM LOCKSET	ND80T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
1	SURFACE CLOSER	1461 FC RW/PA TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	THRESHOLD	566A	ZER
1	CONCEALED AUTOMATIC DOOR BOTTOM	364AA	ZER
1	GASKET SEAL	188S-BK-PSA	ZER

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WEDOWEE, ALABAMA

HARDWARE SET: UT-05

DOOR NUMBER:

109

EACH TO HAVE:

3	BUTT HINGES	3CB1HW 4.5 X 4.5	IVE
1	PASSAGE SET	ND10S 10-025	SCH
1	SURFACE CLOSER	1461 FC EDA DEL TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
1	GASKET	188S-BK-PSA	ZER

HARDWARE SET: UT-06

DOOR NUMBER:

108

EACH TO HAVE:

3	BUTT HINGES	3CB1 4.5 X 4.5	IVE
1	PIVACY SET	ND40 OS-OCC 10-025	SCH
1	SURFACE CLOSER	1461 FC RW/PA DEL TBSRT	LCN
1	KICK PLATE	8400 8" X 2" LDW B-CS	IVE
1	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
1	WALL STOP	WS401/402CVX	IVE
3	SILENCERS	SR64	IVE

A NEW CITY HALL
WEDOWEE, ALABAMA

HARDWARE SET: UT-07

DOOR NUMBER:

102.1

104.1

EACH TO HAVE:

6	BUTT HINGES	3CB1 4.5 X 4.5	IVE
2	MANUAL FLUSH BOLTS	458-12"	IVE
1	DUST PROOF STRIKE	DP2	IVE
1	DUMMY LEVER TRIM	ND170	SCH
1	ENTRY LOCKSET	ND53T 10-025	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
2	MOP PLATE	8400 6" X 1" LDW B-CS	IVE
2	OVERHEAD STOP	90S SNB	GLY
2	SILENCERS	SR64	IVE

HARDWARE SET: UT-AL-01

DOOR NUMBER:

101

EACH TO HAVE:

2	CONTINUOUS GEAR HINGES	112XY	IVE
2	MANUAL FLUSH BOLTS	458	IVE
1	MORTISE DEADLOCK	MS1850	ADA
1	MORTISE THUMB TURN CYLINDER	4066	ADA
1	MORTISE CYLINDER	20-062 ICX	SCH
1	FSIC CORE	23-030 CKC EV29 S	SCH
2	SPECIAL OFFSET PUSH/PULL BAR SET	9190EZHD-18" CTC PULL, HORIZONTAL CTC AS REQ'D	IVE
2	CONCEALED OVERHEAD STOPS	100S	GLY
2	SURFACE CLOSERS	4021 W/DROP PLATE 18G TBSRT	LCN
1	THRESHOLD	2006 STC X Q380	PEM
1	WEATHER SEALS	PROVIDED BY FRAME/DOOR SUPPLIER	ZER

HARDWARE SUPPLIER TO COORDINATE HARDWARE WITH ALUMINUM DOOR SUPPLIER.

MANUFACTURER LIST

<u>Code</u>	<u>Name</u>
SCH	Schlage
ZER	ZERO
LCN	LCN Closers
IVE	Ives
GLY	Glynn Johnson
VON	Von Duprin
PEM	PEMKO

A NEW CITY HALL
WEDOWEE, ALABAMA

LKN	Locknetics
Ada	Adams Rite

END OF SECTION

SECTION 08 80 00
GLAZING

1.GENERAL

1.1. SUMMARY

- A. Provide glass and glazing.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- D. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
 - 1. Laminated Glass: Manufacturer's 5-year warranty.
 - 2. Coated Glass: Manufacturer's 10-year warranty.
 - 3. Insulating Glass: Manufacturer's 10-year warranty.
 - 4. Mirror Glass: Manufacturer's 5-year warranty.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Glazing for Fire-Rated Assemblies: Glazing for assemblies that comply with NFPA 80
- C. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201 and, for wired glass, ANSI Z97.1.
- D. Glazing Publications:
 - 1. GANA Publications: GANA's 'Glazing Manual.' and 'Laminated Glass Design Guide.'
 - 2. AAMA Publications: AAMA GDSG-1, 'Glass Design for Sloped Glazing,' and AAMA TIR-A7, 'Sloped Glazing Guidelines.'
 - 3. IGMA Publication for Sloped Glazing: IGMA TB-3001, 'Sloped Glazing Guidelines.'
 - 4. IGMA Publication for Insulating Glass: SIGMA TM-3000, 'Glazing Guidelines for Sealed Insulating Glass Units.'
- E. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
 - 1. Each type of glazing.

2.EXECUTION

2.1. INSTALLATION

- A. Inspect framing and report unsatisfactory conditions in writing.
- B. Comply with GANA "Glazing Manual" and manufacturers instructions and recommendations. Use manufacturer's recommended spacers, blocks, primers, sealers, gaskets and accessories.

- C. Install glass with uniformity of pattern, draw, bow and roller marks.
- D. Install sealants to provide complete wetting and bond and to create a substantial wash away from glass.
- E. Set mirrors on stainless steel clips and adhere to wall with mirror adhesive.
- F. Remove and replace damaged glass and glazing. Wash, polish and protect all glass supplied under this section.

END OF SECTION

SECTION 08 92 00
LOUVERS AND VENTS

1.GENERAL

1.1. SUMMARY

- A. Provide louvers and vents.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Aluminum Wall Louvers:
 - 1. Manufacturers: [Air Balance](#); [Air Performance LLC](#); [Airline Louvers, a Mestek company](#); [Airolite Co. \(The\)](#); [Arrow United Industries, a Mestek Company](#) .
 - 2. Material: Aluminum extrusions.
 - 3. Blades: Horizontal storm-resistant louvers.
 - 4. Blades: Horizontal drainable blades.
 - 5. Blade Type: Fixed.
 - 6. Finish: Baked enamel.
 - 7. Auxiliary Materials:
 - a. Bird screens.
 - b. Insect screens.
 - c. Blank-off panels.
 - d. Insulated blank-off panels.
 - e. Glazing for louvered vent assemblies.
- B. Steel Wall Louvers:
 - 1. Manufacturers: [Airolite Co. \(The\)](#); [Construction Solutions](#) .
 - 2. Material: Galvanized steel.
 - 3. Blades: Horizontal drainable fixed blades.
 - 4. Blades: Horizontal non-drainable, fixed blades.
 - 5. Finish: Baked enamel.
 - 6. Auxiliary Materials:
 - a. Bird screens.
 - b. Insect screens.
 - c. Blank-off panels.
 - d. Insulated blank-off panels.
 - e. Glazing for louvered vent assemblies.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- B. Comply with AMCA Standard 500 and provide units with AMCA Certification rating seal. Comply with SMACNA Sheet Metal Manual except as otherwise indicated.
- C. Provide separate continuous sills where needed to prevent water penetration. Maintain equal blade-to-blade and blade-to-frame spacing for uniform appearance. Provide concealed vertical mullions and reinforcement as needed.
- D. Provide anchors, supports and accessories as needed. Provide gaskets, flashings and fillers as necessary to make installation watertight.
- E. Restore damaged finishes. Clean and protect work from damage.

END OF SECTION

SECTION 09 21 16
GYPSUM BOARD ASSEMBLIES

1.GENERAL

1.1. SUMMARY

- A. Provide gypsum board assemblies.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Tolerances: Not more than 1/16-inch difference in true plane at joints between adjacent boards before finishing. After finishing, joints shall be not be visible. Not more than 1/8 inch in 10 feet deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.
- C. Fire Resistance for Fire-Rated Assemblies: ASTM E 119.
- D. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship and level of finish.
- E. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities.

2.PRODUCTS

2.1. MATERIALS

- A. Gypsum Board:
 - 1. Manufacturers: [TRUFAST Walls](#) .
 - 2. Application: Interior walls, partitions, and ceilings with tape and joint compound finish.
 - 3. Application: Cementitious backer units for application of tile.
 - 4. Application: Soffit board at exterior ceilings and soffits.
 - 5. Application: Insulation and vapor barrier systems in gypsum board assemblies.
 - 6. Application: Installation of access panels in gypsum board assemblies.
 - 7. Material Standard: ASTM C1396.
 - 8. Type: Board for tape and joint compound finish.
 - a. Type: Regular, moisture-resistant and fire-rated types as required.
 - b. Typical Thickness: 5/8 inch.
 - 9. Type: Water-resistant gypsum backing board.
 - a. Type: Regular and fire-rated types as required:
 - b. Typical Thickness: 5/8 inch.
 - 10. Type: Sag-resistant gypsum board.
 - a. Type: Regular and fire-rated types as required for ceilings.
 - b. Thickness: 1/2 inch.
 - 11. Type: Exterior soffit board.
 - a. Type: Regular and fire-rated types as required:
 - b. Typical Thickness: 1/2 inch.
 - 12. Joint Treatment: ASTM C474 and ASTM C840, 3-coat system, paper or fiberglass

- fiberglass tape.
- 13. Auxiliary Materials:
 - a. Cornerbead, edge trim and control joints.
 - b. Extruded aluminum reveals and channels.
 - c. Gypsum board screws, ASTM C 1002.
 - d. Gypsum board nails, ASTM C 514.
 - e. Fastening adhesive.
 - f. Concealed acoustical sealant.
 - g. Mineral fiber sound attenuation blankets.
 - h. Mineral fiber thermal insulation.
 - i. Polyethylene vapor retarder, 6 mils.
 - j. Polystyrene aggregated finish for ceilings.
 - k. Acoustical finish.
- B. Glass-Mat Water-Resistant Gypsum Backing Board:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec09260.html
 - 2. Material Standard: ASTM C1178.
 - 3. Type: Regular and fire-resistant as required.
 - a. Typical Thickness: 1/2 inch.
 - b. Typical Thickness: 5/8 inch.
- C. Cementitious Backer Units:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec09260.html
 - 2. Material Standard: ANSI A118.9.
 - 3. Type: Cement-coated Portland cement panels.
 - a. Thickness: 1/2 inch nominal.

3.EXECUTION

3.1. INSTALLATION

- A. Install gypsum board for tape and 3-coat joint compound finish in compliance with ASTM C 840 and GA 216, Level 4 finish. Install gypsum board assemblies true, plumb, level and in proper relation to adjacent surfaces.
- B. Provide fire-rated systems where indicated and where required by authorities having jurisdiction.
- C. Install boards vertically. Do not allow butt-to-butt joints and joints that do not fall over framing members.
- D. Where new partitions meet existing construction, remove existing cornerbeads to provide a smooth transition.
- E. Provide insulation full height and thickness in partitions at conference rooms, toilet rooms, between different occupancies, and where required.
- F. Provide acoustical sealant at both faces at top and bottom runner tracks, wall perimeters, openings, expansion and control joints.
- G. Install trim in strict compliance with manufacturer's instructions and recommendations.
- H. Repair surface defects. Leave ready for finish painting or wall treatment.

END OF SECTION

SECTION 09 30 00
TILING

1.GENERAL

1.1. SUMMARY

- A. Provide tile.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - 1. Include manufacturers full range of color and finish options if additional selection is required.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Tile: ANSI A 137.1.
- C. Tile Setting Materials: ANSI A 118 series standard specifications.
- D. Tile Installation: ANSI 108 series standard specifications and Tile Council of America, Handbook for Ceramic Tile Installation.
- E. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.PRODUCTS

2.1. MATERIALS

- A. Tile:
 - 1. Manufacturers: Coverall Stone Inc.; PROFLEX Products, Inc.; Schluter Systems LP .
 - 2. Application: Interior wall tile over gypsum wallboard.
 - 3. Application: Interior wall tile over tile backer board at wet areas.
 - 4. Application: Interior floor tile over concrete slab.
 - 5. Type: Ceramic mosaic tile.
 - 6. Type: Porcelain tile.
 - 7. Type: Quarry tile.
 - 8. Type: Paver tile.
- B. Setting Materials:
 - 1. Manufacturers: Custom Building Products; Futura Transitions; LATICRETE International, Inc.; MAPEI; North American Adhesives; PROFLEX® Products, Inc.; Schluter Systems LP; SGM, Inc. .
 - 2. Mortar setting bed.
 - a. Latex additive.
 - 3. Thin-set mortar.
 - a. Dry-set Portland cement mortar.
 - b. Latex-Portland cement mortar.
 - c. Conductive dry-set mortar.

- d. Chemical-resistant epoxy adhesive.
- e. Chemical-resistant furan mortar.
- f. Modified epoxy emulsion mortar.
- 4. Organic adhesive.
- 5. Grout.
 - a. Sand-Portland cement grout.
 - b. Dry-set grout.
 - c. Latex-Portland cement grout.
 - d. Chemical-resistant epoxy grout.
 - e. Chemical-resistant furan resin grout.
 - f. Silicone rubber elastomeric grout for pregrouted sheets.
- 6. Waterproofing membrane under tile.
 - a. ANSI A 118.10.
- 7. Crack suppression membrane under tile.
 - a. ANSI A 118.10.
- 8. Elastomeric sealants.
- 9. Stone thresholds.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with Tile Council of America and ANSI Standard Specifications for Installation for substrate and installation required. Comply with manufacturer's instructions and recommendations.
- B. Install waterproof membrane in accordance with manufacturer's instructions and recommendations.
- C. Lay tile in grid pattern with alignment grids. Layout tile to provide uniform joint widths and to minimize cutting; do not use less than 1/2 tile units.
- D. Provide sealant joints where recommended by TCA and approved by Architect.
- E. Grout and cure, clean and protect.

3.2. SCHEDULE

- A. Tile Schedule: See Finish Schedule and Interior Elevations
 - 1. Toilet Room Walls: Glazed ceramic mosaic tile over tile backer board with thin-set latex-modified cement mortar and latex-Portland cement grout.
 - 2. Toilet Room Floors: Unglazed ceramic mosaic tile over concrete slab with latex-Portland cement mortar and latex-Portland cement grout.

END OF SECTION

SECTION 09 65 13
RESILIENT BASE AND ACCESSORIES

1.GENERAL

1.1. SUMMARY

- A. Provide resilient wall base and accessories.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- C. Submit extra stock equal to 2% of total used.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Performance: Fire performance meeting requirements of building code and local authorities.

2.PRODUCTS

2.1. MATERIALS

- A. Resilient Wall Base:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec09653.html
 - 2. Standard: ASTM F 1861.
 - 3. Type: TS (rubber, vulcanized thermoset).
 - 4. Style: Cove.
 - 5. Thickness: 0.125 inch
 - 6. Thickness: 0.080 inch
 - 7. Height: 4 inches.
 - 8. Height: 6 inches.
- B. Resilient Stair Accessories:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec09653.html
 - 2. Stair Treads and Risers: Rubber.
 - a. Standard: FS RR-T-650, Composition A.
 - 3. Nosing Style: Square
 - 4. Thickness: 0.125 inches thick.

3.EXECUTION

3.1. INSTALLATION

- A. Comply with manufacturer's instructions and recommendations. Install in proper relation to adjacent work.
- B. Install base and accessories to minimize joints. Install base with joints as far from corners as practical.

C. Clean, polish, and protect.

END OF SECTION

SECTION 09 70 00
WALL FINISHES

1.GENERAL

1.1. SUMMARY

- A. Provide wall coverings and surface preparation.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- C. Extra Stock: Submit extra stock equal to 2 unopened rolls of each type of wall covering used.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Performance: Fire performance meeting requirements of building code and local authorities.

2.PRODUCTS

2.1. MATERIALS

- A. Vinyl Wall Covering:
 - 1. Manufacturers: [3M Commercial Solutions](#).
 - 2. Stain Resistance: Factory applied polyvinyl fluoride or polymer coating.
 - 3. Serviceability: ASTM F 793 for peelable or strippable wall coverings.
- B. Textile Wall Covering:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec09720.html
 - 2. Type: ASTM F 793, Category III, Decorative with Medium Serviceability.
 - 3. Fiber: Cotton wall covering.
 - 4. Fiber: Linen wall covering.
 - 5. Fiber: Silk wall covering.
- C. Wallpaper:
 - 1. Manufacturers: Refer to www.arcata.com/divs/sec/sec09720.html
 - 2. Type: ASTM F 793, Category I, Decorative Only.
 - 3. Stain Resistance: Factory applied coating.

3.EXECUTION

3.1. INSTALLATION

- A. Acclimatize materials; prime and seal substrates; test substrates for moisture content and prepare surfaces in compliance with manufacturer's recommendations.
- B. Install in accordance with manufacturer's instructions. Apply adhesive and install with seams plumb and overlapped and double-cut to ensure tight closure except where pattern would

not match. Do not place seams within 6" of corners.

- C. Remove air bubbles, blisters, wrinkles and other defects; horizontal seams are not permitted. Remove excess adhesive immediately; clean walls and protect surfaces.

END OF SECTION

SECTION 09 80 00
ACOUSTICAL TREATMENT

1.GENERAL

1.1. SUMMARY

- A. Provide acoustical wall panels.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- D. Extra Stock: Submit extra stock equal to 2% of total used.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Performance: Fire performance meeting requirements of building code and local authorities.
- C. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.EXECUTION

2.1. INSTALLATION

- A. Take field measurements prior to fabrication where practical. Do not delay job progress. Comply with ASTM C 636.
- B. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- C. Adjust, clean, and touch-up all system components.

END OF SECTION

SECTION 09 91 00
PAINTING

1.GENERAL

1.1. SUMMARY

- A. Provide painting and surface preparation.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
 - 1. Include manufacturers full range of color and finish options if additional selection is required.
- C. Extra Stock: Submit 2 unopened gallons of each paint and color used in the project.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Regulations: Compliance with VOC and environmental regulations.
- C. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
 - 1. Provide 4 foot x 4 foot mock-ups of each type of surface.

2.PRODUCTS

2.1. MATERIALS

- A. Painting:
 - 1. Manufacturers: [Behr Paint Company](#); [Benjamin Moore & Co. \(Canada\)](#); [Benjamin Moore & Co. \(United States\)](#); [Coronado Paint Co.](#); [Dumond, Inc.](#); [Florida Paints](#); [Kelly-Moore Paints](#); [PPG Architectural Finishes, Incorporated](#) - PPG Paints; [Sherwin-Williams](#).
 - 2. Application: Interior unfinished surfaces.
 - 3. Application: Exterior unfinished surfaces.
 - 4. Application: Exposed mechanical and electrical items.

3.EXECUTION

3.1. INSTALLATION

- A. Inspect surfaces, report unsatisfactory conditions in writing; beginning work means acceptance of substrate.
- B. Comply with manufacturer's instructions and recommendations for preparation, priming and coating work. Coordinate with work of other sections.
- C. At existing areas to be repainted, remove blistered or peeling paint to sound substrates. Remove chalk deposits and mildew and wash all surfaces with mild detergent. Perform related minor preparation including caulk and glazing compounds. Spot prime bare areas

before priming and painting as specified.

- D. Match approved mock-ups for color, texture, and pattern. Re-coat or remove and replace work which does not match or shows loss of adhesion. Clean up, touch up and protect work.

3.2. PAINT SCHEDULE

A. Gypsum Drywall Walls:

- 1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
- 2. System:
 - a. 1 coat latex primer
 - b. 1 coat latex finish
 - c. 2 coats latex finish
 - d. 1 coat alkyd finish
 - e. 2 coats alkyd finish

B. Gypsum Drywall Walls and Ceilings in Bathrooms, Kitchens and Wet Areas:

- 1. Gloss:
 - a. Semi
 - b. High
- 2. Texture:
 - a. Stipple
- 3. System:
 - a. 1 coat latex primer
 - b. 1 coat latex finish
 - c. 2 coats latex finish
 - d. 1 coat alkyd finish
 - e. 2 coats alkyd finish

C. Gypsum Drywall Walls, Multicolor Finish:

- 1. System:
 - a. 1 coat latex primer
 - b. 1 coat spray applied multicolor finish

D. Gypsum Drywall Walls to Receive Wall Covering:

- 1. System:
 - a. 1 coat latex primer

E. Gypsum Drywall Ceilings:

- 1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
- 2. System:
 - a. 1 coat latex primer
 - b. 1 coat latex finish
 - c. 2 coats latex finish
 - d. 1 coat alkyd finish
 - e. 2 coats alkyd finish

F. Plaster:

- 1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
- 2. System:

- a. 1 coat latex primer
 - b. 1 coat latex finish
 - c. 2 coats latex finish
 - d. 1 coat alkyd finish
 - e. 2 coats alkyd finish
- G. Wood for Painted Finish:
- 1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
 - 2. System:
 - a. 1 coat interior alkyd enamel undercoat
 - b. 1 coat latex enamel
 - c. 2 coats latex enamel
 - d. 1 coat alkyd enamel
 - e. 2 coats alkyd enamel
- H. Wood for Transparent Finish:
- 1. Gloss:
 - a. Satin
 - b. High
 - 2. System:
 - a. 1 coat water base sealer
 - b. 1 coat oil base sealer
 - c. 2 coats water base varnish
 - d. 2 coats oil base varnish
- I. Wood for Stain Finish:
- 1. Gloss:
 - a. Satin
 - b. High
 - 2. System:
 - a. 1 coat water base wood stain
 - b. 1 coat oil base wood stain
 - c. 1 coat water base sealer
 - d. 1 coat oil base sealer
 - e. 2 coats water base varnish
 - f. 2 coats oil base varnish
- J. Exterior Wood for Stain Finish:
- 1. System:
 - a. 1 coat semi-transparent stain, oil or alkyd resin base
 - b. 2 coats semi-transparent stain, oil or alkyd resin base
 - c. 1 coat solid color stain, oil or alkyd resin base
 - d. 2 coats solid color stain, oil or alkyd resin base
- K. Exterior Wood for Painted Finish:
- 1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
 - 2. System:
 - a. 1 coat exterior primer
 - b. 1 coat latex enamel
 - c. 2 coats latex enamel
 - d. 1 coat alkyd enamel
 - e. 2 coats alkyd enamel

- L. Concrete Masonry Units:
1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
 2. System:
 - a. 1 coat latex block filler
 - b. 1 coat latex finish
 - c. 2 coats latex finish
- M. Concrete Walls:
1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
 2. System:
 - a. 1 coat latex primer
 - b. 1 coat latex finish
 - c. 2 coats latex finish
- N. Ferrous Metals:
1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
 2. System:
 - a. 1 coat rust-inhibiting primer
 - b. 1 coat latex enamel
 - c. 2 coats latex enamel
 - d. 1 coat alkyd enamel
 - e. 2 coats alkyd enamel
- O. Galvanized Metal:
1. Gloss:
 - a. Flat
 - b. Semi
 - c. High
 2. System:
 - a. 1 coat galvanized metal primer
 - b. 1 coat alkyd enamel
 - c. 2 coats alkyd enamel

END OF SECTION

SECTION 09 93 00
STAINING AND TRANSPARENT FINISHING

1.GENERAL

1.1. SUMMARY

- A. Provide staining and transparent finishing and surface preparation.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Regulations: Compliance with VOC and environmental regulations.
- C. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

2.PRODUCTS

2.1. MATERIALS

- A. Staining and Transparent Finishes:
 - 1. Manufacturers: [Bona US](#).
 - 2. Finishing Schedule: Included at the end of this Section.

3.EXECUTION

3.1. INSTALLATION

- A. Inspect surfaces, report unsatisfactory conditions in writing; beginning work means acceptance of substrate.
- B. Comply with manufacturer's instructions and recommendations for preparation, priming and coating work. Coordinate with work of other sections.
- C. Match approved mock-ups for color, texture, and pattern. Re-coat or remove and replace work which does not match or shows loss of adhesion. Clean up, touch up and protect work.

3.2. FINISHING SCHEDULE

- A. Exterior Wood Trim:
 - 1. Semi-solid color, oil or alkyd resin base wood stain, 2 coats.
- B. Exterior Wood Soffits and Fascia: semi-transparent, oil or alkyd resin base stain, 2 coats.
 - 1. Semi-solid color, oil or alkyd resin base wood stain, 1 or 2 coats.
- C. Interior Woodwork:
 - 1. Satin natural clear finish, 3 coats linseed oil-modified polyurethane.

2. Semi-gloss natural clear finish, 3 coats linseed oil-modified polyurethane.
3. Gloss natural clear finish, 3 coats linseed oil-modified polyurethane.
4. Satin natural clear finish, 3 coats polyurethane.
5. Gloss natural clear finish, 3 coats polyurethane.
6. Stained, satin natural clear finish, resin-based stain, 3 coats linseed oil-modified polyurethane.
7. Stained, semi-gloss natural clear finish, resin-based stain, 3 coats linseed oil-modified polyurethane.
8. Stained, gloss natural clear finish, resin-based stain, 3 coats linseed oil-modified polyurethane.
9. Stained, satin natural clear finish, resin-based stain, 3 coats polyurethane.
10. Stained, gloss natural clear finish, resin-based stain, 3 coats polyurethane.

END OF SECTION

SECTION 09 51 00
ACOUSTICAL CEILINGS

1.GENERAL

1.1. SECTION INCLUDES

- A. Acoustical ceiling tiles and panels. (Sound Silencer)

1.2. RELATED SECTIONS

- A. Section 09 80 00 - Acoustic Treatment.

1.3. REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM C423 - Sound Absorption by Reverberation Room Method.
 - 2. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - 3. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
 - 4. ASTM C1338 - Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings.
 - 5. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 6. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - 7. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
 - 8. ASTM E1477 - Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
- B. National Fire Protection Association (NFPA):
 - 1. NFPA 286: Standard Method of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.

1.4. SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Test Reports: Upon request submit certified test reports from recognized test laboratories.
- D. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.
- E. Shop Drawings: Submit shop drawings in detail of all work in scale to indicate size, location and attachment methods required for the installation of the required work.
- F. Verification Samples: Submit samples or portions of full size units showing jointing where such exists and methods of internal fastening as well as all other detailing required.

1.5. QUALITY ASSURANCE

- A. Manufacturer: The manufacturer shall have a minimum of three years' experience in molding solid wood panel systems or laminating veneers to fire retardant substrates and shall have

completed at least five projects of the scope and quality required by this project.

1. The manufacturer shall have tested the lamination bond of the veneer to the substrate without showing signs of delamination, cracking or blistering.
2. The manufacturer shall have complete installation drawings and instructions to insure a quality installation.

B. Installer Qualifications: Minimum 2 year experience installing projects of similar size and complexity.

C. 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 is approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.6. PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.7. DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver material in the manufacturer's original, unopened, undamaged containers with identification labels intact.

B. Provide labels indicating brand name, source of procurement, style, size and thickness.

C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

D. Handling: Handle materials to avoid damage.

1.8. 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 recommended limits.

1.9. SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10. WARRANTY

A. Warranty Period: One year.

1. Manufacturer's warranty that the materials furnished hereunder will be free of manufacturing defects for a period of one year. The manufacturer's warranty may be conditioned with a statement that damage resulting from wet job conditions, faulty construction, plumbing or ventilating systems is not covered by the warranty. The manufacturer's warranty is limited to replacement of defective material only, rather than installation of the same. Faulty installation shall be corrected by the installing contractor. The warranty required herein is the sole remedy against the manufacturer and there are no other implied warranties. In any event, the manufacturer shall not be liable for incidentals or consequential damages.

1.11. EXTRA MATERIALS

A. Extra Materials: Provide ____ percent for use by owner in building maintenance and repair.

2.PRODUCTS

2.1. MANUFACTURERS

- A. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2. ACOUSTICAL CEILING TILES AND PANELS

- A. Ceiling Tiles: Sound Silencer Ceiling Tiles as manufactured by Acoustical Surfaces, Inc.
 - 1. Performance Requirements:
 - a. Panels to be impervious to moisture, excessive humidity or water, and Impact resistant.
 - b. Acoustical Performance Noise Reduction Coefficient (NRC) per ASTM C423 and Sound Transmission Classification (STC) per ASTM E90:
 - 1. Thickness: 1 inch (25 mm).
 - a. NRC: 0.55. E-400 Mount. STC: 9.
 - 2. Thickness: 2 inches (51 mm). STC: 13.
 - a. NRC: 0.70. E-400 Mount.
 - c. Surface Burning Performance Fire Rating per ASTM E84:
 - 1. Flammability: Class A.
 - a. 1 inch (25 mm) Flame Spread: 3. Smoke Developed: 84.
 - b. 2 inches (51 mm) Flame Spread: 5. Smoke Developed: 113.
 - 2. Suspension System:
 - a. Grid suspension system shall be as manufactured by Chicago Metallic Corporation, Armstrong or approved equal.
 - 1. Face Width: 9/16 inch (14 mm).
 - 2. Finish: White.
 - b. All main runners and cross runners shall conform to the intermediate classification of ASTM C635.
 - c. Main runners shall be installed 48 inches (1219 mm) o.c. and be directly suspended by not less than 12 ga. galvanized steel wire wrapped tightly at least three full turns. Suspension wires shall be straight and vertically installed not more than 48 inches (1219 mm) o.c.
 - d. Main runners shall be interconnected by cross tees to form 2 feet x 2 feet (610 mm x 610 mm) module.
 - e. Main runners shall be interconnected by cross tees to form 4 feet x 4 feet (1219 mm x 1219 mm) module.
 - f. Wall angle moldings shall be standard cold rolled electro-galvanized steel.

3.EXECUTION

3.1. EXAMINATION

- A. Upon receiving and prior to the installation of the interior finish materials, the installing contractor shall completely read all of the manufacturer's instructions for storage, job conditions and the installation recommendations, and see that they are strictly complied with.
- B. Work shall not begin until the space is fully enclosed and glazed.
- C. All wet work is to be completed and dried out to the satisfaction of the architect.
- D. Temperature shall be at least 65 degrees Fahrenheit during the installation and thereafter.
- E. The installation contractor shall be responsible for the examination of all of the conditions and recommendations as set forth and shall not proceed until satisfactory conditions have been met.

3.2. INSTALLATION

- A. Installation shall be in strict accordance with the manufacturer's written recommendations, project specifications and the contract drawings. Installation shall be performed by trained

crews under the direction of a trained foreman. Finished appearance in all cases shall be in exact conformance with the contract documents.

- B. Suspension cables should be securely anchored to ceiling deck and not existing T-Bar grid. Cutouts for lights and sprinkler systems should be approved by manufacturer.

3.3. CLEANING

- A. Clean exposed surfaces of ceiling panel to comply with manufacturer's instructions for cleaning.
- B. Remove and replace panels and tiles, which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

3.4. PROTECTION

- A. Protect installed work from damage due to subsequent construction activity, including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the Owner.

END OF SECTION

SECTION 09 65 19
RESILIENT TILE FLOORING

1. GENERAL

1.1. SECTION INCLUDES

- A. Resilient tile flooring.
 - 1. Opus Range.
 - 2. Knight Tile and Knight Tile Rigid Core.
 - 3. Van Gogh and Van Gogh Rigid Core.
 - 4. Art Select Range.
 - 5. Art Select Range Rigid Core. Ktrade Rigid Core Range.
- B. Accessories.
- C. Moisture barrier membrane.
- D. Noise reduction underlayment.

1.2. RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 06 10 00 - Rough Carpentry.
- C. Section 07 27 19 - Plastic Sheet Air Barriers .
- D. Section 09 65 16 - Resilient Sheet Flooring.
- E. Section 09 65 13 - Resilient Base and Accessories.

1.3. REFERENCES

- A. American Association of Textile Chemists and Colorists, AATCC 134 - Electrostatic Propensity of Carpets.
- B. ASTM International (ASTM):
 - 1. ASTM D2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
 - 2. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
 - 3. ASTM D3884 - Standard Guide for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method), Abrasion Wheels- H18 with 1000 grams load.
 - 4. ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
 - 5. ASTM E492 - Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
 - 6. ASTM E662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
 - 7. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - 8. ASTM E989 - Standard Classification for Determination of Impact Insulation Class (IIC).
 - 9. ASTM F137 - Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus.
 - 10. ASTM F386 - Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
 - 11. ASTM F925 - Standard Test Method for Resistance to Chemicals of Resilient Flooring.
 - 12. ASTM F970 - Standard Test Method for Static Load Limit.

13. ASTM F1514 - Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color Change.
14. ASTM F1515 - Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
15. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile.
16. ASTM F1914 - Standard Test Methods for Short-Term Indentation and Residual Indentation of Resilient Floor Covering.
17. ASTM F2055 - Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method.
18. ASTM F2199 - Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat.
19. ASTM F3261- Standard Specification for Resilient Flooring in Modular Format with Rigid Polymetric Core.

1.4. SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Provide detailed data on each product to be used including but not limited to the following information as applicable:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
 4. Maintenance recommendations.
- C. Selection Samples: For each finish product specified, two sets of each type, colors and finish of resilient flooring and accessory required, indicating full range of color and pattern variation.
- D. Verification Samples: For each finish product specified, two sets of each type, colors and finish of resilient flooring and accessory required, indicating color and pattern of actual product, including variations, as proof of application compliance.
- E. Closeout Submittals: Submit three copies of the following:
 1. Maintenance and operation data includes - methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
 2. Documentation of warranty specified herein.
- F. Flame Spread Certification: Submit manufacturer's certification that resilient flooring furnished for areas indicated to comply with required flame spread rating has been tested and meets or exceeds indicated or required standard.

1.5. QUALITY ASSURANCE

- A. Installer Qualifications: Minimum two years' experience, and have completed at least three projects of similar magnitude, material, and complexity. Upon request, provide project references including contact names and telephone numbers for three projects.
- B. 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, sheen, and finished appearance are approved by Architect.

1.6. DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Flooring material and adhesive shall be acclimated to the installation area for a minimum of

48 hours prior to installation.

- C. Store cartons of tile products flat and squarely on top of one another, not on edge.
- D. Store tubes of design strips and borders in a horizontal position. Storage in a vertical or inclined position causes uneven weight distributions, which will spaghetti the ends of the design strips. Store all tubes lying flat.

1.7. PROJECT CONDITIONS

- A. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations. Areas to receive flooring shall be clean, fully enclosed, weather tight with the permanent HVAC set at a uniform temperature of at least 65 degrees F (18 degrees C) and less than 85 degrees (30 degrees C) 48 hours prior to and during and for not less than 48 hours after installation. The flooring material shall be conditioned in the same manner prior to installation.
- B. Close off areas to traffic during resilient flooring installation, and for a period of time after installation as recommended in writing by the manufacturer.
- C. Install resilient flooring materials and accessories after other finishing operations, including painting, have been completed.
- D. Where demountable partitions and other items are indicated for installation on top of sheet resilient flooring material, install flooring material before these items are to be installed.
- E. Concrete substrates must be tested in accordance with ASTM F2170 or ASTM F1869. If the results exceed limits of the product or adhesive to be used a moisture mitigation system or damp-proof membrane must be installed to bring moisture levels within specifications.
- F. Store tubes of design strips and borders in a horizontal position. Storage in a vertical or inclined position causes uneven weight distributions, which will spaghetti the ends of the design strips. Store all tubes lying flat.

1.8. WARRANTY

- A. Warranty Period: Manufacturer's standard warranty against manufacturing defects and wearing for flooring are as follows:
 - 1. Opus and Opus Heritage Range:
 - a. 15-year commercial warranty.
 - 2. Van Gogh and Van Gogh Rigid Core Ranges:
 - a. 15-year commercial warranty.
 - 3. Karndean LooseLay Range:
 - a. 15-year commercial warranty.
 - 4. Art Select and Art Select Rigid Core Ranges:
 - a. 20-year commercial warranty.
 - 5. Korlok Select and Korlok Reserve Ranges:
 - a. 15-year commercial warranty.
 - 6. KTrade Gluedown Range:
 - 7. KTrade LooseLay Range:
 - a. 15-year commercial warranty.
 - b. Lifetime residential warranty.

1.9. EXTRA MATERIALS

- A. Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 closeout submittals requirements.
 - 1. Quantity: Furnish quantity of flooring units equal to 2 percent of amount installed.
Delivery, Storage and Protection: Comply with Owner's requirements for delivery,

storage, and protection of extra materials.

2.PRODUCTS

2.1. MANUFACTURERS

- A. Acceptable Manufacturer: Karndean Designflooring, Carlisle Wide Plank, Nucore
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2. RESILIENT TILE FLOORING - OPUS AND OPUS HERITAGE RANGE

2.3. RESILIENT TILE FLOORING - VAN GOGH AND VAN GOGH RIGID CORE

- A. Resilient Tile Flooring: Van Gogh Range Planks by Karndean Designflooring.
 - 1. Dimensions: 48 by 7 inches (1219 by 178 mm).
 - 2. Wear Layer Thickness: 20 mil (0.5 mm).
 - 3. Tile Thickness: 1/8 inches (3 mm).
 - 4. Edge: Micro bevel.
 - 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
- Resilient Tile Flooring: Van Gogh Rigid Core Planks by Karndean Designflooring.
 - 6. Dimensions: 48 by 7 inches (1219 by 178 mm).
 - 7. Wear Layer Thickness: 20 mil (0.5 mm).
 - 8. Tile Thickness: 0.18 inches (4.5 mm).
 - 9. Edge: Micro bevel.
 - 10. Compliance: ASTM F3261.
 - 11. Classification, ASTM F1700: Class 3 Type B.
 - 12. Slip Resistance, ASTM D2047: Pass (Dry 0.89).
 - 13. Reaction to Fire: ASTM E648-06: Class 1.
 - 14. Staining Resistance, ASTM F925: Pass.
 - 15. Light Fastness, ASTM F1515: Less than 8.
 - 16. Abrasion Resistance, ASTM D4060: 20,000 Cycles.
 - 17. Dimensional Stability, ISO 23999: Pass.
 - 18. Acoustic Impact Noise Reduction: ASTM E492-09: IIC69.
 - 19. Indentation, Residual, ASTM F1914: Pass.

2.4. RESILIENT TILE FLOORING - ART SELECT RANGE

- A. Resilient Tile Flooring: Art Select Range; Hand Crafted Wood Collection Planks by Karndean Designflooring.
 - 1. Dimensions: 36 by 6 inches (915 by 152 mm).
 - 2. Wear Layer Thickness: 30 mil (0.7 mm).
 - 3. Tile Thickness: 1/8 inches (3 mm).
 - 4. Edge: Beveled edge, 2.5 mm thick.
 - 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
 - 6. Item Number and Name:
 - a. EW01 HICKORY PAPRIKA.
 - b. EW02 HICKORY PEPPERCORN.
 - c. EW03 HICKORY NUTMEG.
- B. Resilient Tile Flooring: Art Select Range; Marble collection Tiles by Karndean Designflooring.
 - 1. Dimensions: 18 by 18 inches (457.2 by 457.2 mm).
 - 2. Wear Layer Thickness: 30 mil (0.7 mm).
 - 3. Tile Thickness: 1/8 inches (3 mm).

4. Edge: Beveled edge, 2.5 mm thick.
 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
 6. Item Number and Name:
 - a. LM30 IONIC MARBLE.
 - b. LM31 CORINTHIAN MARBLE.
 - c. LM32 DORIC MARBLE.
- C. Resilient Tile Flooring: Art Select Range; Slate collection Tiles by Karndean Designflooring.
1. Dimensions: 18 by 24 inches (457 by 610 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 1/8 inches (3 mm).
 4. Edge: Beveled edge, 2.5 mm thick.
 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
 6. Item Number and Name:
 - a. LM49 LAGO QUARTZITE.
 - b. LM50 ALPINE QUARTZITE.
 - c. LM51 STERLING QUARTZITE.
- D. Resilient Tile Flooring: Art Select Range; Travertine Collection Tiles by Karndean Designflooring.
1. Dimensions: 18 by 36 inches (457 by 914 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 1/8 inches (3 mm).
 4. Edge: Beveled edge, 4 mm thick.
 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
 6. Item Number and Name:
 - a. LM33 CALACATTA D'ORO.
 - b. LM35 PEARL ONYX.
 - c. LM36 ROSE ONYX.
 - d. LM37 SILK TRAVERTINO.
 - e. LM38 CHAMPAGNE TRAVERTINO.
 - f. LM39 CALIZA CLASSICO.
 - g. LM40 PAVIMENTO CREMA.
 - h. LM42 PAVIMENTO BIANCO.
 - i. LM43 BREZZA CEPPO.
 - j. LM44 SABBIA CEPPO.
 - k. LM45 NATURALE CEPPO.
- E. Resilient Tile Flooring: Art Select Range; Planks by Karndean Designflooring.
1. Dimensions: 48 by 7 inches (1219 by 178 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 1/8 inches (3 mm).
 4. Edge: Beveled edge, 2.5 mm thick.
 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
 6. Item Number and Name:
 - a. RL01 SPRING OAK. (Oak Royale).
 - b. RL03 AUTUMN OAK. (Oak Royale).
 - c. RL07 SANTINA CHERRY. (Cherry Royale).
 - d. RL13 SALON OAK.
 - e. RL34 CANVAS OAK.
 - f. RL35 DAMASK OAK.

- g. RL36 MERINO OAK.
 - h. RL37 TWEED OAK.
 - i. RL38 COTTON OAK.
- F. Resilient Tile Flooring: Art Select Range; Planks by Karndean Designflooring.
- 1. Dimensions: 56 by 9 inches (1422 by 228 mm).
 - 2. Wear Layer Thickness: 30 mil (0.7 mm).
 - 3. Tile Thickness: 1/8 inches (3 mm).
 - 4. Edge: Beveled edge, 2.5 mm thick.
 - 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
- G. Resilient Tile Flooring: Art Select Range; Planks by Karndean Designflooring.
- 1. Dimensions: 48 by 4.5 inches (1219 by 114 mm).
 - 2. Wear Layer Thickness: 30 mil (0.7 mm).
 - 3. Tile Thickness: 1/8 inches (3 mm).
 - 4. Edge: Beveled edge, 2.5 mm thick.
 - 5. Material Compliance: ASTM F1700.
 - a. Reaction to Fire: ASTM E662, ASTM E648.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.89).

2.5. RESILIENT TILE FLOORING - ART SELECT RANGE RIGID CORE

- A. Performance and Design Requirements:
- 1. Locking System: 5G Fold Down installation system.
 - 2. Surface Treatment: K-Guard+ PU coating.
 - 3. Classification, ASTM F3261: Pass. Resilient flooring with Rigid Polymeric Core.
 - 4. Flammability Test, ASTM D2859: Pass.
 - 5. Staining Resistance, ASTM F925: Pass.
 - 6. Heat Fastness, ASTM F1514: Pass.
 - 7. Light Fastness, ASTM F1515: Pass.
 - 8. Electrostatic Propensity, AATCC 134-1996: 1.7 kV.
 - 9. Abrasion Resistance, ASTM D4060: Pass. Greater than 50,000 cycles.
 - 10. Dimensional Stability ISO 23999: Pass. -0.005 percent Avg.
 - 11. Acoustic Impact Noise Reduction:
 - a. ASTM E2179: Delta IIC = 25 dB.
 - b. ASTM E492: IIC = 68 dB. 6 inch Concrete Slab w/Drop Ceiling.
 - c. ASTM E492: IIC = 72 dB. 6 inch Concrete Slab w/Drop Ceiling + QuietChoice.
 - 12. Static Load ASTM F970: Pass. 400 psi at 0.005 inches.
 - 13. Indentation - Residual, ASTM F1914: Pass.
 - 14. Thickness Swell, NALFA 3.2 Pass. Class 4.
 - 15. Adhesive: None Required.
 - 16. Environmental:
 - a. FloorScore SCS-EC10.3-2014 v4.0: Indoor air quality certified; Compliant low emitting VOC emissions.
 - b. Environmental Product Declaration: Product-specific Type III EPD. Products with external third-party verification.
 - c. NSF / ANSI 332: Sustainability Assessment for Resilient Floor Coverings; Silver certified product.
 - d. ASSURE CERTIFIED: Conformance with Rigid Core Flooring Standard SCS-0011 V1-0.
 - e. ISO 14001 / ISO 9001: Manufactured to quality and environment management systems standards.
 - 17. Recycling: Suitable.
 - 18. Phthalate free, CPSC-CH-C1001-09.4: Yes.
- B. Resilient Tile Flooring: Art Select Range; Rigid Core Hand Crafted Wood Collection Planks by Karndean Designflooring.

1. Dimensions: 36 by 6 inches (915 by 152 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 9/32 inches (7 mm).
 4. Edge: Beveled edge, Standard.
 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
 6. Item Number and Name:
 - a. AKP-EW01 HICKORY PAPRIKA.
 - b. AKP-EW02 HICKORY PEPPERCORN.
 - c. AKP-EW03 HICKORY NUTMEG.
- C. Resilient Tile Flooring: Art Select Range; Rigid Core Planks by Karndean Designflooring.
1. Dimensions: 56 by 9 inches (1422 by 228 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 9/32 inches (7 mm).
 4. Edge: Beveled edge, Standard.
 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
- D. Resilient Tile Flooring: Art Select Range; Rigid Core Planks by Karndean Designflooring.
1. Dimensions: 48 by 7 inches (1220 by 107 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 9/32 inches (7 mm).
 4. Edge: Beveled edge Standard.
 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
- E. Resilient Tile Flooring: Art Select Range; Rigid Core Parquet Collection Planks by Karndean Designflooring.
1. Dimensions: 28 by 4.25 inches (711 by 114 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 9/32 inches (7 mm).
 4. Edge: Beveled edge, Standard.
 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
- F. Resilient Tile Flooring: Art Select Range; Rigid Core Planks by Karndean Designflooring.
1. Dimensions: 48 by 4.25 inches (1220 by 108 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 9/32 inches (7 mm).
 4. Edge: Beveled edge, Standard.
 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
- G. Resilient Tile Flooring: Art Select Range; Rigid Core Travertine Collection Tiles by Karndean Designflooring.
1. Dimensions: 18 by 36 inches (457 by 914 mm).
 2. Wear Layer Thickness: 30 mil (0.7 mm).
 3. Tile Thickness: 9/32 inches (7 mm).
 4. Edge: Beveled edge, Standard.
 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).

- H. Resilient Tile Flooring: Art Select Range; Slate collection Tiles by Karndean Designflooring.
 - 1. Dimensions: 18 by 24 inches (457 by 610 mm).
 - 2. Wear Layer Thickness: 30 mil (0.7 mm).
 - 3. Tile Thickness: 9/32 inches (7 mm).
 - 4. Edge: Beveled edge, Standard.
 - 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
 - 6. Item Number and Name:
 - a. AKT-LM49 LAGO QUARTZITE.
 - b. AKT-LM50 ALPINE QUARTZITE.
 - c. AKT-LM51 STERLING QUARTZITE.
- I. Resilient Tile Flooring: Art Select Range; Marble collection Tiles by Karndean Designflooring.
 - 1. Dimensions: 18 by 18 inches (457.2 by 457.2 mm).
 - 2. Wear Layer Thickness: 30 mil (0.7 mm).
 - 3. Tile Thickness: 9/32 inches (7 mm).
 - 4. Edge: Beveled edge, Standard.
 - 5. Material Compliance: ASTM 3261.
 - a. Reaction to Fire, ASTM E648-06: Class 1.
 - b. Slip Resistance: ASTM D2047: Pass (Dry 0.8).
 - 6. Item Number and Name:
 - a. AKT-LM30 IONIC MARBLE.
 - b. AKT-LM31 CORINTHIAN MARBLE.
 - c. AKT-LM32 DORIC MARBLE.

2.6. RESILIENT TILE FLOORING - KORLOK SELECT AND KORLOK RESERVE RANGES

- A. Resilient Tile Flooring: Korlok Select Range Planks by Karndean Designflooring.
 - 1. Dimensions: 56 by 9 inches (1420 by 225 mm).
 - 2. Thickness: 1/4 inches (6.5 mm).
 - 3. Wear Layer: 20 mil (0.5 mm).
 - 4. Beveled Edge: Micro bevel.
 - 5. Compliance: ASTM F3261.
 - 6. Slip Resistance: ASTM D2047.
 - 7. Reaction to Fire: ASTM E648-06: Class 1.
 - 8. Staining Resistance: ASTM F925: Pass.
 - 9. Light Fastness: ASTM F1515: Pass.
 - 10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
 - 11. Dimensional Stability: ASTM F2199: Pass.
 - 12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
 - 13. Indentation, Residual: ASTM F1914: Pass.
 - 14. Thermal Conductivity: ISO 8302, 0.052 m²K/W.
 - a. RKP8217 IVORY BRUSHED OAK.
 - b. RKP8236 BALTIC COASTAL OAK.
 - c. RKP8237 GLENMORE OAK.
 - d. RKP8238 BRAEMAR OAK.
- B. Resilient Tile Flooring: Korlok Select Stone Range by Karndean Designflooring.
 - 1. Dimensions: 18 by 24 inches (457 by 610 mm).
 - 2. Thickness: 1/4 inches (6.5 mm).
 - 3. Wear Layer: 20 mil (0.5 mm).
 - 4. Beveled Edge: Micro bevel.
 - 5. Compliance: ASTM F3261.
 - 6. Slip Resistance: ASTM D2047.
 - 7. Reaction to Fire: ASTM E648-06: Class 1.
 - 8. Staining Resistance: ASTM F925: Pass.
 - 9. Light Fastness: ASTM F1515: Pass.

10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
 11. Dimensional Stability: ASTM F2199: Pass.
 12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
 13. Indentation, Residual: ASTM F1914: Pass.
 14. Thermal Conductivity: ISO 8302, 0.052 m²K/W
- C. Resilient Tile Flooring: Korlok Select Stone Range by Karndean Designflooring.
1. Dimensions: 24 by 6 inches (609 by 152 mm).
 2. Thickness: 1/4 inches (6.5 mm).
 3. Wear Layer: 20 mil (0.5 mm).
 4. Beveled Edge: Micro bevel.
 5. Compliance: ASTM F3261.
 6. Slip Resistance: ASTM D2047.
 7. Reaction to Fire: ASTM E648-06: Class 1.
 8. Staining Resistance: ASTM F925: Pass.
 9. Light Fastness: ASTM F1515: Pass.
 10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
 11. Dimensional Stability: ASTM F2199: Pass.
 12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
 13. Indentation, Residual: ASTM F1914: Pass.
 14. Thermal Conductivity: ISO 8302, 0.052 m²K/W.
 15. Item Number, Name:
 - a. SM-RKT3012-G PALAZZO MARBLE.
 - b. SM-RKT3013-G BRUNELLA MARBLE.
- D. Resilient Tile Flooring: Korlok Reserve Range Planks by Karndean Designflooring.
1. Dimensions: 48 by 7 inches (1219 by 178 mm).
 2. Thickness: 1/4 inches (6.5 mm).
 3. Wear Layer: 20 mil (0.5 mm).
 4. Beveled Edge: Micro bevel.
 5. Compliance: ASTM F3261.
 6. Slip Resistance: ASTM D2047.
 7. Reaction to Fire: ASTM E648-06: Class 1.
 8. Staining Resistance: ASTM F925: Pass.
 9. Light Fastness: ASTM F1515: Pass.
 10. Abrasion Resistance: ASTM D4060: 20,000 Cycles.
 11. Dimensional Stability: ASTM F2199: Pass.
 12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
 13. Indentation, Residual: ASTM F1914: Pass.
 14. Thermal Conductivity: ISO 8302, 0.052 m²K/W.
- E. Resilient Tile Flooring: KTrade Gluedown Planks by Karndean Designflooring.
1. Dimensions: 48 by 7 inches (1219 by 178 mm).
 2. Thickness: 0.2 inches (2.5 mm).
 3. Wear Layer: 20 mil (0.5 mm).
 4. Beveled Edge: No.
 5. Compliance: ASTM F1700.
 6. Slip Resistance: ASTM D2047.
 7. Reaction to Fire: ASTM E648-06: Class 1, ASTM E662.
 8. Staining Resistance: ASTM F925: Pass.
 9. Light Fastness: ASTM F1515: Pass.
 10. Abrasion Resistance: ASTM D3884: 42000 Cycles.
 11. Dimensional Stability: ASTM F2199: Pass.
 12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC43.
 13. Indentation, Residual: ASTM F1914: Pass.
- 2.7. RESILIENT TILE FLOORING - KTRADE LOOSELAY RANGE
- 2.8. RESILIENT TILE FLOORING - KTRADE RIGID CORE RANGE

- A. Resilient Tile Flooring: KTrade Rigid Core Planks by Karndean Designflooring.
 - 1. Dimensions: 48 by 7 inches (1219 by 178 mm).
 - 2. Thickness: 0.18 inches (4.5 mm).
 - 3. Wear Layer: 12 mil (0.3 mm).
 - 4. Beveled Edge: No.
 - 5. Compliance: ASTM F1700.
 - 6. Slip Resistance: ASTM D2047
 - 7. Reaction to Fire: ASTM E648-06: Class 1, ASTM E662.
 - 8. Staining Resistance: ASTM F925: Pass.
 - 9. Light Fastness: ASTM F1515: Pass.
 - 10. Abrasion Resistance: ASTM D3884: 25,000 Cycles.
 - 11. Dimensional Stability: ASTM F2199: Pass.
 - 12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC56.
 - 13. Indentation, Residual: ASTM F1914: Pass.

2.9. ACCESSORIES

- A. Karndean Borders and Design Strips: Location, quantity, type, style, and configuration as indicated on the Drawings.
- B. Karndean Floor Care Kit with cleaning and maintenance products in quantities appropriate to size and scope of resilient flooring application are available but not required.
- C. Adhesive: Manufacturer's recommended adhesive as follows.
 - 1. Karndean Epoxy adhesive.
 - a. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.
 - 2. Karndean DrySet Roll-on Adhesive.
 - a. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.
 - 3. Karndean K-Spray Spray Adhesive.
 - a. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.
 - 4. Karndean K99 HM.
 - a. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.
- D. Portland based cementitious base leveler or patch. Gypsum based is not acceptable unless properly prepared.

2.10. MOISTURE BARRIER MEMBRANE

- A. Moisture Barrier Membrane:
 - 1. KOVARA 95 as manufactured by GCP Applied Technologies.
 - a. Material: Three-layer composite construction of a HDPE bottom layer, glass mat middle layer, and gray mineral top layer.
 - b. Thickness: 0.024 inches (0.61 mm).
 - c. Resistant to heavy rolling loads.
 - d. No VOC content.
 - e. Does not support mold or mildew growth.
 - f. Provides resistance to 95 percent relative humidity.
 - g. Tapes: As recommended by Manufacturer.
 - 2. KOVARA MBX as manufactured by GCP Applied Technologies.
 - a. Material: Three-layer composite construction of a HDPE bottom layer, glass mat middle layer, and dark blue mineral top layer.
 - b. Thickness: 0.028 inches (0.71 mm).
 - c. Resistant to heavy rolling loads.
 - d. No VOC content.
 - e. Does not support mold or mildew growth.

- f. Provides resistance to 99.5 percent relative humidity.
- g. Tapes: As recommended by Manufacturer.

2.11. NOISE REDUCTION UNDERLAYMENT

- A. Noise Reduction Underlayment: QuietChoice Acoustic Underlayment.
 - 1. Material Composition: Frothed polyurethane foam.
 - 2. Thickness: 0.055 inches (1.4 mm).
 - 3. Sound Rating with 6 inch (152 mm) concrete slab, drop ceiling, and 5 mm (0.20 inch) LVT:
 - a. Impact Isolation Class (IIC): 71.
 - b. Delta IIC: 25.

3.EXECUTION

3.1. EXAMINATION

- A. Inspect floor to be installed immediately upon arriving at job site; perform a moisture test.
- B. Do not begin installation until substrates have been properly prepared.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- D. The installation of the resilient flooring shall not begin until the work of all other trades has been completed, particularly wet and overhead trades.
- E. Areas to receive flooring shall be adequately lit during all phases of the installation process.

3.2. PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Using Portland based cementitious base leveler or patch fill and cover all seams, nail heads, voids, cracks, and expansion joints. Achieve smooth, even, firmly attached substrate for best finish results. Gypsum based underlayment not acceptable with Karndean Luxury Vinyl Flooring unless it is first properly prepared.
 - 1. Encapsulate any gypsum with a premium latex primer/sealer recommended by gypsum manufacturer.
 - 2. Cement slabs can be floated or repaired using Portland cement based compound. Follow patch manufacturers' instructions.
 - 3. Once substrate flatness is achieved, 3/16 inch (5 mm) in 10 feet (mm in 3 m), continue with the next step.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- D. Concrete Substrates: The Contractor shall verify to the Owner and installer a minimum of 30 days prior to the scheduled resilient flooring installation the following substrate conditions. All substrate testing shall be documented and submitted to the Architect and Owner before commencement of the flooring installation.
 - 1. Verify that substrates are dry, free of debris, and that all surfaces have properly cured.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
 - 4. Moisture Testing: Perform ASTM 1869 Calcium Chloride or ASTM 2170 In-Situ RH test and record results. Choose proper adhesive or moisture mitigation systems to meet manufacturers' specifications for moisture content. Proceed with installation only

after substrates meet specifications.

3.3. INSTALLING RESILIENT TILES AND PLANKS

A. General:

1. Karndean does not mandate any one brand of resilient flooring underlayment. Permanent HVAC system shall be turned on and set to a minimum of 65 degrees F (20 degrees C) for a minimum of 48 hours prior to, during and 48 hours after installation.
2. All products shall be allowed to acclimate at least 24 hours before installation. This means product shall be placed in the same room as the install that is taking place and removed from its factory packaging.
3. Material shall be visually inspected prior to installation.
4. Ensure that all recommendations for sub-floor and jobsite conditions are met prior to beginning the installation. Once the installation is started, Contractor and installer have accepted those conditions.
5. Install in accordance with manufacturer's installation instructions for each product type and application specified.

B. Layout and Installation:

1. Position planks so the end seams are no closer than the width of the plank being installed. Maintain this approach to staggering the planks throughout the entire installation while keeping a random appearance.
2. Center tiles or planks in rooms and hallways so borders are not less than half a tile or plank when possible.
3. Cut edges shall always be installed against a wall.
4. Install using tile and plank installation techniques recommended by manufacturer.
5. Install tiles, planks, borders and design strips in locations and configurations indicated on the Drawings.

C. Product Application:

1. Install in accordance with adhesive recommendations on label or data sheet.
2. Refer to manufacturer's literature for selection criteria for applicator, type.
3. Using proper applicator, apply adhesive in accordance with label on adhesive.
4. For LooseLay installations only, spread a 4 inch (100 mm) wide band of adhesive around the perimeter of the area designated as an extreme condition area. An additional 4 inch (100 mm) band shall be spread at approximately 10 foot (3 m) intervals, forming a grid pattern.
5. For transitional areas, from LooseLay to another floor covering of a different height, a 4 inch (100 mm) band of adhesive should be spread across the length of the transition.
6. Additional requirements for Korlok Products:
 - a. Comply with manufacturer's instruction sheets included in material packaging.
 - b. Install as "Floating Floor" assembly only. Use of adhesives is not recommended.
 - c. Clean, stable, and dry subfloors are required. Concrete subfloors must be moisture tested and any above 75 percent RH must have a DPM, damp proof membrane, or moisture mitigation installed.
 - d. Confirm floors are flat to within 3/16 inch (5 mm) in 10 feet (2 mm in 3 m).
 - e. Install with 3/16 inch (5 mm) expansion at walls and other vertical abutments.

3.4. CLEANING

- A. Wipe off any adhesive on floor as installation proceeds. Wait 48 hours before applying the cleaning and maintenance products.
- B. Prior to installation of permanent fixtures or furniture, remove all dirt, debris, or residual adhesive and clean the floor. If desired, a protective covering may be applied at this time. Specific products and instructions are available from the manufacturer.

3.5. PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.6. MAINTENANCE

- A. Comply with manufacturer's instructions for proper cleaning and maintenance of the products.

END OF SECTION

SECTION 10 14 00
SIGNAGE

1.GENERAL

1.1. SUMMARY

- A. Provide signage.

2.PRODUCTS

2.1. MATERIALS

- A. Interior Signage:
1. Manufacturers: [Access Products / Ecoglo](#); [Gemini Inc.](#); [LumAware](#); [Nova Polymers, Inc.](#) .
 2. Type: Framed.
 3. Type: Unframed.
 4. Material: Aluminum.
 5. Material: Plastic.
 6. Material: Stainless steel.
 7. Material: Wood.
 8. Copy: Engraved lettering.
 9. Copy: Raised lettering.
 10. Copy: Applied die-cut vinyl lettering.
- B. Exterior Signage, Dimensional Letters and Numbers:
1. Manufacturers: [Gemini Inc.](#); [Nova Polymers, Inc.](#) .
 2. Type: Solid stock.
 3. Type: Fabricated.
 4. Type: Cast.
 5. Material: Aluminum, anodized finish.
 6. Material: Bronze, satin finish.
 7. Material: Stainless steel, satin finish.
 8. Material: Wood.
- C. Exterior Signage, Cast Plaques:
1. Manufacturers: [Gemini Inc.](#) .
 2. Material: Aluminum castings.
 3. Material: Bronze castings, statuary finish.
 4. Material: Plastic resin.
- D. Exterior Panel Signs, Post Mounted:
1. Manufacturers: Refer to www.arcata.com/divs/sec/sec10430.html
 2. Type: Unframed single-sheet panels.
 3. Type: Framed single-sheet panels.
 4. Type: Composite box-type panels.
 5. Copy: Applied.
 6. Copy: Cutout.
 7. Material: Aluminum, anodized.
 8. Material: Galvanized steel, painted.
 9. Material: Fiberglass.
 10. Frame: Extruded aluminum.
 11. Frame: Galvanized steel.
 12. Post: Structural aluminum tubing.
 13. Post: Galvanized steel posts.
 14. Mounting: Permanent direct-burial.
 15. Mounting: Base-plate mounting.

16. Mounting: Reverse sleeve mounting.
17. Illumination: Internal illumination.
18. Illumination: External illumination.

E. Exterior Monumental Pylon Signs:

1. Manufacturers: Refer to www.arcad.com/divs/sec/sec10430.html
2. Panel Faces: Aluminum, anodized.
3. Panel Faces: Fiberglass.
4. Copy: Applied.
5. Copy: Cut-out.
6. Frame: Extruded aluminum.
7. Frame: Galvanized steel.
8. Illumination: Internal illumination.
9. Illumination: External illumination.

SECTION 10 51 00
LOCKERS

1.GENERAL

1.1. SUMMARY

- A. Provide lockers.

2.PRODUCTS

2.1. MATERIALS

A. Metal Lockers:

1. Manufacturers: [Hadrian](#); [Ojmar](#); [Wenger Corporation](#), [JR Clancy and GearBoss](#); [Zephyr Lock](#) .
2. Type: Wardrobe lockers, sheet steel.
 - a. Steel, 24 gauge (.0239 inch) back and sides, 16 gauge (.0598 inch) top, bottom, and doors.
3. Type: Athletic lockers, sheet steel.
 - a. Steel, 16 gauge (.0598 inch) top and bottom, 18 gauge (.0358 inch) back, 16 gauge (.0598 inch) doors.
4. Tier: Double-tier lockers.
5. Face: Solid with punched louvers.
6. Locking: Built-in combination lock.
7. Tops: Sloped.
8. Mounting: Elevated base.
9. Mounting: Legs with metal base cover.
10. Colors: As selected.
11. Accessories:
 - a. Coat hooks.
 - b. Number plates.
 - c. End panels.
 - d. Filer strips.

B. Solid Plastic Lockers:

1. Manufacturers: [General Partitions Mfg. Corp.](#); [Scranton Products](#); [Zephyr Lock](#) .
2. Tier: Single-tier lockers.
3. Tier: Double-tier lockers.
4. Door Vents: Manufacturer's standard.
5. Door Vents: Lattice mesh.
6. Locking: Padlock type.
7. Locking: Built-in combination lock.
8. Locking: Keyed type.
9. Tops: Sloped.
10. Tops: Flat.
11. Mounting: Elevated base.
12. Hardware: Assembly brackets, door hinges, door latches.
13. Solid Plastic Locker Materials:
 - a. Plastic: Solid molded high-density polyethylene (HDPE).
14. Colors: As selected.
15. Accessories:
 - a. Coat hooks.
 - b. Number plates.
 - c. End panels.
 - d. Filer strips.

SECTION 10 75 00
FLAGPOLES

1.GENERAL

1.1. SUMMARY

- A. Provide flagpole systems.

2.PRODUCTS

2.1. MATERIALS

- A. Flagpoles:
1. Manufacturers: Refer to www.arcat.com/divs/sec/sec10350.html
 2. Shape: Cone tapered.
 3. Shape: Entasis tapered.
 4. Shape: Stepped sectional.
 5. Type: Vertical pole.
 6. Type: Outrigger type.
 7. Type: Nautical type.
 8. Type: Vertical with tilting, counterbalanced bases.
 9. Mounting: Ground-set.
 10. Mounting: Anchor bolt set.
 11. Mounting: Wall-mounted, exterior.
 12. Mounting: Wall-mounted, interior.
 13. Mounting: Roof-mounted.
 14. Material and Finish: Galvanized steel with powder coating.
 15. Material and Finish: Aluminum with clear anodized finish.
 16. Material and Finish: Aluminum with color anodized finish.
 17. Material and Finish: Aluminum with fluoropolymer finish.
 18. Material and Finish: Stainless steel with No. 4 finish.
 19. Material and Finish: CDA bronze alloy 230, seamless bronze pipe.
 20. Material and Finish: Bronze alloy with lacquer coating.
 21. Material and Finish: Fiberglass with high-gloss gel coat or coating.
 22. Accessories:
 - a. Flagpole mounted uplights.
 - b. Lightning protection.
 - c. External halyard.
 - d. Internal halyard.
 - e. Halyard/cleat cover.

SECTION 10 21 00
TOILET AND SHOWER PARTITIONS

1. GENERAL

1.1. SECTION INCLUDES

- A. Toilet Compartments.
- B. Urinal Screens.
- C. Shower and Dressing Compartments.

1.2. RELATED SECTIONS

- A. Section 05 40 00 - Cold-Formed Metal Framing.
- B. Section 10 51 00 - Lockers.
- C. Section 10 28 00 - Toilet, Bath, and Laundry Accessories.

1.3. REFERENCES

- A. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- B. ASTM A 240/A 240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- C. Stainless Steel Industry of North America (SSINA): Stainless Steel Finishes.

1.4. SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Submit plan, section, elevation and perspective drawings showing layout, door swings, fixture clearance, hardware, and methods of anchoring.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. 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. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of eighty-five years experience.
- B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of one year demonstrated experience in installing products of the same type and scope as specified.
- C. 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 partitions, hardware, and headrail in manufacturer's original protective shipping containers or packaging with labels intact and legible.
- B. Store products in manufacturer's unopened packaging until ready for installation.

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 recommended limits.

1.8. WARRANTY

- A. At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.

2. PRODUCTS

2.1. MANUFACTURERS

- A. Acceptable Manufacturer: American Sanitary Partition Corp., Bobrick
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2. PHENOLIC CORE TOILET PARTITIONS

- A. Partition Construction:
 1. Toilet Partition Type: PH-CS - Phenolic Core, Ceiling Stile.
 2. Panels, Stiles and Doors: Solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft paper and surface sheets fused at high temperature and pressure; the edges being finished and polished; black core.
 - a. Panel Thickness: No less than 1/2 inch (13mm) thick.
 - b. Stile Thickness: No less than 3/4 inch (19mm) thick.
 - c. Door Thickness: No less than 3/4 inch (19mm) thick.
- B. Materials:
 1. Panels: Solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft paper and surface sheets fused at high temperature and pressure; the edges being finished and polished; black core.
 - a. Panel Thickness: 3/4 inch (19mm) Phenolic Core.
 2. Doors: Solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft paper and surface sheets fused at high temperature and pressure; the edges being finished and polished; black core.
 - a. Door Thickness: 3/4 inch (19mm) Phenolic Core.
 - b. Door Thickness: 1 inch (25mm) Phenolic Core.
 3. Stiles: Solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft paper and surface sheets fused at high temperature and pressure; the edges being finished and polished; black core.
 - a. Stile Thickness: 3/4 inch (19mm) Phenolic Core.
 - b. Stile Thickness: 1 inch (25mm) Phenolic Core.

4. Headrail: 6063-T5 Aluminum; etched and anodized.

C. Fittings:

1. Wall Brackets:
 - a. Stirrup Brackets: Stainless Steel; #304 with a #4 finish; adjustable to keep panels and stiles clear from walls.
 - b. Full Height Continuous Brackets: Stainless Steel; #304 with a #4 finish; adjustable to keep panels and stiles clear from walls.
 - c. Full Height Continuous Aluminum: 6063-T5 Aluminum; etched and anodized and adjustable to keep panels and stiles clear from walls.
2. Stile Cover Bases: Stainless Steel: #304 with a #4 finish; 3 inches (76mm) high.
3. Panel Brackets:
 - a. Full height Continuous Stainless Steel; #304 with a #4 finish; "U" brackets, adjustable to keep panels clear from pilasters.
 - b. Full Height Continuous Aluminum: 6063-T5 Aluminum; etched and anodized and adjustable to keep panels clear from stiles.

D. Hardware:

1. Door Hardware: Vault Ball Bearing Hinge
 - a. Fastening Hardware: Stainless Steel; #304 with a #4 finish.
 - b. Top Hinge: Heavy Duty "Bank Vault" type, die-cast #304 stainless steel with a #4 finish; wrap-around pilaster and door mounting, through bolted.
 - c. Bottom Hinge: Same as top hinge, with gravity-type cam permitting adjustment to any desired angle of the door when not latched.
2. Door Hardware: Piano Hinge
 - a. Hinges: Full Height Continuous Piano Hinge; #304 stainless steel with a #4 finish, surface mounted, through bolted with screws of same material and finish.
 - b. Fastening Hardware: Stainless Steel; #304 with a #4 finish.
3. Slide Latch: Stainless Steel; #304 with a #4 finish. Through bolted with one-way theft proof screws of the same material and finish.
4. Combination Bumper Coat Hook: Stainless Steel; #304 with a #4 finish.
5. Keepers: Stainless Steel; #304 with a #4 finish. Through bolted with one-way theft proof screws of the same material and finish.
6. Keepers: Full Height Continuous 6063 T5 etched and anodized aluminum.
7. Coat Hooks: Stainless Steel; #304 with a #4 finish.

2.3. PHENOLIC CORE URINAL SCREENS

A. Urinal Screen Type: #1 - Wall Hung

1. Panel Shell: Solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft paper and surface sheets fused at high temperature and pressure; the edges being finished and polished; black core.
2. Panel Thickness: 1/2 inch (13mm).
3. Panel Width: 18 inches (457mm).
4. Panel Width: 24 inches (610mm).
5. Panel Height: 48 inches (1219mm).
6. Wall supported:
 - a. Attached with three (3) stainless steel wall brackets.
 - b. Attached with full height continuous stainless steel bracket.

2.4. PHENOLIC CORE SHOWER SEAT

A. Construction:

1. Type: Folding wall mounted phenolic core shower seat. Bobrick B-5181 Reversible folding shower seat, 360 lb. capacity.
2. Panel Shell: Solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft paper and surface sheets fused at high temperature and pressure; the edges being finished and polished; black core..
3. Panel Thickness: 3/4 inch (19mm)

- B. Fittings:
 - 1. Wall Brackets: Stainless Steel, #304 with a #4 finish. Adjustable to keep panels and stiles clear from walls.
 - 2. Stile Cover Bases: Stainless Steel, #304 with a #4 finish; 3 inches (76mm) high.
- C. Hardware:
 - 1. Door Hardware: Vault Ball Bearing Hinge
 - a. Fastening Hardware: Stainless Steel; #304 with a #4 finish.
 - b. Top Hinge: Heavy Duty "Bank Vault" type, die-cast #304 stainless steel with a #4 finish; wrap-around pilaster and door mounting, through bolted.
 - c. Bottom Hinge: Same as top hinge, with gravity-type cam permitting adjustment to any desired angle of the door when not latched.
 - 2. Door Hardware: Piano Hinge
 - a. Hinges: Full Height Continuous Piano Hinge; #304 stainless steel with a #4 finish, surface mounted, through bolted with "Torx" screws of same material and finish.
 - b. Fastening Hardware: Stainless Steel; #304 with a #4 finish.
 - 3. Slide Latch: Cast metal; chrome plated. Through bolted with theft proof "Torx" screws of the same material and finish.
 - 4. Combination Bumper Coat Hook: Stainless Steel, #304 with a #4 finish.
 - 5. Keepers: Stainless Steel, #304 with a #4 finish. Through bolted with theft proof "Torx" screws of the same material and finish.
 - 6. Keepers: Full Height Continuous 6063 T5 etched and anodized aluminum. Though bolted with one-way theft proof "Torx" screws.
 - 7. Coat Hooks: Stainless Steel, #304 with a #4 finish.

2.5. FINISHES

- A. Phenolic Core Finishes: Laminated surfacing as manufactured by Formica, Inc.
 - 1. Color: As selected from manufacturer's standard color offerings.

3.EXECUTION

3.1. EXAMINATION

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

3.2. PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3. INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.4. PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.5. CLEANING

- A. Phenolic Core Partitions:
1. Wipe laminate with a clean damp cloth or sponge using a mild soap, detergent, or general purpose cleaner.
 2. Do not use abrasive cleaners or powders, or abrasive scouring pads.

END OF SECTION

SECTION 10 28 13
COMMERCIAL TOILET ACCESSORIES

1.GENERAL

1.1. SECTION INCLUDES

- A. Public-use washroom and shower room accessories.
 - 1. Mirrors.
 - 2. Towel dispensers.
 - 3. Waste receptacles.
 - 4. Combination units.
 - 5. Hand dryers.
 - 6. Soap dispensers.
 - 7. Grab bars.
 - 8. Toilet paper dispensers.
 - 9. Seat cover dispensers.
 - 10. Napkin disposals.
 - 11. Hooks.
 - 12. Shelves.

1.2. RELATED SECTIONS

- A. Division 10185 - Shower and Dressing Compartments: Shower room accessories.

1.3. REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI A 117.1 - Accessible and Usable Buildings and Facilities.
- B. ASTM International (ASTM):
 - 1. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 - 2. ASTM A1008/A 1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.
 - 3. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
 - 4. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror.
 - 5. ASTM F446 - Standard Consumer Safety Specification for Grab Bars and Accessories Installed in the Bathing Area.
- C. US Federal Government:
 - 1. U.S. Architectural and Transportation Barriers Compliance Board. Americans with Disability Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities.

1.4. ACTION SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: For each product:
 - 1. Manufacturer's product data sheets indicating operating characteristics, materials, and finishes. Mark each sheet with product designation.
 - 2. Mounting requirements and rough-in dimensions.
- C. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.

1.5. INFORMATION SUBMITTALS

- A. Sample warranty.
- B. Operation, care, and cleaning instructions.

1.6. Closeout SUBMITTALS

- A. Furnish all spare parts packaged with identification labels.
- B. Provide operation and maintenance guides for each installed product.
- C. Surrender all keys to lockable units.

1.7. QUALITY ASSURANCE

- A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.
- B. Manufacturer Qualifications: Approved manufacturer listed in this section, with minimum five years' experience in the manufacture of product types in use in similar facilities. Manufacturers seeking approval must submit the following:
 - 1. Product data, including test data from qualified independent testing agency indicating compliance with requirements.
 - 2. List of successful installations of similar products available for evaluation by Architect.

1.8. WARRANTY

- A. The warranty is limited to replacing or repairing, at manufacturer's option, transportation charges prepaid by the purchaser, any washroom accessory unit or part thereof which our inspection shall show to have been defective within the limitations of the warranty.
- B. The period during which accessory units are warranted is as follows, measured from the date of manufacturer's invoices:
 - 1. Complete unit, except mirrors: one (1) year.
 - 2. Stainless Steel Mirror Frames: fifteen (15) years against corrosion.
 - 3. Plate Glass Mirrors: fifteen (15) years against silver spoilage under normal indoor atmospheric conditions.
 - 4. Hand/Hair Dryers: ten (10) years (see DRYER WARRANTY).
 - 5. Tempered Glass Mirrors: five (5) years against silver spoilage under normal indoor atmospheric conditions.
 - 6. Laminate Glass: five (5) years against silver spoilage under normal indoor atmospheric conditions.
 - 7. LED Mirrors: five (5) years on electronic components and against silver spoilage under normal indoor atmospheric conditions.
 - 8. Polished No. 8 Architectural Grade Finish on 304 Series Stainless Steel: one (1) year against corrosion.
 - 9. Bright Annealed Finish on 430 Series Stainless Steel: one (1) year against corrosion.
 - 10. Verge Deck Mounted Soap Dispensers: three (3) years
- C. The warranty does not cover installation labor charges and does not apply to any units which have been damaged by accident, abuse, improper installation, improper maintenance, or altered in any way. Rust and discoloration to stainless steel parts resulting from exposure to harsh environmental and/or chemical conditions are not considered to be defects in workmanship or material and there is no expressed or implied warranty for such a condition.
- D. The replacement or repair of defective washroom accessory units as stated in the warranty shall constitute the sole remedy of the purchaser and the sole liability of the manufacturer under this warranty. The manufacturer shall not under any circumstances be liable for incidental, consequential or indirect damages caused by defects in washroom accessory

units or any delay in the repair or replacement thereof.

- E. The warranty extends only to commercial and institutional purchasers and does not extend to any others, including consumer customers of commercial and institutional purchasers.
- F. The warranty does not extend to any product purchased from an unauthorized online seller (meaning any seller offering manufacturer's products for sale over the internet, other than those resellers identified as "authorized").
- G. The warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose or otherwise.

2.PRODUCTS

2.1. MANUFACTURERS

- A. Acceptable Manufacturer: Bradley Corp., which is located at: W142 N9101 Fountain Blvd.; Menomonee Falls, WI 53051; Toll Free Tel: 800-BRADLEY; Tel: 262-251-6000; Fax: 262-251-5817; Email: [request info \(john.Suberlak@bradleycorp.com\)](mailto:request info (john.Suberlak@bradleycorp.com)); Web: <http://www.bradleycorp.com>
- B. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.

2.2. PERFORMANCE REQUIREMENTS

- A. Accessibility Requirements: Comply with requirements of ADA/ABA and authorities having jurisdiction.
 - 1. ANSI A 117.1 - Accessible and Usable Buildings and Facilities.
- B. Operational Performance:
 - 1. Concealed magnetic locking system with magnetic key.
 - 2. High visibility low-level indicator to alert staff when attention is needed.
 - 3. Anti-slam operation to prevent an open dispenser from damaging walls or dispenser when being opened for refilling.

2.3. MIRRORS

- A. Frameless Mirrors:
 - 1. Basis of Design: Bradley Corp., Model 7B1 (MIR-7B1-Series).
 - 2. High Quality Flat Glass: Thickness: 0.25 inches (6.4 mm).
 - 3. Corners: Radiused. Edges: Ground and polished smooth.
 - 4. Mounting: Vertical only.
 - 5. Tamper Resistant: Remove mirror with tool No. 330-074 (ordered separately).
 - 6. Shelf: Stainless steel, 300 series 16 gauge.
 - a. Finish: Brushed No. 3 satin.
 - b. Shelf Thickness: 5/16 inches (8 mm). Depth: 4-1/2 inches (140 mm).
 - c. Length: Varies based on mirror width.
 - 7. Guarantee: 15 years. Silver spoilage.
 - 8. Size: As shown.
- B. Framed Mirrors:
 - 1. Basis of Design: Bradley Corp., Model 7B1 (MIR-7B1-Series).
 - 2. High Quality Flat Glass: Thickness: 0.25 inches (6.4 mm).
 - 3. Corners: Radiused. Edges: Ground and polished smooth.
 - 4. Frame: 20-gauge stainless steel. Finish: Brushed No. 3 satin.
 - 5. Frame: 16-gauge stainless steel. Finish: Brushed No. 3 satin.
 - 6. Mounting: Vertical only.
 - 7. Tamper Resistant: Remove mirror with tool No. 330-074 (ordered separately).
 - 8. Shelf: Depth: 5-1/2 inch (140 mm).

- a. Length: Varies based on mirror width.
- 9. Guarantee: 15 years. Silver spoilage.
- 10. Size: As shown.

2.4. TOWEL DISPENSERS

- A. Paper Towel Dispenser: Surface mounted.
 - 1. Basis of Design: Bradley Corp., Model 2B1 (PTD-2B1-11 Series). Seamless design. Easy access for service.
 - 2. Material: 20-gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin.
 - 3. Construction: Welded, pill-shape.
 - 4. Red, low-level indicator.
 - 5. Integral, easy-feed towel guide liner.
 - 6. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.
 - 7. Size: 2B1-113400 - Recessed small capacity.
 - a. Capacity: Approximately 400 folded paper towels.

2.5. WASTE RECEPTACLES

- A. Recessed Waste Receptacle:
 - 1. Basis of Design: Bradley Corp., Model 3B1 (WR-3B1-00 Series).
 - 2. Material: 20-gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
 - 3. Construction: Welded, D-shape.
 - 4. Bag Retention Ring: Holds liners in place and can serve as a handle.
 - 5. Type: 3B1-003400 - Recessed small capacity 11 gallon.
 - a. Size (HxWxD): 26-9/16 x 16-9/16 x 8-11/16 inches (675 x 420 x 220 mm).
 - 6. Type: 3B1-000000 - Recessed medium capacity 12 gallon.
 - a. Size (HxWxD): 35-9/16 x 16-9/16 x 8-11/16 inches (904 x 420 x 220 mm).

2.6. COMBINATION UNITS

- A. Towel/Waste Combination Unit: Surface mounted.
 - 1. Basis of Design: Bradley Corp., Model 2B5 (2B5-11 Series).
 - 2. Material: 20 gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
 - b. 20-gauge stainless steel connecting plate. Protects walls and makes cleaning easier.
 - 3. Construction: Welded, pill-shape.
 - 4. Bag Retention Ring: Holds liners in place and can serve as a handle.
 - 5. Concealed BradLock magnetic locking system.
 - 6. Size: 2B5-113400 - Recessed small capacity).
 - a. Towel Dispenser: Approximately 400 folded paper towels.
 - b. Waste Receptacle: 10 gallons (38 L).

2.7. HAND DRYERS

- A. Sensored Electric Hand Dryer:
 - 1. Basis of Design: Bradley Corp., Model 2B4 (HND-2B4). ADA approved. Slim profile. Surface-mounted.
 - 2. Components: UL and CE.
 - 3. Material: 20-gauge, 300 series stainless steel
 - a. Finish: Brushed No. 3 satin finish.
 - 4. Construction: Welded mounting frame.
 - 5. Size (HxWxD): 8.5 x 12.5 x 3.9 inches (216 x 318 x 100 mm).
 - 6. Sound Level: 72 to 78 dB
 - 7. Air Speed: 70- 82 m/s.

8. Air Filters: Carbon filter and 3M Filtrete sets.
9. Thermal Protection: For the motor and heater.
10. Adjustable Motor Wattage: 325 to 500 W.
11. Dryer requires a dedicated properly grounded 15 A circuit.
12. Power Source: 110 Volts.

2.8. SOAP DISPENSERS

- A. Sensored Hand Soap Dispensers: Surface mounted.
 1. Basis of Design: Bradley Corp., Model 6B1-119373T. Foam soap dispenser with drip tray.
 2. Material: 20 gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
 3. Mounting: Completely concealed. Mounting hardware is not included.
 4. Red, low-level indicator.
 5. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.
 6. Anti-Slam Operation: Prevents damage to walls or dispenser when being opened for refilling.
 7. Capacity: 40-oz liquid soap/gel sanitizer or bulk foam soap.
 8. Size (HxWxD): 18-1/16 x 6-7/8 x 3-15/16 inches (273 x 279 x 102 mm).
- B. Manual Hand Soap Dispensers: Surface-mounted. Manually-activated mechanism dispenses measured amount of vegetable or coconut oil soaps, synthetic detergents, gel sanitizer, or foam soap. Seamless design, and easy access for service.
 1. Basis of Design: Bradley Corp., Model 6B1 110073. Foam soap.
 - a. Provide with drip tray.
 2. Material: 20 gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
 3. Low-level indicator.
 4. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.
 5. Anti-Slam Operation: Prevents damage to walls or dispenser when being opened for refilling.
 6. Capacity: 40-oz liquid soap/gel sanitizer or bulk foam soap.
 7. Size (HxWxD): 18-1/16 x 6-7/8 x 3-15/16 inches (273 x 279 x 102 mm).
- C. Manual Hand Soap Dispensers: Recess-mounted. Manually-activated mechanism dispenses measured amount of vegetable or coconut oil soaps, synthetic detergents, gel sanitizer, or foam soap.
 1. Basis of Design: Bradley Corp., Model 6B1 HSD-6B1-000073. Foam soap.
 2. Material: 20 gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
 3. Low-level indicator.
 4. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.
 5. Anti-Slam Operation: Prevents damage to walls or dispenser when being opened for refilling.
 6. Capacity: 40-oz liquid soap/gel sanitizer or bulk foam soap.
 7. Size (HxWxD): 18-9/16 x 7 x 4-1/4 inch (472 x 178 x 108 mm).
 - a. Dispenser protrudes 3/4 inch (19 mm).

2.9. GRAB BARS

- A. Grab Bars:
 1. Basis of Design: Bradley Corp., Model 812 Series. 1 1/2" OD grab bar. lengths as indicated on the drawings
 2. Material: 18-gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.

3. End Caps: Welded.
4. Size: 8B1-0011800 - 18inch (457 mm) length.
5. Size: 8B1-0013600 - 36 inch (914 mm) length.
6. Size: 8B1-0014200 - 42 inch (1066 mm) length.
7. Size: 8B1-0014800 - 48 inch (1219 mm) length.

2.10. TOILET PAPER DISPENSERS

- A. Toilet Paper Dispensers: Dual roll with drop-down, roll-in-reserve. A seamless design, and easy access for service.
 1. Basis of Design: Bradley Corp. Model 5B2-000000 - Recessed.
 - a. Size (WxHxD): 7-5/8 x 12-1/2 x 5-9/16 inches (193 x 318 x 142 mm).
 2. Basis of Design: Bradley Corp. Model 5B2-110000 - Surface-mounted.
 - a. Size (WxHxD): 5-11/16 x 10-1/2 x 5-9/16 inches (144 x 266 x 142 mm).
 3. Material: 20 gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish on exposed surfaces.
 4. Toilet Roll Size: Up to 5-1/4 inch (mm) diameter.
 5. Roll Spindles: Molded polyethylene. Non-removable.
 6. Bottom-hinged service door.
 7. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.

2.11. SEAT COVER DISPENSERS

- A. Seat Cover Dispenser: Surface and recessed mounted. A seamless design with easy access for service.
 1. Basis of Design: Bradley Corp., Model 5B1-003600. Recessed, large capacity.
 - a. Size (HxWxD): 11 x 15-3/4 x 2 inches (279 x 400 x 50 mm).
 - b. Capacity: 500.
 2. Basis of Design: Bradley Corp., Model 5B1-110000. Surface-mounted, medium capacity.
 - a. Size (HxWxD): 11-15/16 x 15-3/4 x 2-7/16 inches (304 x 400 x 62 mm).
 - b. Capacity: 250.
 3. Basis of Design: Bradley Corp., Model 5B1-113600. Surface-mounted, large capacity.
 - a. Size (HxWxD): 14 x 17-3/8 x 2-7/16 inches (355 x 441 x 62 mm).
 - b. Capacity: 500.
 4. Material: 20-gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
 5. Construction: Welded. Pill shaped. Access Door: Piano hinged.
 6. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.

2.12. NAPKIN DISPOSAL UNITS

- A. Recessed Sanitary Napkin/Tampon Disposal Unit:
 1. Basis of Design: Bradley Corp., Model 4B2-000000. Recessed with self-trimming design.
 2. Material: 20-gauge, 300 series stainless steel
 - a. Finish: Brushed No. 3 satin finish.
 3. Capacity 1.5 gal (0.2 cu. ft.).
 4. Size (HxWxD): 17-3/16 x 13-5/16 x 4-11/16 inches (437 x 338 x 119 mm).
 5. Push Flap Door with concealed hinges.
 6. Service Door: Hinged drop-down.
 7. Waste Container: Removable. Leak-proof.
 8. Low-level indicator.
 9. Security: BradLock system and magnetic key.
 - a. Magnetic Lock Location: Hidden behind the Bradley logo.
- B. Surface Mounted Sanitary Napkin/Tampon Disposal Unit:

1. Basis of Design: Bradley Corp., Model 4B2-110000.
2. Material: 20-gauge, 300 series stainless steel.
 - a. Finish: Brushed No. 3 satin finish.
3. Capacity 1.5 gal (0.2 cu. ft.).
4. Size (HxWxD): 11-1/16 x 10-3/4 x 4 inches (281 x 273 x 102 mm).
5. Hinged cover.
6. Accepts owner's disposable liners.
7. Low-level indicator.

2.13. HOOKS

- A. Wall Hook: Surface-mounted Elvari Coat/Robe Hooks.
 1. Basis of Design: Bradley Corp., Model 9B1-110000. Single hook.
 - a. Size: 2-3/4 x 1-3/16 x 1-11/16 inches (69 x 30 x 42 mm).
 2. Basis of Design: Bradley Corp., Model 9B1-110200. Double hook.
 - a. Size: 5-3/8 x 1-3/16 x 1-3/4 inches (136 x 30 x 44 mm).
 3. Material: 14-gauge, 300 series stainless steel
 - a. Finish: Brushed No. 3 satin finish.
 4. Fasteners: Set screws and hex key included.
 5. Load Rating: 50 lbs (23 kg).

2.14. SHELVES

- A. Shelves:
 1. Basis of Design: Bradley Corp., Model 7B2 (SHLF- 7B2-00 Series. Surface mounted.
 2. Material:
 - a. Top and Back and Integral Back Mounting Plate: 20-gauge, 300 series stainless steel.
 1. Finish: Brushed No. 3 satin finish on exposed surfaces.
 - b. Front and Sides: 18-gauge, 300 series stainless steel.
 1. Finish: Brushed No. 3 satin finish on exposed surfaces.
 3. Hooks: Two per shelf.
 - a. Material: 30-gauge, 300 series stainless steel.
 1. Finish: Brushed No. 3 satin finish.
 4. Size (DxL): 7B2-0051200 - 5 x 12 inch (127 x 305 mm) length.

2.15. MATERIALS

- A. Stainless Steel: ASTM A666 Type 304 (18-8); satin finish exposed surfaces unless otherwise indicated.
- B. Fasteners:
 1. Exposed: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant.
 2. Concealed: Galvanized steel.
- C. Chrome Plating: ASTM B456, Service Condition Number SC 2, moderate service.
- D. Mirrors: ASTM C1503, mirror glazing quality, consisting of clear float glass ASTM C1036, nominal 6.0 mm thick, triple silver plated with electro copper plated layer and thermosetting, infrared cured paint backing with epoxy protective finish.
- E. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

2.16. FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage with corrosion-resistant backing plates.

- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

3.EXECUTION

3.1. EXAMINATION

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

3.2. PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3. INSTALLATION

- A. Install supports attached to building structure for equipment requiring supports.
- B. Grab Bars: Install grab bars to withstand downward force of not less than 250 lbf (1112 N) per ASTM F446.
- C. Install equipment level, plumb, and firmly in place in accordance with manufacturer's rough-in drawings.

3.4. CLEANING AND PROTECTION

- A. Repair or replace defective work, including damaged equipment and components.
- B. Clean unit surfaces and leave in ready-to-use condition.
- C. Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.

3.5. TESTING AND ADJUSTING

- A. Test each piece of equipment provided with moving parts to assure proper operation, freedom of movement, and alignment.
- B. Repair or replace malfunctioning equipment, or equipment with parts that bind or are misaligned.

END OF SECTION

SECTION 11 31 00
RESIDENTIAL APPLIANCES

1.GENERAL

1.1. SUMMARY

- A. Provide residential appliances.

1.2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
- D. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.

1.3. QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

2.PRODUCTS

2.1. MATERIALS

- A. Kitchen Appliances:
 - 1. Manufacturers: [JennAir Appliances](#); [KitchenAid Appliances](#); [Whirlpool® Appliances](#) .
 - 2. Appliance: Refrigerator/freezers.
 - 3. Appliance: Undercounter refrigerators.
 - 4. Appliance: Microwave ovens.
 - 5. Appliance: Dishwashers.

3.EXECUTION

3.1. INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- B. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 11 97 13
SECURITY DRAWERS AND PASS-THRU PRODUCTS

1.GENERAL

1.1. SECTION INCLUDES

- A. Deal trays.
- B. Security transaction drawers.
- C. Thru-Wall transaction drawers.
- D. Large capacity security drawers.
- E. Convenience shelving.
- F. Intercom systems.

1.2. RELATED SECTIONS

- A. Section 06 20 13 - Exterior Finish Carpentry.
- B. Section 06 20 00 - Finish Carpentry.
- C. Section 11 98 21 - Detention Windows.
- D. Section 10 26 16 - Bumper Guards.
- E. Section 11 22 13.16 - Safes
- F. Section 11 22 16.13 - Teller Equipment Systems
- G. Section 11 19 00 - Detention Equipment.
- H. Section 13 10 10 - Security Protection*.

1.3. REFERENCES

- A. Underwriters Laboratories (UL).

1.4. SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Manufacturer's printed installation instructions, showing required preparation and installation procedures.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Cleaning and maintenance instructions.
- C. Closeout Submittals: Documentation of manufacturer's warranty.

1.5. QUALITY ASSURANCE

- A. Installer: General construction knowledge.
- B. 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 and appearance are approved by Architect.
 3. Subject to approval by Architect, mock-up may be retained as part of finish work.
- C. Pre-Installation Meetings: Conduct pre-installation meetings to verify project requirements, substrate conditions, construction documents, details and manufacturer's warranty requirements.

1.6. DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged rolls/pallets with identification labels intact.
- B. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

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.

1.8. WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard warranty document executed by authorized company official.

2.PRODUCTS

2.1. MANUFACTURERS

- A. Acceptable Manufacturer: Shure Mfg. Corp., which is located at: 1901 W. Main St.; Washington, MO 63090; Toll Free Tel: 800-227-4873; Tel: 636-390-7176; Fax: 636-390-7171; Email: [request info \(rwakeman@shureusa.com\)](mailto:request info (rwakeman@shureusa.com)); Web: <http://www.shuresafe.com> | <http://www.shureusa.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2. DEAL TRAYS

- A. Basis of Design: DT Series as manufactured and supplied by Shure Manufacturing Corporation.
1. Security solution for cashier windows or other secured areas.
 2. Material: Stainless steel.
 3. Model SPT100: Stationary base for countertop installation.
 - a. Curved interior angles.
 - b. Overall Size (W x D x H): 10 x 8-1/8 x 1-5/8 in (254 x 206 x 41 mm).
 - c. Transfer Area (W x D x H): 8 x 6-3/4 x 1-9/16 in (203 x 171 x 40 mm).
 - d. Countertop Cut-Out (W x D x H): 8-1/4 x 7-1/8 x 1-7/8 in (210 x 181 x 48 mm).
 - e. Weight - Approx. 3 lbs (1.36 kg).
 4. Model SPT158: Stationary base for countertop installation.
 - a. Curved interior angles.
 - b. Overall Size (W x D x H): 12 x 9-1/4 x 1-5/8 in (305 x 235 x 41 mm).
 - c. Transfer Area (W x D x H): 10 x 8 x 1-9/16 in (254 x 203 x 40 mm).
 - d. Countertop Cut-Out (W x D x H): 10-1/4 x 8-1/4 x 1-13/16 in (260 x 210 x 48 mm).

- mm).
- e. Weight - Approx. 4 lbs (1.81 kg).
- 5. Model SPT159: Stationary base for countertop installation.
 - a. Curved interior angles.
 - b. Overall Size (W x D x H): 14 x 12 x 2 in (356 x 305 x 51 mm).
 - c. Transfer Area (W x D x H): 12 x 10 x 1-7/8 in (305 x 254 x 48 mm).
 - d. Countertop Cut-Out (W x D x H): 12-1/4 x 11 x 1-7/8 in (311 x 279 x 48 mm).
 - e. Weight - Approx. 5 lbs (2.27 kg).
- 6. Model SPT094: Stationary base and sliding tray for countertop installation.
 - a. Curved interior angles on sliding tray.
 - b. Overall Size (W x D x H): 10 x 15 x 1-1/2 in (254 x 381 x 38 mm).
 - c. Transfer Area (W x D x H): 7-3/4 x 6-1/4 x 1-1/4 in (197 x 159 x 32 mm).
 - d. Countertop Cut-Out (W x D x H): 8-1/4 x 13-1/4 x 1-9/16 in (210 x 337 x 40 mm).
 - e. Weight - Approx. 7 lbs (3.17 kg).

2.3. SECURITY TRANSACTION DRAWERS

- A. Basis of Design: Extended Security Drawers as manufactured and supplied by Shure Manufacturing Corporation.
 - 1. Standards Compliance: UL approved Level 3 bullet resistance.
 - 2. Material: Stainless Steel.
 - 3. Exterior frame mounting angles.
 - 4. Exterior drip edge.
 - 5. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - 6. Manually operated removable deal tray to expose larger transfer area.
 - a. For transferring currency bags and gallon-sized containers.
 - 7. Push button handle with self-opening and closing transaction area cover.
 - a. Lid interlock mechanism prevents simultaneous customer and operator access.
 - 8. Restricts outside airflow and external environment penetration.
 - 9. Model SPT217:
 - a. Built-in 3 in (76 mm) speaker with 7 feet of wire.
 - b. Dimensions:
 - 1. Overall Size (W x D x H): 24 x 31 x 10 in (610 x 787 x 254 mm).
 - 2. Frame Face (W x H): 26 x 11-1/16 in (660 x 281 mm).
 - 3. Transfer Area (W x D x H): 13-1/2 x 19 x 6 in (343 x 483 x 152 mm).
 - 4. Wall Opening (W x H): 24-1/4 x 10-1/4 in (616 x 260 mm).
 - 5. Weight: 140 lbs (63.503 kg).
 - 10. Model SPT218:
 - a. Built-in 3 in (76 mm) speaker with 7 feet of wire.
 - b. Model SPT001 intercom console.
 - c. Dimensions:
 - 1. Overall Size (W x D x H): 24 x 31 x 10 in (610 x 787 x 254 mm).
 - 2. Frame Face (W x H): 26 x 11-1/16 in (660 x 281 mm).
 - 3. Transfer Area (W x D x H): 13-1/2 x 19 x 6 in (343 x 483 x 152 mm).
 - 4. Wall Opening (W x H): 24-1/4 x 10-1/4 in (616 x 260 mm).
 - 5. Weight: 147 lbs (66.678 kg).
 - 11. Model SPT219:
 - a. Built-in 3 in (76 mm) speaker with 7 feet of wire.
 - b. Model SPT001 intercom console.
 - c. Model SPT005 heavy-duty foot switch.
 - d. Dimensions:
 - 1. Overall Size (W x D x H): 24 x 31 x 10 in (610 x 787 x 254 mm).
 - 2. Frame Face (W x H): 26 x 11-1/16 in (660 x 281 mm).
 - 3. Transfer Area (W x D x H): 13-1/2 x 19 x 6 in (343 x 483 x 152 mm).
 - 4. Wall Opening (W x H): 24-1/4 x 10-1/4 in (616 x 260 mm).
 - 5. Weight: 158 lbs (71.668 kg).
- B. Basis of Design: UL Approved Security Drawers as manufactured and supplied by Shure

Manufacturing Corporation.

1. Standards Compliance: UL approved Level 3 bullet resistance.
2. Material: Stainless Steel.
3. Exterior frame mounting angles.
4. Exterior drip edge.
5. Wall thickness: Up to 4-1/2 in (114 mm) thick walls on top of the drawer.
6. Manually operated removable deal tray to expose larger transfer area.
 - a. For transferring currency bags and gallon-sized containers.
7. Push button handle with self-opening and closing transaction area cover.
 - a. Lid interlock mechanism prevents simultaneous customer and operator access.
8. Restricts outside airflow and external environment penetration.
9. Model SPT330:
 - a. Built-in 3 in (76 mm) speaker with 7 feet of wire.
 - b. Dimensions:
 1. Overall Size (W x D x H): 24 x 28 x 10 in (610 x 711 x 254 mm).
 2. Frame Face (W x H): 26 x 11-1/16 in (660 x 281 mm).
 3. Transfer Area (W x D x H): 13-1/2 x 16 x 6 in (343 x 406 x 152 mm).
 4. Wall Opening (W x H): 24-1/4 x 10-1/4 in (616 x 260 mm).
 5. Weight: 120 lbs (54.431 kg).
10. Model SPT331:
 - a. Built-in 3 in (76 mm) speaker with 7 feet of wire.
 - b. Model SPT001 intercom console.
 - c. Dimensions:
 1. Overall Size (W x D x H): 24 x 28 x 10 in (610 x 711 x 254 mm).
 2. Frame Face (W x H): 26 x 11-1/16 in (660 x 281 mm).
 3. Transfer Area (W x D x H): 13-1/2 x 16 x 6 in (343 x 406 x 152 mm).
 4. Wall Opening (W x H): 24-1/4 x 10-1/4 in (616 x 260 mm).
 5. Weight: 128 lbs (58.060 kg).
11. Model SPT333:
 - a. Built-in 3 in (76 mm) speaker with 7 feet of wire.
 - b. Model SPT001 intercom console.
 - c. Model SPT005 heavy-duty foot switch.
 - d. Dimensions:
 1. Overall Size (W x D x H): 24 x 28 x 10 in (610 x 711 x 254 mm).
 2. Frame Face (W x H): 26 x 11-1/16 in (660 x 281 mm).
 3. Transfer Area (W x D x H): 13-1/2 x 16 x 6 in (343 x 406 x 152 mm).
 4. Wall Opening (W x H): 24-1/4 x 10-1/4 in (616 x 260 mm).
 5. Weight: 138 lbs (62.596 kg).

2.4. THRU-WALL TRANSACTION DRAWERS

- A. Basis of Design: T-Walls Series Transaction Drawers as manufactured and supplied by Shure Manufacturing Corporation.
 1. Standards Compliance: UL approved Level 3 bullet resistant faceplate insert.
 2. Material: Stainless steel.
 3. Manual Operation: Handle with push-to-operate mechanism to prevent uncontrolled exterior access to the transfer area.
 4. Extending tray housing for installation through walls, countertops with security windows, kiosks etc.
 5. Full-length removable deal tray. Removable deal tray allows transferal of bulkier items.
 6. Model SPT150: Bullet Resistant Transaction drawer.
 - a. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - b. Dimensions:
 1. Overall Size (W x D x H): 18 x 25 x 5 in (457 x 635 x 127 mm).
 2. Frame Face (W x H): 21-3/8 x 8 in (543 x 203 mm).
 3. Transfer Area (W x D x H): 13-3/4 x 20 x 4-1/8 in (349 x 508 x 105 mm).
 - a. Travel length: 11 in (279 mm).
 4. Wall Opening (W x H): 19-5/8 x 6-1/4 in (498 x 159 mm).

5. Weight: 60 lbs (27.2 kg).
7. Model SPT160: Double hinged transaction drawer.
 - a. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - b. Double hinged lid preventing simultaneous customer and operator access to the transfer area.
 - c. Dimensions:
 1. Overall Size (W x D x H): 18 x 25 x 5 in (457 x 635 x 127 mm).
 2. Frame Face (W x H): 21-3/8 x 8 in (543 x 203 mm).
 3. Transfer Area (W x D x H): 13-3/4 x 18-1/2 x 2-3/4 in (349 x 470 x 70 mm).
 - a. Travel length: 11 in (279 mm).
 4. Wall Opening (W x H): 19-5/8 x 6-1/4 in (498 x 159 mm).
 5. Weight: 62 lbs (28.1 kg).
8. Model SPT198: Thru-wall cash drawer.
 - a. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - b. Rear wall of the transfer area prevents interior side access when the drawer is fully opened.
 - c. Cup Holder: Stainless steel.
 - d. Dimensions:
 1. Overall Size (W x D x H): 18 x 25 x 9 in (457 x 635 x 229 mm).
 2. Frame Face (W x H): 21-3/8 x 11-1/8 in (543 x 283 mm).
 3. Transfer Area (W x D x H): 13-3/4 x 17-3/4 x 7-7/8 in (349 x 451 x 200 mm).
 - a. Travel length: 11 in (279 mm).
 4. Wall Opening (W x H): 19-5/8 x 9-1/2 in (498 x 241 mm).
 5. Weight: 67 lbs (30.4 kg).
9. Model SPT350: 11 in (279 mm) Extending drawer.
 - a. Wall thickness: Up to 4-1/2 in (114 mm) thick walls on top of the drawer.
 - b. Economical solution for cashier and ticket windows, administrative, retail/ convenience store environments and other point-of-sale contacts.
 - c. Dimensions:
 1. Overall Size (W x D x H): 12 x 16-3/4 x 3-3/4 in (305 x 425 x 95 mm).
 2. Frame Face (W x H): 14 x 5-3/4 in (356 x 146 mm).
 3. Transfer Area (W x D x H): 9-1/2 x 5-1/2 x 1-7/8 in (241 x 140 x 48 mm).
 - a. Travel length: 11 in (279 mm).
 4. Wall Opening (W x H): 12-1/4 x 4 in (311 x 102 mm).
 5. Weight: 24 lbs (10.9 kg).
10. Model SPT354: 17 in (432 mm) Extending drawer.
 - a. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - b. Economical solution for cashier and ticket windows, administrative, retail/ convenience store environments and other point-of-sale contacts.
 - c. Dimensions:
 1. Overall Size (W x D x H): 12 x 24 x 3-3/4 in (305 x 610 x 95 mm).
 2. Frame Face (W x H): 14 x 5-3/4 in (356 x 146 mm).
 3. Transfer Area (W x D x H): 9-1/2 x 8-1/16 x 1-7/8 in (241 x 205 x 48 mm).
 - a. Travel length: 17 in (432 mm).
 4. Wall Opening (W x H): 12-1/4 x 4 in (311 x 102 mm).
 5. Weight: 44 lbs (20 kg).
11. Model SPT-FR101: Fire rated, manually operated, self-closing, stainless steel, thru-wall cash drawer. The rear wall of the transfer bucket prevents interior side access when the drawer is fully opened.
 - a. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - b. Dimensions:
 1. Overall Size (W x D x H): 18 x 25 x 9 inches (457 x 635 x 229 mm).
 2. Frame Face (W x H): 21-3/8 x 11-1/8 inches (543 x 283 mm).
 3. Transfer Area (W x D x H): 13-5/8 x 17-3/4 x 7-7/8 in (346 x 451 x 200 mm).
 - a. Travel length: 11 inches (279 mm) minimum.

4. Wall Opening (W x H): 19-5/8 x 9-1/2 inches (498 x 241 mm).
 5. Weight: 67 lbs (30.4 kg).
- B. Basis of Design: Duo Series Transaction Drawers as manufactured and supplied by Shure Manufacturing Corporation.
1. Standards Compliance: UL approved Level 3 bullet resistance.
 2. Material: Stainless steel.
 3. Extending tray housing for installation through walls.
 4. Manual Operation: Dual-purpose transaction drawer.
 5. Full-length locking, sliding upper deal tray.
 6. Sliding deal tray frame prevent simultaneous interior and exterior access to the transfer area.
 7. Deal tray lock.
 8. Model SPT145: Dual purpose transaction drawer.
 - a. Wall Thickness: Up to 4-1/2 in (114 mm) thick walls on top of the drawer.
 - b. Weather guard frame, model SPT532.
 - c. Dimensions:
 1. Overall Size (W x D x H): 16 x 21 x 10 in (406 x 533 x 254 mm).
 2. Frame Face (W x H): 16 x 10 in (406 x 254 mm).
 3. Transfer Area (W x D x H): 13-1/2 x 6-3/8 x 6-5/8 in (343 x 162 x 168 mm).
 4. Wall Opening (W x H): 16-1/4 x 10-1/4 in (413 x 260 mm).
 5. Weight: 67 lbs (30.4 kg).
 9. Model SPT155: Dual purpose transaction drawer.
 - a. Wall Thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - b. Weather guard frame, model SPT571.
 - c. Dimensions:
 1. Overall Size (W x D x H): 16 x 25 x 20-1/2 in (406 x 635 x 521 mm).
 2. Frame Face (W x H): 16 x 20-1/2 in (406 x 635 mm).
 3. Transfer Area (W x D x H): 13-1/2 x 9 x 15-1/2 in (343 x 229 x 394 mm).
 4. Wall Opening (W x H): 16-1/4 x 20-3/4 in (413 x 527 mm).
 5. Weight: 117 lbs (53.1 kg).
 10. Model SPT183: Dual purpose transaction drawer.
 - a. Wall Thickness: 4-1/2 in (114 mm) thick walls on top of the drawer.
 - b. Weather guard frame, model SPT662.
 - c. Dimensions:
 1. Overall Size (W x D x H): 16 x 21 x 15 in (406 x 533 x 381 mm).
 2. Frame Face (W x H): 16 x 15 in (406 x 381 mm).
 3. Transfer Area (W x D x H): 13-1/2 x 6-3/8 x 11-5/8 in (343 x 162 x 295 mm).
 4. Wall Opening (W x H): 16-1/4 x 15-1/4 in (413 x 387 mm).
 5. Weight: 85 lbs (38.5 kg).
- C. Basis of Design: ER Series Transaction Drawers as manufactured and supplied by Shure Manufacturing Corporation.
1. Standards Compliance: UL approved Level 3 bullet resistance.
 2. Material: Stainless steel.
 3. Manual Operation: Handle, push-to-operate interlock mechanism to prevent uncontrolled exterior access to the transfer area.
 4. Extending tray housing for installation through walls, countertops with security windows, kiosks etc.
 5. Exterior frame angles for mounting.
 6. Front Drawer Face: Drop down design to allow access.
 7. Transfer Area: Equipped with coin and paper currency handling devices.
 8. Cup holder, stainless steel.
 9. Model SPT300: Bullet resistant transaction drawer.
 - a. High-rise stainless steel change tray and currency clip in the transfer area.
 - b. Right handed manual operation.
 - c. Wall thickness: Up to 4-1/2 in (114 mm) thick walls on top of the drawer.

- d. Dimensions:
 - 1. Overall Size (W x D x H): 21-3/4 x 16-3/4 x 14-15/16 in (552 x 425 x 379 mm).
 - 2. Frame Face (W x H): 21-3/4 x 12-15/16 in (552 x 329 mm).
 - 3. Transfer Area (W x D x H): 18-15/64 x 14-9/32 x 9-1/2 in (457 x 356 x 241 mm).
 - a. Travel length: 8 in (203 mm).
 - 4. Wall Opening (W x H): 22 x 13-1/4 in (559 x 337 mm).
 - 5. Weight: 65 lbs (29.5 kg).
- 10. Model SPT301: Bullet resistant transaction drawer.
 - a. High-rise stainless steel change tray and currency clip in the transfer area.
 - b. Left handed manual operation.
 - c. Wall thickness: Up to 4-1/2 in (114 mm) thick walls.
 - d. Dimensions:
 - 1. Overall Size (W x D x H): 21-3/4 x 16-3/4 x 15-15/16 in (552 x 425 x 405 mm).
 - 2. Frame Face (W x H): 21-3/4 x 12-15/16 in (552 x 329 mm).
 - 3. Transfer Area (W x D x H): 18-15/64 x 14-9/32 x 9-1/2 in (457 x 356 x 241 mm).
 - a. Travel length: 8 in (203 mm).
 - 4. Wall Opening (W x H): 22 x 13-1/4 in (559 x 337 mm).
 - 5. Weight: 65 lbs (29.5 kg).
- 11. Model SPT302: Bullet resistant transaction drawer.
 - a. High-rise stainless steel change tray and currency clip in the transfer area.
 - b. Right handed manual operation.
 - c. Wall thickness: Up to 4-1/2 in (114 mm) thick walls.
 - d. Dimensions:
 - 1. Overall Size (W x D x H): 21-3/4 x 16-3/4 x 15-15/16 in (552 x 425 x 405 mm).
 - 2. Frame Face (W x H): 21-3/4 x 12-15/16 in (552 x 329 mm).
 - 3. Transfer Area (W x D x H): 18-15/64 x 14-9/32 x 9-1/2 in (457 x 356 x 241 mm).
 - a. Travel length: 8 in (203 mm).
 - 4. Wall Opening (W x H): 22 x 13-1/4 in (559 x 337 mm).
 - 5. Weight: 65 lbs (29.5 kg).
- D. Basis of Design: ER Series Passage Transaction Drawers as manufactured and supplied by Shure Manufacturing Corporation.
 - 1. Model SPT355: Package Passer transaction drawer.
 - a. Standards Compliance: UL approved Level 3 bullet resistance.
 - b. Material: Stainless steel.
 - c. Full-length sliding upper tray for low profile items.
 - d. Wall thickness: Up to 8 in (203 mm) thick walls on top of the drawer.
 - e. Secured interlock system prevent simultaneous opening of both doors.
 - f. Trim kit, Model SPT818.
 - g. Weather guard, Model SPT571.
 - h. Front and rear keyed locking system; Model SPT819.
 - i. Cup holder, stainless steel; Model SPT199.
 - j. Dimensions:
 - 1. Overall Size (W x D x H): 16 x 25 x 20-5/8 in (406 x 635 x 524 mm).
 - 2. Frame Face (W x H): 16 x 20-1/2 in (406 x 521 mm).
 - 3. Transfer Area (W x D x H): 13-9/16 x 23-5/8 x 14-7/8 in (344 x 600 x 378 mm).
 - 4. Wall Opening (W x H): 16-1/4 x 20-3/4 in (413 x 527 mm).
 - 5. Weight: 117 lbs (53.1 kg).

2.5. LARGE CAPACITY SECURITY DRAWERS

- A. Basis of Design: LC Series Transaction Drawers as manufactured and supplied by Shure

Manufacturing Corporation.

1. Standards Compliance: UL approved Level 3 bullet resistance.
2. Material: Stainless steel.
3. Wall thickness: Up to 4-1/2 in (114 mm) thick walls on top of the drawer.
4. Ribbed vinyl mat in bottom of transfer area.
5. Intercom system.
6. Manual operation by handle located at the drawer center on the interior side.
7. Model SPT336: Large capacity transaction drawer.
 - a. Dimensions:
 1. Overall Size (W x D x H): 36 x 16-3/4 x 12 in (914 x 425 x 305 mm).
 2. Frame Face (W x H): 37-7/8 x 14 in (962 x 356 mm).
 3. Transfer Area (W x D x H): 32-5/8 x 13-1/4 x 9-9/16 in (829 x 336 x 243 mm).
 - a. Travel length: 8-1/4 in (209 mm).
 4. Wall Opening (W x H): 36-1/8 x 12-1/8 in (918 x 308 mm).
 5. Weight: 95 lbs (43.1 kg).
8. Model SPT348: Large capacity transaction drawer.
 - a. Dimensions:
 1. Overall Size (W x D x H): 48 x 16-3/4 x 12 in (1219 x 425 x 305 mm).
 2. Frame Face (W x H): 49-7/8 x 14 in (1267 x 356 mm).
 3. Transfer Area (W x D x H): 44-5/8 x 13-1/4 x 9-9/16 in (1133 x 336 x 243 mm).
 - a. Travel length: 8-1/4 in (209 mm).
 4. Wall Opening (W x H): 48-1/8 x 12-1/8 in (1222 x 308 mm).
 5. Weight: 140 lbs (63.5 kg).
9. Model SPT360: Large capacity transaction drawer.
 - a. Dimensions:
 1. Overall Size (W x D x H): 60 x 16-3/4 x 12 in (1524 x 425 x 305 mm).
 2. Frame Face (W x H): 61-7/8 x 14 in (1572 x 356 mm).
 3. Transfer Area (W x D x H): 56-5/8 x 13-1/4 x 9-9/16 in (1438 x 336 x 243 mm).
 - a. Travel length: 8-1/4 in (209 mm).
 4. Wall Opening (W x H): 60-1/8 x 12-1/8 in (1527 x 308 mm).
 5. Weight: 190 lbs (86.2 kg).

2.6. ACCESSORY ITEMS

A. Convenience Shelving:

1. Basis of Design: Customer Shelving, Model SPT146 as manufactured and supplied by Shure Manufacturing Corporation.
 - a. Material: Stainless steel.
 - b. Construction: Front, sides, and backing are bent downward. Welded seams. All welds and sharp corners are ground smooth.
 1. Four key-hole cutouts in the backing plate for mounting.
 2. Fasteners not included.
 3. Dimensions (W x D x H): 12 x 8 x 5-1/2 in (305 x 203 x 140 mm).
2. Basis of Design: Customer Shelving, Model SPT203 as manufactured and supplied by Shure Manufacturing Corporation.
 - a. Material: Stainless steel.
 - b. Construction: Front, sides, and backing are bent downward. Welded seams. All welds and sharp corners are ground smooth.
 1. Four key-hole cutouts in the backing plate for mounting.
 2. Fasteners not included.
 3. Dimensions (W x D x H): 16 x 9 x 5 in (406 x 229 x 127 mm).

3.EXECUTION

3.1. EXAMINATION AND PREPARATION

- A. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
- B. Do not proceed with installation until substrates have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Commencement of installation constitutes acceptance of conditions.

3.2. INSTALLATION

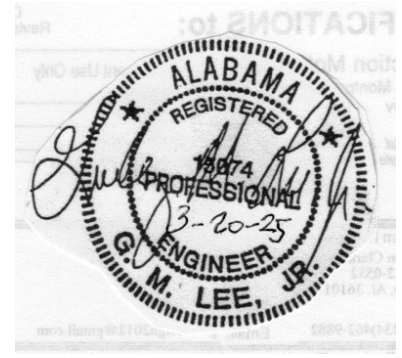
- A. Install in accordance with manufacturer's written instructions and recommendations as applicable to specified application.

3.3. CLEANING AND PROTECTION

- A. Protect installed drawers from damage during application and remainder of construction period, per manufacturer's written instructions.

END OF SECTION

DIVISION 16 - ELECTRICAL



A. GENERAL

1. **WORKMANSHIP AND MATERIALS:** All work shall be executed in a workmanlike manner so as to insure a high quality job and to present a neat and mechanical appearance when completed. All materials used shall be new and UL approved for their intended use where such standards have been established.
2. **CODES, PERMITS AND INSPECTIONS:** Work included in this section shall comply with all applicable laws of the community and with the latest edition of the National Electrical Code where it is not in conflict with those laws. The contractor shall obtain and pay for all necessary permits required to perform the work outlined herein and on the drawings. Upon completion of the work the contractor shall submit a certificate of final inspection and approval from the local Electrical Inspector's office (or the authority having jurisdiction), certifying that the installation complies all applicable regulations governing the same. Once bids are taken, changes to the drawings and/or specifications made necessary by code requirements shall be performed at no additional cost.
3. **DRAWINGS AND SPECIFICATIONS:** The contract drawings and these specifications shall be considered as complimentary each to the other. What is called for by one shall be considered binding as if called for by both. Where conflicts occur, secure clarification from the Architect/ Engineer prior to submitting bids; otherwise, provide for the more costly quality or quantity. The drawings are diagrammatical and dimension figures should be followed in preference to scaling; verify dimensions with the architectural drawings and with field conditions.
4. **SITE CONDITIONS:** Before submitting a bid the contractor shall visit the project site and ascertain all existing conditions. Adjustment to the work made necessary by actual field conditions shall be made at no additional cost. Routing of underground feeders and circuits may be adjusted to suit actual conditions encountered.
5. **COORDINATION WITH OTHER TRADES:** Coordinate the work in this section so as to conform to the progress of the work of the other trades. Phasing of the work shall be done as soon as possible with the entire installation completed as soon as the condition of the building permits.
6. **PROPOSED SUBSTITUTIONS:** Manufacturers' names and catalog numbers are used in the contract documents to generally establish a desired type, style and/or quality level. This is not to be construed as favoring one manufacturer over another; substitutions of equal products will be considered unless noted otherwise in the contract documents.
7. **WORK INCLUDED IN OTHER SECTIONS:** Portions of work related to this section to be done by others include: finished painting of conduits, equipment, etc. (except wood backboards), furnishing and setting in place of all motors, furnishing and installation of all control devices and circuits (except for control devices in power circuits which are to be included as a part of this section).
8. **EQUIPMENT IDENTIFICATION:** Nameplates shall be provided for various items of equipment as listed herein. The nameplate shall be fabricated from laminated PHENOLIC to provide engraved white letters on a black background with chamfered edges. Nameplates shall be fastened to the equipment with at least two metal pins or screws. Letter sizes shall be as follows:

Minimum 1/4 Inch Letters Minimum 1/8 Inch Letters

Switchboards	Starters
Panel boards	Safety Switches
Motor Control Centers	Control Devices (Time switches, Contactors,
Transformers	Telephone terminal Cabinets, etc.)

9. **CUTTING AND PATCHING:** Where possible, all work shall be built in as the job progresses. Where this is not possible, secure the Architect's approval for any cutting, chasing, etc. that is required. All cut surfaces shall be

repaired by skilled mechanics of the trade involved.

10. TRENCHING AND BACKFILLING: Perform all excavation necessary for installation of the work shown; do not backfill until all work is completed and inspected. Backfill within the building and under paved areas shall meet compaction requirements established under other sections of these specifications; fill material shall be pit run gravel or similar granular material. Avoid all existing utilities; any existing utilities damaged shall be repaired as directed by the Architect. Restore any damaged paving to match existing.

11. TESTING: Upon completion of the work, conduct a thorough test in the Architect's presence to show the entire system to be in perfect working condition.

B. RACEWAYS, BOXES AND FITTINGS

1. RACEWAY TYPES: Conduit raceways shall be galvanized rigid steel, galvanized intermediate grade, galvanized electrical metallic tubing, metal-clad cable MC, rigid aluminum, galvanized flexible steel, liquid-tight flexible steel or plastic as required by Code and as herein specified.

2. RACEWAY MANUFACTURERS:

2.a. Rigid Steel Conduit, Intermediate Grade Conduit: Shall be galvanized with threaded fittings: Pittsburgh, Republic or equal.

2.b. Electrical Metallic Tubing: Shall be galvanized with steel compression or setscrew type connectors: Pittsburgh, Republic or equal.

2.c. Rigid Aluminum Conduit: Shall be heavy-wall type with threaded fittings.

2.d. Flexible Steel: Shall be galvanized with setscrew fittings.

2.e. Liquid-Tight Flexible Steel: Shall have a galvanized steel core covered by a liquid-tight PVC jacket and compression type liquid-tight fittings: Anaconda.

2.f. Plastic (PVC): Shall be heavy wall type rated for direct burial: Carlon.

2g. Metal Clad Cable (MC)

3. INSTALLATION CONDITIONS:

3.a. Underground: Coated rigid steel or schedule 40 PVC conduit.

3.b. Slab on grade, poured concrete, slabs above grade, and areas subject to moisture: Rigid steel conduit or schedule 40 PVC. On runs longer than 100 feet use rigid steel or IMC elbows with PVC.

3.c. Overhead and in wall cavities in dry locations: Rigid steel, intermediate grade, electrical metallic tubing, rigid aluminum conduit or metal clad cable.

3.d. Exposed conduit in areas subject to physical damage: Rigid steel or intermediate grade conduit.

3.e. Exposed conduit in areas not subject to damage or moisture: Rigid steel, intermediate grade, or electrical metallic tubing.

3.f. Final connections to light fixtures: Flexible steel conduit (6'-0" maximum) or metal clad MC cable.

3.g. Final connections to transformers, motors and equipment in mechanical rooms and outdoors: Liquid-tight flexible steel conduit.

4. INSTALLATION EXECUTION: Conduit is to be installed concealed except in equipment rooms and where

exposed runs are specifically indicated. Exposed conduits shall be installed parallel with or at right angles to walls, ceilings, structural members, etc. The conduit layout shown on the drawings is diagrammatical only and must be adjusted for actual conditions. Offsets are not shown and must be furnished as required. Keep conduit runs at least 12 inches away from parallel runs of flues, steam pipes and other heat producing sources. Conduit sizes shall not be smaller than shown on the drawings and shall comply with Chapter 9 of the NEC where no size is indicated; the minimum size shall be 1/2".

All conduits shall be securely supported within 3 feet of each outlet box, junction box, cabinet, termination, fitting, etc. and at intervals not exceeding 8 feet between. Conduit support shall be as required by the NEC. Fastening methods shall employ metal expansion anchors or powder-driven fasteners in concrete, toggle bolts in hollow walls, metal expansion anchors or drive pins in masonry, wood screws in wood, sheet metal screws in sheet metal and clamps on bar joists and equipment frames. Conduit shall not be welded nor tied with wires to provide support. Where rigid steel conduit is installed underground, the conduit and couplings shall be provided with a factory applied PVC coating or shall be painted with 2 coats of asphaltum paint. If plastic conduit is used for below ground runs the turn up through the floor shall be made with a rigid steel elbow. Plastic conduit used for underground service entrance shall be encased in 2 inches of concrete: minimum. All runs of plastic conduit shall be provided with a properly sized ground wire.

The overall diameter of any conduit installed in a slab shall not exceed 1/3 the slab thickness. Run the conduit in the center of the slab and route to avoid displacing the reinforcing steel. Conduit support may be obtained by tying to the reinforcing steel.

Conduit ends shall be cut square, reamed smooth and fully inserted into fittings. Bends shall be made with a proper hickey or bending machine. Make no bends less than 6 times the conduit diameter, nor more than 90 degrees. Crushed or deformed conduit shall not be installed; where damage occurs after installation the damaged conduit shall be replaced. Cap conduit ends with plastic caps or plugs during construction to keep out debris; taping is not acceptable.

Where raceway is terminated not in an enclosure, such as at a backboard or in a furred space, provide insulated throat bushings. Field insertable throats are not acceptable. Provide all empty conduits with no. 14 galvanized steel pull wire with 12 inches free at each end.

5. OUTLET BOXES:

5.a. General: Unless noted otherwise, boxes shall be galvanized sheet steel 1/16 inch thick minimum, at least 1-1/2 inches deep. Boxes shall be sized to accommodate the devices and conductors indicated in accordance with NEC Article 370. Boxes not cast in concrete or set in masonry shall be fastened to the building structure in the same manner as specified for conduit.

5.b. Locations: Outlet locations shown on the drawings are approximate unless a dimensioned location is specified. Obtain Architect's approval before relocating any outlet due to conflicts.

Where outlets at different levels occur together they shall be installed in one vertical line where possible. Where outlets occurring at the same height are shown they shall be mounted 6 to 10 inches apart unless specifically shown under a common cover.

Outlet heights in masonry walls may be slightly adjusted up or down to suit the masonry courses provided that a uniform height is maintained throughout the facility. Other mounting heights shall be as noted in the symbols legend and elsewhere in the drawings.

Switch outlets are generally to be located 6 to 10 inches from the doorjamb on the latch side of the door where possible. Coordinate height as directed by Architect.

Where outlets occur in or above casework, counters, cabinets and other equipment their exact location and mounting height shall be verified with the particular item prior to roughing in.

6. BOX TYPES:

6.a. Ceiling and wall bracket outlets shall be 4-inch octagonal boxes with plaster rings as appropriate for the finished surface.

6.b. Switch outlets, receptacle outlets and auxiliary system outlets shall be 4 inch square boxes with plaster rings or tile rings as required by wall types.

6.c. Exposed boxes shall be 4-inch square utility boxes.

6.d. Exterior boxes and boxes in wet location shall be cast aluminum or galvanized cast iron with appropriate gaskets and fittings.

6.e. Special purpose outlets shall have box types as required and/or as indicated on the drawings.

7. BOX MANUFACTURERS: Outlet boxes shall be as manufactured by Appleton, Raco, Steel City or equal.

C. WIRING SYSTEM AND CONDUCTORS

1. MATERIAL: Conductors shall be copper, not less than 98% conductivity, with 600-volt insulation. Manufacturer's name, insulation type and conductors size shall be imprinted on the outer jacket at regular intervals. Branch circuit conductors no. 10 and smaller shall be solid, type THWN; no. 8 and larger shall be stranded, type THWN.

2. SIZES: All conductor sizes refer to AWG standard. Minimum wire size used in line voltage power circuits shall be no. 12. Where the first device in a branch circuit occurs farther than 100 ft. from the panel board the branch circuit conductors shall be increased to the next larger size.

3. COLOR CODING: Conductor color-coding shall be in compliance with NEC Section 210-5. Where it is not practical to use color-coded insulation, conductors shall be identified with a minimum 6 inch band of the proper colors of tape or paint in all panel boards, switches, junction boxes, pull boxes or other enclosures. All equipment grounding conductors shall be green. Conductors shall be color coded as follows:

208Y/120 VOLT SYSTEMS

Phase A ----- Black
Phase B ----- Red
Phase C ----- Blue
Neutral ----- White
Ground ----- Green

480Y/277 VOLT SYSTEMS

Phase A-----Brown
Phase B-----Orange
Phase C-----Yellow
Neutral-----Gray
Ground-----Green

120/240 VOLT SYSTEMS

Phase A-----Black
Phase B-----Red
Neutral-----White
Ground-----Green

4. INSTALLATION: Do not install conductors until all conduit systems are complete and the building has been closed to the weather. Use only UL approved lubricants to facilitate the pulling of conductors.

5. MANUFACTURERS: Conductors shall be of the types indicated manufactured by General, Okonite, Rome or Triangle.

6. CONNECTORS: Splices in conductors shall be joined using solder less type connectors. For solid conductors, pre-insulated twist-on type connectors such as Ideal "Wing Nut" or Buchanan "B-Cap" shall be used. For stranded conductors, hydraulic or mechanical type compression connectors shall be used and the joint shall be wrapped with approved gum and friction tapes or electrical tape to equal the conductor insulation value.

7. WIRING METHODS: The wiring system shall consist of single conductor cables installed in metallic raceway unless noted otherwise on the drawings. Conductors shall be of the types and sizes shown and as specified herein; where no types or sizes are indicated they shall be as required by Code. Multi-conductor circuits shall be employed as indicated; assure that not more than one conductor is connected to the same phase to prevent overloading of the neutral conductor. Circuit numbers indicated by the home runs on the drawings are basically for circuit separation; circuits shall be connected to the panel board to give an evenly balanced load between phases based on normal usage

conditions of the connected equipment.

D. WIRING DEVICES

1. GENERAL: All wiring devices shall be specification grade with features as described herein. See the symbols legend on the drawings for further descriptions of various devices. All wiring devices shall be color as selected by architect or owner and are to have plaster ears.

2. DEVICE PLATES:

2.a. Flush mounted outlets: Device plates for all flush mounted outlets shall be one-piece smooth impact-resistant nylon with rounded edges. Plates shall be provided with the appropriate number of matching countersunk screws and shall be installed with all four edges in continuous contact with the finished wall.

2.b. Surface mounted outlets: Device plates for all surface mounted outlets shall be one-piece, zinc coated sheet steel, .040 inches thick with rounded edges and furnished with matching countersunk screws.

2.c. Exterior outlets: Device cover plates for exterior mounted outlets (or outlets mounted in wet locations) shall be cast aluminum or galvanized cast iron to match box construction and shall be installed with proper gasketing. Caps shall be permanently attached to the cover by means of a spring-loaded hinge.

3. WALL SWITCHES:

3.a. General: Wall switches shall be the totally enclosed type with a non-conductive PHENOLIC or plastic handle and deep slotted screw terminals. Switches shall be of a type such that only one switch may be installed in a single gang location. Switches shall be quiet-type, rated for **15 amps**, 120/277 volts AC only with the throw, contact type, and number of poles as indicated. Color to match receptacle color.

3.b. Manufacturer's Catalog Numbers:

	Arrow-Hart	Bryant	Hubbell
Single Pole	1891	4801	1201
Double Pole	1892	4802	1202
Three Way	1893	4803	1203
Four Way	1894	4804	1204
Pilot Light	1891-PL	4801-PLR	1201-PL
Night Light	1981-IL	4801-I	1201-IL

3.c. Motor Switches: Motor switches shall be provided with pilot light and integral thermal overload protection. Enclosures shall be NEMA Type 1 or Type 4 as required by unit location. Units shall be flush or surface mounted as indicated. Motor switches shall be Square D Class 2510 or equal with number of poles as required.

4. POWER RECEPTACLES:

4.a. General: Power receptacles shall be of a standard NEMA configuration for the voltage and amperage characteristics of its intended use. Bodies shall be of a non-conductive phenolic or plastic compound nylon permanently attached to a metal mounting yoke. Internal contact arrangement shall be such that contact is made on two opposite sides of an inserted blade. Ground terminals shall be connected to the mounting yoke and provided with a green colored screw for connection of the circuit-grounding conductor. Ground fault circuit interrupter devices shall conform to the requirements of UL 943. Locking of receptacles indicated to be the locking type shall be accomplished by rotation of the plug.

4.b. Manufacturer's Catalog Numbers:

	Arrow-Hart	Bryant
Hubbell		

15A, 125V devices - NEMA 5-15R

Single Outlet	5261	5261	5261
Duplex Outlet	5262	5262	5262
Clock Hanger Outlet	5708	2828-GS	5235
Duplex w/GFCI	GF8200	GFR52FT	
GF-5262			
Isolated Ground	IG5262	52562-IG	
IG-5262			

20A, 125V devices - NEMA 5-20R

Single Outlet	5361	5361	5361
Duplex Outlet	5362	5362	5362

30A, 125/250V devices - NEMA 10-30R

Single Outlet	9344	9303	9350
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50A, 125/250V devices - NEMA 10-50R

Single Outlet	7985	9306	7962
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4.c. Installation: Power receptacle outlets shall be installed flush or surface mounted at the heights and locations shown on the drawings. Receptacles with ground terminals shall be installed with the ground terminal down. Care shall be exercised to protect the installed devices from paint splatter. Devices that have been damaged and/or devices that have been painted over shall be replaced prior to final inspection.

E. POWER DISTRIBUTION SYSTEM

1. SERVICE: Electrical service to the building shall be as shown on the plans. The service transformer and metering shall be provided by the utility; see the drawings for further detail and verify all requirements with the utility company. The contractor shall include in his bid any charges and/or costs from the utility company to provide service to the building as shown.

2. SAFETY SWITCHES: Safety disconnect switches shall be provided for all motors and other equipment as indicated on the drawings or as required by code. Switches shall be heavy-duty type; quick-make, quick-break in NEMA 1 general purpose enclosures with interlocking doors. Where exposed to the weather, moisture or where so noted, furnish switches in NEMA 3R enclosures. Switches used in motor circuits shall be horsepower rated. Where fusible switches are indicated or required they shall be equipped with rejection type fuse clips, furnish complete with fuses. All safety switches shall be type HD by General Electric, Siemens or Square D.

3. SERVICE ENTRANCE EQUIPMENT: Equipment used to provide entrance for the electrical service into the facility shall be UL labeled for such use. Equipment shall be listed for use at the available fault current levels determined in the coordination study.

4. PANELBOARDS:

4.a. Construction: All panelboards shall be dead front construction, surface or recessed mounted as called for by the panelboard schedule. Lighting and appliance panelboards shall have a hinged door cover with a flush combination latch and keyed lock; all locks shall be keyed alike. All covers shall be finished with a factory applied, standard gray enamel. Back boxes shall be constructed of galvanized sheet steel and be a minimum of 20 inches wide.

4.b. Interior: All interiors shall be factory assembled with aluminum bussing and bolt-on molded case circuit breakers. Circuit numbering shall be as indicated on the drawings. Multi-pole circuit breakers shall have a common internal trip action and shall be inter-changeable with single-pole breakers. Where 'bussed space' is indicated, include all necessary provisions for adding additional breakers; no additional parts or modifications to the bussing or panel structure shall be required. See the Panelboard Schedule for individual panelboard bus ratings, circuit breaker

and space requirements. All components of the panelboard assembly shall be listed for use at the available fault current levels determined in the coordination study.

4.c. Identification: All panelboards shall be identified with engraved nameplates designating the panel name and voltage characteristics. See paragraph 16 A.8 for nameplate requirements. Each panelboard with a hinged door shall contain a typewritten circuit directory card indicating equipment and/or areas controlled by each circuit; directory cards shall be placed in protective, permanently mounted holders inside the door. Circuits on panels without doors shall be identified with individual circuit nameplates.

5. PROTECTIVE DEVICE COORDINATION STUDY: Submittals of electrical distribution system items (switchgear, switchboards, panelboards, etc.) shall include a computer generated short circuit and coordination study to demonstrate that the items being submitted are capable of interrupting the expected available fault currents at all points in the system. Study shall be prepared by qualified engineers of the equipment manufacturer and shall include: the available utility fault current; the calculated fault current at each panelboard and transformer in the system; and the effects of any current-limiting devices in the system. Where adjustable breakers are used, coordination curves shall also be supplied showing time-current characteristics of each of these devices in series back to the point of service entrance. The study shall be organized in an easily readable form using the same equipment identification marks used on the drawings.

F. GROUNDING SYSTEM

1. GENERAL : Except where specifically indicated otherwise, all exposed non-current carrying metal parts of electric equipment, metallic raceway systems, equipment ground bus, metallic cable armor, grounding conductor in non-metallic raceways and the neutral conductor shall be grounded in accordance with NEC article 250. Bonding of the ground to the power wiring neutral conductor shall occur at the point of service entrance only. Ground shall be obtained by connecting the ground conductor to the water service by an approved type clamp; supplemental grounds shall be obtained by bonding to building steel and with driven rods.

2. GROUND RODS: Ground rods shall be copper-clad steel not less than 3/4 inch in diameter, 10 feet long, driven full length into the earth.

3. BARE GROUND CONDUCTOR: Bare conductors for buried grounding system use shall be braided copper, no. 1 AWG minimum.

4. CONNECTIONS: All connections to ground rods and underground grounding cable shall be made with hydraulic compression fittings or exothermic welds.

5. BUILDING EQUIPMENT GROUND CONDUCTOR: The equipment ground conductor shall be copper with green insulation. Where green insulation is not available, a minimum 6-inch band of green tape shall be applied at each termination point and in each cabinet, pull box, etc. the conductor passes through. A ground shall be installed in all conduits, around expansion joints, and as otherwise indicated on the drawings. The ground conductor shall be sized in accordance with Table 250.94 of the NEC.

G. LIGHTING SYSTEM

1. GENERAL: The contractor shall furnish and install all lighting fixtures and lamps as indicated in the Lighting Fixture Schedule and as shown on the plans. See paragraph 16 A.6 for fixture substitution requirements.

2. INSTALLATION: All fixtures shall be furnished with necessary backbones, frames, hangers and other hardware required for a complete installation. Coordinate recessed fixture clearances with the air conditioning trade to avoid conflicts with ductwork. Prior to final inspection, all fixtures shall be lamped and cleaned with a soft cloth or sponge and a mild detergent (not soap) solution.

H. TELEPHONE SYSTEM

1. GENERAL : The contractor shall provide and install a system of terminal backboards, cabinets, raceways and conduit as shown. The system layout shown on the drawings is diagrammatical and may be modified by the owner or architect prior to the start of construction.
2. TERMINAL BACKBOARDS : Telephone system terminal backboards shall be 3/4 inch thick exterior grade plywood of the sizes shown. Backboards shall have straight and smooth surfaces and edges trimmed to finished carpentry standards and shall have two coats of gray insulating enamel or varnish front and back.
3. TERMINAL CABINETS : Telephone system terminal cabinets shall consist of metal enclosures conforming to the same construction as panelboard enclosures, including latching mechanism and finish. Cabinets shall be NEMA 1 or 3R as indicated or required by location. Terminal cabinets shall have an internal plywood backboard meeting all requirements listed above for Terminal Backboards.
4. CONDUCTORS : Telephone system conductors shall be furnished and installed by others.
5. SERVICE : Coordinate service entrance requirements with the local telephone utility prior to bid. Any telephone company charges to furnish service to the facility shall be included in the bid price.
6. INSTALLATION : Outlets shall be installed at heights and locations indicated on the plans. Empty raceways and outlet boxes shall be installed in accordance with the requirements of Section 16 B.

I. FIRE ALARM SYSTEM

1. GENERAL: The contractor shall furnish and install a complete and operating addressable fire detection and voice alarm system as shown on the drawings and as specified herein. The system shall be fully tested after installation is complete and left in first class operating condition. The system shall conform to all requirements of applicable NFPA requirements and local codes and authorities having jurisdiction. *NOTE: VOICE ACTIVATION NOT REQUIRED IN UTILITY BUILDING. UTILIZE HORN STROBES AND MINI HORN STROBES FOR UTILITY BUILDING.*
2. SEQUENCE OF OPERATION: The Fire Alarm system shall continually monitor all initiating devices connected to it. All initiating and annunciating circuits shall be electrically supervised to detect shorts, ground faults and open circuits and shall sound a 'trouble' signal if any of these conditions are detected.
In the event of an alarm signal being received all audible and visual signals shall be activated, all smoke doors shall close, selected air handling units shall shut down and the municipal tie shall be activated. An alarm silence switch on the main control panel shall silence the audible alarms while visual alarms continue to operate; should a second alarm signal be received after the audible alarms have been silenced they shall automatically resound. A system alarm condition shall be cleared only by a reset switch at the main control panel.
3. EQUIPMENT:
 - 3.a. Control Panel: The fire alarm system control panel shall be a 24 volt DC system complete with power supply, standby batteries and charger, electronic system motherboard, provisions for plug-in option cards, modular expansion construction, terminal strips for incoming wiring and systems status LEDs. The panel shall provide for control of ... class B initiating zones. The standby batteries shall be capable of powering the system for 24hours in the supervisory mode followed by 15 minutes in the alarm mode.
 - 3.b. Smoke Detectors :
 - 3.b.1. Ionization Type: Ionization type smoke detectors shall be ceiling mounted on a detachable base. The detectors shall be dual chamber type and shall have an alarm indicating light and 1 set SPDT contacts.

3.b.2. Photoelectric Type: Photoelectric type smoke detectors shall be ceiling mounted on a detachable base. Detector sensitivity shall be 3.0%/ft. nominal. Each detector shall have an alarm indicating light and 1 set of SPDT contacts.

3.b.3. Duct Mounted: Duct-mounted smoke detectors shall be ionization type mounted in a special enclosure fitted with duct sampling tubes which shall run the full width of the duct. The entire assembly shall conform to the requirements of NFPA 90A and shall be UL listed specifically for use in air handling systems. Each duct detector shall be furnished with a test station to be local or remote mounted as shown. The test station shall contain an alarm indicating light and a keyed test and reset switch.

3.c. Heat Detectors :

3.c.1. Fixed Temperature: Fixed temperature heat detectors shall be the single element type with elements designed for 200 degree F. operation. Detectors shall be suitable for ceiling mounting on a standard outlet box.

3.c.2. Combination: Combination type heat detectors shall have a fixed temperature element designed to operate at 135 degrees F. and a pneumatic rate of rise element designed to detect temperature changes greater than 15 degrees F./min. Detectors shall be suitable for ceiling mounting on a standard outlet box.

3.d. Flame Detectors : Flame detectors shall be dual sensor, infrared type designed to minimize the possibility of an interference generated alarm. One sensor shall have maximum sensitivity to wavelengths between 1.7 and 4.1 micrometers; the second sensor shall have a maximum sensitivity to wavelengths between 5 and 6 micrometers. Detectors shall have all sensors and electronics in an environmentally sealed, impact and corrosion resistant housing with alarm indicating light.

3.e. Water flow Switches : Connections shall be made to water flow indicating switches which are to be furnished in place by the sprinkler contractor in the locations indicated.

3.f. Tamper Switches : Connections shall be made to valve tamper indicating switches which are to be furnished in place by the sprinkler contractor in the locations indicated.

3.g. Manual Stations : Manual pull stations shall be the non-coded type. Stations located outdoors or in wet locations shall be approved for such use. Stations shall be single-action, break glass type with contacts rated for 3 amps, 125 volts AC. The housing shall be cast or extruded aluminum painted red with the word 'FIRE' plainly visible.

3.h. Alarm Indicating Devices :

3.h.1. Speaker / Alarm horns shall be flush mounted at 7'-0" AFF with red protective metal cover plates. The horns shall be the heavy duty type with a minimum output level of 90dB at 10 feet. Speakers shall annunciate a predetermined message.

3.h.2. Flashing light assemblies shall be mounted at 7'-0" AFF. They shall have a high impact plastic lens with the word 'FIRE' printed to be readable from any angle. The signal shall be non-coded with a minimum flash rate of 120 flashes/ min. The light source shall be a high-intensity Xenon flash tube with a minimum output of 6000 candlepower.

3.h.3. Combination horn/flashing light assemblies shall meet all requirements listed above for individual horn and light units.

3.i. Magnetic Door Holders: Door hold open devices shall be the electromagnetic type which operates on a DC voltage supplied by the Fire Alarm control panel. Units shall be designed for 'fail safe' operation and shall comply with UL 228. The devices shall provide a minimum holding force of 50 pounds at 110% and 15 pounds at 85% of rated voltage.

3. j. Remote Annunciator Panel: The remote annunciator panel shall be an LED type with a separate indicator for each zone and a system trouble indicator. The trouble indicator shall include a light and an audible signal with a silencing switch and automatic resound feature. The unit shall contain a terminal strip for connection for incoming

wiring. A 'Lamp Test' switch shall be provided. Zone identification lettering shall be provided for each active zone

4. INSTALLATION: The fire alarm system shall be installed in accordance with NFPA 70 (NEC), and NFPA 72 as applicable. All wiring shall be color coded, terminated on terminal strips and installed in conduit. Minimum conductor size shall be #14 AWG; stranded conductors shall be used. Locations of equipment shall be as shown on plans. The contractor shall leave the system fully tested and in first class operating condition. Before final acceptance, the contractor shall furnish a letter of certification from the manufacturer's representative stating that the system has been installed in accordance with the manufacturer's accepted procedures and has been thoroughly tested and shown to be fully operational. The contractor shall guarantee the entire system against faulty products and/or installation for a period of one year from final acceptance.

5. MANUFACTURERS: Catalog numbers and descriptions were written based on Gamewell equipment. Equal products by EST or Simplex will be considered for approval subject to meeting all specification requirements

END OF SECTION