

PROJECT MANUAL AND SPECIFICATIONS

Office Renovation Deer Haven Park

BID OPENING: 1:00 P.M. local time, September 26, 2019

LOCATION: District Office

Clearly Mark Envelope “Bid Enclosed – Office Renovation, Deer Haven Park”



DISTRICT OFFICE
2656 Hogback Road
Sunbury, Ohio 43074

BOARD OF PARK COMMISSIONERS

John Bader
Glenn Marzluf
Bruce Ruhl

EXECUTIVE DIRECTOR

Tom Curtin

Prepared by:

Schorr Architects, Inc.
230 Bradenton Avenue
Dublin, Ohio 43017
614/798-2096

Comm. No. 1917

OFFICE RENOVATION
DEER HAVEN PARK
PRESERVATION PARKS OF DELAWARE COUNTY

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NOTICE TO BIDDERS

Sealed Bids for the construction of the "Office Renovation - Deer Haven Park" will be received by Preservation Parks of Delaware County (PPDC), 2656 Hogback Road, Sunbury, Ohio 43074, until 1:00 p.m. local time on September 26, 2019, according to the documents as prepared by Schorr Architects, Inc., 230 Bradenton Avenue, Dublin, Ohio 43017. The bids will be publicly opened and read at that time.

Bid Documents may be reviewed at 2656 Hogback Road, Sunbury, Ohio 43074, between 8:00 a.m. and 3:30 p.m., Monday through Friday; at the office of Schorr Architects, Inc., 230 Bradenton Avenue, Dublin, Ohio 43017; and McGraw-Hill Construction Dodge at www.construction.com/projectcenter/.

Copies of the Instructions to Bidders and this notice are posted on the Preservation Parks website at: <http://www.preservationparks.com/parks-facilities/planning-construction/bidding-contractor-information>.

Contract Bid Documents are available for purchase at DC Reprographics, 1254 Courtland Ave., Columbus, Ohio 43201, 614/297-1200; 614/297-1300 Fax, www.dcreprographics.com, at cost plus applicable shipping charges. All bidding documents can be forwarded if requested via shipping charges collect. Schorr Architects, Inc. will not be responsible for any documents obtained from any other source.

A non-mandatory Pre -Bid Conference will be held at 10:00 a.m. on September 17, 2019 at Deer Haven Park located at 4183 Liberty Road, Delaware, Ohio 43015.

The bidder whose bid is accepted shall be required to enter into a contract within ten (10) days after notice of acceptance. All bids must be submitted in sealed envelopes and clearly marked with the project title. The cost of this project has been estimated to be approximately \$150,000.00.

No bidder may withdraw its bid within sixty (60) days after the actual date of the opening thereof. PPDC reserves the right the waive irregularities in proposals, to reject any or all bids, and to conduct such investigation as necessary to determine the responsibility of any bidder submitting a bid proposal for the Project.

A response to this Bid Notice should not be construed as a contract nor indicate a commitment of any kind by PPDC. The bid does not commit PPDC to pay for the costs incurred in the submission of a response to this Bid Notice or for any costs incurred prior to the execution of the final contract.

Advertised in the Delaware Gazette and www.preservationparks.com

END OF NOTICE TO BIDDERS

Advertised: September 10, 2019
September 17, 2019

BID FORM

BID SUBMITTED BY:

(Contractor)

DATED: _____, 2019

DELIVER TO:

Preservation Parks of Delaware County
2656 Hogback Road
Sunbury, Ohio 43074

The Bidder is submitting its bid on the following Project

Office Renovation - Deer Haven Park

The Project is for The Board of Park Commissioners, and the Bidder has received and reviewed the following Addenda, which are part of the Bidding Documents:

Addendum No. _____, dated _____;

Addendum No. _____, dated _____;

The Bidder certifies that it has examined the Contract Documents and the Site all as provided in the Instructions to Bidders and has no outstanding questions about the Contract Documents or the Site.

The Bidder certifies that it has carefully reviewed the Bidding Documents as listed in the Instructions to Bidders, including the Notice to Bidders, Instructions to Bidders, Bid Form, Form of Bid Guaranty and Contract Bond, Contractor's Affidavit (ORC 5719.042), Owner-Contractor Agreement, General Conditions of the Contract (as modified), Project Specifications, and the Drawings.

BONDS AND CONTRACT:

If the undersigned is notified of bid acceptance, it agrees to furnish required bonds as indicated in Instructions to Bidders.

COMPLETION OF WORK:

In submitting a bid, the undersigned agrees to execute and deliver the Owner-Contractor Agreement in the form included in the Contract Documents with no changes and to substantially complete its work by the Date for Substantial Completion as required by the Contract Documents.

NOTE A: The wording of the Bid Form shall be used throughout, without change, alteration, or addition. Any change may cause it to be rejected.

NOTE B: Bidder is cautioned to bid only on the "Brands" specified.

BID:

The Bidder's bid includes all the Work, as defined in the Contract Documents, for the contracts on which the Bidder is submitting its bid. Bidder is to fill in all blanks related to the Bid Package for which a bid is being submitted. If no bid is submitted for an item, leave the item blank or insert "NO BID" in the blank. For alternate items, indicate whether the amount stated is in addition to or a deletion from the base bid amount. If there is no indication of whether the amount is an add or a deduct, it shall be conclusively assumed that the amount is a deduct. If there is a difference between the words and the figures, the worded amount shall govern.

ITEM 1. BASE BID CONTRACT

ALL LABOR AND MATERIALS, for the sum of \$ _____

Sum in words: _____

ITEM 2. ALTERNATE NO. 1 (Luxury Vinyl Tile Flooring)

ALL LABOR AND MATERIALS, for the sum of \$ _____

Sum in words: _____

INSTRUCTIONS FOR SIGNING

The person signing for a sole proprietorship must be the sole proprietor or his authorized representative. The name of the sole proprietor must be shown below.

The person signing for a partnership must be a partner or his authorized representative.

The person signing for a corporation must be the president, vice president or other authorized representative; or he must show authority, by affidavit, to bind the corporation.

The person signing for some other legal entity must show his authority, by affidavit, to bind the legal entity.

BIDDER CERTIFICATIONS. The Bidder hereby acknowledges that the following representations in this bid are material and not mere recitals:

The Bidder represents that the bid contains the name of every person interested therein and is based upon the Standards specified by the Contract Documents.

The Bidder and each person signing on behalf of the Bidder certifies, and in the case of a bid by joint venture, each member thereof certifies as to such member's entity, under penalty of perjury, that to the best of the undersigned's knowledge and belief: (a) the Base Bid, any Unit Prices and any Alternate bid in the bid have been arrived at independently without collusion, consultation, communication or agreement, or for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; (b) unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base

Bid, Unit Prices or Alternate bid; (c) no attempt has been made or will be made by the Bidder to induce any other Person to submit or not to submit a bid for the purpose of restricting competition; and (d) the statements made in the Bidder's Affidavit are true and correct, to the best of the Bidder's knowledge and information.

The Bidder certifies that it has no unresolved findings for recovery issued by the Auditor of State.

The Bidder acknowledges that this is a public project involving public funds, and that the Owner expects and requires that each successful Bidder adhere to the highest ethical and performance standards. The Bidder by submitting its bid pledges and agrees that a) it will act at all times with absolute integrity and truthfulness in its dealings with the Owner and the Architect, b) it will use its best efforts to cooperate with the Owner and the Architect and all other Contractors on the Project and at all times will act with professionalism and dignity in its dealings with the Owner, Architect and other Contractors, c) it will assign only competent supervisors and workers to the Project, each of whom is fully qualified to perform the tasks that are assigned to him/her and d) it has read, understands and will comply with the terms of the Contract Documents.

LEGAL NAME OF BIDDER: _____

BIDDER IS: _____
(Sole proprietor, partnership, corporation or other legal entity)

NAME & TITLE OF PERSON LEGALLY AUTHORIZED TO BIND BIDDER TO A CONTRACT:

Name	Title
------	-------

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____

FAX: _____

FEDERAL
TAX I.D. # _____

DATE SIGNED _____

When the Bidder is a partnership or a joint venture, state name and address of each partner in the partnership or participant in the joint venture below:

Name

Address

Name

Address

Name

Address

Name

Address

Name

Address

END OF SECTION

**BID GUARANTY AND
CONTRACT PERFORMANCE AND PAYMENT BOND**
(O.R.C. § 153.571)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned _____
_____, ("Contractor") as principal and _____
_____ as sureties are hereby held and
firmly bound unto the Preservation Parks of Delaware County, as obligee in the penal sum of the dollar
amount of the bid submitted by the principal to the obligee on _____, 2019, to undertake the
project known as Office Renovation - Deer Haven Park. The penal sum referred to herein shall be the
dollar amount of the principal's bid to the obligee, incorporating any additive or deductive Alternates made
by the principal on the date referred to above to the obligee, which are accepted by the obligee. In no
case shall the penal sum exceed the amount of _____
_____ Dollars (\$ _____). (If the foregoing blank is not filled in,
the penal sum will be the full amount of the principal's bid, including add Alternates. Alternatively, if the
blank is filled in the amount stated must not be less than the full amount of the bid including add
Alternates, in dollars and cents. A percentage is not acceptable.) For the payment of the penal sum well
and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators,
successors, and assigns.

Signed this _____ day of _____, 2019.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above-named principal has
submitted a bid for work on the Project.

Now, therefore, if the obligee accepts the bid of the principal and the principal fails to enter into a
proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the
event the principal pays to the obligee the difference not to exceed ten percent (10%) of the penalty
hereof between the amount specified in the bid and such larger amount for which the obligee may in good
faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the
obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the
principal pays to the obligee the difference not to exceed ten percent (10%) of the penalty hereof between
the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract
documents, required advertising, and printing and mailing notices to prospective bidders, whichever is
less, then this obligation shall be null and void, otherwise to remain in full force and effect; if the obligee
accepts the bid of the principal and the principal within ten (10) days after the awarding of the contract
enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material,
which said contract is made a part of this bond the same as though set forth herein.

Now also, if the said principal shall well and faithfully do and perform the things agreed by said
principal to be done and performed according to the terms of said contract; and shall pay all lawful claims
of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying
forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall
be for the benefit of any materialman or laborer having a just claim, as well as for the obligee herein; then
this obligation shall be void; otherwise the same shall remain in full force and effect; and surety shall
indemnify the obligee against all damage suffered by failure of the principal to perform the contract
according to its provisions and in accordance with the plans, details, specifications, and bills of material
therefor and to pay all lawful claims of subcontractors, materialmen, and laborers for labor performed or
material furnished in carrying forward, performing, or completing the contract and surety further agrees
and assents that this undertaking is for the benefit of any subcontractor, materialman, or laborer having a
just claim, as well as for the obligee; it being expressly understood and agreed that the liability of the
surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as
herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of said surety on its bond. The said surety further stipulates that it is authorized to execute bonds in the State of Ohio and that the liability incurred is within the limits of Section 3929.02 of the Ohio Revised Code.

Signed and sealed this _____ day of _____, 2019.

(PRINCIPAL) (Seal)

By: _____

Printed Name & Title: _____

(SURETY) (Seal)

By: _____

Printed Name & Title: _____

NAME OF SURETY'S AGENT

Surety's Agent's Address: _____

Surety's Agent's Telephone Number: _____

Surety's Agent's Fax Number: _____

CONTRACT BOND NOTE

NOTE: The Contract Bond Form that follows is to be used **ONLY** by a bidder that is determined to be the lowest responsible bidder **AND** that submits a form of bid guaranty other than the combined Bid Guaranty and Contract Bond with its bid. If a bidder submits a combined Bid Guaranty and Contract Bond, then the bid guaranty becomes the contract bond when the contract is awarded.

CONTRACT PERFORMANCE AND PAYMENT BOND
(O.R.C. § 153.57)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned ("Contractor") as principal and _____ as sureties, are hereby held and firmly bound unto the Preservation Parks of Delaware County, (together referred to as the "Board") as obligee, in the penal sum of _____ Dollars (\$ _____), for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed this _____ day of _____, 2019.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas, the above-named principal did on the _____ day of _____, 2019, enter into a contract with the Board for _____ in connection with the _____, which said contract is made a part of this bond the same as though set forth herein:

Now, if the said Contractor shall well and faithfully do and perform the things agreed by the Contractor to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialman or laborer having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of the said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of said surety on its bond. The surety further stipulates that it is authorized to execute bonds in the State of Ohio and that the liability incurred is within the limits of Section 3929.02 of the Revised Code.

Signed and sealed this _____ day of _____, 2019.

(PRINCIPAL) (Seal)

By: _____

Printed Name & Title: _____

(SURETY) (Seal)

By: _____

Printed Name & Title: _____

NAME OF SURETY'S AGENT

Surety's Agent's Address: _____

Surety's Agent's Telephone Number: _____

Surety's Agent's Fax Number: _____

INSTRUCTIONS TO BIDDERS

A. BIDDER'S PLEDGE AND AGREEMENT

1. Each Bidder acknowledges that this is a public project involving public funds and that the Owner expects and requires that each successful Bidder adhere to the highest ethical and performance standards. Each Bidder by submitting a bid pledges and agrees that (a) it will act at all times with absolute integrity and truthfulness in its dealings with the Owner and the Design Professional, (b) it will use its best efforts to cooperate with the Owner and the Design Professional and all other Contractors on the Project and at all times will act with professionalism and dignity in its dealings with the Owner, Design Professional, and other Contractors, (c) it will assign only competent supervisors and workers to the Project, each of whom is fully qualified to perform the tasks that are assigned to him/her, and (d) it has read, understands and will comply with the terms of the Contract Documents.

B. EXAMINATION OF CONTRACT DOCUMENTS AND SITE CONDITIONS AND RELIANCE UPON TECHNICAL DATA

1. Each Bidder shall have a competent person carefully and diligently review each part of the Contract Documents, including the Divisions of the Specifications and parts of the Drawings that are not directly applicable to the Work on which the Bidder is submitting its bid. By submitting its bid, each Bidder represents and agrees, based upon its careful and diligent review of the Contract Documents, that it is not aware of any conflicts, inconsistencies, errors, or omissions in the Contract Documents for which it has not notified the Design Professional in writing at least seven (10) days prior to the bid opening. If there are any such conflicts, inconsistencies, errors, or omissions in the Contract Documents, the Bidder (i) will provide the labor, equipment, or materials of the better quality or greater quantity of Work and/or (ii) will comply with the more stringent requirements. The Bidder will not be entitled to any additional compensation for any conflicts, inconsistencies, errors, or omissions that would have been discovered by such careful and diligent review, unless it has given prior written notice to the Design Professional.
2. Each Bidder shall have a competent person carefully and diligently inspect and examine the entire site and the surrounding area, including all parts of the site applicable to the Work for which it is submitting its bid, including location, condition, and layout of the site and the location of utilities, and carefully correlate the results of the inspection with the requirements of the Contract Documents. The Bidder's bid shall include all costs attributable to site and surrounding area conditions that would have been discovered by such careful and diligent inspection and examination of the site and the surrounding area, and the Bidder shall not be entitled to any Change Order, additional compensation, or additional time on account of such conditions.
3. The Bidder may rely upon the general accuracy of any technical data identified in the Owner-Contractor Agreement (e.g., any soils exploration reports, soil boring logs, site survey, or abatement reports) in preparing its bid, but such technical data are not part of the Contract Documents. Except for the limited reliance described in the preceding sentence, Bidder may not, if awarded a contract for the Work, rely upon or make any Claim against the Owner or Design Professional, or any of their agents or employees, with respect to any of the following:
 - (a) the completeness of such reports and drawings for Bidder's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by the successful Bidder and safety precautions and programs incident thereto; or

- (b) any interpretation by the successful Bidder of or conclusion drawn from any technical data or any such other data, interpretations, opinions, or information. For example, all interpolations and extrapolations of data performed by the Bidder to estimate locations or quantities of subsurface strata are independent factual assumptions, which Owner does not warrant.
- 4. Each Bidder will be deemed to have actual knowledge of all information provided or discussed at the pre-bid meeting.

C. PROJECT

- 1. The Project and Work for the Project consists of all labor, materials, equipment, and services necessary for the construction of the project identified as Office Renovation - Deer Haven Park ("the Project"), all in accordance with the Drawings and Specifications prepared by the Design Professional.
- 2. The Design Professional for the Project is:

Schorr Architects, Inc.
230 Bradenton Avenue
Dublin, Ohio 43017
Telephone Number: 614/798-2096;
Fax Number: 614/798-2097
Design Professional's Representative:
Larry Rancour, VP
Senior Project Manager
lrancour@schorrarchitects.com

D. WORK

- 1. Only one contract will be issued by the Owner for constructing the Project, the General Contract, which will cover all scopes of work necessary to construct the Project.
- 2. The Contractor awarded the General Contract (General Contractor) will be responsible for the performance and coordination of any and all subcontractors and suppliers either directly or indirectly contracted with the General Contractor.
- 3. Subject to a prior, written request from the Bidder and prior authorization from the Owner, Owner may provide Bidders access to the Project site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates. Bidders may visit the Project site following the pre-bid conference .

E. ESTIMATE OF COST

- 1. The total estimated construction cost for the base bid Work for the Project is as follows:

\$150,000.00
- 2. The estimated construction cost of the Alternates for which Owner is seeking bids is as follows;
 - a. Alternate No. 1 : \$10,000.00

F. CONTRACT DOCUMENTS AND PRE- BID MEETING

The Contract Documents consist of the Contract Documents listed in Section 1 of the Owner-Contractor Agreement.

Contract Documents may be examined without charge during business hours at Schorr Architects, Inc. 230 Bradenton Avenue, Dublin, Ohio 43017, online at www.dcplanroom.com, and online for members of Dodge Construction at www.construction.com.

Copies of said drawings and specifications may be obtained by Prime Bidders from DC Reprographics, 1254 Courtland Avenue, Columbus, Ohio 43201; 614/297-1200, Fax: 614/297-1300, www.dcplanroom.com at cost.

Bidders shall use complete sets of Contract Documents in preparing bids. Neither the Owner nor the Design Professional assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

The Owner or the Design Professional, in making the Contract Documents available on the above terms, does so only for the purpose of obtaining bids on the Work and does not confer a license or grant for any other use.

A Pre Bid Meeting will be scheduled as indicated in the Notice to Bidders. The Pre-Bid meeting is not mandatory.

G. PREPARATION OF BIDS

1. All bids must be submitted on the "Bid Form" furnished with the Contract Documents.
2. All blank spaces shall be filled in, in ink or typewritten, in words and figures, and in figures only where no space is provided for words, and signed by the Bidder. The wording on the Bid Form shall be used without change, alteration, or addition. Any change in the wording or omission of specified accompanying documents may cause the bid to be rejected. If there is an inconsistency or conflict in the bid amount, the lowest amount shall control, whether expressed in numbers or words.
3. Bidders shall note receipt of Addenda on the Bid Form. If the Bidder fails to acknowledge receipt of each Addendum, the Bid shall be deemed non-responsive, unless the Bid amount clearly and unambiguously reflects receipt of the Addendum or the Addendum involves only a matter of form and does not affect the price, quantity or quality of the Work to be performed.
4. Each Bidder shall submit **2** identical copies of its bid to the Owner. The Bid Form shall be signed with the name typed or printed below the signature. A Bid shall not be submitted by facsimile transmission. A Bidder that is a corporation shall sign its bid with the legal name of the corporation followed by the name of the state of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.
5. Each Bid shall be enclosed in a sealed opaque envelope with the Bidder's name and the title of the Project printed in the upper left hand corner and addressed as follows:

Office Renovation - Deer Haven Park
ATTN: Matt Simpson, Senior Park Planner
2656 Hogback Road
Sunbury, OH 43074
msimpson@preservationparks.com

6. **The completed Bid Form shall be accompanied by the following documents:**

- a. **Pre-Bid Substitution Form, if any proposed substitutes have been pre-approved.**
 - b. **Bid Guaranty and if applicable, Contract Bond**
 - c. **Contractor's Qualification Statement**
7. The Bidder shall take the following precautions in preparing its bid:
- a. Sign the bid and check to ensure all blank spaces have been filled in with requested information and that the specified accompanying documents have been included in a sealed opaque envelope .
 - b. When the Bid Form provides for quoting either an addition or deduction for an Alternate item, indicate whether the sum named is an addition or deduction. If it is not indicated, it will be conclusively presumed that the amount is a deduction.
 - c. When the Bid Form provides for quoting a unit price, the Bidder should quote the unit price as set forth in the Bid Documents.
 - d. When applicable, make sure that the Bid Guaranty is properly executed and signed by:
 - 1) The Bidder
 - 2) The Surety or Sureties
 - e. Make sure that the amount of the Bid Guaranty (if the Bid Guaranty is in the form of a certified check, letter of credit, or cashier's check) is for a specific sum in an amount as instructed in Paragraph G.8.a below. If the Bid Guaranty is in the form of the Bid Guaranty and Contract Bond, the amount may be left blank; if an amount is inserted, it must equal the total of the base bid and all add alternates included. If inserted, then the failure to state an amount equal to the total of the base bid and all add alternates shall make the bid non-responsive if the Owner selects alternates not included in the amount.
 - f. Make sure that the appropriate bid package and scope of work is inserted in the correct space on the Bid Guaranty and Contract Bond Form. Failure to include work covered by the bid submitted may make the bid non-responsive.
8. Bonds and Guarantees
- a. Bid Guaranty: Bidder shall furnish a Bid Guaranty, in the form prescribed in Sections 153.54, 153.57, and 153.571 of the Ohio Revised Code, in the form of either: (1) a bond for the full amount of the bid in the form of the Bid Guaranty and Contract Bond included in the Bid Documents; or (2) a certified check, cashier's check, or irrevocable letter of credit in a form satisfactory to the Owner in an amount equal to 10% of the bid. Bid amount shall be the total of all sums bid, including all add alternatives, but excluding all deduct alternatives. NOTE: AIA Bid Bond forms are not acceptable.
 - b. Contract Bond: The successful Bidder, who, as a Bid Guaranty, submits a certified check, cashier's check, or irrevocable letter of credit in an amount equal to 10% of the bid, shall furnish a Contract Bond in the form Contract Bond included in the Bid Documents in an amount equal to 100% of the Contract Sum. NOTE: AIA Bond forms are not acceptable.
 - c. The bond must be issued by a surety company authorized by the Ohio Department of Insurance to transact business in the State of Ohio and acceptable to the Owner. The bond must be issued by a surety capable of demonstrating a record of competent underwriting, efficient management, adequate reserves, and sound investments. These

criteria will be deemed to be met if the surety currently has an A.M. Best Company Policyholders Rating of "A-" or better and has or exceeds the Best Financial Size Category of Class VI. Other sureties may be acceptable to the Owner, in its sole discretion

- d. All bonds shall be signed by an authorized agent of an acceptable surety and by the Bidder.
- e. Surety bonds shall be supported by credentials showing the Power of Attorney of the agent, a certificate showing the legal right of the Surety Company to do business in the State of Ohio, and a financial statement of the Surety.
- f. The Bid Guaranty, as applicable, shall be in the name of or payable to the order of the Owner.
- g. The name and address of the Surety and the name and address of the Surety's Agent should be typed or printed on each bond.

H. METHOD OF AWARD

- 1. All bids shall remain open for acceptance for sixty (60) days following the day of the bid opening, but the Owner may, in its sole discretion, release any bid and return the Bid Guaranty prior to that date. The Bid Guaranty shall be subject to forfeiture, as provided in the Ohio Revised Code, if a bid is withdrawn during the period when bids are being held.
- 2. The Owner reserves the right to reject any, part of any, or all bids and to waive any informalities and irregularities. The Bidder expressly acknowledges this right of the Owner to reject any or all bids or to reject any incomplete or irregular bid. Bidders must furnish all information requested on or accompanying the Bid Form. Failure to do so may result in disqualification of the bid.
- 3. Determination of the Lowest Responsible Bid. Subject to the right of the Owner to reject any or all bids, the Owner will award the Contract for the Work to the bidder submitting the lowest responsible bid, taking into consideration accepted alternates. In evaluating bids, the Owner may consider the qualifications of the Bidders, whether or not the bids comply with the prescribed requirements, and alternates and unit prices, if requested, on the Bid Form. The Owner may also consider the qualifications and experience of subcontractors and suppliers. The Owner may conduct such investigations as are deemed necessary to establish the qualifications and financial ability of the Bidder and its subcontractors and suppliers. The factors the Owner may consider in determining which bid is lowest responsible include the factors set forth below. The Owner, in its discretion, may consider and give such weight to these criteria as it deems appropriate.
 - a. The Bidder's work history. The Bidder should have a record of consistent customer satisfaction and of consistent completion of projects, including projects that are comparable to or larger and more complex than the Owner's Project, on time and in accordance with the applicable Contract Documents, and the Bidder's claims history. If the Bidder's management operates or has operated another construction company, the Owner may consider the work history of that company in determining whether the Bidder submitted the lowest responsible bid.

The Owner will consider the Bidder's prior experience on other projects of similar scope and/or complexity including prior projects with the Owner and/or Design Professional, including the Bidder's demonstrated ability to complete its work on these projects in accordance with the Contract Documents and on time, and will also consider its ability to work with the Owner and Design Professional as a willing, cooperative, and successful team member. Bringing overstated claims, an excessive number of claims, acting uncooperatively, and filing lawsuits against project owners and/or their design

professionals on prior projects of similar scope and/or complexity will be deemed evidence of a Bidder's inability to work with the Owner and Design Professional as a willing, cooperative, and successful team member.

The Bidder authorizes the Owner and its representatives to contact the owners and design professionals (and construction managers, if applicable) on projects on which the Bidder has worked and authorizes and requests such owners and design professionals (and construction managers) to provide the Owner with a candid evaluation of the Bidder's performance. By submitting its bid, the Bidder agrees that if it or any person, directly or indirectly, on its behalf or for its benefit brings an action against any of such owners or design professionals (or construction managers) or the employees of any of them as a result of or related to such candid evaluation, the Bidder will indemnify and hold harmless such owners, design professionals (and construction managers) and the employees of any of them from any claims whether or not proven that are part of or are related to such action and from all legal fees and expenses incurred by any of them arising out of or related to such legal action. This obligation is expressly intended for the benefit of such owners, design professionals (and construction managers), and the employees of each of them.

- b. The Bidder's financial ability to complete the Contract successfully and on time without resort to its Surety.
 - c. The Bidder's prior experience with similar work on comparable or more complex projects.
 - d. The Bidder's prior history for the successful and timely completion of projects, including the Bidder's history of filing claims and having claims filed against it.
 - e. The Bidder's equipment and facilities.
 - f. The adequacy, in numbers and experience, of the Bidder's work force to complete the Contract successfully and on time.
 - g. The Bidder's compliance with federal, state, and local laws, rules, and regulations, including but not limited to the Occupational Safety and Health Act and Ohio ethics laws.
 - h. The foregoing information with respect to each of the Subcontractors and Suppliers that the Bidder intends to use on the Project.
 - i. The Bidder's participation in a drug-free workplace program acceptable to the Owner, and the Bidder's record for both resolved and unresolved findings of the Auditor of State for recovery as defined in Section 9.24 of the Ohio Revised Code.
 - j. The Owner's prior experience with the Bidder's surety.
 - k. The Bidder's interest in the Project as evidenced by its attendance at any pre-bid meetings or conferences for bidders.
 - l. Depending upon the type of the work, other essential factors, as the Owner may determine and as are included in the Specifications.
4. **Qualifications Statement.** Each Bidder will submit with its bid a completed Contractor Qualifications Statement, which is included with the Contract Documents, and thereafter provide the Design Professional promptly with such additional information as the Design Professional may request regarding the Bidder's qualifications. A Bidder shall submit any requested additional information within three (3) business days of the date on the request.
5. The failure to submit requested information on a timely basis may result in the determination that the Bidder has not submitted the lowest responsible bid.
6. By submitting its bid, the Bidder agrees that the Owner's determination of which bidder is the lowest responsible bidder shall be final and conclusive, and that if the Bidder or any person on its behalf challenges such determination in any legal proceeding, the Bidder will indemnify and

hold the Owner and its employees and agents harmless from any claims included or related to such legal proceeding, whether or not proven, and from legal fees and expenses incurred by the Owner, its employees, or agents that arise out of or are related to such challenge.

7. After bid opening, within three (3) business days of a request made by the Design Professional, the apparent low Bidder and any other Bidder so requested by the Design Professional must submit the following:

- a. For all subcontracts with an estimated value of at least \$20,000, a list of all Subcontractors that the Bidder will use to construct the Project, as well as an indication of whether or not the Bidder has ever worked with a proposed Subcontractor before, including the following information for the three most recent projects on which the Bidder and each Subcontractor have worked together:**

- i. Project Owner**
- ii. Project Name**
- iii. Subcontract Scope**
- iv. Subcontract Value**
- v. Owner's contact name and phone number.**

If Bidder and a proposed Subcontractor have not worked together on at least three projects in the five years, Bidder must submit the information set forth above for the three most recent similar projects to the Project that a proposed Subcontractor has worked on.

The above Subcontractor information, as well as the information pertaining to each proposed Subcontractor, shall be used in the Owner's determination of the lowest responsible bid.

Once a Bidder identifies its proposed Subcontractors as set forth herein, and Owner makes no objections, the list shall not be changed unless written approval of the change is authorized by the Owner and Design Professional.

- 8. Affidavit as to Personal Property Taxes. Each successful Bidder shall submit, prior to the time of the entry into the Contract, an affidavit in the form required by Section 5719.042, Ohio Revised Code, regarding the status of the Bidder's personal property taxes. A copy of the affidavit form is included with the Contract Documents.**
- 9. No Bidder may withdraw its bid within sixty (60) days after the date bids are opened. The Owner reserves the right to waive any formalities or irregularities or to reject any or all bids.**
- 10. The Owner reserves the right to disqualify bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder.**
- 11. Award of Contract. The award of the Contract, when required, will only be made pursuant to a duly adopted resolution of the Owner.**

I. EXECUTION OF CONTRACT

- 1. Within the time designated by the Design Professional after award of the Contract, the successful Bidder shall execute and deliver to the Design Professional the required number of copies of the Owner-Contractor Agreement, in the form included in the Contract Documents, and all accompanying documents requested, including, but not limited to, a Contract Bond (if applicable), insurance certificates, and a valid Workers' Compensation Certificate. The**

successful Bidder shall have no property interest or rights under the Owner-Contractor Agreement until the Agreement is executed by the Owner.

J. SUBSTITUTIONS/NON-SPECIFIED PRODUCTS

1. Certain brands of material or apparatus are specified. Each bid will be based on these brands, which may be referred to in the Contract Documents as Standards. The use of another brand (referred to as a substitution or proposed equal in the Contract Documents, when a bidder or the contractor seeks to have a different brand of material or apparatus than that specified approved by the Owner for use in the Project) may be requested as provided herein. Substitutions, however, will not be considered in determining the lowest responsible bid.
2. The products specified in the Contract Documents establish a standard of required function, dimension, appearance, and quality.
3. Bidders wishing to obtain approval to bid non-specified products shall submit written requests to the Design Professional a minimum of seven (10) working days before the bid date and hour. To facilitate the submission of requests, a Pre-Bid Substitution Form is included in the Contract Documents. The Bidder shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution, including the name of the proposed manufacturer and/or product and a complete description of the proposed product including manufacturer's name and model number or system proposed, drawings, product literature, performance and test data, color selections or limitations, and any other information necessary for evaluation. Include a statement including any changes in other materials, equipment, or other work that would be required if the proposed product is incorporated in the materials, equipment, or other work that would be required if the proposed product is incorporated in the work. The burden of proof of the merit of the proposed product is on the proposer. The Design Professional's decision on approval of a proposed product will be final.

The following will be cause for rejection of a proposed substitution:

- a. Requests submitted by subcontractors, material suppliers, and individuals other than Bidders;
 - b. Requests submitted without adequate documentation;
 - c. Requests received after the specified cut-off date.
4. When the Design Professional approves a product submission before receipt of bids, the approval will be included in an Addendum, and Bidders may include the pricing of this product in their bid. Bidders shall not rely on approvals made in any other manner.
 5. In proposing a non-specified product or a substitution, the Bidder represents and warrants that each proposed product will not result in any changes to the Project, including changes to the Work of other contractors, or any decrease in the performance of any equipment or systems to be installed in the Project and agrees to pay any additional costs incurred by the Owner and the Owner's consultants as a result of a non-specified or substitute product that is accepted.
 6. Following the award of the Contract, there shall be no substitutions for specified products, except pursuant to a Change Order. The Owner in its sole discretion may decline to consider a substitution for a Change Order.

K. ALTERNATES

1. The Owner may request bids on alternates. If the Owner requests bids on alternates, the Bidder should include the cost of the alternates requested on its Bid Form.

2. At the time of awarding the contract, the Owner will select or reject alternates as it determines is in its best interest. A Bidder's failure to include on its Bid Form the cost of an alternate selected by the Owner and applicable to the Bidder's work shall render the bid non-responsive and be grounds for the rejection of the bid. Otherwise, the failure to include the cost of an alternate will not be deemed material.
3. The Bidder acknowledges that although there is an estimate for the cost of the Project, the market conditions may and frequently do result in the estimate being different from the sum of the bids received, either higher or lower. The Bidder understands that the Owner may include alternates, which may include deduct alternates as well as add alternates, to give it flexibility to build the Project with the funds available. The Bidder further understands and acknowledges that use of add and deduct alternates is a long held customary practice in the construction industry in the State of Ohio. The Bidder also acknowledges that the Owner will not make a decision about the alternates on which to base the award of contracts until the bids are received, and the Owner can compare its available funds with the base bids and the cost or savings from selecting different alternates. The Bidder understands that the award to the Bidder submitting the lowest responsible bid will be based on the lowest base bid plus selected alternates, and may result in an award to a Bidder other than the Bidder that submitted the lowest base bid.
4. If, during the progress of the Work, the Owner desires to reinstate any alternate not included in the Contract, the Owner reserves the right to reinstate the alternate at the price bid by the Contractor provided that such action is taken in sufficient time so as not to delay the progress of the work or cause the Contractor additional expense.

L. UNIT PRICES

1. Where unit prices are requested in the Bid Form the Bidder should quote a unit price. Unless otherwise expressly provided in the Bid Documents, such unit prices shall include all labor, materials, and services necessary for the timely and proper installation of the item for which the unit prices are requested. The unit prices quoted in the bid shall be the basis for any Change Orders entered into under the Owner-Contractor Agreement, unless the Design Professional determines that the use of such unit prices will cause substantial inequity to either the Contractor or the Owner.

M. ADDENDA

1. The Owner reserves the right to issue Addenda changing, altering, or supplementing the Contract Documents prior to the time set for receiving bids. The Design Professional will issue the Addenda to clarify bidders' questions and/or to change, alter, or supplement the Contract Documents.
2. Any explanation, interpretation, correction, or modification of the Contract Documents will be issued in writing in the form of an Addendum, which shall be the only means considered binding; explanations, interpretations, etc., made by any other means shall NOT be legally binding. All Addenda shall become a part of the Contract Documents.
3. Bidders shall submit written questions to the Design Professional in sufficient time in advance of the bid opening to allow sufficient time for the Design Professional to respond. All Addenda will be issued, except as hereafter provided, and mailed or otherwise furnished to persons who have obtained Contract Documents for the Project, at least seventy-two (72) hours prior to the published time for the opening of bids, excluding Saturdays, Sundays, and legal holidays. If any Addendum is issued within such seventy-two (72) hour period, then the time for opening of bids shall be extended one (1) week with no further advertising of bids required.
4. Copies of each Addendum will be sent only to the Bidders to whom Contract Documents have been issued and to Plan Rooms where copies of the Contract Documents are maintained. Receipt of Addenda shall be indicated by Bidders in the space provided on the Bid Form. Bidders are responsible for acquiring issued Addenda in time to incorporate them into their

bid. Bidders should contact the Design Professional prior to the bid opening to verify the number of Addenda issued.

5. Each Bidder shall carefully read and review the Contract Documents and immediately bring to the attention of the Design Professional any error, omission, inconsistency, or ambiguity therein.
6. If a Bidder fails to indicate receipt of all Addenda through the last Addendum issued by the Design Professional on its Bid Form, the bid of such Bidder will be deemed to be responsive only if:
 - a. The bid received clearly indicates that the Bidder received the Addendum, such as where the Addendum added another item to be bid upon and the Bidder submitted a bid on that item; or
 - b. The Addendum involves only a matter of form or is one which has either no effect or has merely a trivial or negligible effect on price, quantity, quality, or delivery of the item bid upon.

N. INTERPRETATION

1. If a Bidder contemplating submitting a bid for the proposed Project is in doubt as to the true meaning of any part of the Contract Documents, it may submit a written request for an interpretation thereof to the Design Professional. Requests received fewer than 5 days prior to bid opening may not be answered. Any interpretation of the proposed documents will be made by Addendum only, duly signed by the Design Professional, and a copy of such Addendum will be mailed or delivered to each Bidder receiving a set of Contract Documents and each plan room where the Contract Documents are maintained. The Owner will not be responsible for any other explanation or interpretation of the proposed documents.
2. In interpreting the Contract Documents, words describing materials that have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with the well-known meaning recognized by the trade.
3. Bidders are responsible for notifying the Design Professional in a timely manner of any ambiguities, inconsistencies, errors, or omissions in the Contract Documents. The Bidder shall not, at any time after the execution of the Contract, be compensated for a claim alleging insufficient data, incomplete Contract Documents, or incorrectly assumed conditions regarding the nature or character of the Work, if no request was made by the Bidder prior to the bid opening.

O. STATE SALES AND USE TAXES

1. The Owner is a political subdivision of the State of Ohio and is exempt from taxation under the Ohio Sales Tax and Use Tax Laws. Building materials that the successful Bidder purchases for incorporation into the Project will be exempt from state sales and use taxes if the successful Bidder provides a properly completed Ohio Department of Taxation Construction Contract Exemption Certificate to the vendors or suppliers when the materials are acquired. The Owner will execute properly completed certificates on request.

P. DATE FOR SUBSTANTIAL COMPLETION/ DATE FOR FINAL COMPLETION /LIQUIDATED DAMAGES

1. The Date for Substantial Completion (aka Contract Time), Date for Final Completion, and Liquidated Damages shall be as defined and set forth in the Owner-Contractor Agreement. **By submitting its Bid, each Bidder agrees that the period for performing its Work is reasonable.**

Q. OWNER'S RIGHT TO WAIVE DEFECTS AND IRREGULARITIES

1. The Owner reserves the right to waive any and all irregularities provided that the defects and irregularities do not affect the amount of the bid in any material respect or otherwise give the Bidder a competitive advantage.

R. MODIFICATION/WITHDRAWAL OF BIDS

1. Modification. A Bidder may modify its bid by written communication to the Owner addressed to the Owner's Representative at any time prior to the scheduled closing time for receipt of bids, provided such written communication is received by Owner's Representative prior to the bid deadline. The written communication shall not reveal the bid price, but should provide the addition or subtraction or other modification so that the final prices or terms will not be known until the sealed bid is opened. If the Bidder's written instructions with the change in bid reveal the bid amount in any way prior to the bid opening, the bid may be rejected as non-responsive.
2. Withdrawal Prior to Bid Deadline. A Bidder may withdraw its bid at any time for any reason prior to the bid deadline for the opening of bids established in the Request for Bids. The request to withdraw shall be made in writing to and received by the Owner's Representative prior to the time of the bid opening.
3. Withdrawal after Bid Deadline.
 - a. All bids shall remain valid and open for acceptance for a period of at least 60 days after the bid opening; provided, however, that a Bidder may withdraw its bid from consideration after the bid deadline when all of the following apply:
 - (1) the price bid was substantially lower than the other bids;
 - (2) the reason for the bid being substantially lower was a clerical mistake, rather than a mistake in judgment, and was due to an unintentional and substantial error in arithmetic or an unintentional omission of a substantial quantity of work, labor, or material;
 - (3) the bid was submitted in good faith; and
 - (4) the Bidder provides written notice to the Owner, to the attention of the Owner's Representative, within two (2) business days after the bid opening for which the right to withdraw is claimed.
 - b. No bid may be withdrawn under this provision if the result would be the awarding of the contract on another bid for the bid package from which the Bidder is withdrawing its bid to the same Bidder.
 - c. If a bid is withdrawn under this provision, the Owner may award the Contract to another Bidder determined by the Owner to be the lowest responsible bidder or the Owner may reject all bids and advertise for other bids. In the event the Owner advertises for other bids, the withdrawing Bidder shall pay the costs incurred in connection with the rebidding by the Owner, including the cost of printing new Contract Documents, required advertising, and printing and mailing notices to prospective bidders, if the Owner finds that such costs would not have been incurred but for such withdrawal.

S. COMPLIANCE WITH APPLICABLE LAWS

1. By submitting a bid for Work on the Project, the Bidder acknowledges that it is in compliance with applicable federal, state, and local laws and regulations, including, but not limited to, the following:
 - a. Equal Employment Opportunity/Nondiscrimination. The Bidder agrees that if it is awarded a contract that in the hiring of employees for performance of work under the contract or any subcontract, neither it nor any subcontractor, or any person acting on its behalf or its

subcontractor's behalf, by reason of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color, shall discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform work to which the employment relates. The Bidder further agrees that neither it nor any subcontractor or any person on its behalf or on behalf of any subcontractor, in any manner, shall discriminate against or intimidate any employees hired for the performance of the work under the contract on account of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color.

- b. Ethics Laws. The Bidder represents that it is familiar with all applicable ethics law requirements, including without limitation Sections 102.04 and 3517.13 of the Ohio Revised Code, and certifies that it is in compliance with such requirements.

T. FINDINGS FOR RECOVERY

1. By submitting its bid, each Bidder certifies for reliance of the Owner that it has no unresolved finding for recovery against it issued by the Auditor of the State of Ohio on or after January 1, 2001, except as permitted by Section 9.24 (F) of the Ohio Revised Code.

END OF INSTRUCTIONS TO BIDDERS

Note. Certain brands of material or apparatus are specified. Each bid will be based on these brands, which may be referred to in the Contract Documents as Standards. The use of another brand (referred to as a substitution or proposed equal in the Contract Documents, when a bidder or the contractor seeks to have a different brand of material or apparatus than that specified approved by the Owner for use in the Project) may be requested as provided in the Instructions to Bidders. Substitutions, however, unless approved and issued in an Addendum, will not be considered in determining which bidder to award the contract to.

[illegible]

CONTRACTOR'S PERSONAL PROPERTY TAX AFFIDAVIT
(O.R.C. § 5719.042)

State of Ohio

County of _____, ss:

_____, being first duly sworn, deposes and says that he is the
(Name)

_____ of _____ with offices located at
(Title) (Contractor)

_____, and as its duly
(Address of Contractor)

authorized representative, states that effective this _____ day of _____, 2019,

(Name of Contractor)

() is charged with delinquent personal property taxes on the general list of personal property as set forth below:

<u>County</u>	<u>Amount</u> (include total amount penalties and interest thereon)
---------------	---

_____ County	\$ _____
--------------	----------

_____ County	\$ _____
--------------	----------

() is not charged with delinquent personal property taxes on the general list of personal property in any Ohio county.

(Affiant)

Sworn to and subscribed before me by the above-named affiant this _____ day of _____, 2014.

(Notary Public)

My commission expires

_____, _____.

CONTRACTOR'S QUALIFICATION STATEMENT

Introduction. As provided in the Instructions to Bidders, within three (3) business days after receipt of the bids, if requested, the apparent low Bidder, will complete and submit to the Design Professional AIA Document A305, Contractor's Qualification Statement, and the information required by the following supplement to AIA Document A305, and thereafter will provide the Design Professional promptly with such additional information as the Design Professional may request regarding the Bidder's qualifications. Upon request from the Design Professional, any other Bidder will promptly complete and submit to the Design Professional the AIA Document A305, Contractor's Qualification Statement and the following supplement to the AIA Document A305, and such additional information as the Design Professional may request regarding the Bidder's responsibility. A Bidder shall submit any requested information within three (3) business days of the date on the request.

The failure to submit requested information on a timely basis may result in the determination that the Bidder is not the lowest responsible bidder.

AIA Document A305, Contractor's Qualification Statement, is part of the Contract Documents. This document may be purchased at one of the following offices of the AIA:

AIA Cleveland	1001 Huron Road, #101 Cleveland, OH 44115 Phone: (216) 575-1242 Fax: (216) 575-1244	For Mail orders, print form from website: www.aiacleveland.com/documents.asp and click on Order Form. For Email orders, go to: aiadocs@aiacleveland.com to order. Shipped one day after payment is received; or For Online orders, download and print from website: www.aia.org/docs_purchase .
AIA Cincinnati	Longworth Hall Design Center 700 W. Pete Rose Way Cincinnati, OH 45203-1892 Phone: (513) 421-4661 Fax: (513) 421-4665	For Mail orders, call or send order by email to: aiacinc@fuse.net – order is shipped same day. Document can be ordered online and printed from website: www.aia.org/docs_purchase .
AIA Columbus	21 W. Broad St., Ste. 200 Columbus, OH 43215 Phone: (614) 469-1973 Fax: (614) 469-1976	For Mail orders, call or send order by email to: info@aiacolumbus.org to order – order is shipped same day. Document can be ordered online and printed from website: www.aia.org/docs_purchase .

SUPPLEMENT TO AIA DOCUMENT A305

AIA Document A305 is modified as follows:

Paragraph 3.2.3. Modify Paragraph 3.2.3 as follows:

3.2.3 Has your organization filed any claims or lawsuits or requested arbitration regarding construction contracts within the last five years? If so, please provide the following information. If there are more than ten (10) of these claims, lawsuits or arbitrations only provide information on the most recent ten (10). Attach a separate sheet if needed.

Project and Scope of Work	Description of the Claims and the Final Resolution of the Claim (by mediation, lawsuit, or arbitration)	Owner's Representative & Telephone Number	Design Professional's Representative & Telephone Number

Paragraph 3.5. Modify Paragraph 3.5 as follows:

3.5 Provide the following information for each contract your organization has had during the last five (5) years, including current contracts, where the Contract Sum is fifty percent (50%) or more of the bid amount for this Project, including add alternates. If there are more than ten (10) of these contracts only provide information on the most recent ten (10) contracts, including current contracts. If there was a construction manager on the project, please include the contact information for the construction manager in the same column as the Design Professional information. Use additional sheets if needed to provide the requested information.

Project and Scope of Work	Contract Sum	Owner's Representative & Telephone Number	Design Professional's Representative & Telephone Number

3.5.1 Provide the following information for each project your organization has had during the last five (5) years, which you believe is of comparable or greater size and complexity than the Owner's project. If there are more than five (5) of these projects, only provide information on the most recent five (5) projects, including current projects. If there was a construction manager on the project, please include the contact information for the construction manager in the same column as the Design Professional information. Use additional sheets if needed to provide the requested information.

Project and Scope of Work	Contract Sum	Owner's Representative & Telephone Number	Design Professional's Representative & Telephone Number

New Subparagraphs 3.5.2, 3.5.3 and 3.5.4. Add the following new subparagraphs:

3.5.2 If any of the following members of your organization's management--president, chairman of the board, or any director--operates or has operated another construction company during the last five (5) years, identify the company.

3.5.3 If your organization is operating under a trade name registration with the Secretary of State for the State of Ohio, identify the entity for which the trade name is registered. If none, state "none."

3.5.4 If your organization is a division or wholly-owned subsidiary of another entity or has another relationship with another entity, identify the entity of which it is a division or wholly-owned subsidiary or with which it has another relationship and also identify the nature of the relationship. If none, state "not applicable."

New Paragraph 3.7. Add the following new paragraph:

3.7 On a separate sheet, list the construction education, training and construction experience for each person who will fill a management role on the Project, including without limitation the Project Executive, Project Engineer, Project Manager, and Project Superintendent. For each person listed, include with the other information the last three projects on which the person worked and the name and telephone number of the design profession and the owner.

Signature _____

Dated at _____ on _____, 2014.

Name of Organization: _____

By: _____
Typed or printed name

Title: _____

County of _____,

State of _____, ss:

Sworn to me a notary public by _____ on behalf of
_____ on _____, 2019.

Notary Public

My Commission Expires: _____

CONTRACTOR'S REVIEW CERTIFICATE

The undersigned acknowledges that:

- ☐ Authorized agent has carefully read and understood all of the Bid Documents submitted for the Project, including, but not limited to, the Instructions to Bidders, Form of Proposal, Substitution Sheet, Form of Bid Guaranty and Performance Bond, Form of Performance Bond, Contractor's Affidavit (R.C. § 5719.042), this Contractor's Review Certificate, the Owner-Contractor Agreement, General Conditions of the Contract for the Project, Project Specifications and Drawings, and
- ☐ The Bid Documents are sufficient and adequate for the undersigned to perform the work; and
- ☐ Has carefully reviewed the site and conditions under which the Work will be performed, or has been given ample opportunity to do so, and fully assumes the risk for any condition at the site that could have been discovered by a careful and diligent review of the site;
- ☐ Has confirmed that his surety is authorized to do business in the State of Ohio.
- ☐ Has attended the pre bid meeting.

Date: _____

CONTRACTOR: _____

By: _____
SIGNATURE

TYPED OR PRINTED NAME

Its: _____

NOTE: The Bidder should review the Bid Documents and the site and conditions under which the Work will be performed so that he can give the acknowledgements contained in this Certificate.

NON-COLLUSION AFFIDAVIT

No bid will be accepted that does not have this form completely executed.

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

- (a) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or any competitor.
- (b) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor;
- (c) No attempt has been made or will be made by the bidder to insure any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition;
- (d) The person signing this bid or proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as to the person signing in its behalf.
- (e) That attached hereto (if corporate bidder) is a certified copy of resolution authorizing the execution of this certificate by the signature of this bid or proposal on behalf of the corporation bidder.

(Individual)

(Corporation)

Date: _____

By _____

OWNER-CONTRACTOR AGREEMENT

Owner:

Preservation Parks of Delaware County
2656 Hogback Road
Sunbury, Ohio 43074
Telephone Number: 740.524.8600

Contract: Single Prime General Contracting

Alternates: _____

Contractor:

Telephone Number: _____

Project:

Office Renovation – Deer Haven Park

This document is an agreement between the Owner and the Contractor for the Work described in the Contract Documents related to the Contract identified above for the Project defined above and is effective as of the date the Agreement is signed by the Owner (the "Effective Date").

The Owner and the Contractor agree as set forth in the following sections:

1. CONTRACT DOCUMENTS. The Contract Documents consist of the following documents:

- A. Notice to Bidders;
- B. Instructions to Bidders;
- C. Bid Form;
- D. Owner-Contractor Agreement;
- E. Contractor Review Certificate
- F. Non-Collusion Affidavit
- G. General Conditions of the Contract for Construction (AIA Document A201-2017), as modified;
- H. Drawings;
- I. Specifications;
- J. Addenda issued;
- K. Contractor's Personal Property Tax Affidavit (O.R.C. 5719.042);
- L. Statement of Claim Form; and
- M. Modifications issued after the execution of the contract, including:
 - i. A Change Order;
 - ii. A Work Change Directive; or,
 - iii. A written order for a minor change of the Work issued by the Design Professional in accordance with the General Conditions.

1.1 Notwithstanding anything in the Contract Documents to the contrary, in the event of any inconsistency, the provisions of this Agreement shall control over any other Contract Document, proposal, document, or other attachment. In the event inconsistencies, conflicts, or ambiguities between or among the Contract Documents are discovered after execution of the Agreement, Contractor shall provide the better quality or greater quantity of Work or comply with the more stringent requirements.

Note: Non-Contract Documents. The following are the reports and tests of subsurface conditions at or contiguous to the Site, if any, that the Design Professional has used in preparing the Contract Documents. These are not Contract Documents. Geotechnical data is not a warranty of subsurface conditions and is not to be relied upon as a complete representation of all possible soil conditions. Neither Owner nor its consultants warrant the accuracy of the geotechnical data. It is possible that

there may be other reports, and/or tests of subsurface conditions at or contiguous to the Site not prepared by or on behalf of Owner. The Owner makes no representation about such reports and/or tests, assuming they exist. Additional information, if needed by Contractor for geotechnical data or site survey, shall be obtained by the Contractor at no additional cost to Owner. The General Conditions, as modified, contain additional terms related to these reports and tests.

Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings listed below, and except for such reliance on "technical data," Contractor shall not rely upon or make any claim against Owner or Design Professional with respect to: (1) the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or (2) other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or (3) any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information. For example, all interpolations and extrapolations of data performed by Contractor to estimate locations or quantities of subsurface strata are independent factual assumptions which Owner does not warrant. (Not applicable, if none are listed).

Note: Non-Contract Documents. The following are those reports and drawings related to any Hazardous Conditions at the Site, if any. These are not Contract Documents. The General Conditions, as modified, contain additional terms related to these reports and drawings. (None if none are listed).

2. DESIGN PROFESSIONAL RELATIONSHIP. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Design Professional and the Contractor or any Subcontractor or Material Supplier to the Project. The Design Professional, however, shall be entitled to performance of the obligations of the Contractor intended for its benefit and to enforcement of such obligations, but nothing contained herein shall be deemed to give the Contractor or any third party any claim or right of action against the Design Professional that does not otherwise exist without regard to this Contract. The Contractor and its Subcontractors shall not be deemed to be beneficiaries of any of the acts or services of the Design Professional that are performed for the sole benefit of the Owner. The Contractor shall forward all communications to the Owner through the Design Professional and hereby acknowledges and agrees that any instructions, reviews, advice, approvals, orders, or directives that are rendered to it by the Design Professional are specifically authorized and directed by the Owner to the Contractor through the Design Professional acting on behalf of the Owner.

2.1 The Design Professional is:
Schorr Architects, Inc.
230 Bradenton Avenue
Dublin, Ohio 43017
Telephone Number: 614/798-2096

3. TIME FOR COMPLETION AND PROJECT COORDINATION.

3.1 DATE OF COMMENCEMENT. The date of commencement of the Work shall be the date identified in the Notice to Proceed issued by the Owner, or by the Owner through the Design Professional, to the Contractor, or if there is no Notice to Proceed, the Effective Date of this Agreement.

3.2 DATE OF SUBSTANTIAL COMPLETION. The Project and Work for the Project consists of all labor, materials, equipment, and services necessary for construction of the Project, all in accordance with the Drawings and Specifications prepared by the Design Professional. The Contractor

shall achieve Substantial Completion of its Work on the Project, as defined in the General Conditions and Construction Milestones ("Date of Substantial Completion").

3.2.1 DATE OF FINAL COMPLETION. The Contractor shall achieve Final Completion of its Work on the Project, as defined the General Conditions and Construction Milestones ("Date of Final Completion").

3.2.2 UTILITIES AND OPERATIONS. Contractor shall not interrupt utilities to facilities or existing operations without prior written notice and approval by Owner.

Contractor's Construction Schedule for performing the Work shall account for Contractor not being able to perform Work on these dates and the contractual dates for Substantial Completion and Final Completion will not be changed due to Contractor not being able to perform Work on these dates.

3.3 CONSTRUCTION SCHEDULE. The Construction Schedule shall be developed by the Contractor as provided in the Contract Documents.

3.4 LIQUIDATED DAMAGES. If the Contractor does not have its Work on the Project Substantially Complete by the specified Date for Substantial Completion or Finally Complete by the Date of Final Completion, the Contractor shall pay the Owner (and the Owner may set off from sums coming due the Contractor) Liquidated Damages in the per diem amounts as set forth in the following tables, whichever may be applicable. "Contract Amount" of the Work will be determined by totaling the cost of all line items of Work, as set forth in the Schedule of Values.

LIQUIDATED DAMAGES – CONSTRUCTION MILESTONES

<u>Original Contract Amount</u>	<u>Dollars Per Day</u>
\$1.00 to \$500,000.00	\$ 200.00
\$500,000.01 to \$2,000,000.00	\$ 250.00
\$2,000,000.01 to \$10,000,000.00	\$ 325.00
\$10,000,000.01 to \$50,000,000.00	\$ 500.00
\$50,000,000.01 and greater	\$ 625.00

The Contractor acknowledges that such amounts of Liquidated Damages represent a reasonable estimate of the actual damages for loss of or interference with the intended use of the Project that the Owner would incur if the Contractor's Work is not Substantially Complete by its Date for Substantial Completion or Finally Complete by the required date for Final Completion.

3.5 INITIAL DECISION MAKER. The Initial Decision Maker renders initial decisions on Claims in accordance with the claims process set forth in the General Conditions. The Initial Decision Maker shall be the Design Professional, unless a different Initial Decision Maker is identified below:

4. CONTRACT SUM (also called Contract Price). The Contract Sum to be paid by the Owner to the Contractor, as provided herein, for the satisfactory performance and completion of the Work and all of the duties, obligations, and responsibilities of the Contractor under this Agreement and the other Contract Documents is \$_____, subject to adjustment as set forth in the Contract Documents. The Contract Sum includes Allowances, Accepted Alternates, and all federal, state, county, municipal, and other taxes imposed by law, including but not limited to any sales, use, commercial activity, and personal property taxes payable by or levied against the Contractor on account of the Work or the materials incorporated into the Work. The Contractor will pay any such taxes. The Contract Sum includes the following:

4.1 Base Bid Amount: \$_____ (Lump Sum Bid);

4.2 Alternate No.1 Amount \$ _____

4.5 If after Substantial Completion of its Work, the Contractor fails to submit its final payment application with all the documents required to be submitted with such application within ninety (90) days after written notice to do so from the Owner and without prejudice to any other rights and remedies the Owner may have available to it, the balance of the Contract Sum shall become the Owner's sole and exclusive property, and the Contractor shall have no further interest in or right to such balance.

5. RETAINAGE. Retainage applicable to the Contract by Ohio Revised Code Sections 153.12, .13, and .14 will be withheld on all Applications for Payment.

6. [NOT USED.]

7. GENERAL.

7.1 MODIFICATION. No modification or waiver of any of the terms of this Agreement or of any other Contract Documents will be effective against a party unless set forth in writing and signed by or on behalf of a party. In the case of the Owner, the person executing the modification or waiver must have express authority to execute the Modification on behalf of the Owner pursuant to a resolution that is duly adopted by the Owner. Under no circumstances will forbearance, including the failure or repeated failure to insist upon compliance with the terms of the Contract Documents, constitute the waiver or modification of any such terms. The parties acknowledge that no person has authority to modify this Agreement or the other Contract Documents or to waive any of its or their terms, except as expressly provided in this section.

7.2 ASSIGNMENT. The Contractor may not assign this Agreement without the written consent of the Owner, which the Owner may withhold in its sole discretion.

7.3 LAW AND JURISDICTION. All questions regarding the validity, intention, or meaning of this Agreement or any modifications of it relating to the rights and obligation of the parties will be construed and resolved under the laws of the State of Ohio. Any suit, which may be brought to enforce any provision of this Agreement or any remedy with respect hereto, shall be brought in the Franklin County Court of Common Pleas and each party hereby expressly consents to the exclusive jurisdiction of such court to the exclusion of any other court, including any U.S. District Court or any other federal court.

7.4 CONSTRUCTION. The parties acknowledge that each party has reviewed this Agreement and the other Contract Documents and entered into this Agreement as a free and voluntary act. Accordingly, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party will not be employed in the interpretation of this Agreement, the other Contract Documents, or any amendments or exhibits to it or them.

7.5 APPROVALS. Except as expressly provided herein, the approvals and determinations of the Owner and Design Professional will be subject to the sole discretion of the respective party and be valid and binding on the Contractor, provided only that they be made in good faith, i.e., honestly. If the Contractor challenges any such approval or determination, the Contractor has the burden of proving that it was not made in good faith by clear and convincing evidence.

7.6 PARTIAL INVALIDITY. If any term or provision of this Agreement is found to be illegal, unenforceable, or in violation of any laws, statutes, ordinances, or regulations of any public authority having jurisdiction, then, notwithstanding such term or provision, this Agreement will remain in full force and effect and such term will be deemed stricken; provided this Agreement will be interpreted, when possible, so as to reflect the intentions of the parties as indicated by any such stricken term or provision.

7.7 COMPLIANCE WITH LAWS AND REGULATIONS. The Contractor, at its expense, will comply with all applicable federal, state, and local laws, rules, and regulations applicable to the Work, including but not limited to Chapter 4115 of the Ohio Revised Code and Sections 153.59 and 153.60 of the Ohio Revised Code, which prohibit discrimination in the hiring and treatment of employees, with respect to which the Contractor agrees to comply and to require its subcontractors to comply.

7.7.1 NON-DISCRIMINATION. Contractor agrees:

- .1 That in the hiring of employees for the performance of Work under this Agreement or in any subcontract, neither the Contractor, subcontractor, or any person acting on behalf of either of them, shall by reason of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform the Work to which the employment relates.
- .2 That neither the Contractor, subcontractor, nor any person acting on behalf of either of them shall, in any manner, discriminate against or intimidate any employee hired for the performance of Work under this Agreement on account of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color.
- .3 That there shall be deducted from the amount payable to the Contractor by the Owner under this Agreement a forfeiture of twenty-five dollars (\$25.00) as required by Ohio Revised Code Section 153.60 for each person who is discriminated against or intimidated in violation of this Agreement.
- .4 That this Agreement may be canceled or terminated by the Owner and all money to become due hereunder may be forfeited for a second or subsequent violation of the terms of this section of this Agreement.

7.7.2 [NOT USED.]

7.7.3 ETHICS. By signing and entering into this agreement with the Owner, the Contractor represents that it is familiar with all applicable ethics law requirements, including without limitation Sections 102.04 and 3517.13 of the Ohio Revised Code, and certifies that it is in compliance with such requirements. The Contractor understands that failure to comply with the ethics laws is, in itself, grounds for termination of this contract and may result in the loss of other contracts with the Owner.

7.8 JOB MEETINGS. The Contractor or one of its representatives with authority to bind the Contractor will attend all job meetings. The Owner anticipates that job meetings will be scheduled on a weekly basis during construction or as needed. The Contractor will ensure that its Subcontractors also hold regular job meetings at which safety issues and job matters are discussed as these relate to the Work being performed. Job meetings include, but are not limited to, pre-construction meetings, weekly job meetings, weekly safety tool box meetings, and monthly safety meetings.

7.9 PROPERTY TAX AFFIDAVIT. The Contractor's affidavit given under Section 5719.024, Ohio Revised Code, is incorporated herein.

7.10 PARTNERING. Contractor agrees that it will participate, as part of the Contract Sum, in any partnering sessions scheduled by Owner.

7.11 WARRANTIES. Notwithstanding anything to the contrary in the Contract Documents, including the Project Manual and Specifications, no warranties by Contractor shall be limited to any time shorter than the statute of limitations for written contracts in Ohio.

7.12 CONTRACTOR ATTESTATIONS.

- .1 Contractor attests that it has not scaled these contract documents to determine quantities for bids, as Contractor has field verified and taken its own dimensions to determine the quantities for its bid.
- .2 Contractor agrees that all the scales noted on the drawings are correct; so as to give it an "intent" of what is to be bid. Contractor has not relied on any other dimensions than what are noted in text and dimension lines.
- .3 Contractor has thoroughly read the Contract Documents and has asked any and all questions it has on the intent of the scope of work, or supposed errors and omissions contained in these drawings, during the bid process and prior to signing this Agreement.

- .4 Contractor will not be asserting a claim for additional time or money associated with the three issues listed above.
- .5 Contractor believes it has accurately interpreted the Contract Documents and has asked for clarification and received satisfactory response for all items not thoroughly addressed or appeared to be conflicting in the Contract Documents and has found all stipulations and requirements contained in this Agreement are as stated in the bid specifications and are enforceable according to Ohio Law, including but not limited to the Owner's right of offset, and the Owner's right to assess liquidated damages for work not completed according to the milestones listed on the project schedule contained in the Contract Documents.

7.13 ENTIRE AGREEMENT. This Agreement and the other Contract Documents constitute the entire agreement among the parties with respect to their subject matter and will supersede all prior and contemporaneous, oral or written, agreements, negotiations, communications, representations, and understandings with respect to such subject matter, and no person is justified in relying on such agreements, negotiations, communications, representations, or understandings.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their properly authorized representatives and agree that this Agreement is effective as of the date first set forth above.

Owner:

Preservation Parks of Delaware County

By: _____

Name: _____

Title: _____

Date: _____

Contractor:

By: _____

Name: _____

Title: _____

Date: _____

CERTIFICATE

(Section 5705.41, R.C.)

The undersigned, fiscal officer of the Owner, certifies that the moneys required to pay that part of the Contract Sum coming due during the current fiscal year, under the Agreement to which this Certificate is attached have been lawfully appropriated for such purpose and are in the appropriate account of the Owner, or in the process of collection to the credit of the appropriate account or fund, free from any previous encumbrances. Moneys due in excess of the Contract Sum shall require an additional and separate Fiscal Officer's Certificate.

DATED: _____

Fiscal Officer

AIA Document A201™ – 2017

General Conditions of the Contract for Construction

for the following **PROJECT**:
(Name and location or address)

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS**
- 2 OWNER**
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- 5 SUBCONTRACTORS**
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- 10 PROTECTION OF PERSONS AND PROPERTY**
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- 12 UNCOVERING AND CORRECTION OF WORK**
- 13 MISCELLANEOUS PROVISIONS**
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

ADDITIONS AND DELETIONS:

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

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

Init.

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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 or proposal 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. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

(Paragraphs deleted)

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as

binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

§ 1.3 Capitalization

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

§ 1.4 Interpretation

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

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

(Paragraphs deleted)

§ 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 retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and 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 the 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 suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, 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 suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

(Paragraphs deleted)

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

(Paragraphs deleted)

§ 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 Evidence of the Owner's Financial Arrangements

(Paragraphs deleted)

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

(Paragraphs deleted)

§ 2.3.1 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.

§ 2.3.2 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.

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

§ 2.3.4 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.

§ 2.3.5 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.

§ 2.3.6 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.

§ 2.4 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.

§ 2.5 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 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 default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for 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. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

(Paragraphs deleted)

§ 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 its 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

(Paragraphs deleted)

§ 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 2.3.4, 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 submit 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, subject to Section 15.1.7, 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

(Paragraphs deleted)

§ 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. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be 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 notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative 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

(Paragraphs deleted)

§ 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 approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 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

(Paragraphs deleted)

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

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 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

(Paragraphs deleted)

§ 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 14 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 that an equitable adjustment be made 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, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

(Paragraph deleted)

§ 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

(Paragraphs deleted)

§ 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

(Paragraphs deleted)

§ 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 notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice 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 and Submittal Schedules

(Paragraphs deleted)

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to

completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably 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, or fails to provide submittals in accordance with the approved 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 make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and 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

(Paragraphs deleted)

§ 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.

(Paragraph deleted)

§ 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.

(Paragraphs deleted)

§ 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 how 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 the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect 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 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.

§ 3.12.10.1 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 be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately 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 and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and 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.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 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, 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

(Paragraphs deleted)

§ 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, or patching shall be restored to the condition existing prior to the cutting, fitting, or 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 construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

(Paragraphs deleted)

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and 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 the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with 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 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 an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

(Paragraphs deleted)

§ 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

(Paragraphs deleted)

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 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.

§ 4.2 Administration of the Contract

(Paragraphs deleted)

§ 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.

§ 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 promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) 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

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

(Paragraphs deleted)

§ 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 13.4.2 and 13.4.3, whether or not the 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, 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 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 order 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 Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 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

(Paragraphs deleted)

§ 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 the 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, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice 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 for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, 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 that the Contractor, by these Contract 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

(Paragraphs deleted)

§ 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; 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 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

(Paragraphs deleted)

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 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 any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its 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 or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has 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

(Paragraphs deleted)

§ 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 notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work 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. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 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 that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor 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

(Paragraphs deleted)

§ 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. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

(Paragraphs deleted)

§ 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

(Paragraphs deleted)

§ 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 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine 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 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .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, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 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.

§ 7.3.7 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.

§ 7.3.8 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 may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

(Paragraphs deleted)

§ 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

(Paragraphs deleted)

§ 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, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 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

(Paragraphs deleted)

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended 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

(Paragraphs deleted)

§ 9.1.1 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.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

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

§ 9.3 Applications for Payment

(Paragraphs deleted)

§ 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. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and 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 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, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

(Paragraphs deleted)

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole 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 in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. 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. 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 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

(Paragraphs deleted)

§ 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 suppliers 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 either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

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

§ 9.5.4 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 supplier 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 Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

(Paragraphs deleted)

§ 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 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 and suppliers 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 or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to 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 or provided by 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, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 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' 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 shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

(Paragraphs deleted)

§ 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; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and 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 the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the 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

(Paragraphs deleted)

§ 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 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

(Paragraphs deleted)

§ 9.10.1 Upon receipt of the Contractor's 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. 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 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, (3) a written statement that the Contractor knows of no 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, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and 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, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance 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 the lien, claim, security interest, or encumbrance, 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, corrected, 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 the 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;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a 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

(Paragraphs deleted)

§ 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, a Subcontractor, or a Sub-subcontractor; 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 implement, 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 the owners and users of adjacent sites and utilities of the safeguards.

§ 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. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is 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, notice of the 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 and Substances

(Paragraphs deleted)

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. 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 notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's 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 the material or substance or who are to perform the task of removal or safe containment of the 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 by the amount of the Contractor's reasonable additional costs of shutdown, 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 hazardous 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 hazardous 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 reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances 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 reimburse 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 Insurance and Bonds

(Paragraphs deleted)

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 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.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

(Paragraphs deleted)

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract

Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

(Paragraph deleted)

§ 11.3.1 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; (2) the Architect and Architect's consultants; and (3) Separate Contractors, 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 those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 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, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

(Paragraphs deleted)

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

(Paragraphs deleted)

§ 11.5.1 A loss insured under the property insurance required by the Agreement 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 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

(Paragraphs deleted)

§ 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, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before 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

(Paragraphs deleted)

§ 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 any 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 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 2.5.

§ 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 of the Owner or Separate Contractors, whether completed or partially completed, 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, excluding that jurisdiction's choice of law rules. 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

(Paragraphs deleted)

§ 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 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 the assignment.

§ 13.3 Rights and Remedies

(Paragraphs deleted)

§ 13.3.1 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.

§ 13.3.2 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 thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

(Paragraphs deleted)

§ 13.4.1 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 tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 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 13.4.1, 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 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 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.

§ 13.4.4 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.

§ 13.4.5 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.

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

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties 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.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

(Paragraphs deleted)

§ 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, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, 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 reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, 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' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work 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' 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

(Paragraphs deleted)

§ 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 or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .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 reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner 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' 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

(Paragraphs deleted)

§ 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 under 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

(Paragraphs deleted)

§ 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 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 Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

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, a change in the Contract Time, 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. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the 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 15.1.2.

§ 15.1.3 Notice of Claims

(Paragraphs deleted)

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by 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 under this Section 15.1.3.1 shall 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.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

(Paragraphs deleted)

§ 15.1.4.1 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.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

(Paragraphs deleted)

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 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.

§ 15.1.6.2 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.

§ 15.1.7 Waiver of 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 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

(Paragraphs deleted)

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, 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. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a 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 the 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 receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, 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

(Paragraphs deleted)

§ 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 15.1.7, 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 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 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

(Paragraphs deleted)

§ 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. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. 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

(Paragraphs deleted)

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party 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 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party 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 those of the Owner and Contractor under this Agreement.

SUPPLEMENTARY GENERAL CONDITIONS

1.0 GENERAL

A. The following supplements AIA Document A201-2017 General Conditions of the Contract for Construction.

2.0 MODIFICATIONS

A. Article 11, Insurance, add: The Contractor shall purchase the following insurances:

1. General Liability
 - a. Combination Single Limit for Bodily Injury, Personal Injury, and Property Damage - \$1,000,000 per occurrence with \$2,000,000 general aggregate.
 - b. Products/Completed Operation - for a period of (1) year after the substantial completion of the project - \$1,000,000 aggregate.
 - c. Personal and Advertising Injury - \$1,000,000 aggregate.
 - d. Fire Damage - \$50,000.
 - e. Medical Payment - \$5,000.

2. Automobile Liability
 - a. Combination Single Limit for Bodily Injury and Property Damage for Owned, Non-Owned, and Hired Vehicles - \$1,000,000.

3. Builders' Risk
 - a. Maintain insurance to protect himself and the Owner from loss incurred by fire, lightning, extended coverage hazards, vandalism, theft, explosion, and malicious mischief in the full amount of the

Contract and such insurance shall cover all labor and materials connected with work, including materials delivered to the site but not yet installed in the building.

B. Exhibit A, Insurance, add: The Contractor is to have all of his subcontractors carry the same insurances and coverages. The Owner is to be additionally insured for each coverage and a statement regarding this is to be included on each insurance certificate. The Contractors insurances are primary over any other valid and collectable insurance. The Contractor shall file with the Owner a copy of the limits and coverages for each insurance stated above.

3.0 DEFINITIONS

A. "Provide" means provide in place, furnish and install.

4.0 RELATED DOCUMENTS

A. The requirements of the drawings, the General Provisions of the Contract, the General Conditions, the Bidding Requirements and Division 1 of the specifications apply to each of the specification sections.

B. The Contractor is to file with the Owner an affidavit regarding personal property tax in accordance with Section 5719.042 of the Ohio Revised Code.

C. Finding of Recovery:

1. The Bidder will need to provide certification that it has no unresolved findings of recovery issued by the Auditor of the State prior to award of their contract.

END OF SUPPLEMENTARY GENERAL CONDITIONS

**NOTICE OF COMMENCEMENT FOR
PUBLIC IMPROVEMENT UNDER
SECTION 1311.252 OF THE REVISED CODE**

The undersigned, _____, of _____, first being sworn gives the following information with respect to the indicated public improvement:

1. The name of the public improvement is Preservation Parks of Delaware County–
Office Renovation - Deer Haven Park
2. The Public Improvement is located at _____
3. The project number for the public improvement is _____
4. The name and address of this public authority is as follows:

5. The name and address of all principal contractors working on the public improvement, the trade of each principal contractor, and the name and address of the surety for each principal contractor are as follows:

		Trade
A.	_____	_____

Surety:

B.	_____	_____

Surety:

C.	<u>N/A</u> _____	_____

Surety:

D. N/A _____

Surety:

6. The name and address of the representative of the public authority for the purposes of serving the lien affidavit are as follows:

Preservation Parks of Delaware County
2656 Hogback Road
Sunbury, Ohio 43074

(Signature of Affiant)

County of _____
State of Ohio

Sworn to before me a notary public this ____ day of _____ 2019
by _____, _____, of
_____, on behalf of the public authority.

Notary Public



**STATE OF OHIO
DEPARTMENT OF TAXATION
CONSTRUCTION CONTRACT EXEMPTION CERTIFICATE**

Identification of Contract:

Contractee's (Owner's) name:

Exact location of job/project _____

Name of job/project as it
appears on contract documentation _____

The undersigned hereby certifies that the tangible personal property purchased under this exemption certificate was purchased for incorporation into:

- ☒ real property under a construction contract with the United States government, its agencies, the State of Ohio, or an Ohio political subdivision.
- ☐ real property which is owned, or will be accepted for ownership at the time of completion, by the United States government, its agencies, the State of Ohio, or an Ohio political subdivision.
- ☐ a house of public worship or religious education.
- ☐ a building used exclusively for charitable purposes by a nonprofit organization operated exclusively for charitable purposes as defined in section 5739.02(B)(12) of the Revised Code.
- ☐ the original construction of a sports facility under section 307.696 of the Revised Code.
- ☐ a hospital facility entitled to exemption under section 140.08 of the Revised Code.

The original of this certificate must be signed by the owner/contractee and/or government official and must be retained by the prime contractor. Copies must be maintained by the owner/contractee and all subcontractors. When copies are issued to suppliers when purchasing materials, each copy must be signed by the contractor or subcontractor making the purchase.

Prime Contractor

Name _____

Signed by _____

Title _____

Address _____

City, State, Zip _____

Date _____

Subcontractor

Name _____

Signed by _____

Title _____

Address _____

City, State, Zip _____

Date _____

Owner/Contractee

Name Preservation Parks of Delaware County

Signed by _____

Title _____

Address _____

City, State, Zip _____

Date _____

Political Subdivision

Name same as Owner

Signed by _____

Title _____

Address _____

City, State, Zip _____

Date _____

CONSTRUCTION PROGRESS REPORT

CONTRACTOR:

PROJECT NAME:

PROJECT NO:

DATE:

WORK PROGRESS FOR PAST WEEK (7-DAYS):

1. _____
2. _____
3. _____
4. _____
5. _____

WORK GOALS FOR NEXT WEEK (7-DAYS):

1. _____
2. _____
3. _____
4. _____
5. _____

NOTES & PROBLEMS:

SUBCONTRACTORS ON SITE DURING PAST WEEK (7-DAYS):

_____	_____
_____	_____
_____	_____

MAN DAYS PAST WEEK (7-DAYS): _____
ESTIMATED PROJECT COMPLETION: _____%

STATEMENT OF CLAIM FORM

Claim No. ____

1. Name of Contractor: _____.

2. Date written claim given: _____.

3. Contractor's representative to contact regarding the claim:

Name: _____ Title: _____

Telephone No. _____ (office) FAX No. _____

E-mail: _____

4. General description of claim:

5. Contract Documents. If the claim is based upon any part or provision in the Contract Documents, including but not limited to pages in the Drawings and/or paragraphs in the Specifications, Owner-Contractor Agreement, General Conditions or Supplementary General Conditions, state upon which parts or provisions the claim is based:

6. Delay claims:

6.1 Date delay commenced: _____

6.2 Duration or expected duration of the delay, if known: _____

6.3 Apparent cause of the delay and part of critical path affected:

6.4 Expected impact of the delay and recommendations for minimizing such impact:

7. Additional compensation. Set forth in detail all additional compensation to which the Contractor believes it is entitled with respect to this claim:

8. Truth of Claim. By submitting this claim, the Contractor and its representative certify that after conscientious and thorough review and to the best of his or her knowledge and belief a) the information in this State of Claim is accurate, b) the Contractor is entitled to recover the compensation in paragraph 7, and c) the Contractor has not knowingly presented a false or fraudulent claim. The Contractor by its authorized representative must acknowledge this Statement of Claim before a notary public.

CONTRACTOR: _____

By: _____

Name and Title: _____

Date: _____

CONTRACTOR'S ACKNOWLEDGMENT

State of Ohio

County of _____, ss:

_____ first being sworn, states that after conscientious and thorough review the statements made in attached Statement of Claim Form are true to the best of his or her knowledge and belief.

Sworn to before me a notary public by _____ on _____, 2019.

Notary Public

WHEN COMPLETED, FORWARD A COPY OF THIS NOTICE AND STATEMENT OF CLAIM FORM TO THE OWNER, ARCHITECT, AND CONSTRUCTION MANAGER (if applicable), AS DESCRIBED IN THE INSTRUCTIONS FOR COMPLETING THE NOTICE AND STATEMENT OF CLAIM FORM.

INSTRUCTIONS FOR COMPLETING THE STATEMENT OF CLAIM FORM

1. Completing the Statement of Claim Form ("Claim Form") is a material term of the Contract. The Claim Form tells the Owner, Architect, and, if applicable, the Construction Manager that the Contractor is making a Claim and that they need to act promptly to mitigate the effects of the occurrence giving rise to the Claim. The Claim Form also provides them with information so that they can mitigate such effects. The Contractor acknowledges that constructive knowledge of the conditions giving rise to the Claim through job meetings, correspondence, site observations, etc. is inadequate notice, because knowledge of these conditions does not tell the Owner, Architect, and, if applicable, Construction Manager that the Contractor will be making a Claim and most often is incomplete.
2. The Contractor must provide preliminary information in all blanks in the Claim Form, except for paragraph 7, within the ten (10) day period required by the Contract Documents. After providing the preliminary information, the Contractor must supplement the Claim Form with complete and detailed information within thirty (30) days of submitting the Claim Form. If the space provided in the Claim Form is insufficient, the Contractor, as necessary to provide complete and detailed information, must attach pages with the required information to the Claim Form.
3. Paragraph 4. The Contractor must state what it wants, *i.e.*, time and/or compensation, and the reason why it is entitled to time and/or compensation.
4. Paragraph 5. The Contractor must identify the exact provisions of the Contract Documents it is relying on in making its Claim. For example, if the Claim is for a change in the scope of the Contractor's Work, the Contractor must identify the specific provisions of the Specifications, and the Plan sheets and details which provide the basis for the scope change.
5. Paragraph 6. This paragraph applies to delay claims, including delays which the Contractor believes result in constructive acceleration. The Contractor must identify the cause of the delay, party or parties responsible, and what the party did or did not do that caused the delay, *i.e.*, specific work activities. The Contractor acknowledges that general statements are not sufficient, and do not provide the Owner with sufficient information to exercise the remedies available to the Owner or to mitigate the effects of the delay.

For example, if the Contractor claims a slow response time on submittals caused a delay, the Contractor must identify the specific submittals, all relevant dates, and then show on the applicable schedule, by circling or highlighting, the activities immediately affected by the delays. Also, for example, if the Contractor claims it was delayed by another Contractor, the Contractor must identify the delaying Contractor, specifically what the delaying Contractor did or did not do that caused the delay, and then show on the applicable schedule, by circling or highlighting, the activities immediately affected by the delays. Further by example, if the Contractor seeks an extension of time for unusually severe weather, the Contractor must submit comparative weather data along with a record of the actual weather at the job site and job site conditions.
6. Paragraph 6.4. Time is of the essence under the Contract Documents. If there is a delay, it is important to know what can be done to minimize the impact of the delay. It therefore is important that the Contractor provide specific recommendations on how to do so.
7. Paragraph 7. The Contractor must provide a specific and detailed breakdown of the additional compensation it seeks to recover. For future compensation, the Contractor shall provide its best estimate of such compensation.
8. Paragraph 8 and Acknowledgment. In completing the Claim Form, the Contractor and its representative certify that after conscientious and thorough review and to the best of its knowledge and belief (a) the information in this Claim Form is accurate, (b) the Contractor is entitled to recover the compensation in paragraph 7, and (c) the Contractor has not knowingly presented a false or fraudulent claim. The Contractor by its authorized representative must acknowledge this Statement of Claim before a notary public at the time of the preliminary submission and also when making the supplemental submission.

End of Instructions

CONTRACTOR'S PAYMENT APPLICATION CHECKLIST

THE CONTRACTOR MUST COMPLETE THIS CHECKLIST AND SUBMIT IT TO THE DESIGN PROFESSIONAL WITH ITS PAYMENT APPLICATION AND ALL REQUIRED DOCUMENTATION.

1. Contractor's Name: _____
2. Name, title, and telephone and fax numbers of Contractor's representative to contact regarding the Payment Application and required documentation:
Name: _____ Title: _____
Office Telephone No.: (____) _____ FAX No.: (____) _____
3. Payment Application Number and Date:
No. _____ Date: _____, 2019__
4. The following is a list of required documentation that must accompany its Payment Application. The Contractor certifies that it has submitted the documentation listed below with its Payment Application. If the Contractor cannot do so, the Contractor should explain why in Paragraph 5. Such explanations shall not excuse the Contractor from the requirements for submitting this documentation.
 - ____ .1 Five (5) copies of a properly completed and executed Application for Payment with a properly completed and executed Schedule of Values attached to each;
 - ____ .2 Properly Completed Contractor's Affidavit with List of Subcontractors and Suppliers and Any Amounts Withheld;
 - ____ .3 Contractor's Waiver and Release Agreement (beginning with the second Application for Payment);
 - ____ .4 For each of its Subcontractors and Suppliers, a Subcontractor's – Supplier's Waiver and Release Agreement (beginning with the second Application for Payment);
 - ____ .5 Schedule of all materials and equipment stored on-site;
 - ____ .6 For materials and equipment stored off-site:
 - ____ A list of the materials and equipment consigned and stored off-site in connection with the Project (which shall be clearly identified), giving the place of storage, together with copies of invoices and reasons why the materials and equipment cannot be delivered to the site;
 - ____ Certification that all items have been tagged for delivery to the Project and that they will not be used for any other purpose;
 - ____ A letter from the Contractor's surety bonding company indicating agreement to the arrangements and that payment to the Contractor shall not relieve either party of its responsibility to complete the facility;
 - ____ Evidence of adequate insurance covering the material and equipment in storage, which shall name the Owner as additional insured;

- _____ Evidence that the Design Professional has visited the Contractor's place of storage and found that all the materials and equipment set forth in the payment request and represented to be stored off-site are stored at the place of storage (any costs incurred by the Design Professional to inspect material and equipment in off-site storage shall be paid by the Contractor); and
- _____ Itemization of the materials and equipment and their cost, which were approved on previous Pay Applications and which remain in off-site storage.
- _____ .7 Other documentation or information required by the Contract Documents or by the Design Professional or Owner.

5. Reason why required documentation is not submitted:

NOTE: The failure to submit required documentation, regardless of the reason, may result in non-payment, partial payment, and/or late payment.

Signature

Printed Name

Date

DESIGN PROFESSIONAL'S REVIEW

_____ Checklist and documentation complete.

_____ Checklist and documentation incomplete.

Signature

Printed Name

Date



Department of Commerce

Division of Industrial Compliance

John R. Kasich, Governor
Jacqueline T. Williams, Director

Bureau of Wage and Hour Administration
6606 Tussing Road - PO Box 4009
Reynoldsburg, OH 43608-9009
Phone 614-644-2239 | Fax 614-728-8639
TTY/TDD 800-750-0750
com.ohio.gov

An Equal Opportunity Employer and Service Provider

PREVAILING WAGE CONTRACTOR RESPONSIBILITIES

This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$250,000 for new construction or \$75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$91,150 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or \$27,309 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

- a) Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration
- b) Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census*, but may not increase or decrease more than 3% for any year

Penalties for violation

Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

Intentional Violations

If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

- Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- Intentional misclassification of employees for the purpose of reducing wages.
- Intentional misclassification of employees as independent contractors or as apprentices.
- Intentional failure to pay the prevailing wage.
- Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.
- Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.

Responsibilities

- A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.
 1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.

2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
 3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.
- B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.
1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
 2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.
- C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, and Labor, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:
1. Time cards, time sheets, daily work records, etc.
 2. Payroll ledger/journals and canceled checks/check register.
 3. Fringe benefit records must include program, address, account number, & canceled checks.
 4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
 5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.
- D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.
- E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.
- F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.
1. **Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.**
- G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.
- H. Supply all subcontractors with the Prevailing Wage Rates and changes.
- I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:
1. Employees' names, addresses, and social security numbers.
 - (a) Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
 2. Employees' work classification.
 - (a) Be specific about the laborers and/or operators (Group)
 - (b) For all apprentices, show level/year and percent of journeyman's rate
 3. Hours worked on the project for each employee.

- (a) The number of hours worked in each day and the total number of hours worked each week.
 - 4. Hourly rate for each employee.
 - (a) The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.
 - (b) All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.
 - 5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
 - (a) When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.
 - (b) When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by **dividing the total yearly contribution by 2080**.
 - 6. Gross amount earned on all projects during the pay period.
 - 7. Total deductions from employee's wages.
 - 8. Net amount paid.
- J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.
- K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

Prevailing Wage Determination Cover Letter

THE FOLLOWING PAGES ARE PREVAILING RATES OF WAGES ON PUBLIC IMPROVEMENTS FAIRLY ESTIMATED TO BE MORE THAN THE AMOUNT IN O.R.C. SEC. 4115.03 (b) (1) or (2), AS APPLICABLE.

Section 4115.05 provides, in part: "Where contracts are not awarded or construction undertaken within ninety days from the date of the establishment of the prevailing wages, there shall be a redetermination of the prevailing rate of wages before the contract is awarded." The expiration date of this wage schedule is listed above for your convenience only. This wage determination is not intended as a blanket determination to be used for all projects during this period without prior approval of this Department.

Section 4115.04, Ohio Revised Code provides, in part: "Such schedule of wages shall be attached to and made a part of the specifications for the work, and shall be printed on the bidding blanks where the work is done by contract..."

The contract between the letting authority and the successful bidder shall contain a statement requiring that mechanics and laborers be paid a prevailing rate of wage as required in Section 4115.06, Ohio Revised Code.

The contractor or subcontractor is required to file with the contracting public authority upon completion of the project and prior to final payment therefore an affidavit stating that he has fully complied with Chapter 4115 of the Ohio Revised Code.

The wage rates contained in this schedule are the "Prevailing Wages" as defined by Section 4115.03, Ohio Revised Code (the basic hourly rates plus certain fringe benefits). These rates and fringes shall be a minimum to be paid under a contract regulated by Chapter 4115 of the Ohio Revised Code by contractors and subcontractors. The prevailing wage rates contained in this schedule include the effective dates and wage rates currently on file. In cases where future effective dates are not included in this schedule, modifications to the wage schedule will be furnished to the Prevailing Wage Coordinator appointed by the public authority as soon as prevailing wage rates increases are received by this office.

"There shall be posted in a prominent and accessible place on the site of work a legible statement of the Schedule of Wage Rates specified in the contract to the various classifications of laborers, workmen, and mechanics employed, said statement to remain posted during the life of such contract." Section 4115.07, Ohio Revised Code.

Apprentices will be permitted to work only under a bona fide apprenticeship program if such program exists and if such program is registered with the Ohio Apprenticeship Council.

Section 4115.071 provides that no later than ten days before the first payment of wages is due to any employee of any contractor or subcontractor working on a contract regulated by Chapter 4115, Ohio Revised Code, the contracting public authority shall appoint one of his own employees to act as the prevailing wage coordinator for said contract. The duties of the prevailing wage coordinator are outlined in Section 4115.071 of the Ohio Revised Code.

Section 4115.05 provides for an escalator in the prevailing wage rate. Each time a new rate is established, that rate is required to be paid on all ongoing public improvement projects.

A further requirement of Section 4115.05 of the Ohio Revised Code is: "On the occasion of the first pay date under a contract, the contractor shall furnish each employee not covered by a collective bargaining agreement or understanding between employers and bona fide organizations of Labor with individual written notification of the job classification to which the employee is assigned, the prevailing wage determined to be applicable to

that classification, separated into the hourly rate of pay and the fringe payments, and the identity of the prevailing wage Coordinator appointed by the public authority. The contractor or subcontractor shall furnish the same notification to each affected employee every time the job classification of the employee is changed."

Work performed in connection with the installation of modular furniture may be subject to prevailing wage.

SECTION 01 10 00 SUMMARY OF THE WORK

1.0 GENERAL

1.01 DESCRIPTION

- A. This project consists of miscellaneous interior and exterior renovations to the existing Visitors Center including the following (but not limited to) at Deer Haven Park:
 - 1. Mechanical and Electrical Upgrades.
 - 2. Office Addition
 - 3. Exterior Renovations
 - 4. Interior Finishes.
- B. The Contractor is to verify all existing conditions which may affect their bid.
- C. The project when finished is to be complete in every respect.
- D. All Contractors need to reference the General Notes on the drawings.
- E. The Contractors for each bid package shall be experienced and qualified to anticipate and understand the requirements and conditions associated with the construction of this type of renovation. It will be necessary to perform out-of-sequence and come back work, so as to accommodate continuity and use of temporary facilities, etc. Work required to comply with this paragraph shall be included in the bid amount and will not be considered as additional/extra work.

1.02 PRIME CONTRACTS

- A. Prime contracts are defined to include the following contracts, and each is recognized to be a major portion of the project, with work to be performed concurrently:
 - 1. General Trades – Single Prime Contract.

1.03 WORK TO BE DONE UNDER SEPARATE CONTRACT

- A. The Owner will provide the following:
 - 1. Final data wiring and connectivity.

1.04 BUILDING PERMITS

- A. The structural, plumbing, HVAC and Electrical Plan Approval Certificates will be obtained by the A/E from the Ohio Department of Commerce.
- B. Each Contractor will be responsible to obtain and pay for any additional permits and/or fees required and to contact all building inspectors as required to secure the occupancy permits.

1.05 ASBESTOS CONTAINING MATERIALS

- A. The Contractor is not to install any materials containing asbestos. At the completion of this project the Contractor is to provide a notarized letter stating that there were no asbestos containing materials installed.

1.06 GUARANTEES

- A. Contactor is to provide a notarized letter guaranteeing all materials installed and workmanship for a period of one (1) year from the date of substantial completion. Reference each specification section for additional guarantees and warranties required.

1.07 POLICIES

- A. The Park will not permit the use of tobacco, weapon devices and profanity while on property.
- B. Sexual harassment will not be tolerated. Prompt corrective measures will be taken to stop sexual harassment in accordance with Board policy.

1.08 MISCELLANEOUS PROVISIONS

- A. Performance Requirements for Completed Work: Provide the final project, or portion of the project, complete and ready for use in every respect by the completion dates specified herein.
 - 1. Contract documents indicate the intended utilization of the individual project system and facilities. Compliance with all applicable governing regulations, codes and standards is intended and required for the work and for the Owner's occupancy and utilization.
 - 2. In addition to the requirement that every element of the work comply with applicable requirements of the Contract Documents, it is also required that the work as a whole comply with all applicable industry standards and governing codes and regulations.

END OF SECTION 01 10 00

SECTION 01 23 00 – ALTERNATES

1.0 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

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

1.03 DEFINITIONS

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

1.04 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other work of the Contract.
- C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

2.0 PRODUCTS (Not Used)

3.0 EXECUTION

3.01 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Provide Luxury Vinyl Tile flooring as indicated on the Room Finish Schedule for the Kitchen, Storage and Classroom areas.

END OF SECTION 01 23 00

PROJECT #1917
ALTERNATES 01 23 00-2

SECTION 01 26 00 CHANGE ORDER PROCEDURES

1.0 GENERAL

1.01 DESCRIPTION

- A. The Architect, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions. To the extent the Contract time or Contract price are affected, the Agreement will be equitably adjusted by Change Order in accordance with this section. The Contractor shall increase the amount of the Bond whenever the Contract price is increased.
- B. The Contractor shall not proceed with any change in the Work without the required written authorization.

1.02 DIFFERING SITE CONDITIONS

- A. Should the Contractor encounter, during the progress of the Work, concealed physical conditions at the Project, differing materially from those upon which the Contract Documents permit the Contractor to rely and differing materially from those ordinarily countered and generally recognized as inherent in the Work of the character provided for in the Contract, the Contractor shall notify the Architect in writing of such conditions, before they are disturbed.
- B. The Architect will promptly investigate the conditions and if the Architect finds that such conditions do materially differ from those upon which the Contract Documents permit the Contractor to rely, or differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract, causing an increase or decrease of the cost of the Contract, an appropriate Change Order shall be processed.

1.03 PRICE DETERMINATION

- A. Maintain detailed records on a time and materials basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work. Reference the General Provisions,
- B. Document each quotation for a change in cost with sufficient data to allow evaluation of the quotation.
- C. On request, provide additional data to support computations:
 - 1. Quantities of products, labor and equipment.
 - 2. Taxes, insurance and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract time.
 - 5. Credit or deletions from Contract, similarly documented.
 - 6. Invoices and receipts for products, equipment, subcontractors and suppliers.
- D. Any such work, the price for which cannot be mutually agreed upon, shall be paid for at a reasonable cost plus 15%. Said cost shall be determined by the Architect.

1.04 CHANGE PROCEDURES

- A. The Architect will advise of minor changes in the Work not involving an adjustment to Contract sum or Contract time by issuing supplemental instructions on letterhead or field report form.
- B. The Architect may issue a Proposal request which includes a detailed description of the proposed change with supplementary or revised drawings and specifications, and if warranted a change in Contract time for executing the change. Contractor will prepare and submit an estimate within seven (7) days.
- C. The Contractor may propose a change by submitting a request for change to the Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract sum/price and Contract time.

1.05 TIME EXTENSIONS

- A. Notwithstanding any other provision of the Contract Documents, time extensions for changes in the Work will depend upon the extent to which the change causes delay in work on the progress schedule.
- B. If the Architect finds that extending the Contract completion date is not possible, the Contractor shall price all costs of accelerated performance in the Contractor's Proposal.
- C. A Change Order granting a time extension may provide that the Contract Completion Date will be extended for only those specific elements so delayed and that remaining completion dates will not be altered and may further provide for adjustment of liquidated damages.

1.06 EXECUTION OF CHANGE ORDERS

- A. The Architect will issue Change Orders for signatures of parties as provided in the conditions of the Contract.
- B. Promptly enter changes on project record drawings.

END OF SECTION 01 26 00

SECTION 01 29 00 PAYMENT

1.0 GENERAL

1.01 DESCRIPTION

- A. Partial payment procedures, acceptance and payment.

1.02 PARTIAL PAYMENTS AND RETAINAGE

- A. The Contractor can apply for payment on a monthly basis. This application is to be provided on A.I.A. Documents G702 and G703. Submit three (3) copies.
- B. With each Application for Payment, beginning with the second Application, submit two (2) copies of the following:
 - 1. A.I.A. Document G706A (Contractor's Affidavit of Release of Liens).
 - 2. A.I.A. Document G706 (Contractor's Affidavit of Payment of Debts and Claims).
 - 3. Lien releases from all subcontractors and suppliers stating payment from previous Application for Payment.
 - 4. Revised list of subcontractors and suppliers.
 - 5. Updated schedule.
- C. An amount equal to eight percent (8%) for labor costs and for stored materials to the Contractor on each month's payment request will be retained. When the labor for this project is fifty (50%) complete no additional amount will be retained as long as progress and performance of the work is satisfactory. The retained amount will be placed in an escrow account if requested. The amount retained will not be paid until final acceptance of the work.
- D. Format and content; Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. The Schedule of Values shall include at a minimum a line item for labor and material costs for each specification section assigned to the Contractor, and shall further divide the work into a sufficient number of individual work items to serve as an accurate basis for Contractor's Application for Payment. Each work item shall receive its prorated share of profit and overhead, including a line item for closeout. The Schedule of Values shall consist of a complete breakdown of the Contractor's contract sum showing the various items of work, divided so as to facilitate the approval of payments to the Contractor for Work completed. In addition to and conjunctive with the division of various items of work, the breakdown shall separate individual buildings within the project shall separate sitework from building(s) components, and shall separate remodeling/ renovation work from new construction work. The Schedule of Values shall be prepared in a format as directed by the Architect, showing the breakdown of items of work and supported by such data to substantiate its correctness as the Architect may require. Each item of work shall have indicated a separate cost of labor and material. This schedule when reviewed by the Architect and Owner shall be used as the basis of approving payments along with establishing percentages of work complete.

1. Identification; include the following project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Architect.
 - c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal
2. 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 work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - h. Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100%.
3. In addition to the sections assigned to the Contractor as defined above, Contractors shall include the following line items on their Schedule of Values:
 - a. Bonds; performance, labor and material (if required).
 - b. Mobilization.
 - c. Demobilization.
 - d. Insurance/Hazcom/Safety.
 - e. Submittals in the amount of 2 percent of the contract.
 - f. Project Meetings.
 - g. Daily cleanup.
 - h. Final cleaning.
 - i. Closeout.
4. Provide a complete breakdown of the Contract Sum in substantial detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into multiple line items. Schedule of Values shall be coordinated with the Construction Schedules such that the percentages of work completed closely relates to the values for the work shown on the request for payments. At the beginning of the Project, the Contractor shall prepare a schedule of monthly progress payments showing the amount the Contractor may require for the work proposed to be completed. The purpose of this schedule is to allow the Owner to determine what amounts of funds will be required to have available each month during the progress of construction for progress payments.
5. Round amounts to nearest whole dollar; the 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 requirements for insurance and bonded warehousing, if required.
 7. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the work.
 8. Unit-Cost Allowances; show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.
 9. Margins of Cost; show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin 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 the Contractor's option.
 10. Schedule updating; update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
- E. Schedule of Values shall be typed or printed on AIA Documents.
- F. Each Schedule of Values shall have the Contractor's name, Bid Category name and number, project name and number and shall be dated and signed.
- G. Should the Schedule of Values be "rejected, resubmit", resubmittal is due within 5 days of receipt of rejected schedule.
- H. Application preparation; complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor.
- I. Application for payment at substantial completion; following issuance of the Certificate of Substantial Completion, submit an Application for Payment.
1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the work.
 2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals. Occupancy permit shall be submitted by party responsible for acquiring general building permit.
 - b. Warranties (guarantees) and maintenance agreements.
 - c. Test/adjust/balance records.
 - d. Maintenance instructions.
 - e. Meter readings.
 - f. Startup performance reports.
 - g. Changeover information related to Owner's occupancy, use, operation, and maintenance.

- h. Final cleaning.
 - i. Advise on shifting insurance coverages.
 - j. List of incomplete work, recognized as exceptions to Architect's Certificate of Substantial Completion.
- J. Final payment application; administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
 - 1. Completion of Project closeout requirements.
 - 2. Completion of items specified for completion after substantial completion.
 - 3. Ensure that unsettled claims will be settled.
 - 4. Ensure that incomplete work is not accepted and will be completed without undue delay.
 - 5. Transmittal of required project construction records to the Owner.
 - 6. Certified property survey.
 - 7. Proof that taxes, fees, and similar obligations were paid.
 - 8. Removal of temporary facilities and services.
 - 9. Removal of surplus materials, rubbish, and similar elements.
 - 10. Change of door locks to Owner's access.

END OF SECTION 01 29 00

SECTION 01 30 00 PROJECT MEETINGS AND REPORTS

1.0 GENERAL

1.01 DESCRIPTION

- A. Responsibility for meetings is as follows:
 - 1. Coordination meetings shall be scheduled and conducted by the Contractor.
 - 2. Progress meetings shall be scheduled as required to complete work.
- B. These responsibilities include:
 - 1. Prepare all meeting agenda.
 - 2. Make physical arrangements for meetings.
 - 3. Notify all parties of scheduled meetings.
 - 4. Preside at meetings.
 - 5. Prepare and distribute minutes of all meetings.

1.02 PRE-CONSTRUCTION MEETING

- A. A meeting will be scheduled after Award of Contract.
- B. Location: At the site of the Project.
- C. Attendance: Contractors, Owner, and/or Owner's representative.
- D. Agenda:
 - 1. Sign-in and introductions
 - 2. Wage compliance (as required)
 - 3. Safety and security:
 - a. Working hours
 - b. Security and storage
 - c. Emergency contact list
 - d. Temporary facilities
 - 4. Supervision:
 - a. Contractor's Superintendent
 - b. Contractor's Daily Report
 - 5. Payment Procedures:
 - a. Contract Cost Breakdown
 - b. Payment procedures
 - c. Final payment
 - d. Tax exempt status
 - 6. Change Orders:
 - a. Design generated changes
 - b. Field condition generated changes
 - 7. Insurance:
 - a. Liability insurance
 - b. Builders Risk insurance
 - c. State Worker's Compensation
 - d. Bonding
 - 8. Shop Drawing Submittals
 - 9. Schedule:
 - a. Project schedule

- b. Submittals/material lead time/fabrication time
10. Open Discussion

1.03 COORDINATION MEETINGS

- A. Contractor shall arrange and conduct regular coordination meetings with any other Contractors and material suppliers. Architect shall be given 24 hours notice.
- B. Record and distribute minutes to all parties.

1.04 PROGRESS MEETINGS

- A. Progress meetings will be scheduled weekly and generally be held on same day and hour of the week for the duration of the construction period.
- B. Additional meetings as progress of work dictates may be required.
- C. Location of progress meetings; construction field office or other designated location.
- D. Attendance:
 - 1. Contractors
 - 2. Architect
 - 3. Owner's representative
- E. Minimum agenda:
 - 1. Review and approve minutes of previous meeting.
 - 2. Review work progress since last meeting.
 - 3. Note and discuss field observations, problems and decisions.
 - 4. Identify problems which impede planned progress.
 - 5. Review off-site fabrication problems.
 - 6. Develop corrective measures and procedures to regain planned schedule.
 - 7. Revise construction schedule as required.
 - 8. Plan progress during next work period.
 - 9. Review submittal schedules and expedite as required to facilitate ordering of equipment.
 - 10. Review quality and work standards.
 - 11. Discuss and complete other current business.

END OF SECTION 01 30 00

SECTION 01 32 00 CONSTRUCTION MILESTONES

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide three (3) copies of the final Project Time Schedule to the Architect indicating all areas of work and shop drawings submittal schedule. REVISE SCHEDULE AS NOTED IN CRITICAL PATH REQUIREMENTS.
- B. The work will be required to be performed in several phases. Phases must be completed in the order as specified.
- C. ALL WORK IS TO BE COMPLETED, INCLUDING PUNCHLIST ITEMS BY THE DATES AS STATED. REFERENCE CRITICAL MILESTONE DATES BELOW:

	<u>MILESTONE</u>	<u>DATE</u>
1.	Pre-Con Meeting/Notice to Proceed	Oct. 14, 2019
2.	Submittals Due	Oct. 30, 2019
3.	Excavation/ Pad Complete	Nov.15, 2019
4.	Rough Framing Complete	Nov. 30, 2019
5.	Rough Mechanicals Complete	Dec. 10, 2019
6.	Final Mechanicals Complete	Dec. 20, 2019
7.	Finishes	Dec.27, 2019
8.	Substantial Completion	Dec.31, 2019

Note! There will be no work permitted on site on Tuesday November 5, 2019 due to the Elections. This Facility is a Polling Location for Delaware County Board of Elections.

1.02 SCHEDULE OF WORK

- A. If at any time the Contractor's working force and equipment, in the opinion of the Architect shall be inadequate for securing the necessary progress or required quality of work as herein stipulated, the Contractor shall, if so directed, at his own expense, increase or supplement the working force and equipment and/or perform the work on an overtime or multiple shift basis to such an extent as to give reasonable assurance of compliance with the schedule of completion and the required quality of work. When so directed, the Contractor shall submit for approval such supplementary construction schedules as may be necessary to demonstrate the manner in which such compliance will be established. Failure to make such demands shall not relieve the Contractor of his obligation to secure the quality and the rate of progress required by the Contract; and the Contractor alone shall be and remain liable and responsible for the efficiency and adequacy of his methods, materials, working force and equipment, irrespective of whether or not he makes any change as a result of any order or orders received.

- B. Should the Architect require, either for convenience or to move the completion date forward or to otherwise accelerate schedules, causing the Contractor to perform contract work outside of the normal working hours, the Contractor shall do so, in which case the Contractor shall be reimbursed for actual premium payments made for labor overtime worked, with no allowance for overhead or profit. In the event that such overtime work is required the Contractor shall, at the end of each day on which the overtime is worked, furnish daily time slips showing the name or number of each workman employed thereon with the time worked, the character of work performed and the wages to be paid. Loss of efficiency or productivity associated with multiple shift or overtime work, work whether affecting work on which overtime is spent or on work under the contract, shall not be the basis for any claim for additional compensation by the Contractor.
- C. Reference Owner – Contractor Agreement for work not completed on time.

END OF SECTION 01 32 00

SECTION 01 32 16 CPM PROGRESS SCHEDULE

1.0 GENERAL

1.01 DESCRIPTION

- A. This Section includes specifications for the general requirements for the preparation, updating, revision and submittal of project progress schedules and the Monthly Progress Status Report. Progress schedules required include the Project CPM Schedule and Updated Project CPM Schedules.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, and other Division 1 specification sections, apply to this section.

1.03 GENERAL

- A. The purpose of the project schedule is to allow the Contractor to prepare an orderly guide to aid in the timely completion of the project.
- B. The approved construction schedule shall be used to measure the progress of the work, to aid in evaluation time extensions, and to provide the basis for all progress payments.
- C. Progress schedules shall represent a practical plan to complete the Work within the Contract Time, and shall convey the Contractor's intent in the manner of presentation and progress of the Work.
- D. The scheduling and execution of construction in accordance with the Contract Documents are the responsibility of the Contractor. The Contractor shall involve and coordinate all subcontractors and material suppliers in the development and updating of progress schedules.
- E. The submittal of progress schedules shall be understood to be the Contractor's representation that the progress schedule meets the requirements of the Contract Documents and that the Work will be executed in the sequence and duration indicated in the progress schedule.

1.04 PROJECT SCHEDULING SEQUENCE REQUIREMENTS

- A. Upon receipt of a Notice to Proceed, the Contractor shall prepare a construction schedule for all work included under the scope of this contract, in accordance with general conditions of the contract for construction.
- B. All Contractors shall provide all construction schedule requirements specified herein to the Contractor so that they can prepare a fully coordinated Construction Schedule.

1.05 SUBMITTALS

- A. Progress schedules shall take the form of a time-scaled network diagram.
- B. All progress schedule submittals shall include one reproducible and six full size copies with two of six full size copies being in color.

1.05 SUBMITTALS (CONT.)

- C. Re-submittals shall conform to the same requirements as original submittals.
- D. The Project CPM Schedule shall be prepared so that a CPM activity, or group of activities, corresponds directly with the Schedule of Values breakdown. The Contractor's failure to submit the Project CPM Schedule and Schedule of Values breakdown as required may result in the withholding of progress payments until such submission requirements are met.
- E. The Project CPM Schedule submittal, and all subsequent Project CPM schedule updates, and time extension requests shall consist of a computer-generated time-scaled network diagram, accompanying reports, and a monthly progress report.
 - 1. The reports generated by the computer program shall include a tabulation of each activity. The following information shall be furnished as a minimum for each activity of work item:
 - a. Preceding and succeeding event numbers.
 - b. Activity description end number.
 - c. Responsible subcontractor, vendor, or other party for each activity.
 - d. Estimated duration of each activity.
 - e. Resource loading for each activity. Indicate the quantity of daily workforce necessary to accomplish the work in the times indicated.
 - f. Earliest start date (by calendar date).
 - g. Earliest finish date (by calendar date).
 - h. Latest start date (by calendar date).
 - i. Latest finish date (by calendar date).
 - j. Total float and free float.
 - k. Percentage of activity completed and number of days remaining (for updates only).
 - l. Actual start date (by calendar date) (for updates only).
 - m. Actual finish date (by calendar date) (for updates only).

2.0 PRODUCTS

2.01 SCHEDULE SOFTWARE

- A. The Construction Schedule required by Special Provision shall be prepared using one of the following project management software systems or an approved equal.
Microsoft Project, Microsoft

3.0 EXECUTION

3.01 USE OF THE CRITICAL PATH METHOD

- A. The Critical Path Method (CPM) of network calculations shall be used to generate the project schedule. The lead contractor shall provide the project schedule in either the Precedence Diagram Method (PDM) or the Arrow Diagram Method (ADM).

- B. A calendar time-scaled and resource loaded CPM network diagram schedule covering the complete project shall be submitted within thirty days following the date of the Notice to Proceed.
- C. The schedule shall be in accordance with the Contract with the Contract requirements at the time of the Notice to Proceed.
- D. A schedule found to be impractical for any reason shall be revised by the Contractor and resubmitted.

3.02 APPROVED CHANGES CERTIFICATION

- A. Only construction schedule changes that have been previously approved shall be included in the schedule submission. The narrative report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change documented, approved schedule changes.
- B. The Contractor shall prosecute the work in accordance with the approved Construction Schedule. Out of sequence construction, defined as a change from the Construction Schedule in the Contractor's actual operations, requires prior approval.

END OF SECTION 01 32 16

SECTION 01 33 00 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1.0 GENERAL

1.01 DESCRIPTION

- A. The following is a description of the processing of submittals for this project and includes:
 - 1. Submittal procedures
 - 2. Shop drawings
 - 3. Product data
 - 4. Samples
 - 5. Manufacturer's installation instructions
 - 6. Manufacturer's certificates
 - 7. Other information as requested

1.02 RELATED SECTIONS

- A. Reference Section 01700 Project Closeout Requirements and Section 01750 Final Inspection and Payment for other submittals. (Contract warranties, bonds, manufacturer's certificates and closeout submittals to be provided.)

1.03 SUBMITTAL PROCEDURES

- A. Transmit each submittal with a transmittal form.
- B. Sequentially number and a sequential alphabetic suffix.
- C. Identify project, Contractor, subcontractor or suppliers; pertinent drawing and detail number and specification section number, as appropriate.
- D. Apply Contractor's stamp signed and initialed certifying that review, verification of product required, field dimensions, adjacent construction work and coordination of information is in accordance with the requirements of the work and Contract Documents. SUBMITTALS WILL BE RETURNED IF THERE IS NO STAMP.
- E. Schedule submittals to expedite the project. With Project Time Schedule submit submittal schedule for each item to Architect. Coordinate submission of related items.
- F. For each submittal for review, allow seven (7) days excluding delivery time to and from the Contractor.
- G. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Architect review stamps.
- I. On revisions and resubmissions, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.
- K. Submittals not requested will not be recognized or processed.

1.04 ARCHITECT'S APPROVAL

- A. DO NOT proceed with procurement or installation of materials until approval of the product data, installation instructions, sample areas, etc. has been granted by the Architect.

1.05 SHOP DRAWINGS AND PRODUCT DATA

- A. Submission requirements: Three (3) copies.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this project.
- C. After review distribute in accordance with the submittal procedures article above and provide copies for record documents.

1.06 SAMPLES

- A. Submission requirements: One (1) sample.
- B. Submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- C. Submit samples of finishes from the full range of manufacturer's standard colors, textures and patterns for Owner and Architect selection.
- D. Include identification on each sample, with full project information.
- E. Reviewed samples which may be used in the Work are indicated in individual specification sections.

1.07 MANUFACTURER CERTIFICATES

- A. When specified in individual specifications sections, submit certification by manufacturer to Architect in quantities specified for product data.
- B. Indicate material of product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

END OF SECTION 01 33 00

SECTION 01 50 00 TEMPORARY FACILITIES AND UTILITIES

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide and maintain all temporary facilities and utilities in accordance with Federal, State and Local codes and regulations.
- B. Pay for all costs for the installation and the consumption of temporary utilities as indicated below.
- C. Temporary facility and utility services shall be provided on a continuous basis until the date of final acceptance of Work.
- D. THE CONTRACTOR WILL NEED TO NOTIFY THE ARCHITECT (48) HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITIES. THE CONTRACTOR WILL NEED TO PROVIDE ADEQUATE TEMPORARY POWER, HVAC, ETC. IF THE SYSTEM IS OUT FOR LONGER THAN (4) HOURS.

1.02 TEMPORARY WATER

- A. Temporary water to be provided by the Owner. The Contractor to provide any hoses required. The Owner to pay for reasonable consumption. If Contractors are negligent with water, they will be required to pay for negligent consumption.

1.03 TEMPORARY TOILETS

- A. All Contractors may use the toilet facilities located at the site. These toilet facilities are to be kept clean of construction materials and debris.

1.04 TEMPORARY VENTILATION

- A. Contractor to provide own ventilation as required. Provide, operate, and maintain approved adequate ventilating units for the purposes specified. During warm weather provide an adequate supply of fresh air when necessary to properly ventilate for moisture, dust and fumes from paints, cements, or adhesives in tightly enclosed areas where natural ventilation will not be sufficient.

1.05 TEMPORARY LIGHT AND POWER

- A. Provide temporary light and power for construction purposes for all trades. Existing power can be used.
- B. The Owner is to pay for reasonable consumption of the electrical power consumed throughout the construction period. If Contractors are negligent with consumption, they will be required to pay for negligent consumption.
- C. Electrical work for construction purposes shall conform to all Federal, State (Ohio Safety Code IC-3) Specific Safety Requirements as well as the requirements of the National Electric Code. The Electrical Contractor shall obtain and pay for required applications, permits and inspections pertaining to this Work. This cost shall also be included in the Contractor's price.

D. Provide extensions for lights or power tools.

1.06 TEMPORARY PARKING

A. All Contractors are to park at a location as directed by the Owner and the Architect.

1.07 TEMPORARY PHONE AND FAX

A. Cellular telephones may be utilized as means of communication during construction.

1.08 DUMPSTERS

A. The Contractor is to provide dumpsters and debris. Owner's dumpsters are not to be used.

END OF SECTION 01 50 00

SECTION 01 52 00 FIELD OFFICE AND TRAILERS

1.0 GENERAL

1.01 FIELD OFFICE

- A. Field office trailer will not be required.
- B. Contractor is to keep copies of permits, approved submittals, a complete set of contract drawings and specifications, Addenda, Change Orders and current record drawings at this office. Coordinate location with the Architect.
- C. The GTC is to post the following items on site:
 - 1. Permits and permit documents
 - 2. Prevailing wage information as required by the Ohio Department of Industrial Relations
 - 3. Safety & Health Plan and other information required by OSHA.
 - 4. Project schedule
 - 5. Directory of all contractors, subcontractors, suppliers, etc.
 - 6. Other items required by Federal, State and Local Authorities

1.02 STORAGE TRAILERS

- A. Each Contractor shall provide storage trailers for the storage of his materials until such time as portions of the building can be used. The security and protection of the materials and the Contractor's equipment is the responsibility of each Contractor. Coordinate locations with the A/E and the Park District.

END OF SECTION 01 52 00

SECTION 01 54 00 TEMPORARY CONSTRUCTION AIDS

1.0 GENERAL

1.01 DESCRIPTION

- A. Reference General Conditions.
- B. The Contractor is to provide and erect all temporary construction aids such as fencing, scaffolding, barriers, guards and barricades to protect pedestrians from latent dangers of the construction process. ALL EXIT ACCESSSES ARE TO REMAIN CLEAN AND LABELED AT ALL TIMES TO MAINTAIN LIFE SAFETY.
- C. The Contractor will be held responsible for any damage to the building or its contents resulting from the construction process.
- D. The Contractor will be responsible to keep all areas of the building secured to prevent weather damage or pilferage.
- E. The Contractor to provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.
- F. Provide and maintain all construction aids in accordance with Federal, State and Local Codes and Regulations. Safety requirements shall be in accordance with OSHA requirements. THE CONTRACTOR NEEDS TO PROVIDE A COPY OF THEIR SAFETY PLAN AT THE JOB TRAILER. REFERENCE PROJECT MEETINGS, FOR INFORMATION REGARDING SAFETY MEETINGS.

END OF SECTION 01 54 00

SECTION 01 70 00 PROJECT CLOSEOUT REQUIREMENTS

1.0 GENERAL

1.01 DESCRIPTION

- A. Contractor is to provide and/or complete the following items at the completion of the Project:
 - 1. Complete all punch list items
 - 2. Final Application for Payment
 - 3. Notarized letter guaranteeing all materials and workmanship for a period of one (1) year
 - 4. AIA Document G706 (Contractor's Affidavit of Payment of Debts and Claims)
 - 5. AIA Document G706a (Contractor's Affidavit of Release of Liens) from the Contractor, subcontractors and material suppliers
 - 6. Record drawings
 - 7. Consent of Surety
 - 8. Revised list of subcontractors and suppliers
 - 9. Completion Certificate
 - 10. Contractor's Certificate of Insurance indicating coverage beyond completion date
 - 11. Certificates of Demonstration for each item to be demonstrated
 - 12. Signed building permit.
 - 13. Final occupancy certificate. (2 copies)
 - 14. Reports of all testing required. (2 copies)
 - 15. Warranties Requested. (2 copies)
- B. Upon completion of the Work, and as a condition of its acceptance, compile and submit Owner Maintenance Manuals for equipment.

1.02 PROCEDURE

- A. Submit Contractor's punch list and Request for Final Inspection of the Work.
- B. Provide submittals to Architect that are required by governing authorities.
- C. Adjust operating products and equipment to ensure smooth and unhindered operation.

2.0 PRODUCTS

2.01 MANUALS

- A. Each Contractor shall provide Owner Maintenance Manuals. Manuals shall be loose leaf, three-ring, hard-cover binders. Materials shall be type-written or printed and be fully legible. Each section shall be divided by labeled tabs.
- B. Prepare a Table of Contents for each volume with each product of system description identified.
- C. The following items, together with any other necessary pertinent data, shall be included in each Owner Maintenance Manual. This list is not necessarily

complete and is to be used only as a guide. Reference each specification section for list of submittals.

1. Each manual to be labeled on front cover with Project name, Contract, Contractor's name, Architect, Engineer and date of Project completion.
 2. Description of systems.
 3. Manufacturer's names, nearest Factory Representative and Model and Serial numbers of components of systems.
 4. Operating instructions, start-up and shut-down procedures.
 5. Maintenance and lubrication instructions. Include routine and emergency service information.
 6. Servicing instructions.
 7. Parts list with numbers of replaceable items, including sources of supply.
 8. Manufacturer's literature describing each piece of equipment.
 9. One approved copy of each Shop Drawing submitted.
 10. Copy of Owner's statement concerning completion of instruction period.
 11. Routine and 24-hour emergency service/repair information:
 - a. Name, address and telephone number of servicing agency.
 - b. Names of personnel to be contacted for service arrangements.
 12. Written warranties.
- D. Include special wrenches, keys, etc.
- E. Submit draft of Owner Maintenance Manual to the Architect for review and approval prior to final inspection.
- F. Upon approval, provide (2) Owner Maintenance Manuals in PDF format on DVR disc or thumb drive.

END OF SECTION 01 70 00

SECTION 01 74 00 CLEANING UP

1.0 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall provide daily clean-up of construction material from the building and yard.
- B. Clean up equipment items as discussed below.

1.02 SAFETY REQUIREMENTS

- A. Standards: Maintain project in accordance with Federal, State and Local Safety and Insurance Standards.
- B. Hazards control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which creates hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.
 - 4. Haul material to a legal dump site.

1.03 APPLICABLE STANDARDS

- A. Conform with:
 - 1. Environmental Protection Agency (EPA).
 - 2. OSHA.
 - 3. Federal, State and Local Laws.

2.0 PRODUCTS

2.01 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

3.0 EXECUTION

3.01 DURING CONSTRUCTION

- A. Clean up:
 - 1. The Contractor shall furnish on-site rubbish collection containers outside of security fence and provide weekly rubbish removal service. Do not use the Owner's dumpster for this purpose.
 - 2. Clean up building and site thoroughly once a week.
 - 3. Prior to completion of the work, remove from the vicinity of the work all temporary structures, unused materials, concrete forms, and other like materials.

All work areas shall be graded and left in a neat manner conforming to the natural appearance of the landscape or as directed elsewhere in the contract documents.

B. Disposal of material by removal:

1. Prior to the completion of the work, remove from the construction area, all material designated to be removed.
2. All material to be removed shall become the property of the Contractor. Remove and dispose of trash in a legal manner off the site. Be responsible for location of dump and length of haul.
3. Make all necessary arrangements with private parties and with local officials pertinent to locations and regulations for dumping.
4. Pay fees or charges required for dumping of materials.

3.02 EQUIPMENT CLEANING & TOUCH UP

- A. Interiors of all enclosures to be cleaned of dirt and debris before installing trim or covers.
- B. All finished surfaces of equipment shall be thoroughly cleaned of dirt and all scratched or damaged surfaces shall be touched up with matching material before final acceptance of the work. Dents and marred finishes shall be repaired.
- C. Rust spots on any part shall be brushed clean, primed and painted.
- D. The Contractor shall prime and paint all steel hangers, boxes, straps, and rods which are not provided with rust-protective finish or damaged in installation. Paint to be zinc chromate primer and aluminum bronze. This applies to unfinished and mechanical spaces as well as "exposed to view" locations.

3.03 FINAL CLEANING

- A. Employ experienced workmen, or professional cleaners, for final cleaning.
- B. Expedite the cleaning, washing, waxing and polishing required within other Sections of these Specifications. In addition, perform final cleaning to remove all foreign matter, spots, soil and construction dust, so as to get the Project in a complete and finished condition ready for acceptance and use intended. Remove all marks, stains, and fingerprints, and other soil or dirt from all painted, enameled or varnished work and all other exposed finished surfaces.
- C. Remove all glazing compound and sealant, stains and paint from all glass. Wash and polish glass, but do not scratch glass. At completion, replace all broken and scratched glass.
- D. Broom clean floors that are not scheduled to receive finishing material or coating.
- E. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior finished surfaces; polish bright surfaces to a shine finish.
- F. Repair, patch and touch-up marred surfaces to specified finish to match adjacent surfaces.
- G. Broom-clean paved surfaces.
- H. Ascertain that all drains are free of debris.

END OF SECTION 01 74 00

SECTION 01 78 00 PROJECT RECORD DOCUMENTS

1.0 GENERAL

1.01 DESCRIPTION

- A. Contractor shall maintain at job site one copy of:
 - 1. Contract Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Reviewed Shop Drawings
 - 5. Change Orders
 - 6. Other modifications to Contract
 - 7. Field Test Records
 - 8. Minutes of Project Coordination and Progress Meetings
 - 9. Record Drawings
- B. Record deviations in locations of concealed piping, valves, equipment, ductwork, all buried, or concealed utility services, piping, etc., dimensioned from a fixed control point, including depth of bury, invert elevations at start of storm or sanitary line, at each change of direction, at each change of slope and as required for further reference. Minor piping or ductwork variations need not be recorded. Record Addendum and Change Order items.
- C. Add valve tag numbers to drawings.
- D. Record deviations made necessary to incorporate equipment different from the design base equipment.
- E. As-Built Drawings:
 - 1. At the completion of the project, Contractor shall use this information to prepare as-built drawings.
- F. At completion of the project, Contractor shall deliver one copy of its as-built drawings to the Architect.
- G. Store documents in temporary field office, apart from documents used for construction.
- H. Provide files and racks for storage of documents.
- I. Maintain documents in clean, dry, legible condition.
- J. Do not use record documents for construction purposes.
- K. Make documents available at all times for inspection.

1.02 MARKING DEVICES

- A. Use red ballpoint pen for all marking of documents.

1.03 RECORDING

- A. Label each document, "AS-BUILT DRAWINGS".
- B. Contractor shall certify as to the accuracy of the "As-Built" drawings and sign on the coversheet.
- C. Contractor shall keep record documents current during project's duration.
- D. Do not permanently conceal any work until required information has been recorded.
- E. Contact drawings shall be legibly marked to record actual construction:

1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
3. Field changes of dimension and detail.
4. Changes made by change order or field order.
5. Details not on original contract drawings.
- F. With regard to specifications and addenda, legibly mark up each section to record:
 1. Manufacturer, trade name, catalog number, and supplier of each product and site of equipment actually installed.
 2. Changes made by change order or field order.
 3. Other matters not originally specified.
- G. With regard to shop drawings maintained as record documents, legibly annotate shop drawings to record changes made to obtain approval.

1.04 SUBMITTAL

- A. At completion of project, Contractor shall deliver As-Built drawings to Architects.
- B. Accompany submittal with transmittal letter in duplicate containing:
 1. Date
 2. Project title and number
 3. Contractor's name and address
 4. Title and number of each record document
 5. Certification that each document as submitted is complete and accurate.
 6. Signature of Contractor or its authorized representative.

END OF SECTION 01 78 00

SECTION 02 40 00 SELECTIVE DEMOLITION

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide all demolition as shown on the drawings and as specified below. The demolition shown on the drawings and as specified is only a guide. Provide any demolition that is not shown on the drawings or in the specifications which is required to complete the demolition.
- B. ALL ITEMS TO BE DEMOLISHED ARE TO BE REVIEWED BY THE OWNER. THE CONTRACTOR IS TO DISPOSE OF ALL ITEMS THE OWNER DOES NOT WISH TO RETAIN.
- C. Work stipulated herein affects prime and subcontractors, and are general descriptions; such applies to similar conditions arising throughout, even though not stated.
- D. No attempt is made to stipulate every required item of demolition and patching, either on drawings or in specifications. Prime and subcontractors must visit and study physical conditions at site, review drawings, and reach their own conclusions on work necessary to accomplish intended results described by drawings and specifications.
- E. Certain work to be removed is designated on drawings and outlined in specifications for benefits of bidders, but even at such areas, complete list of work items required shall be bidder's responsibility.
- F. Contractor will be required to recycle all ceiling tile, carpeting, and all other items that are recyclable.

1.02 PROTECTION

- A. Complete demolitions and patching throughout so that at no time shall any portion of existing work be in danger. Maintain weathertight at all times.
- B. Provide weathertight, dust-tight, insulated barricades at locations approved by Owner to isolate demolition work when continuing operations in existing structure could be adversely affected by the work. No barricades permitted overnight. New work must be installed immediately in openings in order to maintain secure integrity of facility.
- C. At completion, remove barricades, debris, dust, etc. and perform required clean-up stipulated elsewhere for each section of work.

1.03 UTILITIES

- A. Rules and regulations governing the respective utilities shall be observed in executing work.
- B. Active utilities shown on drawings shall be adequately protected from damage, and moved or relocated only as indicated or specified.
- C. Active utilities not shown on the drawings shall be protected or relocated according to written instructions of the Owner.

1.03 UTILITIES (CONT.)

- D. Inactive or abandoned utilities encountered in operations shall be removed below or adjacent to new work, and plugged or capped. Report to the Architect/Engineer in writing the location of such abandoned lines.

1.04 TASKS

- A. Perform interior removals such as steel and/or concrete, framing, etc., including cutting new openings together with whatever shoring, needling, lintel placement, or other work as necessary to accomplish same. Openings necessary for mechanical and electrical work will be performed by their respective trades.
- B. Off-site disposal of debris resulting from demolition.
- C. Patching of interior finishes such as plaster, gypsum board, ceramic tile, flooring and base, acoustical tile, etc. required at cut-into locations as well as any new such shown in existing constructions. This work shall match existing work throughout, and be in accordance with appropriate sections of project specifications.
- D. Painting and like finishing of patched or new surfaces, either to match present abutting finishes.

2.0 PRODUCTS (Not Used)

3.0 EXECUTION

3.01 PREPARATION

- A. Provide, erect and maintain temporary barriers and security devices.
- B. Erect and maintain weatherproof closures for exterior openings.
- C. Take precautions to protect the existing floors, walls, etc. that are to remain. The Contractor will be held responsible for any damage to the building, its contents or the site during the construction process.
- D. Prevent movement of structure. Provide required bracing and shoring.

3.02 REQUIREMENTS

- A. Conduct demolition to minimize interference with adjacent building areas.
- B. The Contractor is responsible to provide temporary shoring as required to maintain the existing structure. The method of shoring is the responsibility of the Contractor.
- C. Cease operations immediately if structure appears to be in danger. Notify Architect/Engineer. Do not resume operations until directed.
- D. Conduct operations with minimum interference to public or private accesses. Maintain protected egress and access at all times.

3.03 PROCEDURE

- A. Disconnect, remove or cap and identify designated utilities within demolition areas.

3.03 PROCEDURE (CONT.)

- B. Demolish in an orderly and careful manner. Protect existing supporting structural members.
- C. Except where noted otherwise, remove demolished materials from site.
- D. Remove equipment and materials to be re-installed in a manner to prevent damage. Store and protect.
- E. Conduct an inventory of equipment and materials to be retained. Remove items designated as salvageable, in a manner to prevent damage.
- F. Remove demolished materials from site as work progresses. Upon completion of work, leave areas in clean condition.
- G. Remove temporary work.

END OF SECTION 02 40 00

SECTION 03 30 00 CAST-IN-PLACE CONCRETE

1.0 GENERAL

1.01 DESCRIPTION

- A. Basic Specification: Perform work of this Section according to ACI 301-latest edition, "Specifications for Structural Concrete for Buildings", except as specifically modified herein.
- B. Section Includes: All cast-in-place concrete shown on the Drawings and required by these Specifications. Allow for the installation of cast-in-place items furnished under other Sections. Install anchor bolts for structural steel. Provide and install grout under steel column base plates and beam bearing areas.
- C. Provide concrete pads, piers, curbs, and bases required for equipment of all trades. Coordinate dimensions and details with requirements of equipment being supplied, prior to placing concrete.
- D. Coordinate the work of other trades who will provide and/or install items of work (sleeves, piping, conduit, inserts, etc.) to be cast in the concrete. Place no concrete until all such items are in place.
- E. Inspection and testing services required by this Section are to be performed by an agency retained by the Contractor. This includes not only the services required to establish mix designs, but also includes all field sampling and testing required by the Field Quality Control article of this Section.

1.02 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. ACI 318-latest edition, Building Code Requirements for Reinforced Concrete.
 - 2. ACI 315R-latest edition, Manual of Standard Practice for Detailing Reinforced Concrete Structures.
 - 3. ACI 347R-latest edition, Guide to Formwork for Concrete.
 - 4. "Placing Reinforcing Bars", CRSI & WCRSI Recommended Practices.

1.03 SUBMITTALS

- A. Submit for approval the name of the agency proposed for the required inspection and testing services. If some or all of the required testing is to be performed by personnel not employed by the proposed agency, submit a letter from the agency stating that those personnel are qualified to perform the tests.
- B. Submit a mix design for each class of concrete required. Concrete proportions shall be established on the basis of previous field experience or trial mixtures.
- C. Submit shop drawings for all reinforcing. Indicate strength, size, and details of all bar reinforcing, and style and specification of all welded wire fabric.
- D. Submit product literature and MSDS for admixtures and curing compounds proposed for use.
- E. Submit reports for all required testing and inspection.

1.04 FIELD REFERENCE MANUALS

- A. Provide at least one copy of the ACI Field Reference Manual, SP-15, and one copy of CRSI's "Placing Reinforcing Bars", in the field office at all times.

2.0 PRODUCTS

2.01 MATERIALS

- A. Cement; Portland Cement, ASTM C150, Type I. Type II or III (high early strength) may be used with written approval and at the Contractor's expense. All cement for concrete exposed to view to be from the same mill.
- B. Water; Potable.
- C. Aggregates; ASTM C33. Use size No. 57 coarse aggregate, unless otherwise indicated.
- D. Admixtures (where required or permitted);
 - 1. Water-reducing; ASTM C494, Type A or D.
 - 2. Mid-range water-reducing admixture; ASTM C494, Type A.
 - 3. Air-entraining; ASTM C260.
 - 4. High-range water-reducing admixture (superplasticizer); ASTM C494, Type F or G.
 - 5. Non-chloride, non-corrosive accelerator; ASTM C494, Type C or E.
 - 6. Fly ash; ASTM C618, Type C or F.
 - 7. Calcium chloride is NOT permitted.
 - 8. Use of admixtures other than those listed will be permitted only when approved prior to bid.
- E. Reinforcing Steel:
 - 1. Deformed bars; ASTM A615, A616, A617, or A706. Minimum yield strength to be 60 ksi.
 - 2. Welded wire fabric; ASTM A185. Provide in sheet form for all uses other than slabs-on-grade.
- F. Preformed expansion joint filler; ASTM D1751.
 - 1. Acceptable products include, but are not limited to:
 - a. Elastite by Philip Carey Company.
 - b. Flexcell by Celotex Corporation.
 - c. Korkpak by Servicized Products Corporation.
 - d. Corkfill or Fibre Joint by W.R. Meadows.
 - e. Symons Expansion Joint by Symons.
 - f. Fiber Expansion Joint by Burke.
- G. Curing compound; ASTM C-309 compliant. The compound shall be a water carried membrane forming liquid, 15% solids content minimum. The following are acceptable:
 - 1. Concrete Curing Agent by Soysolv
- H. Grout for masonry core fill; ASTM C476, coarse type.
- I. Grout under steel base plates and bearing plates; non-shrinking, metallic or non-metallic, with minimum 28-day strength of 5000 psi, when mixed to a fluid consistency. The following are acceptable:
 - 1. Embeco 636, by Master Builders.

2. Ferrolith G, by Sonneborn.
3. Crystex, by L and M Construction Chemicals.

2.02 MIXES

A. The following classes of concrete are required:

Type	F'c(28 day)	Min. Cement Content	Max. Water Cement Ratio	Air Content
Class I Footings, piers, and all other below grade concrete	3,000 PSI	470	--	Optional
Class II Interior slabs on grade and all interior conc. not identified	3,500 PSI	517	--	Optional
Class III Exterior slabs on grade, site concrete and any concrete exposed to weather	4,000 PSI	564	.45	5 to 7%
Class IV Lean concrete, backfill below footings	1,500 PSI	376	--	Optional

- (1) Slump; maximum 3" for slabs, maximum 4" for all members. If a superplasticizer is used, initial slump to be 2" to 3", increased to 8" maximum after addition (at the job site) of the superplasticizer.
- (2) Fly ash is encouraged in all classes, but shall not exceed 15% of cement weight indicated above and can be included in the water-to-cement ratio. Class C fly ash is to replace cement at a 1:1 ratio, and Class F fly ash is to replace cement at 1.25:1 ratio.
- (3) Concrete used for floors is to have 1800 psi, 3-day strength.
- (4) All admixtures (other than superplasticizer) are to be added at the batch plant. Superplasticizers, designed for addition to the mix at the plant, may be added at the batch plant with verification from the Structural Engineer and verification that the water-to-cement ratio has not been exceeded.

3.0 EXECUTION

3.01 SURFACE CONDITIONS

- A. Verify that excavations are free of water and ice, are of the required dimensions and have been approved by the Soils Engineer prior to placing concrete (5.3.1).
- B. Determine field conditions by actual measurement.

- C. Notify the Architect not less than 24 hours in advance of placing concrete. Place concrete only with the Architect is present, unless this requirement is specifically waived.

3.02 FORMWORK AND REINFORCING

- A. Footings may be cast against earth cuts when soil conditions permit.
- B. Removal of Forms and Shoring:
 - 1. Remove no forms within the first 24 hours after placement.
 - 2. Remove all shoring prior to constructing masonry walls supported by the structure.
- C. Reinforcing:
 - 1. Welding of reinforcing is prohibited, except where shown.

3.03 EMBEDDED ITEMS

- A. Install embedded conduit, pipes and sleeves subject to the following limitations:
 - 1. Do not embed aluminum without prior approval of coating material.
 - 2. Do not displace reinforcing steel.
 - 3. In slabs, limit outside dimension of conduits and pipes to 1/3-member thickness. Where conduits cross, maintain same minimum concrete cover as required for reinforcing bars.
 - 4. In piers, limit total area of pipes and conduit to 4% of pier area.
 - 5. Maintain a center-to-center spacing of at least three diameters of conduit or pipe.

3.04 JOINTING

- A. Interior Slabs on Grade:
 - 1. Locate control (contraction) joints as shown on the drawings. In the absence of information on drawings, locate at openings, walls, columns, grid lines, inside corners. For reinforced or unreinforced slabs, maximum joint spacing to be 2-1/2 times slab thickness (i.e., for 4" slabs, at 10'-0" on center). Schedule slab pours and saw cutting operations such that sawing is completed prior to onset of shrinkage cracking.
 - 2. Provide isolation joints at columns (1/2-inch-thick) and at walls (1/8 inch thick). Where isolation joint will be exposed to view, set top of joint filler below top of slab a distance equal to the filler thickness, to receive sealant. Where not exposed to view, set top of filler flush with top of slab.
- B. Exterior Slabs on Grade: Locate joints as shown on the Drawings. In the absence of information on the Drawings, provide the following:
 - 1. Expansion Joints: Full depth, with 1/2 inch joint filler, where slabs abut vertical surfaces, at intersections of sidewalks and at abrupt changes in width.
 - 2. Control Joints: Tooled, 1/4-inch-deep, 4'-0" to 6'-0" on center.

3.05 FINISHES

- A. Schedule of finishes on flatwork is as follows:

1. Typical interior floor areas to receive adhesive-applied finish, or to remain exposed-troweled finish.
2. Exterior slabs - broom finish.

3.06 FINISHING TOLERANCES

- A. Surfaces of floor slabs shall be finished to the following tolerances, per ACI 117:
 1. Minimum flatness of F (f) 25, and a minimum levelness of F(I)17, are required for typical slabs on grade. Preceding values are average values to be obtained over a given area. Minimum local values (one-half bay) of F (f) 17 and F (I) 15 shall be obtained.
- B. Non-conforming to the above flatness and levelness requirements is subject to: repair, or removal; replacement; and retesting; at no expense to the Owner.

3.07 CURING AND PROTECTION

- A. Temperature:
 1. When air temperature during placement is less than 40 degrees, or will be within 24 hours, temperature of concrete as placed is to be between 50- and 90-degrees F 55- and 90-degrees F for sections less than 12 inches thick) and a non-chloride accelerator shall be used. Maintain concrete temperature within these limits for the full curing period of seven days.
 2. When air temperature during placement is greater than 80 degrees, a water reducing retarder shall be used.
- B. Curing:
 1. INTERIOR SLAB AREAS WHICH WILL RECEIVE FINISH ARE TO BE MOIST-CURED, WITHOUT THE USE OF A CURING COMPOUND.
 2. All other slab areas may be either moist-cured or receive an application of curing compound, except that when concrete above grade is placed in the open and the air temperature exceeds 60 degrees, the concrete is to be moist-cured for the first 24 hours.
 3. Whichever curing method is used; it is to commence immediately after placement and continue for at least seven days. Do not allow curing to be delayed overnight.
 4. Prevent excessive moisture loss from formed surfaces. If forms are removed before seven days have elapsed, cure the formed surfaces by

moist-curing or application of curing compound for the remainder of the curing period.

3.08 DELIVERY AND PLACEMENT

- A. Preparation Before Placement:
 1. Remove all debris from forms.
 2. Do not use additives or salts to remove ice.
 3. In cold weather, maintain temperature of forms and reinforcing such that concrete temperature can be kept within the specified range.
- B. Delivery:

1. Conform to ASTM C94-latest edition.
 2. ASTM C94 requires discharge within 1-1/2 hours or 300 revolutions, whichever comes first, after the introduction of water to cement and aggregates, or the introduction of cement to the aggregates. The Architect may require an earlier discharge during hot weather or when high-early strength cement is being used.
 3. Place concrete at the maximum slump for which the mix was designed with a tolerance of up to 1 inch above the maximum for one batch in any five consecutive batches tested.
- C. Placement:
1. Place within 6 feet of final position. Spreading with vibrators is prohibited.
 2. In walls, deposit concrete in uniform horizontal layers with a maximum depth of 5 feet.
 3. Maximum free fall without chutes or elephant trucks to be 5 feet.

3.09 FIELD QUALITY CONTROL

- A. Obtain concrete for required tests at point of placement.
- B. For each concrete class, other than lean concrete, perform one strength test for each 50 yards, or fraction thereof, placed in any one day.
- C. Determine slump for each strength test.
- D. Determine air content for each strength test of a Class III concrete.
- E. Determine concrete temperature for each strength test.
- F. Do not place concrete when slump, air content or temperature vary from allowable.
- G. Determination of the flatness and levelness of a concrete slab shall be made on the day following placement of the first concrete pour. Tests shall be made in accordance with ASTM E1155. After it is established that proper procedures are being utilized to obtain the desired results, flatness/levelness test shall be performed only as directed by the Owner.
- H. Maintain records of all tests, indicating exact location of the structure represented by each test.
- I. Test cylinders shall be stored at the jobsite for the first 20 hours, plus or minus 4 hours, in a protected location, with the temperature maintained between 60 and 80 degrees, or results shall be considered unacceptable.
- J. Pay for all concrete testing under the contract allowance.

END OF SECTION 03 30 00

SECTION 04 05 13 MORTAR

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide mortar for all building masonry.

1.02 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver cement and lime materials in original, unopened containers.
- B. Store cement and lime materials off ground, under cover, and protected from weather damage.
- C. Do not change source or brands of colored mortar material during the course of the work.

1.03 SUBMITTALS

- A. Submit product literature and installation instructions prior to the start of construction.

2.0 PRODUCTS

2.01 MATERIALS

- A. Portland Cement: ASTM C150, Type I or III, non-staining, without air entrapment and of natural color or white, to produce the required color of mortar or grout.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement complying with ASTM C150, Type I or III, and or hydrated lime complying with ASTM C207.
 - 1. For pigmented mortars, use colored portland cement lime mix of formulation required to produce color indicated, or if not indicated, as selected from manufacturer's standard formulations. Pigment shall not exceed 10 percent of portland cement by weight for mineral oxides nor 2 percent for carbon black.
- D. Masonry Cement: ASTM C91. For non-structured brick and CMU only. Not to be used for "Engineered Masonry".
- E. Mortar Cement: ASTM C1329. For structural or "Engineered Masonry" as an option to Portland Cement-Lime Mix.
- F. Aggregates: ASTM C144, except for joints less than ¼ inch, use aggregate graded with 100 percent passing the No. 16 sieve.
- G. Water: Potable, clean, free of deleterious materials which would impair strength or bond.
- H. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.
- I. Epoxy Pointing Mortar: ASTM C395.

- J. Integral Water Repellent Admixture (Exterior): An integral liquid polymeric admixture.
- 2.02 MORTAR MIXES
- A. Do not use calcium chloride in mortar or grout

TABLE

Guide for the Selection of Masonry Mortars

Location	Building Segment	Mortar Type
Exterior, above grade	Loadbearing wall	S
	Non-loadbearing wall	N
	Parapet wall, chimney and veneer wall	N
Exterior, at or below grade	Foundation wall, retaining wall, manholes, sewers, pavements, walks and patios	S
Interior	Loadbearing wall	N
	Non-loadbearing partitions	O

3.0 EXECUTION

3.01 INSTALLATION

- A. Use accurate measuring devices. Shovel count not acceptable.
- B. Mix all cementitious materials and sand in a mechanical batch mixer for a minimum of 5 minutes. Use all mortar within 2-1/2 hours of the initial mixing. Discard mortar off-site after single re-tempering.

END OF SECTION 04 05 13

SECTION 04 05 23 MASONRY ACCESSORIES

1.0 GENERAL

1.01 DESCRIPTION

- A. This Section includes unit masonry assemblies consisting of the following:
 - 1. Masonry joint reinforcement.
 - 2. Ties and anchors.
 - 3. Miscellaneous masonry accessories.

1.02 SUBMITTALS

- A. Product Data: For each different masonry unit, accessory, and other manufactured product specified.
- B. Shop Drawings: Show fabrication and installation details for the following:
 - 1. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement." Show elevations of reinforced walls.
- C. Cold-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with cold-weather requirements.

2.0 PRODUCTS

2.01 CONTINUOUS WIRE REINFORCING AND TIES FOR MASONRY

- A. Masonry Joint Reinforcement, General ASTM A951.
- B. Provide welded wire units prefabricated in straight lengths of not less than 10 foot, with matching corner ("L") and intersection ("T") units.
- C. Fabricate from cold drawn steel wire complying with ASTM A82, with deformed or embossed continuous side rods and plain cross-rods, with unit width of 1-1/2 to 2 inches less than thickness of wall or partition.
- D. Wire shall be mill galvanized and in accord with the following:

1. Joint reinforcement, interior walls exposed to relative humidity less than or equal to 75 percent.	ASTM A641 mill galvanized (0.10 oz. per sq.ft.)
2. Wire ties or anchors in interior walls or exposed to relative humidity less than or equal to 75 percent.	ASTM A641, Class 1 (0.35 oz. per sq.ft.)
3. Joint reinforcement, wire ties, or anchors in exterior walls or a mean relative humidity exceeding 75 percent.	ASTM A153, Class B2 (1.50 oz. per sq.ft.)
4. Sheet metal ties or anchors, interior walls or exposed to relative humidity less than or equal to 75 percent.	ASTM A653, G60 (0.60 oz. per sq.ft.)
5. Sheet metal ties or anchors in exterior walls or a mean relative humidity exceeding 75 percent.	ASTM A153, Class B2 (1.50 oz. per sq.ft.)

- 6. Steel plates and bars ASTM A153, Class B
(1.50 oz. per sq. Ft.)
- E. For single wythe and composite masonry, provide ladder type joint reinforcing fabricated with a minimum two W1.7 or 0.148-inch steel side rods and W1.7 or 0.148-inch cross rods.
- F. For multi-wythe masonry, provide as follows:
 - 1. When both wythes are to be constructed simultaneously:
 - a. Provide ladder type joint reinforcing fabricated with three W1.7 or 0.148-inch steel side rods and W1.7 or 0.148-inch cross rods.
 - 2. When each wythe is to be considered separately:
 - a. Provide adjustable ladder type joint reinforcing fabricated with two W1.7 or 0.148-inch steel rods, W1.7 or 0.148-inch cross rods, 3/16-inch eyes and 3/16-inch double legged pintles. Longitudinal rods shall be spaced for each face shell of CMU; eye sections shall extend into walls cavity, and pintles shall rest upon bed joints of face brick.

2.02 ANCHORING DEVICES FOR MASONRY

- A. Rigid Anchors: Where masonry is to be rigidly anchored to structural steel beams, provide galvanized steel straps, bars or rods welded to the steel beam and extending into the mortar joint. Straps shall be not less than 14 gauge in thickness. Bars and rods shall be not less than 1/4 inch in diameter.
- B. Flexible Anchors: Where masonry is to be laterally supported from structural steel, while permitting only vertical movement or both vertical and horizontal movement, provide flexible anchors consisting of 2 different components as follows:
 - 1. Weld-On Anchors: Shall be 3/16-inch galvanized steel or formed rods of 1/4 inch plain steel with 3/8-inch offsets and 4 inch adjustment for ties specified below. Anchors shall be continuous wherever possible.
 - 2. Flexible anchor ties shall be one of the following:
 - a. Web Ties or Beam Ties: Shall be 3/16-inch galvanized steel wire, ASTM A82, 12 inches long with width being approximately 2 inches less than nominal wall thickness. Provide ties with blunt rod end when used with strap anchors, and provide ties with tapered end when used with rod anchors. This type tie shall permit only vertical movement and shall be installed parallel to masonry walls that abut steel columns.
 - b. Triangular Ties: Shall be 3/16-inch galvanized steel wire, ASTM A82, lengths as required to extend to within 5/8 inch of opposite face of masonry. Closed end shall be 1 inch wide, and split-end opening shall be 1/2 inch. This type shall permit both vertical and horizontal movement and shall be installed where masonry bypasses steel columns, and where masonry is parallel and adjacent to steel beams and joists.
 - c. Flexible Anchors: Where masonry is to be laterally supported from cast-in-place or precast concrete, provide 22-gauge

galvanized dovetail slots with 3/16-inch diameter galvanized triangular ties.

2.03 FLASHING

- A. Embedded Flashing Materials
 - 1. Provide concealed flashing built into masonry. Provide sheet metal drip edge.
 - 2. Provide one of the following types of flashing materials:
 - a. Copper-Fabric Laminate: Copper sheet of 3 ounce bonded with asphalt between 2 layers of glass fiber cloth.
 - b. Rubber Asphalt Sheet Flashing: Manufacturer's standard composite flashing product consisting of 32 mil thick pliable and highly adhesive rubberized asphalt compounds bonded completely and integrally to 8 mil thick, high density, cross laminated polyethylene film to produce an overall thickness of 40 mils. Provide termination mastic and accessories as recommended by membrane manufacturer.
 - c. Elastomeric Thermoplastic Flashing: Manufacturer's standard composite flashing product consisting of a polyester reinforced ethylene interpolymer alloy 0.040 inch thick.
 - 3. Sheet Metal Drip Edge: Fabricated from 26-gauge stainless steel or 16 gauge lead coated copper with hemmed edge.
 - a. Application: Where drip edge is required per recommendations of NCMA-TEK 19-4.
- B. Insulation: Provide insulation as required to meet or exceed thermal performance required or modeled by ASHRAE Standard 90.1. Reference Division 7.

2.04 MISCELLANEOUS

- A. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells with loops for holding reinforcing bars in center of cells. Units are formed from 0.142-inch (3.6 mm) steel wire, hot-dip galvanized after fabrication.
 - 1. Provide units with either two loops or four loops as needed for number of bars indicated.
 - 2. Available Products: Subject to compliance with requirements, cavity drainage materials that may be incorporated into the Work include, but are not limited to, the following:
 - a. Reinforcing Bar Positioners:
 - 1) D/A 811; Dur-O-Wal, Inc.
 - 2) D/A 816; Dur-O-Wal, Inc.
 - 3) No. 376 Rebar Positioner; Heckman Building Products, Inc.
- B. PVC Control Joints
 - 1. Provide PVC control joints designed for standard sash block in CMU walls where control joints (CJ) are indicated and as specified in Unit Masonry. The following products are acceptable.

- a. Blok-Tite AA2000; AA Wire Products Company, Chicago, Illinois
Vulco 8101; Vulcan Metal Products, Inc., Birmingham, Alabama.
- b. Vinylex Type CJ-A; Vinylex Corporation, Knoxville, Tennessee.
- c. 2901; Masonry Reinforcing Corp. of America, Charlotte, North Carolina.

3.0 EXECUTION

3.01 EXAMINATION

- A. Examine conditions, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
 - 1. For the record, prepare written report, endorsed by installer, listing conditions detrimental to performance.
 - 2. Verify that foundations are within tolerances specified.
 - 3. Verify that reinforcing dowels are properly placed.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Before installation, examine rough-in and built-in construction to verify actual locations of piping connections

3.02 MORTAR BEDDING AND JOINTING

- A. Lay hollow masonry units as follows:
 - 1. With full mortar coverage on horizontal and vertical face shells.
 - 2. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout.
 - 3. For starting course on footings where cells are not grouted, spread out full mortar bed, including areas under cells.
- B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness, unless otherwise indicated.
- C. Built-in Work: As the work progresses, build in items specified under this and other Sections of these Specifications. Fill in solidly with masonry around built-in items.
 - 1. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of grout stop mesh in the joint below and rod mortar or grout into core.
 - 2. Fill cores in hollow concrete masonry units with grout 3 courses (24 inches) under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.
 - 3. Take particular care to embed all conduits and pipes with concrete masonry without fracturing exposed shells and to fit units around switch, receptacle and other boxes set in walls. Where electric conduits, outlets, switch boxes, and similar items occur, grind and cut units before building in services.

4. Install anchors and related work built into masonry work, where indicated.

3.03 MASONRY JOINT REINFORCEMENT

- A. General: Provide continuous masonry joint reinforcement as indicated. Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
 1. Space reinforcement not more than 16 inches o.c, unless otherwise indicated. In addition to continuous reinforcement, provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings.
- B. Cut or interrupt joint reinforcement at control joints, unless otherwise indicated.
- C. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections. Cut and bend reinforcing units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

END OF SECTION 04 05 23

SECTION 04 06 00 UNIT MASONRY

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide unit masonry work as indicated. Work includes:
 - 1. Concrete masonry units and accessories, including water repellent admixture in exterior concrete masonry units and mortar.
 - 2. Setting and building-in collars, sleeves, inserts, anchors, ties, sockets, bolts, blocking, plugs, miscellaneous metal work, lintels, bearing plates, and similar items in contact with, supported on or enclosed by, masonry and furnished by others together with information for setting.
 - 3. Through-wall flashing.

1.02 QUALITY ASSURANCE

- A. General: Appoint at least one supervisory journeyman mason who shall be present at all times and direct work performed under this Section. Supervisor shall be thoroughly familiar with design requirements, type of materials being installed, referenced standards, and other requirements.
 - 1. Use skilled journeyman masons for cutting and placing of unit masonry. In acceptance or rejection of installed unit masonry, no allowance will be made for lack of workmen's skill.
 - 2. Comply with applicable codes, regulations, and standards. Where provisions of applicable codes, regulations, and standards conflict with requirements of this Section, the more demanding shall govern.
- B. Consult other trades and make provisions to permit installation of their work in a manner to avoid cutting and patching. Build in work specified under other Sections, as necessary, and as work progresses.
- C. Unit Masonry Standard: Comply with ACI 5301/ASCE 6 / TMS 602-92 "Specifications for Masonry Structures", except as otherwise indicated.
 - 1. Revise ACI 530.1/ASCE 6 / TMS 602 to exclude Section 1.7; Part 2.1.3; and Articles 1.5.1.2 and 1.5.1.3; and to modify Articles 2.1.1.4 by deleting requirements for installing vent pipes and conduits built into masonry.
- D. Single-Source Responsibility for Masonry Units: Obtain exposed masonry units from one manufacturer for each different product required for each continuous surface or visually related surface.

1.03 SUBMITTALS

- A. Submit product data for each different masonry unit, accessory, and other manufactured product indicated.
 - 1. Include a list of manufactured mortar ingredients for mortar products proposed to be used on the project.
- B. Submit shop drawings for reinforcing detailing fabrication, bending, and placement of unit masonry reinforcing bars. Comply with ACI 315 "Details and Detailing of Concrete Reinforcing" showing bar schedules, stirrup spacing,

diagrams of bent bars, and arrangement of masonry reinforcement.

- C. Submit material certificates for the following signed by manufacturer and Contractor certifying each material, as installed, complies with requirements indicated.
 - 1. Each different cement product required for mortar and grout including name of manufacturer, brand name, type and weight slips at time of delivery.
 - 2. Each material and grade indicated for reinforcement.
 - 3. Each type and size of anchors, ties, and metal accessories.
- D. Submit qualification data specified in "Quality Assurance". Include list of completed projects with project names, addresses, telephone numbers, names of Architects and Owners, and other information specified.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver masonry materials to project in undamaged condition.
- B. Store and handle masonry units off the ground, under cover, and in a dry location to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, and other causes. If units become wet, do not place until units are in an air-dried condition.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Store masonry accessories including metal items to prevent corrosion and accumulation of dirt and oil.

2.0 PRODUCTS

2.01 CONCRETE MASONRY UNITS - GENERAL

- A. Load-bearing concrete block shall be normal weight or medium weight units conforming to ASTM C 90, Type I. Provide units with minimum average net area compressive strength of 2000 psi.
- B. Size; standard 16" nominal face dimension except as otherwise indicated, thickness as shown on drawings.
- C. Provide special shapes where required:
 - 1. Bullnose at exposed corners.
 - 2. Grout blocks and bond beams as indicated on drawings.
- D. Moisture content of concrete block delivered to the site shall not exceed 10 lbs/cu.ft.

2.02 CONCRETE MASONRY UNITS

- A. Types: Standard smooth units = non-colored as manufactured by one of the following:
 - 1. Oberfield's, Inc.
 - 2. Clayton Concrete Block
- B. No other admixtures or additives shall be used with the "integral water repellent",

except with the written approval of the manufacturer and Architect. Cold weather masonry techniques (NCMA TEK-3-1A) shall be used.

2.03 THROUGH-WALL FLASHING

- A. Copper/paper flashing; 3 oz. copper sheet laminated between 2 sheets of bituminous impregnated crepe Kraft paper or saturated fabric.
- B. Products; subject to compliance with requirements specified, provide one of the following:
 - 1. Afco Products, Inc., "Cop-A-Bond Duplex".
 - 2. Phoenix Building Products, Inc.; "Duplex Cop-R Flash".
 - 3. York Manufacturing, Inc.; "Cop-R-Tex Duplex".

2.04 MISCELLANEOUS ITEMS

- A. Weep holes; cotton rope wicking material, lengths required to produce 2 inches exposure on exterior and 8 inches in cavity.
- B. Horizontal control joint filler; compressible filler complying with ASTM D 1056, Class RE-41, closed-cell neoprene.
- C. Weep protection: Provide a 1-inch thick device woven from high density polyethylene or nylon strands; device has truncated tabs with sloped sides to allow drainage path to flashing, as manufactured by one of the following:
 - 1. Mortar Net USA, Ltd.
 - 2. Hohmann and Barnard, Inc.
 - 3. Sandell Manufacturing Company, Inc.

3.0 EXECUTION

3.01 MASONRY INSTALLATION

- A. Lay concrete block in common running bond (half bond) plumb, level, and true to dimension.
- B. Install normal weight hollow masonry units in all walls above and below grade.
- C. Lay out all work in such a manner as to avoid using pieces less than 1/2 block in length. Make exposed cuts with a masonry saw. Cut accurately around pipe, duct openings, and similar penetrations. Slush voids full. Neatly "build-in" items provided by other trades
- D. Lay concrete block with full face shell bed and head joints. Fully bed webs of concrete block used in piers and pilasters, as well as the starting course of concrete block on footings and where block cores are to be grouted. Lay solid concrete block with full bed and head joints.
- E. All joints shall be of uniform 3/8-inch width.
 - 1. Tool exposed masonry walls slightly concave.
 - 2. Tool interior block walls which are not exposed or are scheduled to receive applied finish with flush joints.
- F. Store, handle and install masonry to avoid chips in exposed units. Remove and replace damaged masonry as directed by the Architect.
- G. Provide special units and set as required to form corners, returns, offsets, and

closures. Maintain proper bond throughout the wall.

- H. Masonry units shall be delivered to the site dry and within the specified limitations for moisture content and shall be maintained in this condition, before laying in the structure, by storing them above ground and covering them for protection against weather. Unprotected units which have been wetted by rain within the preceding 7 days shall be considered too wet for use.

3.02 GENERAL MASONRY PRACTICE

- A. Stack masonry materials on wood dunnage and protect with tarpaulin or shed.
- B. Consult other trades in advance of the masonry work and make provision for the installation of their work to avoid later cutting and patching. Cut and patch masonry as required to accommodate work of other trades.
- C. Lay masonry plumb, square, level and true to required lines, elevations and dimension, in bond, properly anchored with joints of uniform thickness.
- D. Unfinished work shall be racked back. Toothing masonry will not be permitted.
- E. Build solid masonry 4 inches above and below expansion bolts and built-in anchors.
- F. Install three courses of solid concrete masonry under beam and lintel bearings. Where anchor bolts are specified, use hollow concrete block and grout solid around bolt.
- G. When a wall of hollow masonry units is to be decreased in thickness over its height, place a continuous course of solid masonry to cap the thicker section and provide solid bearing for starting the thinner section above.
- H. As the work progresses, clean mortar daubs and smears from masonry work by wiping with burlap before mortar sets up. Turn back first scaffold plank adjacent to wall at end of each day's work to prevent unnecessary soiling.
- I. Where face of masonry is exposed as the finished, wall, cut neatly around electrical boxes so faceplates for switches, receptacles and other electrical devices will cover the cutout. Where necessary, point between cut out and electrical box with mortar.
- J. Point and fill holes and cracks in exposed joints using fresh mortar. If the mortar has hardened, defects shall be chiseled out, wetted, and refilled solidly with fresh mortar and tooled as specified.

3.03 THROUGH-WALL FLASHING

- A. Install specified through-wall flashing at the base of walls; heads of doors, windows, louvers, and other openings; window sills, wall recesses and projections, copings and at similar locations.
- B. Stop flashing 3/8" inch beyond the exterior face of the wall. Bend down at a 45-degree angle and trim flashing in a straight line.
- C. Flashing shall be laid in a slurry of fresh mortar and topped with a full bed of fresh mortar.
- D. Flashing which is not continuous such as that in heads and sills of openings in exterior walls shall extend 8 inches beyond the jamb lines on each side of the opening and turned up block height to form a dam. Corners at the dams shall be

- folded and not cut.
- E. Discontinuous flashing shall be lapped at least 6 inches and the contact surfaces sealed with fibered asphalt mastic. Flashings shall be one piece where possible.
 - 1. Flashings shall be continuous around corners and at physical interruptions. Pieces of flashing shall be cut, folded, lapped and sealed with mastic as required to maintain continuity.
 - F. Flashing penetrated by vertical reinforcing shall be sealed at penetrations to provide a watertight barrier.
 - G. Flashing installed in single Wythe shall be laid in slurry to provide positive slope to exterior.
 - H. Install weeps in locations shown on drawings, or if not shown, space at 16 inches on center.
 - 1. Provide weep holes in exterior walls immediately above through-wall flashing at all flashing locations. Lay out to provide good appearance.
 - 2. Weep holes at base of wall, flashings at sills and over windows, doors, louvers and other openings or recesses in the masonry walls where flashing is specified shall be spaced 16 inches on center and formed with 1/4-inch diameter cotton cord. Cut cord flush with extension face of masonry. Locate in head joints of masonry unit immediately above the flashing.
 - I. Install mortar net weep protection above weeps in accordance with manufacturer's installation instructions.

3.04 MOVEMENT (CONTROL AND EXPANSION) JOINTS

- A. Do not carry horizontal joint reinforcement through control joints. Do not form a continuous span through movement joints unless provisions are made to prevent in-plane restraint or wall or partition movement.
- B. Build in related items as the masonry progresses.
- C. Make width of control joint minimum 3/8 inch unless otherwise indicated. For joints in exterior walls, build-in control joint filler strips as masonry wall is laid up, allowing for caulking on each side of wall. For control joints in interior walls, and at intersections of walls on interior, no filler strip is required, but rake out all mortar and caulk.
- D. Form control joints in concrete masonry by one of the following methods:
 - 1. "Michigan" Type: Fit bond breaker strips into hollow contour in ends of block units on one side of control joint. Fill the resultant core with grout and rake joints in exposed faces.
 - 2. Install special shapes designed for control joints. Install bond breaker strips at joint. Keep head joints free and clear of mortar or rake joint.
 - 3. Install preformed control joint gaskets designed to fit standard sash block.
 - 4. Contractor shall select one of the above methods and then consistently use throughout project, unless otherwise approved by the Architect.
- E. Maintain lateral support of intersecting masonry non-loadbearing walls with wire mesh ties placed across joint between walls and spaced 16 inches on center vertically.

1. Maintain lateral support of intersecting load bearing walls with specified concrete block lateral support anchors placed across joint between walls and spaced 16 inches on center vertically.

3.05 CLEANING

- A. Keep wall surface clean during construction. Prevent smearing mortar on face of block. Remove mortar droppings when almost dry using a trowel. Remove burrs from tooled joints. Brush clean with fiber brush at end of each day's work and after finally pointing.
- B. Use care to avoid damage to adjacent surfaces when cleaning masonry. Any repairs required due to inadequate protection shall be charged to the Masonry Contractor.

3.06 PROTECTION OF WORK IN PROGRESS

- A. Cover all masonry walls with non-staining waterproof covers at the end of each workday, during inclement weather and when work is not in progress to prevent entrance of water or moisture into wall.
- B. Turn waterproof cover down over wall at least 24 inches each side and hold down edges to prevent loss of protection due to being blown by the wind.

3.07 COLD WEATHER PRACTICE

- A. No masonry shall be installed at temperatures below 32°F on a rising thermometer or below 40°F on a falling thermometer unless adequate precaution against freezing is provided. No masonry shall be installed using frozen materials.
- B. In cold weather, masonry shall be protected against freezing for a minimum of 12 hours after installation with the temperature on both sides of the wall maintained - above 40°F. The use of antifreeze or quickset compounds will not be permitted.
- C. Cold weather masonry construction shall conform to the following:

<u>Temperature</u>	<u>Construction Requirements</u>	<u>Protection Requirements</u>
Above 40°F	Normal masonry procedures	Cover walls with plastic or canvas at end of day to prevent water from entering masonry.
40° to 32°F	Heating mixing water to produce mortar temperature between 40° and 120°F	Cover walls and materials to prevent wetting and freezing. Covers should be plastic or canvas.
32° to 25°F	Heat mixing water and sand to produce mortar temperatures between 40° and 120°F.	With wind velocities over 15 mph, provide windbreaks during the work day and cover walls and materials at

the end of the work day to prevent wetting and freezing.

25° to 20°F.

Mortar on boards should be above 40°F.

Maintain masonry above freezing for 16 hours using auxiliary heat or insulated blankets.

20° to 0°F.

Heat mixing water and send to mortar temperatures between 40° and 120°F.

Provide enclosures and supply sufficient heat to maintain masonry enclosures above 32°F.

END OF SECTION 04 06 00

SECTION 05 01 00 METAL FABRICATIONS

1.0 GENERAL

1.01 DESCRIPTION

- A. This Section includes, but is not limited to, the following metal fabrications:
 - 1. Miscellaneous steel lintels (refer to Details, various building sections, and structural drawings).
 - 2. Anchor bolts, nuts and related items (excluding bolts required on assembly of structural steel).
 - 3. Miscellaneous framing and supports for applications where framing and supports are not specified in other sections.

1.02 SYSTEM PERFORMANCE REQUIREMENTS

- A. Structural performance; design, engineer, fabricate, and install the following metal fabrications to withstand the following structural loads without exceeding the allowable design working stress of the materials involved, including anchors and connections. Apply each load to produce the maximum stress in each respective component of each metal fabrication.

1.03 SUBMITTALS

- A. Submit product data for products used in miscellaneous metal fabrications, including paint products and grout.
- B. Submit shop drawings detailing fabrication and erection of each metal fabrication indicated. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items. Provide templates for anchors and bolts specified for installation under other sections.
 - 1. Where installed metal fabrications are indicated to comply with certain design loadings, include structural computations, material properties, and other information needed for structural analysis that has been signed and sealed by the qualified professional engineer who was responsible for their preparation.
- C. Submit samples representative of materials and finished products as may be requested by Architect.
- D. Submit welder certificates signed by Contractor certifying welders comply with requirements specified under "Quality Assurance" article.
- E. Submit qualification data specified in "Quality Assurance". Include list of completed projects with project name, addresses, names of Architects and Owners, and other information specified.

1.04 QUALITY ASSURANCE

- A. Fabricator qualifications; firm experience in successfully producing metal fabrications similar to that indicated for this project, with sufficient production capacity to produce required units without causing delay in the work.
- B. Installer qualifications; arrange for installation of metal fabrications specified in this section by same firm that fabricated them.

- C. Qualify welding processes and welding operations in accordance with AWS D1.1 “Structural Welding Code - Steel”, D1.3 “Structural Welding Code - Sheet Steel” and D1.2 “Structural Welding Code - Aluminum”. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, in pertinent, has undergone recertification.
- D. Engineer qualifications; an Ohio registered Engineer experienced in providing engineering services to type indicated resulting in the successful installation of metal fabrications similar in material, design and extent to that indicated for this project.

2.0 PRODUCTS

2.01 MATERIALS

- A. Ferrous metals; provide galvanized finish for exterior locations and interior locations where indicated.
 - 1. Steel plates, shapes and bars; ASTM A 36.
 - 2. Steel pipe; ASTM A 53; Type F, standard weight (schedule 40), unless otherwise indicated, or another grade or weight or both required by structural loads.
 - 3. Brackets, flanges and anchors; cast or formed metal of the same type material and finish as supported rails, unless otherwise indicated.
 - 4. Welding rods and bare electrodes; select in accordance with AWS specifications for the metal alloy to be welded.
- B. Non-shrink nonmetallic grout; CE CRD-C621 premixed, factory-packaged, non-staining, non-corrosive, non-gaseous grout. Provide grout specifically recommended by manufacturer for interior and exterior applications of type specified in this section.
 - 1. Subject to compliance with requirements, provide one of the following:
 - a. “Euco N-S Grout”; Euclid Chemical Co.
 - b. “Crystex”; L&M Construction Chemicals, Inc.
 - c. “Masterflow 713”; Master Builders.
 - d. “SonogROUT”; Sonneborn Building Products Div., Rexnord Chemical Products, Inc.
- C. Fasteners; zinc-coated fasteners for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required.
 - 1. Bolts and nuts; regular hexagon head type, ASTM A 307, Grade A.
- D. Paint:
 - 1. Shop primer for ferrous metal; FS TT-P-645 manufacturer’s or fabricator’s standard, fast-curing, lead-free, universal modified alkyd primer selected for good resistance to normal atmospheric corrosion, for compatibility with finish paint systems indicated, and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
 - 2. Galvanizing repair paint; high zinc dust content paint for galvanizing welds in galvanized steel, with dry film containing not less than 94% zinc dust by weight, and complying with DOD-P-21035 or SSPC Paint-20.
 - 3. Bituminous paint; cold-applied asphalt mastic complying with SSPC paint 12

except containing no asbestos fibers.

4. Shop primer for galvanized steel; epoxy primer equal in quality to Series 27 F.C. Typoxy by Themec Company, Inc. #93-36131 Polyamide Epoxy Primer by Duron or #385 Amercoat Multi Purpose Epoxy Primer by Ameron.

2.02 FABRICATION

- A. Form metal fabrications from materials of size, thickness, and shapes indicted but not less than that needed to comply with performance requirements indicated. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of each metal fabrication.
- B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
- C. Allow for thermal movement resulting from a maximum temperature change (range) of 100°F in ambient temperature in the design, fabrication and installation of installed metal assemblies to prevent buckling, opening of joints and overstressing of welds and fasteners. Base design calculations on actual surface temperatures of metals due to both solar heat gain and nighttime sky heat loss.
- D. Shear and punch metals cleanly and accurately. Remove burrs.
- E. Ease exposed edges to a radius of approximately 1/32" unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- F. Remove sharp or rough areas on exposed traffic surfaces.
- G. Weld corners and seams continuously to comply with AWS recommendations and the following:
 1. Use materials and methods to minimize distortion and develop strength and corrosion resistance of base metals.
 2. Obtain fusion without undercut or overlap.
 3. Remove welding flux immediately.
 4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surface matches those adjacent.
- H. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners or type indicated or, if not indicated, Phillips flat head (countersunk) screws and bolts. Locate joints where least conspicuous.
- I. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.
- J. Shop assembly; preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- K. Cut, reinforce, drill and tap miscellaneous metal work as indicated to receive finish hardware, screws, and similar items.
- L. Fabricate joints that will be exposed to weather in a manner to exclude water or

provide weep holes where water may accumulate.

2.03 LOOSE STEEL LINTELS

- A. Fabricate loose structural steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls and partitions at locations indicated.
 - 1. Weld adjoining members together to form a single unit where indicated.
 - 2. Size loose lintels for equal bearing of 6" at each side of openings, unless otherwise indicated.
 - 3. Galvanize loose steel lintels located in exterior walls.

2.04 MISCELLANEOUS FRAMING AND SUPPORTS

- A. Provide steel framing and supports for applications indicated or which are not a part of structural steel framework, as required to complete work.
- B. Fabricate units to sizes, shapes and profiles indicated and required to receive adjacent other construction retained by framing and supports. Fabricate from structural steel shapes, plates, and steel bars of welded construction using mitered joints for field connection. Cut, drill, and tap units to receive hardware, hangers and similar items.
- C. Galvanize miscellaneous framing and supports at exterior locations and interior locations where indicated.

2.05 FINISHES

- A. Steel and iron finishes:
 - 1. Galvanizing; for those items indicated for galvanizing, apply zinc-coating by the hot-dip process in compliance with the following requirements.
 - a. ASTM A 153 for galvanizing iron and steel hardware.
 - b. ASTM A 123 for galvanizing both fabricated and unfabricated iron and steel products made of uncoated rolled, pressed, and forged shapes, plates, bars, and strip 0.0299" thick and heavier.
 - 2. Preparation for shop priming:
 - a. Exteriors (SSPC Zone 1B): SSPC-SP6 "Commercial Blast Cleaning".
 - b. Interiors (SSPC Zone 1A): SSPC-SP3 "Power Tool Cleaning".
 - c. Galvanized surfaces to be primed; SSPC-SP1 solvent cleaning or high-pressure detergent cleaning.

3.0 EXECUTION

3.01 PREPARATION

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions and directions for installation of anchorages including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors that are embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

3.02 INSTALLATION

- A. Fastening to in-place construction; provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction; include threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.
- B. Cutting, fitting and placement; perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true and free of rack; and measured from established lines and levels.
- C. Provide temporary bracing or anchors in formwork for items built into concrete masonry or similar construction.
- D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units which have been hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.
- E. Field welding; comply with AWS code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, methods used in correcting welding work, and the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surface matches those adjacent.
- F. Corrosion protection; coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood or dissimilar metals with a heavy coat of bituminous paint or zinc chromate primer.

3.03 SETTING LOOSE PLATES

- A. Clean concrete and masonry bearing surfaces of any bond-reducing materials, and to roughen to improve bond to surfaces. Clean bottom surface of bearing plates.
- B. Set loose leveling and bearing plates on wedges, or other adjustable devices. After bearing members have been positioned and plumbed, tighten the anchor bolts. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the bearing plate before packing with grout.
 - 1. Use nonmetallic non-shrink grout unless otherwise indicated.
 - 2. Pack grout solidly between bearing surfaces and plates to ensure no voids remain.

3.04 ADJUSTING AND CLEANING

- A. Touch-up painting; immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 requirements for touch-up of field

painted surfaces.

1. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.
- B. For galvanized surfaces clean welds, bolted connections and abraded areas and apply galvanizing repair paint to comply with ASTM A 780.

END OF SECTION 05 01 00

SECTION 06 10 00 ROUGH CARPENTRY

1.0 GENERAL

1.01 DESCRIPTION

- A. This Section includes rough carpentry work for miscellaneous framing, forms and rough carpentry.
 - 1. Layout of work; location of references, dimensions, partitions, and walls; setting grounds, blocking, and similar work.
 - 2. Blocking at all locations, to be anchored to walls and ceilings.
 - 3. Miscellaneous blocking, framing and closures where required, including blocking behind millwork anchored to wall.
 - 4. Exterior sheathing boards.
 - 5. Plywood at various locations.
 - 6. Rough hardware.
 - 7. Coordinate, properly locate, and install anchorage system for grab bars, toilet accessories, and other wall mounted equipment within metal stud and drywall partitions.
 - 8. Anchoring devices and rough hardware as required.

1.02 SUBMITTALS

- A. Submit wood treatment data as follows including chemical treatment manufacturer's instructions for handling, storing, installation, and finishing of treated material:
 - 1. For each type of preservative treated wood product include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained and compliance with applicable standards.
 - 2. For water-borne treated products include statement that moisture content of treated materials was reduced to levels indicated before shipment to project site.
 - 3. For fire-retardant treated wood products include certification by treating plant that treated material complies with specified standard and other requirements.

1.03 QUALITY ASSURANCE

- A. Single-Source Responsibility for Treated Wood: Obtain each type of treated wood products from one source for both treatment and fire-retardant formulation.
- B. Plywood: Provide plywood manufactured and factory grademarked in accordance with PS-1.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks

and under temporary coverings including polyethylene and similar materials.

1. For lumber and plywood treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

2.0 PRODUCTS

2.01 LUMBER, GENERAL

- A. Lumber standards; furnish lumber manufactured to comply with PS 20 “American Softwood Lumber Standard” and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee’s (ALSC) Board of Review.
- B. Grade stamps; provide lumber with each piece factory-marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.
- C. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.
 1. Provide dressed lumber, S4S, unless otherwise indicated.
 2. Provide lumber with 15 percent maximum moisture content at time of dressing and shipment for sizes 2 inches or less in nominal thickness, unless otherwise indicated.
- D. All lumber used for rough framing shall bear the Sustainable Forestry Initiative Program label. Participating manufacturer minimum requirements.

2.02 MISCELLANEOUS LUMBER

- A. General; kiln dried lumber for support or attachment of other construction including copings, bucks, nailers, blocking, furring, grounds, stripping, and similar members.
- B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
- C. Moisture content; 15 percent maximum for lumber items not specified to received wood preservative treatment.
- D. Plywood; APA-CC PLUGGED-EXT or APA-RATED SHEATHING EXT, thickness indicated. Provide span ratings required to suit framing spacing, square edge.

2.03 FASTENERS

- A. General; size and type indicated that comply with requirements specified in this article for material and manufacture.
- B. Nails, wire brads, and staples; FS FF-N-105.
- C. Power driven fasteners; National Evaluation Report NER-272.
- D. Wood screws; ANSI B18.6.1.
- E. Lag bolts; ANSI B18.2.1.
- F. Bolts; steel bolts complying with ASTM A307, Grade A; with ASTM A563 hex

nuts and where indicated, flat washers.

2.04 PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS

- A. General; where lumber or plywood is indicated as preservative-treated wood or is specified to be treated, comply with applicable requirements of AWPAs Standards C2 (Lumber) and C9 (Plywood). Mark each treated item with the applicable inspection agency's Quality Mark Requirements. CCA treatment is not permitted.
- B. Pressure-treat above-ground items with water-borne preservatives to a minimum retention of 0.25 pcf. For interior uses, after treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19 percent and 15 percent. Treat indicated items and the following:
 - 1. Nailers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
- C. Pressure-treat wood members in contact with the ground or fresh water with water-borne preservatives to a minimum retention of 0.40 pcf.
- D. Complete fabrication of treated items before treatment, where possible. If cut after treatment, coat cut surfaces to comply with AWPAs M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

2.05 STRUCTURAL RAFTERS AND PLANKS

- A. General; A category of Dimension Lumber products intended to fit structural application for lumber.
- B. Because of its structural performance, dry Douglas Fir is to be used for rafters and planks.
- C. Provide visual selected grade tongue and groove planking with rounded edges.
- D. Provide structural grading as indicated on the framing plans.

3.0 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of rough carpentry construction and that are too small to use in fabricating rough carpentry with minimum joints or optimum joint arrangement.
- B. Set rough carpentry to required levels and lines, with members plumb and true to line and cut and fitted.
- C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow attachment of other construction.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated.
- E. Countersink nail heads on exposed carpentry work and fill holes.
- F. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finished materials. Make tight connections between members. Install

fasteners without splitting of wood; predrill as required.

3.02 WOOD GROUNDS, NAILERS AND BLOCKING

- A. Install wood grounds, nailers, and blocking where shown and where required for attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved.
- B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry during installation of masonry work. Where possible, anchor to form work before concrete placement.

END OF SECTION 06 10 00

SECTION 06 20 00 FINISH CARPENTRY

1.0 GENERAL

1.01 DESCRIPTION

- A. Finish carpentry is defined to include miscellaneous exposed wood members commonly known as architectural woodwork, unless such items are specified under another section of these Specifications.
- B. The types of finish carpentry include, but are not necessarily limited to the following:
 - 1. Exterior items provided:
 - a. Standing and running trim.
 - 2. Items installed by this section, but provided by other Sections:
 - a. Doors
 - b. Door Hardware.

1.02 RELATED WORK

- A. Documents affecting this work shall include, but are not limited to Bidding Requirements, General Provisions, and Division 1.
- B. Section 06 10 00 - Rough Carpentry
- C. Section 09 90 00 - Painting

1.03 QUALITY ASSURANCE

- A. Quality standards: Except as otherwise shown or specified, comply with specified provisions of the Architectural Woodwork Institute (AWI) "Quality Standards".
- B. Optimum moisture content: Kiln-dry woodwork to an average moisture content within the following ranges or as otherwise recommended by applicable Quality Standards for the regional climatic conditions involved.
 - 1. Interior woodwork – 5 to 10 percent.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soiling, and deterioration.
- B. Wood to be painted shall be sealed upon delivery to the site.

1.05 PROJECT CONDITIONS

- A. Examination of Substrate and Conditions: The installer must examine the substrate and the conditions under which the Work under this Section is to be performed and notify the Contractor in writing of any unsatisfactory conditions. Do not proceed with work under this section until unsatisfactory conditions have been corrected.

2.0 PRODUCTS

2.01 INTERIOR MATERIALS

- A. General: Provide materials that comply with requirements of the AWI Woodworking Standard for each type of woodwork and quality grade indicate and, where the following products are part of woodwork, with requirements of the referenced product standards, that apply to product characteristics indicated:
 - 1. Hardwood Trim: Provide clear, kiln-dried white hardwoods, smooth surface. ANSI/AHA A135.4 Profiles as indicated on the drawings.
 - 2. High Pressure Laminate: NEMA LD3.
 - 3. Medium Density Fiberboard: ANSI A208.2, made with binder containing no urea formaldehyde.
 - 4. Particleboard: ANSI A208.1, Grade M-2 – exterior glue.
 - 5. Straw-based particleboard: ANSI A208.1, Grade M-2, except for density.
 - 6. Softwood Plywood: PS 1.
 - 7. Hardwood Plywood and Face Veneers: HPVA HP-1, made with adhesive containing no urea formaldehyde.
 - 8. Formaldehyde Emission Levels: Comply with formaldehyde emission requirements of each voluntary standard referenced below:
 - a. Particleboard: NPA 8.
 - b. Medium Density Fiberboard: NPA 9.
 - c. Hardwood Plywood: HPM FE.

2.02 FASTENERS AND ANCHORS

- A. Fasteners for Exterior Finish Carpentry: Provide nails or screws of the following materials, in sufficient length to penetrate minimum of 1-1/2" into substrate, unless otherwise recommended by manufacturer:
 - 1. Hot-dip galvanized steel.
- B. Screws: Select material, type, size, and finish required for each use. Comply with FS FF-S-111 for applicable requirements.
 - 1. For metal framing supports, provide screws as recommended by metal framing manufacturer.
- C. Anchors: Select material, type, size, and finish required by each substrate for secure anchorage. Provide nonferrous metal or hot dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed steel or lead expansion bolt devices for drilled-in place anchors. Furnish inserts and anchors, as required, to be set into concrete or masonry work for subsequent woodwork anchorage.

2.03 FABRICATION

- A. Wood Moisture Content: Comply with requirements of specified inspection agencies and with manufacturer's written recommendations for moisture content of finish carpentry at relative humidity conditions existing during time of fabrication and in installation areas.
- B. Back out or kerf backs of the following members, except members with ends exposed in finished work:

1. Standing and running trim wider than 5”.

3.0 EXECUTION

3.01 PREPARATION

- A. Condition finish carpentry to average prevailing humidity conditions in installation areas prior to installing.
- B. Before installing finished carpentry, examine shop fabricated work for completion and complete work as required, including back priming and removal of packing.

3.02 FINISH CARPENTRY INSTALLATION

- A. Quality Standard: Install woodwork to comply with AWI for grade specified
- B. for type of woodwork involved.
- C. Install, plumb, level, true, and straight with no distortions. Shim as required using concealed shims.
- D. Cut to fit unless specified to be shop fabricated or shop cut to exact size. Where woodwork abuts other finished work, scribe and cut for accurate fit. Before making cutouts, drill pilot holes at corners.
- E. Distribute defects allowed in the quality grade specified to the best overall advantage when installing job assembled woodwork items.
 1. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
- F. Installation of Standing and Running Trim:
 1. Trim and Moldings: Install in single, unjointed lengths for openings and for runs less than 10 feet. For longer runs use only one piece less than 10 feet in any straight run. Stagger joints in adjacent members. At returns and corners cope or miter for accurate fit.
 2. Attach securely in place with uniform joints providing for thermal and building movements.
 3. Nailing: Bind nail where possible. Use fine finishing nails where exposed. Set exposed nail heads for filing.
 4. Preparation for Finish: Clean woodwork and fill nail holes in preparation for finishes specified under painting sections of these Specifications.
 5. Fit exterior joints to exclude water. Apply flat grain lumber with rough side exposed to weather.

3.03 STEEL DOOR INSTALLATION

- A. Delivery, Storage and Handling:
 1. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.
 2. Observe doors and frames upon delivery for damage. Minor damages may be repaired provided refinished items are equal in all respects to new work and acceptable. Otherwise, remove and replace damaged items as directed.

3. Store doors and frames at building site under cover. Place units on minimum 4" high wood blocking. Avoid use of non-vented plastic or canvas shelters which could create humidity chamber. If cardboard wrapper on door becomes wet, remove carton immediately. Provide 1/4" spaces between stacked doors to promote air circulation.
- B. Installation: Install standard steel doors, and accessories in accordance with final shop drawings, manufacturer's data, and as herein specified.
- C. Door Installation: Fit hollow metal doors accurately in frames, within clearances specified in ANSI/SDI-100.

3.04 DOOR HARDWARE INSTALLATION

- A. Install each hardware item in compliance with the manufacturer's instructions and recommendations.
- B. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation. Where closers are specified, they shall be the last hardware item to be installed. Closers shall be mounted to wood and steel doors with sex bolts and machine screws.
- C. Drill and countersink units which are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- D. Cut and fit threshold and floor covers to profile of door frames with mitered corners and hairline joints. Join units with concealed welds or concealed mechanical joints. Cut smooth openings for spindles, bolts, and similar items.
- E. Anchor thresholds to substrate with stainless steel machine screws.
- F. At exterior doors and elsewhere as indicated, set thresholds in a bed of either butyl rubber sealant or polyisobutylene mastic sealant to completely fill concealed voids and exclude moisture from every source. Do not plug drainage holes or block weeps. Remove excess sealants.
- G. Where necessary, provide metal hinge shims to maintain clearances at interior and exterior doors.

3.05 ADJUSTMENT AND CLEANING OF DOOR HARDWARE

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.
- B. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy and make final check and adjustment of hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- C. Instruct Owner's personnel in proper adjustment and maintenance of hardware and hardware finishes during the final adjustment of hardware.

END OF SECTION 06 20 00

SECTION 07 20 00 BUILDING INSULATION

1.0 GENERAL

1.01 SUMMARY

- A. This Section includes building insulation. Work includes:
 - 1. Rigid insulation under slabs and exterior masonry cavity walls.
 - 2. Batt type fiberglass insulation at exterior walls to fill any concealed voids and provide a continuous insulation barrier.
 - 3. Safing insulation at fire rated wall opening and edge conditions.

1.02 DEFINITIONS

- A. Thermal Resistivity: Where thermal resistivity of insulation products is designated by "r-values," they represent the reciprocal of thermal conductivity (k-values). Thermal conductivity is the rate of heat flow through a homogenous material exactly 1 inch thick. Thermal resistivities are expressed by the temperature difference in degrees F between the two exposed faces required to cause one BTU to flow through one square foot per hour at mean temperatures indicated.

1.03 SUBMITTALS

- A. Submit product data for each type of insulation product specified, including data substantiating conformance to the requirements of the Ohio Building Code for foam plastic insulation.

1.04 QUALITY ASSURANCE

- A. Fire Performance Characteristics: Provide batt insulation materials identical to those whose indicated fire performance characteristics have been determined per the ASTM test method indicated below, by UL or other testing and inspecting organizations acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing and inspecting organization.
 - 1. Surface Burning Characteristic: ASTM E 84
 - 2. Fire Resistance Ratings: ASTM E 119
- B. Foam plastic insulation shall conform to the requirements of the Ohio Building Code for foam plastic insulation.
- C. Maximum Allowable Asbestos Content of Inorganic Insulation: Provide insulations composed of mineral fibers of mineral ores which contain no asbestos.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Project insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's recommendations for handling, storage and protection during installation.

2.0 PRODUCTS

2.01 INSULATING MATERIALS

- A. General: Insulating materials shall comply with requirements and referenced standards in sizes to fit applications indicated, selected from manufacturer's standard thicknesses as indicated on the drawings.
- B. Rigid Board Insulation: Rigid, cellular polystyrene thermal insulation with closed-cells and integral high density skin, formed by the expansion of polystyrene base resin in an extrusion process to comply with ASTM C 578 Type VI, 1.8 pcf minimum density; with 5 year aged r-values of 5.4 and 5 at 40 and 75 degrees F, respectively; and as follows:
 - 1. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 75 and 450, respectively.
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Styrofoam Square Edge"; Dow Chemical USA.
 - b. "Foamular 250"; Owens-Corning.
 - c. "Certifoam"; Diversified Products, Inc.
 - 3. Locations:
 - a. Against exterior walls and under slabs as indicated on the drawings.
 - b. Exterior masonry cavity walls.
 - 4. Adhesive: Type recommended by insulation board manufacturer for application indicated.
- C. Batt Insulation: Thermal insulation produced from 100% biodegradable post-industrial denim waste and renewable cotton fiber. Complies with ASTM 665 for Type 1 unfaced as follows:
 - 1. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 5 and 35, respectively.
 - 2. Manufacturers: Subject to compliance with requirements, provide one of the following:
 - a. Bonded Logic, Inc.
 - b. Inno-Therm.
 - 3. Location: At locations where no other insulation is provided and other locations where indicated on Drawings. Install as required to provide a continuous thermal barrier.
- D. Block Inserts: Standard U-shaped expandable polystyrene inserts as provided by one of the following:
 - 1. Korfil by Concrete Block Insulation Systems.
 - 2. Polycore by Foam Concepts, Inc.
 - 3. Inserts by Omni Block.
- E. Safing Insulation and Accessories:
 - 1. Semi-Refractory Fiber Board Safing Insulation: Semi-rigid boards designed for use as a fire stop at openings between edges of firewalls and exterior wall panels, produced by combining semi-refractory mineral fiber

manufactured from slag with thermosetting resin binders to comply with ASTM C 612, Type IA and IB; nominal density of 4.0 pcf; passing ASTM E 136 for combustion characteristics; r-value of 4.0 at 75°F.

2. Caulking Compound: Material approved by manufacturer of safing insulation for sealing joint between foil backing of safing insulation and wall against penetration of smoke.
3. Safing Insulation Manufacturers: Subject to compliance with requirements, provide one of the following:
 - a. Partek Insulations, Inc.
 - b. Fibrex, Inc.
 - c. USG: Therafiber Div., USG Interiors, Inc.

2.02 AUXILIARY INSULATING MATERIALS

- A. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation or mechanical anchors securely to substrates indicated without damaging or corroding either insulation, anchors, or substrates.

3.0 EXECUTION

3.01 EXAMINATION

- A. Examine substrates and installation conditions. Do not proceed with insulation installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Clean substrates of substances harmful to insulations or vapor retarders, including removal of projections that might puncture vapor retarders.

3.03 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's instructions applicable to products and application indicated. If printed instructions are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with installation of insulation.
- B. Extend insulation full thickness as indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections that interfere with placement.
- C. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness if more than one layer, stagger joints.

3.04 INSTALLATION OF RIGID BOARD INSULATION

- A. Masonry cavity walls:
 1. Install courses of insulation between masonry wall ties with joists staggered between courses and edges butted tight both ways. Bond with adhesive to exterior face of inside masonry wythes.
 2. Seal all rigid board vertical and horizontal joints with adhesive.
- B. Foundation perimeter walls:

1. Extend vertically as indicated, when not indicated, down to design frost line. Bond with adhesive to vertical substrate. Stagger all joints.
2. Protect insulation from displacement and damage during backfilling and slab placement.

3.05 INSTALLATION OF BATT INSULATION

- A. Apply insulation units to substrate by method indicated, complying with manufacturer's recommendations. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- B. Fill miscellaneous voids and spaces in wall framing and at window and door framing with batt insulation stuffed in place.

3.06 INSTALLATION: FIRESTOPPING INSULATION

- A. Install firestopping materials in accordance with manufacturer's instructions to maintain fire separations indicated.
- B. Install firestopping insulation of proper sizes and thicknesses with brackets or safing clips spaced as needed and not more than 24" on center. Fill safe-off area between floor slabs and exterior wall system components. Fill all voids. Provide continuity of fire safety systems as indicated.
- C. Install firestopping insulation at junction between interior fire-resistance rated walls and structural framing decking. Fill joints solid with mineral fiber insulation stuffed in place.

3.07 PROTECTION

- A. General: Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation will be subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 20 00

SECTION 07 25 00 VAPOR BARRIER

1.0 GENERAL

1.01 DESCRIPTION

- A. This Section includes vapor barrier under interior slab-on-grade concrete and at the new exterior walls.

2.0 PRODUCTS

2.01 MATERIALS

- A. Vapor barrier; Use only materials that are resistant to deterioration when tested in accordance with ASTM E 154, as follows:
 - 1. At concrete slab; polyethylene sheet not less than 10 mils thick.
 - 2. At exterior walls; polyethylene sheet not less than 6 mils thick.

3.0 EXECUTION

3.01 EXAMINATION

- A. Examine substrates and installation conditions. Do not proceed with vapor barrier installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install vapor barrier over gravel subbase before placing concrete slab-on-grade. Gravel surface shall be leveled before laying vapor barrier. Take care to not puncture or damage the membrane.
 - 1. Repair punctures and tears by taping a 6-mil polyethylene patch over the penetration. Patch shall extend one (1) foot larger than penetration in all directions.
 - 2. Place no concrete until vapor barrier is observed and approved by the Architect.
- B. Apply vapor barrier sheets in the widest practical width parallel to direction of pour with joints overlapped 6 inches minimum and sealed. Turn up and seal sheets at walls, columns, and other vertical surfaces.
 - 1. Seal with appropriate tape at seams.
- C. Install vapor barrier at the warm side of exterior walls where indicated on the drawings. Repair punctures as stated above.

END OF SECTION 07 25 00

SECTION 07 46 00 FIBER CEMENT SIDING AND TRIM

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section includes the following:
 - 1. Soffits, fascia and eave trim.
 - 2. Fiber cement siding, corner boards siding and battens.

1.2 RELATED WORK

- A. Documents affecting this work shall include, but are not limited to Bidding Requirements, General and Supplemental Conditions, and Division 1.

1.3 SUBMITTALS

- A. Product data for each type of product specified, including details of construction relative to materials, dimensions of individual components, profiles, textures, and colors.
- B. Samples for initial selection purposes in form of manufacturer's sample finishes showing full range of colors, profiles, and textures available.

1.4 EXTRA MATERIALS

- A. Deliver extra materials to Owner. Furnish extra materials matching products installed as described below, packaged with protective covering for storage and identified with labels clearly describing contents.
 - 1. Furnish quantity of soffit materials equal to 2% of amount installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide "Hardi Plank" fiber cement siding and cornerboards as manufactured by James Hardie Siding Products. No other manufacturers will be accepted.
- B. Provide all accessory items such as trim, soffits, etc. from Hardiplank Siding project.

2.2 FIBER CEMENT SIDING AND TRIM

- A. Siding made from fiber cement board that does not contain asbestos fibers; complies with ASTM C1186, Type A, Grade II; is classified as noncombustible when tested according to ASTM E136; and has a flame spread index of 25 or less when tested according to ASTM E84.
 - 1. Siding: Horizontal, match existing.
 - 2. Batten: 1x2 Batten Covers.
 - 3. Trim: 5/4, sizes as indicated.
 - 4. Soffits: Existing

2.3 ACCESSORIES

- A. Siding Accessories: Provide starter strips, edge trim, corner cap, and other items as recommended by siding manufacturer for building configuration.
 - 1. Provide accessories made from same material as adjacent siding, unless otherwise indicated.
 - 2. Provide accessories matching color and texture of adjacent siding, unless otherwise indicated.
- B. Flashing: Provide aluminum flashing at window and door heads and where indicated.
 - 1. Finish for Aluminum Flashing: Siliconized polyester coating, same color as siding.
- C. Elastomeric Joint Sealant: Single component neutral curing silicone joint sealant complying with requirements Joint Sealers.
- D. Fasteners:
 - 1. For fastening to wood, use siding nails of sufficient length to penetrate a minimum of 1" into substrate.
 - 2. For fastening to metal, use ribbed bugle head screws of sufficient length to penetrate a minimum of 1/4" or 3 screw threads into substrate.
 - 3. For fastening aluminum, use aluminum fasteners. Where fasteners will be exposed to view, use prefinished aluminum fasteners in color to match item being fastened.
 - 4. For fastening fiber cement siding, use hot dip galvanized fasteners.
- E. Fasteners: Non-corrosive aluminum siding nails, in sufficient length to penetrate minimum of 1" into substrate. Provide prefinished fasteners in color to match soffit where face nailing is unavoidable.
- F. Building paper "Tyvek Permeable Perimeter Wrap".

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for substrates, installation tolerances, and other conditions affecting performance of soffit. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with manufacturer's installation instructions and recommendations. Center nails in elongated nailing slots without binding soffit materials to allow for thermal movement. Install trim and accessories in accordance with manufacturer's recommendations. Overlap butt joints to shed water away from direction of prevailing wind.
- B. Fiber Cement Siding:
 - 1. Block framing between studs where siding horizontal joints occur.
 - 2. Place fasteners no closer than 3/8" from panel edges and 2" from panel corners.
 - 3. Allow minimum 1" vertical clearance between roofing and bottom edge of siding.
 - 4. Maintain clearance between siding and adjacent finished grade.
 - 5. Field paint with one (1) coat paint prior to installation. Paint siding with second coat after erection.

3.3 CLEANING

- A. Clean finished surfaces as recommended by manufacturer, and maintain in a clean condition during construction.

END OF SECTION 07 46 00

SECTION 07 90 00 JOINT SEALERS

1.0 GENERAL

1.01 DESCRIPTION

- A. Extent of each form and type of joint sealer is indicated on drawings. This Section includes joint sealers for the following locations:
1. Exterior joints in vertical surfaces and non-traffic horizontal surfaces as indicated below.
 - a. Control and expansion joints in unit masonry.
 - b. Around perimeter of exterior door and window frames and any exterior wall penetrations.
 - c. Flashings set in sealant.
 - d. Joints between dissimilar materials and other joints as indicated.
 2. Exterior joints in horizontal traffic surfaces as indicated below:
 - a. Thresholds at exterior doors.
 - b. Joints between dissimilar materials and other joints as indicated.
 3. Interior joints in vertical surfaces and horizontal non-traffic surfaces as indicated below:
 - a. Locations, as noted on drawings, not specified elsewhere.
 - b. Perimeter joints between interior wall surfaces and frames of interior doors and windows and miscellaneous penetrations.
 - c. Perimeter joints of toilet fixtures, including water closets, urinals and wall sinks.
 - d. Other joints as indicated.
 4. Smoke and fire-resistant joint sealers at openings around penetrations of cables, conduit, pipe and similar penetration of rated walls and floors.

1.02 DEFINITIONS

- A. The terms "Sealant," "Caulk," "Calk" or "Caulking" will be understood to be as follows:
1. Sealant: Elastomeric material used to seal moving joints against the intrusion of liquids, solids, or gases. May also be material used for security, fire resistance, or other special joint requirements.
 2. Caulk, Calk, or Caulking: Refer to elastomeric joint sealant materials and do not refer to the type of material required. Use only the specialized elastomeric joint sealants for all exterior and interior joint sealant work.

1.03 SYSTEM PERFORMANCES

- A. Provide joint sealers produced and installed to establish and maintain watertight and airtight continuous seals.

1.04 SUBMITTALS

- A. Submit product data from manufactures for each joint sealer product required, including instructions for joint preparation and joint sealer application.

- B. Submit samples, for verification purposes, of each type and color of joint sealer required. Install joint sealer samples in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealers.
- C. Submit certificates from joint sealer manufacturers attesting their products comply with specification requirements and are suitable for the use indicated.
- D. Submit qualification data specified in "Quality Assurance" article. Include list of completed projects with project name, addresses, names of Architects and Owners, plus other information specified.
- E. Submit compatibility and adhesion test reports from elastomeric sealant manufacturer indicating materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.
- F. Submit product test reports for each type of joint sealers indicated, evidencing compliance with requirements specified.
- G. Submit preconstruction field test reports indicating which products and joint preparation methods demonstrate acceptable adhesion to joint substrates.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: An Installer who has successfully completed within the last three (3) years at least three joint sealer applications similar in type and size to that of this Project.
- B. Single Source Responsibility for Joint Sealer Materials: Obtain each type of joint sealer material from a single manufacturer for each different product required.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturers' recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.07 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer of below 40°F.
 - 2. When joint substrates are wet due to rain, frost, condensation, or other causes.
- B. Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than or greater than allowed by joint sealer manufacturer for

- application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from joint substrates.

2.0 PRODUCTS

2.01 MATERIALS, GENERAL

- A. Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacture based on testing and field experience.
- B. Colors; provide color of exposed joint sealers, as selected by Architect from manufacturer's complete selection of available colors.

2.02 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric sealant standard; manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM 920 requirements, including those referenced for Type, Grade, Class, and Uses.
- B. Products; subject to compliance with requirements, provide one of the following:
1. Multi-part non-sag urethane sealant; joints not to be painted.
 - a. "Chem-Caul 500"; Bostik Construction Products Div.
 - b. "Vulkem 227"; Mameco International Inc.
 - c. "Sonolastic NP2"; Sonneborn Building Products Div., Chem Rex, Inc..
 - d. "Dymeric 511"; Tremco.
 - e. "Sika 2C"; Sika.
 2. Acrylic-latex sealant; interior joints to be painted.
 - a. "Acrylic Latex 834"; Tremco
 - b. "Sonolac"; Sonneborn Building Products Div, Chem Rex, Inc.
 - c. "AC-20"; Pecora

2.03 FIRE-RESISTANT JOINTS SEALERS

- A. General; provide manufacturer's standard firestopping sealant, with accessory materials, having fire-resistance ratings indicated as established by testing identical assemblies per ASTM E 814 by Underwriters Laboratory, Inc. or other testing and inspecting agency acceptable to authorities having jurisdiction.
- B. One-part firestopping sealant; one part elastomeric sealant formulated for use in a through-penetration firestop system for sealing openings around cables, conduit, pipes and similar penetrations through walls and floors.
- C. Products; subject to compliance with requirements, provide one of the following:
1. "Dow Corning Fire Stop Sealant"; Dow Corning Corp.
 2. "3M Fire Barrier Caulk CP-25"; Electrical Products Div./3M.
 3. "RTV 7403"; General Electric Company.
 4. "Fyre Putty"; Standard Oil Engineered Materials Company.

5. “CS240, Fire Stop Sealant”; Hilti.
6. “Fire Stop Systems”; Tremco.

2.04 JOINT SEALANT BACKING

- A. General; provide sealant backings of material and type which are non-staining compatible with joint substrates, sealants, primers and other joint fillers and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Plastic foam joint fillers; preformed, compressible, resilient, non-waxing, non-extruding strips of flexible, non-gassing plastic foam of material indicated below; non-absorbent to water and gas; of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
 1. Either open-cell polyurethane foam or closed-cell polyethylene foam, unless otherwise indicated, subject to approval of sealant manufacturer, for cold-applied sealants only.
- C. Bond breaker tape; polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.05 MISCELLANEOUS MATERIALS

- A. Primer; provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated.
- B. Cleaners for non-porous surfaces; non-staining, chemical cleaners of type which are acceptable to manufacturers of sealants and sealant backing materials, which are not harmful to substrates and adjacent non-porous materials, and which do not leave oily residues or otherwise have a detrimental effect on sealant adhesion of in-service performance.
- C. Masking tape; non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints.
- D. Accessory materials for firestopping sealants; provide forming, joint fillers, packing and other accessory materials required for installation of firestopping sealants as applicable to installation conditions indicated.

3.0 EXECUTION

3.01 EXAMINATION

- A. Examine joints indicated to receive joint sealers, with Installer present, for compliance with requirements for joint configuration, installation tolerances and other conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements.
 - 1. Remove foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; old joint sealers; oil; grease; water; surface dirt; and frost.
 - 2. Clean concrete, masonry, and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Remove laitance and form release agents from concrete.
 - 4. Clean metal, glass, and other non-porous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION OF JOINT SEALERS

- A. General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications and conditions indicated.
 - 1. Provide standard elastomeric joint sealants except where fire-resistant joint sealant are required.
- C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
 - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.
 - a. Do not leave gaps between ends of joint fillers.

- b. Do not stretch, twist, puncture, or tear joint fillers.
- 2. Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
- E. Tooling of Non-sag Sealants: Immediately after sealant application and before time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
- 1. Provide concave joint configuration per Figure 6A in ASTM C 1193, unless otherwise indicated.
- F. Installation of Firestopping Sealant: Install sealant, including forming, packing, and other accessory materials to fill openings around mechanical and electrical services penetrating floors and walls to provide firestops with fire resistance ratings indicated for floor or wall assembly in which penetration occurs. Comply with installation requirements established by testing and inspecting agency. Each trade will be responsible for sealing their penetrations for fire stopping.

3.04 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

3.05 PROTECTION

- A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new materials to produce joint sealer installations with repaired areas indistinguishable from original work.

END OF SECTION 07 90 00

SECTION 08 14 00 INTERIOR WOOD DOORS

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide unfinished paneled wood doors.

1.02 SUBMITTALS

- A. Submit complete schedule indicating dimensions, cutouts, hardware sets, species, and other pertinent data which references the individual architectural door mark number as shown on the plan sheets.
- B. Submit manufacturer's data sheets, completely describing door construction, WDMA I.S. 1-A and AWI Classifications.
- C. Door supplier to submit written certification on the supplier's letterhead that the doors provided shall conform with every aspect of this specification.
- D. Door finish samples shall accompany submittals. The samples will show the range of color variation.

1.03 WARRANTY

- A. Provide a written lifetime guarantee for door and door finish. Guarantee to include removal, new door, finishing and reinstallation of new door.

1.04 QUALITY ASSURANCE

- A. Wood veneer doors shall conform to the latest edition of the following standards: WDMA I.S. 1-A requirements for "Premium Grade".
- B. Tolerances for warp, telegraphing, squareness and prefitting dimensions as per the latest editions of WDMA I.S. 1-A and AWI Section 1300.
- C. Each door shall bear an identifying label indicating the manufacturer, door number and order number, as well as fire rating where applicable.
- D. Where fire rated doors are required, provide doors labeled by ITS/Warnock Hersey International or Underwriters Laboratories. Construction details and hardware application shall be as approved by the labeling agency.
- E. Doors are to meet the Ohio Building Code requirements for positive pressure opening assemblies in areas where this has been adopted by local authorities having jurisdiction.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Doors shall be individually poly bagged.
- B. Deliver the doors to the jobsite in manufacturer's original unopened poly bags.
- C. Deliver doors after the building is enclosed, dry, heated and adequately ventilated. Do not receive or store doors in damp areas. Do not drag the doors on the ground, floor or across one another.
- D. Store doors flat on a level surface, follow manufacturer's printed instructions for storage and handling.

1.06 ENVIRONMENTAL CONDITIONS

- A. Do not subject doors to extreme conditions or changes in heat, dryness or humidity in accordance with the latest edition of WDMA I.S. 1-A.

1.07 GUARANTEE

- A. Provide manufacturer's written guarantee against warpage, delamination and defects in materials and workmanship for the following time period: interior doors – life of installation for solid core doors, interior use.
- B. Any defects noted during the warranty period shall be corrected. Such corrective work shall include all labor and material for repair, replacement, refinishing and rehanging as required.

2.0 PRODUCTS

2.01 GENERAL

- A. All wood doors are to meet criteria for the latest edition of WDMA I.S. 1-A "Premium Grade".
- B. Doors shall be prefit and beveled at the factory to fit the openings. Prefit tolerances shall be in accordance with the requirements of WDMA I.S. 1-A and AWI, latest editions.
- C. Doors shall be machined in the factory.
- D. Top and bottom rails shall be factory sealed with an approved wood sealer.

2.02 DOORS, INTERIOR

- A. Stiles and rails are to be securely glued to the core, and the entire assembly sanded flat as a unit.
- B. Match Existing Profiles -face to be plain sliced, red oak.
- C. Manufacturers – provide interior wood doors manufactured by the same company as the stile and rail wood doors for quality control.

3.0 EXECUTION

3.01 INSTALLATION

- A. Carefully inspect the locations where the doors are to be installed. Notify the Architect of any conditions which would adversely affect the installation or the subsequent operation of the door. Do not proceed until unsatisfactory conditions are corrected.
- B. Allow doors to become acclimated to building temperature and humidity before installation.
- C. Within four days of fitting each door, seal exposed surfaces with at least two coats of polyurethane.
- D. Use only skilled mechanics to install and adjust the finish hardware.
- E. After the doors have been adjusted and cleaned, place the poly bags over the doors to provide protection while the remainder of construction proceeds.

END OF SECTION 08 14 00

SECTION 08 71 00 FINISH HARDWARE

1.0 GENERAL

1.01 DESCRIPTION

- A. Work includes;
1. Finish door hardware installation including necessary screws, bolts, special fasteners, expansion shields, and other devices necessary and required for proper hardware application and use.
 2. If hardware items are not specified but are required for completion of the work, furnish items of type and quality suitable to the service and function required and comparable to adjacent hardware.

1.02 SUBMITTALS

- A. Submit product data for each item of hardware. Include whatever information may be necessary to show compliance with requirements, and instructions for installation and maintenance of operating parts and finishes.
1. Hardware Schedule will not be considered for review without complete product data sheets.
- B. Submit Hardware Schedule in manner indicated below. Coordinate hardware with doors, frames and related work to ensure proper size, thickness, hand, function and finish of hardware.
1. Hardware Schedule shall be prepared by a member in good standing of the American Society of Architectural Hardware Consultants.
 2. Final Hardware Schedule Content: Based on finished hardware indicated, submit hardware schedule indicating complete designations of every item required for each door or opening. Include the following information:
 - a. Type, style, function, size and finish of each hardware item.
 - b. Name and manufacturer of each item.
 - c. Fastenings other pertinent information,
 - d. Location of hardware set cross-referenced to indications on Drawings both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, codes, etc. contained in schedule.
 - f. Mounting locations for hardware.
 - g. Door and frame material.
 - h. Keying information.
 3. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
- C. Samples: Before submittal of the final hardware schedule and before final ordering of finish hardware, submit one sample of each type of exposed hardware unit, finished as required, and tagged with full description for coordination with schedule.
1. Samples will be returned to the supplier. Units which are acceptable and remain undamaged through submittal, review and field comparison procedures may, after final check of operation, be used in the work, within limitations of keying coordination requirements.

- D. Templates: Furnish hardware templates to each fabricator of doors, frames and other work to be factory-prepared for the installation of hardware. Upon request, check shop drawings of other work, to confirm adequate provisions are made for proper location and installation of hardware.

1.03 QUALITY ASSURANCE

- A. Obtain each type of hardware from a single manufacturer, even though several may be indicated as offering products complying with requirements.
- B. Fire-Rated Openings: Provide hardware for fire-rated openings in accordance with NFPA 80 and local building code requirements. Provide only hardware which has been tested and listed by UL or FM for types and sizes of doors required and complies with requirements of door and door frame labels.

1.04 WARRANTIES

- A. Provide written (10) ten-year warranty by the manufacturer against defects in materials and/or workmanship for closer.
- B. Provide written (3) three-year warranty by the manufacturer against defects in materials and/or workmanship for locksets.
- C. Provide written (2) two-year warranty by the manufacturer against defects in materials for workmanship for hold open device.

2.0 PRODUCTS

2.01 MANUFACTURERS

- A. The following manufacturers have been selected for this project.
- B. Note that even though an acceptable substitute manufacturer may be listed, the product must provide all the functions and features of the specified product or it will not be approved.

<u>Description</u>	<u>Specified Manufacturer</u>	<u>Acceptable Substitution</u>
Hinges	Ives	Hager, Stanley
Hinges(Continuous)	Roton	Markar, Select
Locks, latches & deadlocks	Schlage	Owner Standard (No Substitution)
Cylinders & keying	Schlage	Owner Standard (No Substitution)
Exit Devices	Von Duprin 99	Precision Apex, Sargent 80
Closers	LCN 4011/4111	Sargent 281, Corbin Russwin DC2200
Flush bolts & dust proof strikes	Ives	Hager, Rockwood
Coordinators	Ives	Hager, Rockwood
Overhead stops & holders	Glynn-Johnson	Rixson, ABH
<u>Description</u>	<u>Specified Manufacturer</u>	<u>Acceptable Substitution</u>

Stops & holders	Ives	Hager, Rockwood
Push/pull/kick plates	Ives	Hager, Rockwood
Thresholds	NGP	Pemko, Hager
Seals & door bottoms	NGP	Pemko, Hager
Weather-strip	NGP	Pemko, Hager
Bi-Pass	Hager	Stanley, Lawrence
Power Transfers & Supplies	Von Duprin	Precision

- C. Hand of Door: Drawings show direction of slide, swing or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
- D. Where the exact types of hardware specified are not adaptable to the finished shape or size of the members requiring hardware, furnish suitable types having as nearly as possible the same operation and quality as the type specified, subject to Architect's approval.

2.02 MATERIALS

A. Screws and Fasteners

- 1. Provide hardware manufactured to conform to published template, generally prepared for machine screw installation.
- 2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surface to receive painted finish.
- 3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent that no standard units of type specified are available with concealed fasteners. Do not use through-bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of reinforcing the work adequately to fasten the hardware securely.

B. Hinges

- 1. The following is a guide for hinge type required for their specification:
 - a. 1-3/4" doors up to and including 3'-0" wide:
 - Exterior: heavy weight (.180), ball bearing, bronze/stainless steel 4-1/2" high.
 - b. 1-3/4" doors over 3'-0":
 - Exterior: heavy weight (.180), ball bearing, bronze/stainless steel, 5" high.
 - Interior: heavy weight (.180), ball bearing, steel, 5" high.
- 2. The width of hinges shall be sufficient to clear all trim. Furnish two hinges for all doors up to 60" high. Furnish one additional hinge for every additional 30" or fraction thereof.

3. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins.
 - b. Non-Ferrous Hinges: Stainless steel pins.
 - c. Out-Swing Exterior Doors: Non-removable pins.
 - d. Interior Doors: Non-rising pins.
4. Hinges meeting these requirements are: Ives, Hager and Stanley.

Ives	Stanley	Hager
5BB1	FB179	BB1279
5BB1HW	FB168	BB1168
5BB1 630	FB191	BB1191
5BB1HW 630	FB199	BB1199

C. Locks

Mortise Locks (Exterior)

1. Locks shall be ANSI A156.13, Grade 1 mortise locksets, manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
2. Locks are to have a standard 2-3/4" backset with a full 3/4" throw stainless steel mechanical anti-friction latchbolt. Deadbolt shall be a full 1" throw, constructed of stainless steel.
3. Lever trim shall be cast or forged in the design specified, with 2-1/8" diameter roses. Levers shall be thru-bolted to assure proper alignment. Locks will include screws to accommodate door thickness.
4. All inside thumb-pieces are to have (ADA) Disability turns.
5. Locks meeting this specification: Schlage No Substitution/Owners Standard per section 1.04B1 above.

Cylindrical Locksets (Interior)

1. Heavy-duty cylindrical locksets and latchsets shall conform to ANSI A156.2, Series 4000, Grade 1. Functions as listed in Hardware Sets.
2. Locks shall have field reversible handing.
3. Lever support shall be sustained by use of two independent spring cartridges, one for each lever.
4. Locks shall have special tapped holes in outside mounting plate to resist loosening of thru-bolt.
5. Springs to be full compression type.
6. Strike to be 16 gauge, with 1" deep box construction, curved lip of sufficient length to clear trim and protect clothing.
7. Locks shall have free wheeling lever to eliminate the ability to exert excessive force on the end of the lever.
8. Locks to have inner spindle that independently operates lever when locked.
9. Locks meeting this specification: Schlage "ND series. No Substitution/Owners Standard per section 2.01B above.

D. Exit Devices

1. Exit devices shall be touch-pad type, fabricated of brass, bronze, stainless steel, or aluminum, plated to the standard architectural finishes to match the balance of the door hardware.
2. Exit devices shall be tested to ANSI/BMHA A156.3 test requirements by a BMHA certified testing laboratory. A written certification showing successful completion of a minimum of 1,000,000 cycles must be provided.
3. Touch-pad shall match exit device finish, and shall be stainless steel for US26, US26D, US28, US32 and US32D finishes. Only compression springs will be used in devices, latches and outside trims or controls.
4. All devices to incorporate a Security Dead Latching feature. Devices without DL feature will not be acceptable.
5. Provide Roller Strikes (RS) for all rim and surface mounted vertical rod devices. Devices without roller strikes will not be acceptable. Provide standard manufacturer's strikes for concealed vertical rod devices.
6. Mechanism case shall sit flush on the face of all doors. Device shim kits must be used to eliminate pinch points. Glass trim for doors with cutouts shall not extend beyond face of door as stated in Section 08111, 2.02. (Precision requires S-98 or NS-40 to meet Part 6)
7. All non-fire-rated exit devices shall have Cylinder Dogging.
8. Exit devices shall be UL listed panic exit hardware. All exit devices for fire rated openings shall be UL labeled fire exit hardware.
9. All exit devices shall incorporate a fluid damper or other device, which eliminates noise associated with exit device operation. Touch-pad shall extend a minimum of one half of the door width. End-cap will be flush design, heavy duty die-cast alloy with a sloped backed low profile.
11. Where lever trim is required break-away trim will be used.

E. Door Closers

1. All closers will utilize a stable fluid withstanding temperature range of 120 degrees F to -30 degrees F without seasonal adjustment of closer speed to properly close the door. Closers on fire rated doors will be provided with temperature stabilizing fluid that complies with Standard UL 10C for "Positive Pressure Fire Test Door Assemblies" and UBC 7-2 (1997).
2. Cylinder body shall be 1-1/2" in diameter, and double heat-treated pinion shall be 11/16" in diameter. Door closer shall have hydraulic, full rack and pinion action with a high strength cast iron cylinder.
3. Aluminum Alloy and/or Cast Aluminum cylinders are not acceptable.
4. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed and backcheck. A written certification showing the successful completion of a minimum of 10,000,000 cycles for exterior door closers must be provided.
5. All closers shall have solid forged steel main arms (and forged forearms for parallel closers).

6. Closer cylinders, and arms (and metal covers when specified) shall have a powder coating finish which has been certified to exceed 100 hours salt spray testing by ETL, and independent testing laboratory used by BHMA for ANSI certification. For metal components that can't be powder coated, a special rust inhibiting finish (SRI) must be used.
 7. All closers will not be seen on the public side or hallway side of the door. The appropriate drop or mounting plates will be used as conditions dictate. The door closer will never be used as a stop and will never have a built in holder.
- F. Door Stops and Holders
1. It shall be the responsibility of the hardware supplier to provide door stops for all doors in accordance with the following requirements:
 - a. Wall stops shall be used wherever possible.
 - b. Where wall bumpers cannot be used, provide dome type floor stops of the proper height.
 - c. At no time will a hinge pin stop be acceptable.
 - d. At any opening where wall or floor stop cannot be used, a heavy-duty overhead stop will be required.
 - e. All exterior doors will have an overhead stop and may, at the owner's option, be a stop and holder. This overhead stop will not be built into the closing device, but work in conjunction with the closer.
- G. Thresholds and Gasketing: Furnish as specified and per details. Match finish of other items as closely as possible. Provide only those units where resilient or flexible seal strip is easily replaceable and readily available. Thresholds, sweeps and weather-stripping will be supplied to weather proof the exterior doors. The thresholds will be supplied to fit the particular sill conditions and not conflict with the American Disabilities Act (ADA). Exterior pairs of doors will have a split astragal to prevent air infiltration. Interior doors may require gasketing, thresholds and sweeps to act as a sound barrier per the owner's request.
1. Thresholds and Gasketing that meet this specification: NGP, Pemko, Hager.
- H. Silencers: Furnish "push-in" type silencers for each hollow metal or wood frame, 3 for each single frame, 2 for each pair frame. Omit where gasketing is scheduled, unless the frames are factory pre-drilled.

2.03 MATERIALS AND FABRICATION

- A. General:
1. Hand of door: Drawings show direction of swing or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement shown.
 2. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper and hardness, but in no case of lesser (commercially recognized) quality

than specified for applicable hardware units by applicable ANSI A156 series standard for each type hardware item and with ANSI A156.18 for finish designations indicated. Do not furnish optional materials or forming methods for those indicated, except as otherwise specified.

3. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws, except as specifically indicated.
4. Furnish screws for installation, with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of such other work as closely as possible, including "prepared for paint" in surfaces to receive painted finish.
5. Provide concealed fasteners for hardware units which are exposed when door is closed, except to extent no standard units of type specified are available with concealed fasteners. Do not use through-bolts for installation where bolt head or nut opposite face is exposed in other work, except where it is not feasible to adequately reinforce the work. In such cases, provide sleeves for each through-bolt or use sex screw fasteners.
6. Tools and Maintenance Instructions for Maintenance: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance and removal and replacement of finish hardware.

2.04 LOCK CYLINDERS AND KEYING

- A. General: Supplier will meet with Owner to finalize keying requirements and obtain final instructions in writing.
- B. Review keying system with Owner and provide type required (master, grandmaster or great-grandmaster), integrated with Owner's existing system.
- C. Metals: Construct lock cylinder parts from brass/bronze, stainless steel or nickel silver. Cylinders shall be cast.
- D. Comply with Owner's instruction for masterkeying and, except as otherwise indicated, provide individual change key for each lock which is not designed to be keyed alike with a group of related locks.
- E. Keys: Plain bow type, of nickel silver only.
- F. Key Quantity: Furnish 2 change keys for each lock; 5 master keys for each master system; and 5 grandmaster keys for each grandmaster system.

2.04 LOCK CYLINDERS AND KEYING (CONT.)

1. Furnish one extra blank for each lock.
2. Deliver keys to Owner's representative.
3. Furnish keys properly tagged and indexed for Owner's use.

2.05 LOCKS, LATCHES AND BOLTS

- A. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame, finished to match hardware set.
- B. Lock Throw: Provide 5/8" minimum throw of latch and deadbolts. Comply with UL requirements for throw of bolts and latch bolts on rated fire openings. Provide 1/2" minimum throw on other latch and deadlock bolts.
- C. Exit Device Dogging: Wherever closers are provided on doors equipped with exit devices, equip the units with keyed dogging device to hold the push bar down and the latch bolt in open position.

2.06 CLOSERS AND DOOR CONTROL DEVICES

- A. Size of Units: Except as otherwise specifically indicated, comply with manufacturer's recommendations for size of door control unit, depending upon size of door exposure to weather and anticipated frequency of use.
- B. Provide grey resilient parts for exposed bumpers.

2.07 HARDWARE FINISHES

- A. Provide matching finishes for hardware units at each door opening, to the greatest extent possible, except as otherwise indicated. Reduce differences in color textures as much as commercially possible where the base metal or metal forming process is different for individual units of hardware exposed at the same door opening. In general, match items to the manufacturer's standard finish for the latch and lock set for color and texture.
- B. All finishes to be dark bronze or brown.
- C. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness and other qualities complying with manufacturer's standards, but in no case less than specified for the applicable units of hardware by referenced standards.

2.08 HARDWARE SCHEDULE (SEE DOOR SCHEDULE ON DRAWINGS)

3.0 EXECUTION

3.01 INSTALLATION

- A. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.
- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations using fully experienced and qualified personnel. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protections with finishing work specified in the Division 9

Sections. Do not install surface-mounted items until finishes have been completed on the substrate.

- C. Coordinate with door and frame suppliers to obtain door frame hardware installations which are listed by approved agency.
- D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- F. Keep knobs suitably covered for protection during construction period.

3.02 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation of function of every unit. Replace units which can not be adjusted to operate freely and smoothly as intended for the application made.
 - 1. Upon completion, door shall latch without forcing and close and latch under the force of the closer.
 - 2. Provide door control equipment as required. Mount equipment to permit maximum door opening, but to prevent contact of the door with building construction or equipment.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Instruct Owner's personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

END OF SECTION 08 71 00

SECTION 09 22 00 GYPSUM DRYWALL

1.0 GENERAL

1.01 DESCRIPTION

- A. Extent of each type of gypsum drywall construction required is indicated on Drawings. This Section includes the following types of gypsum board construction:
 - 1. Steel framing members to receive gypsum board.
 - 2. Gypsum board screw-attached to steel framing and furring members.

1.02 SUBMITTALS

- A. Submit product data from manufacturers for each type of product specified.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes. Neatly stack gypsum boards flat to prevent sagging.
- C. Handle gypsum boards to prevent damage to edges, ends, and surfaces. Do not bend or otherwise damage metal corner beads and trim.

1.04 PROJECT CONDITIONS

- A. Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations.
- B. For non-adhesive attachment of gypsum board to framing, maintain not less than 40°F. For finishing of gypsum board, maintain not less than 50°F for 48 hours before application and continuously thereafter until drying is complete.
- C. Ventilate building spaces to remove water not required for drying joint treatment materials. Avoid drafts during dry, hot weather to prevent materials from drying too rapidly.

2.0 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - 1. Grid Suspension Systems:
 - a. Chicago Metallic Corp.
 - b. Unimast.
 - c. National Gypsum Co.

- 2. Gypsum Boards and Related Products:
 - a. Louisiana Pacific Corp.
 - b. National Gypsum Co.
 - c. United States Gypsum Co.

- 2.02 STEEL FRAMING COMPONENTS FOR SUSPENDED AND FURRED CEILINGS
 - A. Provide components which comply with ASTM C 754 and ASTM C 645 for materials and sizes, unless otherwise noted.
 - 1. Gypsum board ceiling shall be supported by minimum 9-gauge wire.

- 2.03 GYPSUM BOARD PRODUCTS
 - A. Provide gypsum board types indicated in maximum lengths available to minimize end-to end joints and in thickness indicated. If not otherwise indicated, provide 5/8-inch thickness to comply with ASTM C 840 for application system and support spacing indicated.
 - B. Types:
 - Interior Partitions; 5/8" Type X (abuse resistant where indicated)

- 2.04 FRAMING AND FURRING MEMBERS
 - A. Metal studs; non-load bearing, C-shaped, roll-formed from corrosion resistant, galvanized steel, 25-gauge thickness.
 - B. Furring channels; hat shaped, roll-formed from corrosion resistant, galvanized steel, 20-gauge thickness.

- 2.05 TRIM ACCESSORIES
 - A. Corner and edge trim; sheet steel zinc coated by the hot-dip process corner beads, edge trim and control joints complying with ASTM C 1047 requirements.
 - 1. Edge trim shapes; ASTM C 1047, Fig. 1, "L" Bead similar to Unimast Inc. No. 200-B, unless otherwise indicated.
 - 2. One-piece control joint; ASTM C 1047, Fig. 1, formed with vee-shaped slot with slot opening covered with removable strip.

- 2.06 GYPSUM BOARD JOINT TREATMENT MATERIALS
 - A. Provide materials complying with ASTM C 475, ASTM C 84, and recommendations of manufacturer of both gypsum board and joint treatment materials for the application indicated.
 - B. Joint tape; paper reinforcing tape, unless otherwise indicated.
 - C. Setting-type joint compounds; factory-prepackaged, job-mixed, chemical-hardening powder products formulated for embedding tape for first coat over fasteners and flanges of corner beads and edge trim which develop greatest bond strength and crack resistance and is compatible with other joint compounds applied over it. Provide proper exterior compounds at exterior grade gypsum boards.

- D. Drying-type joint compounds; factory-prepackaged vinyl-based products complying with the following requirements for formulation and intended use. Provide either ready-mix or job-mixed formulations as follows:
 - 1. Ready-mix formulation; factory-premixed product.
 - 2. Job-mixed formulation; powder product for mixing with water at Project site.
 - 3. Topping compound formulated for use as topping compound.
 - 4. Provide proper exterior compounds at exterior grade gypsum boards.

2.07 MISCELLANEOUS MATERIALS

- A. Provide auxiliary materials for gypsum drywall construction which comply with referenced standards and the recommendations of the manufacturer of the gypsum board.
- B. Gypsum board screws; ASTM C 1002.

3.0 EXECUTION

3.01 EXAMINATION

- A. Examine substrates to which drywall construction attaches or abuts, cast-in-anchors, and structural framing, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of drywall construction. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Coordinate installation of ceiling suspension system with installation of overhead structural systems to ensure inserts and other structural anchorage provisions have been installed to receive ceiling anchors in a manner that will develop their full strength and at spacing required to support ceiling.
 - 1. Furnish inserts and other anchoring devices indicated, to other trades for installation well in advance of time needed for coordination with other construction.

3.03 INSTALLATION OF STEEL FRAMING FOR SUSPENDED CEILINGS

- A. Secure hangers to structural support by connecting directly to structure.
 - 1. Provide secondary framing where needed to facilitate installation.
- B. Do not connect or suspend steel framing from ducts, pipes or conduit.
- C. Keep hangers and braces 2" clear of ducts, pipes and conduits.
- D. Sway-brace suspended steel framing with hangers used for support.
- E. Install suspended steel framing components in sizes and at spacings indicated, but not less than that required by referenced steel framing installation standard. Balance splay as required.
- F. Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically joint main beam and cross furring members to each other and

butt-cut to fit into perimeter wall track. Do not mechanically attach to perimeter wall members to allow independent movement of ceiling.

3.04 APPLICATION AND FINISHING OF GYPSUM BOARD, GENERAL

- A. Gypsum board application and finishing standard; install and finish gypsum board to comply with ASTM C 840.
- B. Locate exposed end-butt joints as far from center of walls and ceilings as possible, and stagger not less than 24 inches in alternate courses of board.
- C. Install ceiling boards across framing in a manner to minimize the number of end-butt joints, and which avoids end joints in the central area of each ceiling. Stagger end joints at least 24 inches.
- D. Install exposed gypsum board with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16-inch open space between boards. Do not force into place.
- E. Locate either edge or end joints over supports, except in horizontal applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Position boards so like edges abut, tapered edges against tapered edges and mill-cut or field-cut ends against mill-cut or field-cut ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions.
- F. Attach gypsum board to supplementary framing and blocking provided for additional support at openings and cutouts.
- G. Form control joints and expansion joints at locations indicated, with space between edges of boards, prepared to receive trim accessories.
- H. Space fasteners in gypsum boards in accordance with referenced gypsum board application and finishing standard and manufacturer's recommendations.

3.05 METHODS OF GYPSUM BOARD APPLICATION

- A. Screw apply gypsum boards to supports.

3.06 INSTALLATION OF TRIM ACCESSORIES

- A. Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, fasten flanges to comply with manufacturer's recommendations.
- B. Attach to metal framing with screws. Clinch attachment to wall board not acceptable.
- C. Install corner beads at external corners.
- D. Install metal edge trim whenever edge of gypsum board would otherwise be exposed or semi-exposed, except where plastic trim is required. Provide type with face flange to receive joint compound.
 - 1. Install "L" bead where edge trim can only be installed after gypsum board is installed.
- E. Install control joints at locations indicated, or if not indicated, at spacings and locations required by referenced gypsum board application and finish standard, and

approved by the Architect for visual effect.

3.07 FINISHING OF DRYWALL

- A. Apply joint treatment at gypsum board joints (both directions); flanges of corner bead, edge trim, and control joints; penetrations; fastener heads, surface defects and elsewhere as required to prepare work for decoration.
- B. Apply joint tape at joints between gypsum boards, except where trim accessories are indicated.
- C. Finish gypsum wall board by applying the following joint compounds in 3 coats (not including prefill of openings in base), and sand between coats and after last coat:
 - 1. Embedding and first coat; ready-mix or job mixed setting type joint or taping compound.
 - 2. Fill (second) coat; ready-mix or job mixed topping compound.
 - 3. Finish (third) coat; ready-mix or job mixed topping compound.

3.08 PROTECTION

- A. Provide final protection and maintain conditions, in a manner suitable to Installer, which ensures gypsum drywall construction being without damage or deterioration at time of Completion.

END OF SECTION 09 22 00

SECTION 09 65 18 LUXURY VINYL TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Luxury vinyl floor tile and accessories.
- B. Related Sections:
 - 1. Section 096513 "Resilient Base and Accessories" for resilient base and reducer strips.

1.3 SUBMITTALS

- A. Submit shop drawings, seaming plan, coving details, and manufacturer's technical data, installation and maintenance instructions (latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061), for flooring and accessories.
- B. Samples for Verification: Submit the manufacturer's full range of colors.
- C. Submit Safety Data Sheets (SDS) available for flooring product, adhesives, patching/leveling compounds, floor finishes and cleaning agents.
- D. Submit sample warranty.
- E. Submit Installer Certification as Armstrong Commercial Flooring Certified installer.
- F. Closeout Submittals: Submit the following:
 - 1. Operation and Maintenance Data: Operation and maintenance data for installed products. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Warranty: Warranty documents specified herein.

1.4 QUALITY ASSURANCE

- A. Single-Source Responsibility: Provide types of flooring and accessories supplied by one manufacturer, including adhesives.
- B. Installer to be competent in the installation of Armstrong resilient solid vinyl tile flooring.
 - 1. Installers to be certified as Armstrong Commercial Flooring Certified Installer.
- C. Fire Performance Characteristics: Provide resilient tile flooring with the following fire performance characteristics as determined by testing material in accordance with ASTM test methods indicated below by a certified testing laboratory or other testing agency acceptable to authorities having jurisdiction:
 - 1. ASTM E 648 (NFPA 253) Critical Radiant Flux of 0.45 watts per sq. cm. or greater, Class I.
 - 2. ASTM E 662 (NFPA 258) (Smoke Generation) Maximum Specific Optical Density of 450 or less.
 - 3. CAN/ULC-S102.2 – Flame Spread Rating and Smoke Developed – Results as tested.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.6 PROJECT CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following time periods:
 - 1. 72 hours before installation.
 - 2. During installation.
 - 3. 72 hours after installation.
- B. Close spaces to traffic during floor tile installation.
- C. Close spaces to traffic for 48 hours after floor tile installation.

1.7 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Floor Tile: Furnish quantity of flooring units equal to 5% of amount installed, of each color of floor tile installed.

1.8 WARRANTY

- A. Submit a written (20) year warranty executed by the manufacturer, agreeing to repair or replace resilient flooring that fails within the warranty period.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Resilient tile flooring, adhesives and accessories to be provided by Armstrong Flooring, Inc.

2.2 RESILIENT TILE FLOORING MATERIALS

- A. Provide Natural Creations with Diamond 10 Technology: Natural Creations Wood Tones Luxury Solid Vinyl Plank Flooring manufactured by Armstrong Flooring Inc.
 1. Description: A layered construction consisting of a tough, clear, rigid vinyl wear layer protecting a high-fidelity print layer on a solid vinyl backing. Protected by a diamond-infused UV-cured polyurethane finish.
 2. Reference specification - ASTM F 1700, "Standard Specification for Solid Vinyl Tile", Class III, Type B – Embossed Surface. Meets requirements for size, squareness, thickness, thickness of wear layer, residual indentation, resistance to chemicals, resistance to light and resistance to heat.
 3. Pattern and Color: Reference Finish Plan drawings. Color selected from the range currently available from Armstrong Flooring Inc.
 4. Size: Tile to be 6" x 48".
 5. Wear layer thickness: 0.020
 6. Thickness: 1/8"/0.125 in.

2.3 ADHESIVES

- A. Provide Armstrong S-288 Flooring Adhesive under the flooring.

2.4 UNDERLAYMENT AND LEVELING COMPOUND

- A. ARDEX K 15 Premium Self-Leveling, Underlayment.
- B. Over existing tile; 1/8" thickness, ARDEX K 60 Rapid Setting Latex Smoothing and Leveling Compound.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including technical bulletins, product catalog, installation instructions, and product carton instructions for installation and maintenance procedures as needed.

3.2 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
- B. Visually inspect flooring materials, adhesives and accessories prior to installation. Flooring material with visual defects shall not be installed and shall not be considered as a legitimate claim.
- C. Examine subfloors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material. Address any concerns prior to installation of flooring.

3.3 PREPARATION

- A. Contractor to remove quarry tile flooring system, quarry tile base and inset entrance mat system where indicated. Contractor to repair remaining quarry tile flooring as required by manufacturer of leveling compound and flooring. Where Contractor removes quarry tile flooring and inset entrance mat system, install ARDEX K 15 underlayment. Where quarry tile is to remain, install ARDEX K 60 leveling compound. Install underlayment and leveling compound as required to meet flooring manufacturer's standards.
- B. If required by the flooring manufacturer, perform subfloor moisture testing.

3.4 INSTALLATION OF FLOORING

- A. Install flooring in strict accordance with the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061.
- B. Scribe, cut, and fit to columns, walls, aluminum entrance/window framing, etc.
- C. Roll with a 100-pound roller in the field areas. Refer to specific rolling instructions of the flooring manufacturer.

- D. Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times

3.5 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.

END OF SECTION 096518

SECTION 09 90 00 PAINTING

1.0 GENERAL

1.01 DESCRIPTION

- A. This Section includes surface preparation, painting, and finishing of exposed interior and exterior items and surfaces. Work includes:
 - 1. Surface preparation, priming, and finish coats specified in this section are in addition to shop priming and surface treatment specified under other sections.
 - 2. Labor, materials, scaffolding, tools, and equipment necessary to complete painting, filling, and sealing requirements of the project as indicated on the Drawings and as specified.
- B. Exterior items include, but are not limited to:
 - 1. Exposed lintels and ferrous metals.
 - 2. Gypsum board soffit.
 - 3. Other items as indicated on the drawings.
- C. Interior items include, but are not limited to:
 - 1. Refer to Room Finish Schedule, remarks and notes on Architectural Drawings for general areas requiring painting. Areas indicated as exposed shall be fully painted.
 - 2. Concrete unit masonry.
 - 3. Gypsum board walls, soffits and ceilings.
 - 4. Hollow metal frames.
 - 5. Exposed lintels above windows and doors.
 - 6. Railings.
 - 7. Finishes behind grilles, registers, and diffusers which might present a reflective type appearance.
 - 8. Miscellaneous pipes, ducts, valves, fitting, conduits, and insulation in areas without ceilings, except for mechanical rooms and chases. Also includes piping exposed under ceilings.
 - 9. Other items indicated on the drawings.
- D. Paint exposed surfaces whether or not colors are designated in Room Finish Schedule, except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.
- E. Painting is not required to prefinish items, finished metal surfaces, concealed surfaces, operating parts, and labels.
 - 1. Prefinish items not to be painted include the following factory-finished components:
 - a. Finished mechanical and electrical equipment.
 - b. Light fixtures.
 - 2. Concealed surfaces not to be painted include wall or ceiling surfaces in generally inaccessible areas.

3. Finished metal surfaces not to be painted include anodized or mill finished aluminum, stainless steel, or chromium plate.
4. Operating parts not to be painted include moving parts of operating equipment such as valve and damper operators, linkages, sensing devices, and motor and fan shafts.
5. Labels; do not paint over Underwriter's Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

F. Related Sections:

1. Priming structural steel.
2. Shop priming ferrous metal.
3. Priming of steel frames.

1.02 SUBMITTALS

- A. Submit product data, manufacturer's technical information, label analysis, and application instructions for each material proposed for use.
 1. List each material and cross-reference the specific coating and finish system and application. Identify each material by the manufacturer's catalog number and general classification.
- B. Submit samples, for verification purposes, of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate. Define each separate coat, including block fillers and primers. Use representative colors when preparing samples for review.
- C. Resubmit until required sheen, color, and texture are achieved.
 1. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
 1. Product name or title of material.
 2. Product description (generic classification or binder type).
 3. Federal Specification number, if applicable.
 4. Manufacturer's stock number and date of manufacturer.
 5. Contents by volume, for pigment and vehicle constituents.
 6. Thinning instructions.
 7. Application instructions.
 8. Color name and number.
- B. Store materials not in use in tightly covered containers in a well-ventilate area at a minimum ambient temperature of 45°F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.04 PROJECT CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50°F and 90°F.
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45°F and 95°F.
- C. Do not apply paint in snow, rain, fog, or mist, when the relative humidity exceeds 85 percent, at temperatures less than 5°F above dew point, or to damp or wet surfaces.
 - 1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying periods.

2.0 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer: Sherwin-Williams. Equal products by the following manufacturers are also acceptable provided that, in the opinion of the Associate Architect, appearance and manufacturing quality, meet specified standards.
 - 1. Benjamin Moore and Co.
 - 2. Duron.

2.02 EXTERIOR PAINT SCHEDULE

- A. Exterior Wood
 - 1. Two coats of exterior solid color 100% acrylic latex satin.

2.03 INTERIOR PAINT SCHEDULE

- A. Previously painted masonry :
 - 1. Spot Primer – A24W00300 Loxon concrete and Masonry Interior/Exterior Latex Primer White.
 - 2. Finish Coats – B66W00501 Pro Industrial Multi-Surface Acrylic Extra White.
- B. Wood siding and trim:
 - 1. Spot Primer – B42W00041 Exterior Latex Wood Primer White.
 - 2. Finish Coats – B66W00501 Pro Industrial Multi-Surface Acrylic Extra White.
- C. Gypsum board:
 - 1. Primer – B28W200 PrepRite 200.
 - 2. Finish coats – K45 Pre-Catalized Waterbased Epoxy.

3.0 EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. Do not begin paint application until unsatisfactory conditions have been corrected.
 - 1. Start of painting constitutes Applicator's acceptance of surfaces and conditions within a particular area.

3.02 PREPARATION

- A. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items in place that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
 - 1. Clean surfaces before applying paint. Remove oil and grease before cleaning. Schedule cleaning and painting so dust and other containments from the cleaning process will not fall on wet, newly painted surfaces.
- B. Clean and prepare surfaces to be painted in accordance with the manufacturer's instructions for each particular substrate condition and as specified.
 - 1. Prepare concrete unit masonry surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - 2. Clean non-galvanized ferrous metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC recommendations.
 - a. Touch up bare areas and damaged shop-applied prime coats. Wire-brush, clean with paint manufacturer recommended solvents, and touch up with the same primer as the shop coat.
 - 3. Clean galvanized surfaces with non-petroleum-based solvents so the surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- C. Carefully mix and prepare paint materials in accordance with manufacturer's directions.
 - 1. Maintain containers used in mixing and applications of paint in a clean condition, free of foreign materials and residue.
 - 2. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
 - 3. Use only paint manufacturer approved thinners. Comply with manufacturer's recommended limits.

3.03 APPLICATION

- A. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - 1. The number of coats and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.

2. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
 3. The term “exposed surfaces” includes areas visible when permanent or built-in fixtures, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection.
 4. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
 5. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, no specular black paint.
 6. Finish doors on tops, bottoms, and side edges same as exterior faces.
 7. Sand lightly between each succeeding enamel coat.
 8. Omit primer on metal surfaces that have been shop-primed and touch up painted.
- C. Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure and where application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
 2. Minimum coating thickness; apply materials at not less than the manufacturer’s recommended spreading rate.
- D. Electrical items to be painted include, but is not limited to, conduit and fittings.
- E. Apply block fillers to concrete masonry units at a rate to ensure complete coverage with pores filled.
- F. Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
- G. Match approved samples for color, texture, and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.04 CLEANING

- A. At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- B. Upon completion of painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

3.05 PROTECTION

- A. Protect work of other trades, whether to be painted or not, against damage by

painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.

- B. Provide “wet paint” signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

- 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.06 MAINTENANCE MATERIALS

- A. All remaining paints not used shall be marked and stored as directed by the Architect.

END OF SECTION 09 90 00

SECTION 26 00 00 ELECTRICAL SPECIFICATIONS

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide all labor, material, equipment, services and inspection necessary for the proper completion of all electric work.
- B. Coordinate location of electrical item with equipment installation requiring electric service.
- C. Contractor is responsible for relocating all existing items that interfere with the installation of new work. The drawings do not show every item that must be removed and disconnected by the Contractor. Unless otherwise noted, Contractor shall deliver all removed items to the Owner. Service to existing equipment that remains shall be maintained or reconnected.

1.02 WORK NOT INCLUDED

- A. The following work shall be provided by the Owner directly or through a separately negotiated contract:
 - 1. Primary Service Transformers

1.03 PERMITS AND FEES

- A. Unless otherwise excluded in the Contract Documents, Contractor shall secure and pay for all other permits and governmental fees, bonds, licenses and inspections necessary for the proper execution and completion of its work.
- B. The Contractor must give notice and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the work.
- C. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, shall promptly notify in writing, and any necessary changes will be arranged.
- D. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and fails to give prior notice, Contractor shall assume full responsibility for, and shall bear all costs associated with correcting the work.

1.04 EXAMINATION OF SITE

- A. Certain existing conditions may affect the manner or sequence of the performance of the work. Existing services, structures and operating schedules may need to be reviewed to facilitate the installation of the work.
- B. Contractor should visit the site of the proposed project. After the Contract is signed, no allowance will be made for lack of knowledge of project conditions.
- C. The Contractor shall verify and reconcile work required by the Contract Documents with conditions at the site.

- D. Should the Contractor note any discrepancies during the bidding period, shall notify immediately, in writing, to permit issuance of an addendum to prevent misunderstandings at a later date.

1.05 STANDARDS OF QUALITY

- A. The Contractor shall provide work of the highest quality, conforming to the accepted practices and standards of the trades involved. Further definition of quality is given by reference to various laws, codes, standards and regulations.
- B. Any law, code standard or regulation referred to in other Sections of Division 16, is included in its entirety as a part of these Specifications.
- C. Listed below are titles and abbreviations that may be used in the Specification:
 - 1. National Electrical Code (NEC).
 - 2. National Electrical Manufacturers Association (NEMA).
 - 3. Underwriters' Laboratories (UL).
 - 4. National Fire Protection Association (NFPA).
 - 5. Institute of Electrical and Electronic Engineers (IEEE).
- D. The following codes apply to this work:
 - 1. National Electrical Code.
 - 2. State Building Code.
 - 3. Americans With Disabilities Act Accessibility Guidelines (ADAAG).
- E. Work must be performed by licensed Contractors as required by local and state codes.
- F. All equipment, fixtures, devices, and wiring shall be listed by Underwriters' Laboratories.

1.06 CONTRACT DRAWINGS

- A. Drawings are schematic and show approximate locations and extent of work. Exact locations must be coordinated with other trade Contractors and verified in the field.
- B. Significant deviations from drawings must be approved in writing.
- C. Make minor changes in location which do not require additional labor or material, up to the time of roughing-in, without additional cost.
- D. If a conflict occurs between the drawings and specifications, the Contractor shall immediately call it to the attention of the Architect.

1.07 GUARANTEE AND WARRANTIES

- A. Provide one full year guarantee from date of substantial completion on all equipment and work performed.
- B. Repair and/or replace any defective work, material or equipment within (1) year period.

END OF SECTION 26 00 00

SECTION 26 01 26 ELECTRICAL TESTS, ADJUSTMENTS AND INSPECTIONS

1.0 GENERAL

1.01 DESCRIPTION

- A. Contractor shall conduct such tests and adjustments of equipment as required by Associate or necessary to verify performance requirements. Contractor shall pay all professional engineering fees involved in required testing of equipment.
- B. Contractor to perform a megger test at 1,000 volts on all power conductors.
- C. All special systems shall be checked out and tested by Certified Representative of Equipment Supplier. A report shall be submitted indicating results of such final check out and test.
- D. Upon completion of electrical work, test the full load phase balance of the entire electrical system.
- E. Any panelboard requiring circuit changes for balance, shall have properly revised changes made in the panel directory.
- F. Verify proper rotation of motors during load balance and final adjustments.
- G. Test lines before covering with new construction.
- H. Tests shall include:
 - 1. Proper operation of lights and equipment.
 - 2. Continuity of conduit system.
 - 3. Insulation leakage and impedances.
 - 4. Ground system resistance.
 - 5. Any special system tests described in other Sections of these Specifications.
- I. Contractor shall demonstrate that all electrical systems are operating properly. It also shall make available upon request, the following information: feeder and branch wiring megger tests, grounding resistance measurements, load balance and special system tests.

1.02 ARRANGEMENTS FOR INSPECTION

- A. On-going inspections shall be performed by the local code authority having jurisdiction.

1.03 CERTIFICATE

- A. Furnish approved Certificate of Final Inspection.

2.0 PRODUCTS

Not Applicable

3.0 EXECUTION

Not Applicable

END OF SECTION 26 01 26

SECTION 26 05 26 SYSTEM GROUNDING REQUIREMENTS

1.0 GENERAL

1.01 DESCRIPTION

- A. Contractor shall ground the electrical service and distribution system, including all equipment, raceways, receptacles, and motors.
- B. Ground metering equipment and base in accordance with the requirements of the local utility company.

1.02 QUALITY ASSURANCE

- A. National Electrical Code Article 250.

1.03 EQUIPMENT GROUNDING CONDUCTOR

- A. An equipment grounding conductor (green ground wire) shall be included with all circuit conductors over 100 volts. Size in accordance with NEC Table 250-95, except not smaller than #12 AWG for power and lighting circuits and #14 AWG for control circuits.

1.04 NEUTRAL CONNECTION

- A. The grounding conductor shall be connected to the neutral in only two locations – on the supply side of the service disconnect means and on separately derived systems. Because the ground is lost through the transformer, it must be re-established by use of a grounding conductor which connects the transformer secondary neutral point to the preferred ground connection.
- B. The neutral of the service entrance shall be bonded to the enclosure by a main bonding jumper. The neutral of the transformer of a separately derived system shall also be bonded by a main bonding jumper to the transformer enclosure.

1.05 WIRED GROUND CONNECTIONS

- A. Because the conduit system can provide a lower impedance path than the wired equipment grounding system, the wired equipment grounding system shall connect to the metallic conduit ground system in EVERY accessible panel, junction box, pull box, fixture housing, motor terminal box, and other metallic enclosures as follows:
 - 1. Lighting and power panels shall have a ground assembly, that has the same number, size and type of anti-turn solderless lugs that the neutral assembly has. This grounding assembly shall be factory bonded to the panel tub and shall have the screwdriver slots facing the front of the panel.
 - 2. Junction and pull boxes shall be bonded by the use of UL listed grounding screws or lugs. If there are more than four ground wires entering a box, a ground assembly of the same type used for panelboards shall be bonded securely to the enclosure. Note that NEC requires that an equipment grounding conductor passing through any accessible location be bonded to that enclosure. Self-tapping sheet metal screws may not be used.

3. In enclosures not requiring a ground assembly, all ground conductors entering an enclosure shall be connected together and a pigtail the size of the largest conductor bonded to the enclosure with an attachment used for no other purpose.
4. General use outlet boxes shall be bonded by the use of a ground screw in the threaded ground tap.
5. Motor terminal boxes shall be bonded by the use of a ground lug or by drilling and tapping a hole for a ground screw. Remove paint prior to making the connection.
6. Lighting fixtures shall be grounded by the use of a pigtail fastened on bare metal that is free of paint.
7. Use equipment grounding conductors on all convenience outlets. Outlet box attachment screws shall not be used as a ground.
8. In any enclosure that has a grounding assembly, all ground wires shall be connected to the assembly. Provide connection lugs or terminals for the ultimate number of wires to be connected to the assembly. Use a separate connection for each wire.
9. Paint and any other material shall be removed from ground connections so the connection is metal to metal.

2.0 PRODUCTS
Not Applicable.

3.0 EXECUTION
Not Applicable.

END OF SECTION 26 05 26

SECTION 26 05 53 ELECTRICAL IDENTIFICATION

1.0 GENERAL

1.01 DESCRIPTION

- A. Nameplate on controller and disconnect switches shall indicate source, voltage and load served.
- B. Branch circuit panelboards:
 - 1. Identify panel designation on directory card within the panel.
 - 2. Fill out branch circuit directory indicating circuit number and area served, rooms, group of rooms, lighting, convenience outlets, motors, etc. Card index shall be neatly typed.
 - 3. Update or replace branch circuit directory in existing panelboards in areas of alteration to reflect any modifications made within the scope of this project.
 - 4. Branch circuit phase conductor color format shall be permanently identified inside each panelboard.
- C. Identify communications and signaling system wiring and branch circuit wiring by circuit number in panels wiring gutters by means of permanent durable wire markers wrapped around or fastened to conductors. This shall be done concurrently with pulling of conductors.

2.0 PRODUCTS

2.01 MATERIALS

- A. Nameplates shall be laminated phenolic with black surface (red surface for emergency) and white core. Use 1/16" thick material for plates up to 2"x4" and 1/8" thick for larger sizes. The lettering shall be condensed Gothic with space between the lines equal to the width of the letters. Use 1/4" minimum height letters on the small plates increasing the size proportionately to plate size.
- B. The lettering on the plate shall indicate the name of equipment, the specific unit number, voltage, phases, which panel or switchboard the equipment is served from, and any other reference data pertinent to the operation. Names and numbers shall coincide with those listed on the drawings. Sample: Panel 3A; 277/480 V, 3 phase, 4 wire, served from unit substation USI.

3.0 EXECUTION

3.01 INSTALLATION

- A. Nameplates shall be secured with screws, one on each end.

END OF SECTION 26 05 53

SECTION 26 09 00 CONDUIT AND FITTINGS

1.0 GENERAL

1.01 DESCRIPTION

- A. This specification section covers common conduit systems, boxes, firestopping and sleeves. Where other methods are specified under separate sections for specific applications, the specific application requirements shall govern.
- B. Unless otherwise noted, all conductors shall be enclosed in a continuous, grounded raceway system.

1.02 QUALITY ASSURANCE

- A. Underwriters' Laboratories (UL) Label.
- B. ANSI C80 Specification.
- C. Use galvanized steel conduit. No aluminum conduit is permitted.

1.03 MINIMUM SIZE

- A. $\frac{3}{4}$ " wiring size, typical everywhere.

1.04 ACCEPTABLE MANUFACTURERS

- A. Steel conduit: Allied, Steel Duct, Omega, LTV, or approved equal.
- B. Non-metallic conduit: Carlton, Certainteed, Condux, or National Pipe.

2.0 PRODUCTS

2.01 MATERIALS

- A. (Use only conduit types listed) Conduit - Rigid or Intermediate Grade Galvanized Threaded. Application - restrictions (not to be used in):
 - 1. Corrosive atmospheres.
- B. Conduit - Rigid Aluminum threaded. Application - restrictions (not to be used in):
 - 1. Corrosive atmospheres.
 - 2. In concrete.
- C. Conduit - Thinwall EMT. Application - restrictions (not to be used in):
 - 1. Poured concrete.
 - 2. Exposed in mechanical equipment or other equipment/process rooms below 48".
 - 3. Hazardous or corrosive atmosphere.
 - 4. Not to be used for medium voltage (2001 volts or higher) cable.
- D. Conduit - Flexible Metal (Greenfield type), galvanized steel. Application - use limited to:
 - 1. Connection to lighting fixtures; not over 6 ft. in length.
 - 2. Connections to controls on dynamic equipment (except motors) and transformers.
 - 3. In existing walls for remodel projects, vertical drops to outlets and switches; no more than 2 ft. out the top of the wall.

- E. Conduit - Liquidtight Flexible Metal. Application - use and limitations:
 - 1. Connections to all motors.
 - 2. Connections to controls on dynamic equipment, transformers, etc. indoors in wet locations.
 - 3. Use not permitted where subject to physical damage.

2.02 CONDUIT SIZES

- A. Interior conduit and fittings; minimum conduit size for power circuits shall be $\frac{3}{4}$ ". Minimum conduit sized for control wiring shall be $\frac{3}{4}$ ".

2.03 CONDUIT FITTINGS

- A. Fittings and workmanship shall assure electrical continuity. All conduit systems in poured concrete shall be concrete tight.
- B. Application of bushings, locknuts and insulated fittings shall comply with NEC requirements.
- C. Use conduit fittings as manufactured by Efcor, Steel City, Raco, Midwest, Appleton, ETP or T&B, equal to the following catalog numbers:
 - 1. Rigid conduit;
 - a. All fittings, couplings and connectors shall be threaded type.
 - b. Grounding bushings, malleable iron; insulated; Steel City BG-801; Midwest Series GLL.
 - 2. EMT;
 - a. Fittings shall be all steel, compression type, concrete tight.
 - b. Compression type couplings; Midwest series 660S; Steel City TK111; Appleton TWC50CS.
 - c. Compression type connectors; Midwest Series 650; Steel City TC111; Appleton TW50CS.
 - 3. Flexible Conduit;
 - a. Malleable iron, "squeeze" type, non-insulated; Midwest series 1708; Steel City XC-901; Appleton 7481V. (For lighting fixture whips only - all steel or die-cast screw-in connector; Midwest 771; Steel City XC-241; Appleton SGC-50DC).
 - 4. Liquid-tight conduit;
 - a. Steel or malleable iron; Midwest Series LT; Steel City LT-100; Appleton ST.

2.04 BOXES

- A. Junction boxes and pull boxes shall be code gauge galvanized steel with multiple screw fasteners and covers.
- B. Boxes not otherwise accessible in ceilings and walls shall be made accessible by installation of hinged door access panels.
- C. Outlet boxes all steel construction with galvanized or plated finish or otherwise all metal, by Steel City, Appleton, Crouse Hinds, R&S or Raco.
 - 1. Fixture outlet boxes 4" square or octagonal, 2-1/8" deep, with 3/8" fixture studs. Equal to Steel City Series 54171; Series 52171 with FE-421 stud.

- Fixtures weighing more than 50 lbs. shall be supported independently of the outlet box.
2. Flush mounted device outlet boxes shall be minimum 4" square. Provide extension rings as required.
 3. Device rings in finished masonry or tile walls shall be square corner masonry type with no extended ears, to allow flush mounting of plates.
 4. Surface mounted device boxes shall be cast "FS" type or special surface mounted boxes for use with surface raceway systems.
- D. Provide water tight boxes, slip expansions and bonding jumpers where dictated by construction conditions.
- E. Terminations at boxes shall be secured by locknuts or approved bushings.

2.05 SURFACE METAL RACEWAYS

- A. Snap-on cover types by Wiremold or Walker mold with prime gray finish (enamel finish coat to match room finishes in remodel areas). Application - permitted only when specifically shown on the drawings or when approved in writing by the Architect.

2.06 SLEEVES AND OPENINGS

- A. Sleeves and formed openings shall be placed in walls, partitions, floor slabs and poured concrete roof decks for the passage of conduit, cable, and wireway. Sleeves and formed openings are not required:
1. In floor slabs on grade.
 2. Where conduit is installed before the wall, partition or slab is constructed.
 3. Openings are cut for conduit passage and patched with equal or comparable material to close the space around the conduit.
 4. In stud and gypsum board or plaster walls and partitions which are not fire rated.
 5. For conduit passing thru masonry walls and partitions and stud and gypsum board or plaster walls and partitions. Sleeves are required however, for which expansion, contraction and other movement can be expected.
 6. In core drilled openings in solid concrete not requiring water protection. Sleeves are required, however, at core drilling thru hollow pre-cast slabs and concrete block walls, to facilitate containment of required firestopping material.
 7. In large floor openings for multiple pipe and duct risers which are within a fire rated shaft, unless the opening is to be closed off with concrete or other material after conduits are set.
- B. Sleeves for passage of conduit and cables shall be schedule 40 black steel pipe or galvanized rigid conduit. Rectangular sleeves for cables and wireway shall be 18-gauge galvanized steel in poured concrete floors, walls and roof decks; 26-gauge galvanized sheet steel in other than poured concrete.
- C. Sleeves shall be sized to afford 1/4" to 3/4" clearance space.

2.07 FIRESTOPPING

- A. Firestopping at penetrations of conduit and raceway thru fire rated walls, ceilings, floors and partitions shall be provided by means of a firestopping system to maintain the required fire resistive rating of the floor or wall. Firestopping systems shall conform to ASTM E814 and E119 (UL 1479, UL 263). Shop drawings shall be submitted for approval defining UL System numbers, as published in the UL Fire Resistance Directory for the various conditions, details of the installation and description of the materials and components.
- B. Firestop fittings shall be provided with wireway for installation in fire rated floors, walls and partition.
- C. Where conduit, cable and raceway penetrate walls and floors other than those required to be fire rated, the annular space between the sleeve, core drilling or opening and the conduit, cable and raceway shall be closed to retard the passage of smoke.
- D. Firestopping systems and materials shall be manufactured by 3M, Dow Corning, Hilti, Specified Technologies, Flame Stop, Tremco or other approved manufacturer. Materials shall be in the form of caulk, putty, sealant, intumescent wrap strip and foam, applied in conjunction with sleeves, damming and fill materials and associated products.

2.08 ESCUTCHEON PLATES

- A. Escutcheon plates shall be split-ring chromium plated pressed steel. Plates shall be sized to cover the surface penetration and sleeve. Plates shall be installed on exposed piping in finished rooms and areas where conduits penetrate walls, floors, ceilings or overhead structure.

3.0 EXECUTION

3.01 INSTALLATION

- A. Conduit shall be run overhead, concealed in all finished areas and elsewhere unless specifically indicated. All conduit shall run parallel building lines.
- B. Conduit shall be run overhead and shall not be run in concrete slabs unless specifically indicated on the drawings. The 90-degree elbow and stub-up shall be galvanized rigid steel.
- C. Conduit crossing building expansion joints shall have expansion provisions with grounding continuity; use special expansion fittings or other NEC approved method.
- D. Do not install wall-mounted boxes back-to-back in opposite sides of wall; in stud walls, boxes shall be on opposite sides of studs.
- E. Work shall be so planned as to:
 - 1. Minimize the number of offsets and junction boxes. For feeder conduits, use all long radius conduit bends or accessibility located large junction boxes with screw covers.
 - 2. Generally run conduit and conductors as high as practicable.
 - 3. Coordinate activity in advance to avoid interference with other trades.
 - 4. Provide access to all junction and pull boxes.

5. Maintain 6" from conduit to paralleled hot water piping and 4" from cross piping.
- F. Secure feeder conduit to basic structural elements with galvanized strap hangers and clamps; use of trapeze type hangers is encouraged for multiple conduits where space will permit. Galvanized metal clamps and screws may be used for attaching and supporting branch circuit conduit. Non-metallic fasteners shall not be used except plastic inserts may be used in concrete for small conduits. Vertical conduits shall be supported at each floor by clamps.
- G. During construction temporarily cap open ends of conduit. Caution trades to take special care of runs in concrete slabs during pouring.
- H. Empty conduit installed for communications use or for future systems shall have an insulated pull wire or heavy nylon cord inserted for use in pulling wires.
- I. Firestopping systems and materials shall be applied at penetrations to form rated systems to restore the fire resistive rating of the floor, floor-ceiling, roof-ceiling or wall assembly. Components and installation shall be conformance with the manufacturers instructions and the appropriate UL systems listed in the Fire resistance Directory.
- J. Where firestopping is not required, the annular space between the sleeve, core drilling or opening and the conduit, cable and raceway shall be closed with caulking to retard the passage of smoke.
- K. Where conduits requiring no pipe sleeves pass thru floor, wall or partition, the annular space shall be closed with materials and methods compatible with the wall or partition material (Type M masonry grout, drywall joint compound, plaster, etc.).
- L. Conduits, wire and cables entering from outside the building shall be sealed water and moisture tight. Seal between conduit and sleeves, conduits and core drilled holes and around conductors inside conduits. Provide cast iron pipe or schedule 40 galvanized steel conduit sleeves in exterior walls below grade, with intermediate wall stop and anchor collar set in place before concrete pouring. Sleeve shall be a part of the sealing assembly. When the wall opening is core drilled the wall sleeve may be omitted. A mechanically compressed rubber sealing assembly equal to Thunderline Corp. "Link-Seal" shall be placed in the annular space between conduit and sleeve or core drilling.
- M. Unless noted otherwise on the drawings, a maximum of 8 conductors shall be installed in a branch circuit conduit. This maximum is a count of all phase and neutral conductors only - ground conductors are not counted when determining maximum fill for this purpose.

3.02 LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LTFMC) INSTALLATION

- A. Provide liquid-tight flexible metal conduit (LTFMC) for the following:
 1. Motors and the motor branch circuit conduit (or motor disconnect switch where present)
 2. Damper operators and associated conduit or J-box.
- B. Install a wired equipment grounding conductor with appropriate terminations in all LTFMC. Grounding wire shall be sized in accordance with NEC Article 250, except #12 AWG Cu shall be the smallest size ground wire permitted. Drill and

tap a hole in motor pigtail box and other enclosures if a suitable ground lug attachment means is not provided. Spring steel box grounding clips are not acceptable attachments.

END OF SECTION 26 09 00

SECTION 26 27 00 OUTLET, JUNCTION AND PULL BOXES

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide boxes for devices, lighting fixtures, motors and equipment connections, system equipment connections, and special outlets. Provide pull boxes where more than (3) 90-degree bends are required or if conductors are pulled farther than 100 ft.

1.02 QUALITY ASSURANCE

- A. Underwriters' Laboratories (UL) label.

1.03 ACCEPTABLE MANUFACTURERS

- A. Appleton, Racco, Steel City, Thomas & Betts, National Electric or Crouse-Hinds.

2.0 PRODUCTS

2.01 BOXES

- A. All outlet boxes to be galvanized pressed steel of standard knockout type. Covers to be secured with screws.
- B. Lighting outlet boxes to be standard 4" octagonal, 1-1/2" minimum deep boxes with 3/8" fixture mounting stud. Outlet boxes having more than two conduits, or when 3/4" conduit is used, to be standard 4" square boxes 1-1/2" deep or deeper as might be required to accommodate the wiring contained therein.
- C. Flush device boxes in masonry walls to be masonry boxes designed for the purpose, or 4" square boxes with raised covers designed for masonry.
- D. Wiring device boxes for surface conduit work and those located in potentially damp areas to be FS series cast boxes. Exterior exposed boxes to be weatherproof or airtight with gaskets.
- E. Flush device boxes in plaster or drywall construction to be 4" square, 2-1/8" deep boxes with plaster covers or gangable 2-1/2" deep boxes. Shallow 1-1/2" deep gangable boxes may be used only in demountable partitions and in other walls too thin for standard depth boxes.
- F. Boxes shall be large enough to accommodate the size and number of conduits secured thereto and the number and size of wiring conductors.
- G. All fittings, covers and hardware shall be galvanized steel.
- H. Boxes must be NEMA type approved for the environmental conditions prevailing.

3.0 EXECUTION

3.01 INSTALLATION

- A. Install plaster rings where boxes are concealed in drywall.

- B. All boxes to be rigidly supported from building structure independent of the conduit system. Boxes to be screwed to studs; no “caddy clips” will be permitted. Boxes cast into masonry or concrete are considered to be rigidly supported.
- C. Flush boxes must finish within ¼” of surface of non-combustible materials. Boxes shall not project beyond finished surfaces.
- D. Flush-mounted fixtures in ceilings to have branch circuit conduit terminated in a junction box above ceiling, but accessible through ceiling opening and located at least one foot away from the fixture. Use 3/8” flexible steel conduit connection between junction box and fixture housing. Pre-wired lighting fixtures may have the branch circuit conduit terminate in the fixture junction box provided the box is sized sufficient for the wire and UL labeled for 75 Deg. C wire.
- E. Boxes installed in masonry walls shall be placed with top or bottom of box at the nearest block joint.
- F. Flush device and outlet boxes in walls are not to be installed back-to-back. Offset for sound isolation.

END OF SECTION 26 27 00

SECTION 26 27 26 WIRING DEVICES AND COVERPLATES

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide wiring devices as indicated, including cover plates.
- B. Wiring devices must be NEMA type approved for the environmental conditions prevailing.

1.02 QUALITY ASSURANCE

- A. Underwriter's Laboratories (UL) label.
- B. NEMA Standards as applicable.

1.03 ACCEPTABLE MANUFACTURERS

- A. Hubbell, Pass & Seymour, Arrow-Hart, G.E., Bryant or Leviton.

1.04 EQUIPMENT TERMINATION

- A. Prior to rough-in, Contractor shall verify termination requirements, including, but not limited to, plug, receptacle configuration.

2.0 PRODUCTS

2.01 MATERIALS

- A. Commercial specification grade receptacles shall be listed by Underwriters Laboratories, Inc. and shall be minimum 20 ampere, 125 volt, NEMA configuration.
- B. Toggle-type AC switches shall be listed by Underwriters Laboratories, Inc. and shall be 20 amperes, 120/277-volt AC.
- C. Provide a device plate to suit each particular application. Cover all empty outlet boxes with a blank plate. Cover plate shall be manufactured by Pass and Seymour, Hubbell, Arrow Hart, Bryant, G.E., Leviton or Mulberry; Taymac is an acceptable manufacturer for weatherproof non-metallic coverplates.

2.02 PLATES

- A. Plates for flush devices in interior partitions shall be Specification Grade stainless steel Type 302/304.
- B. Plates for flush devices in concrete block walls shall be Specification Grade stainless steel Type 302/304 "Jumbo" plates.
- C. Plates for devices in surface fittings shall be cadmium plated steel surface covers. Covers to fit without overlap and have round corners.
- D. Plates for heavy duty outlets and for specialty switches and outlets required for auxiliary systems shall be stainless steel.
- E. All metal plates shall be grounded.
- F. Plates for future system outlets shall be blank covers matching device plates in quality and finish.

- G. Weatherproof plates shall be Hubbell Cat. No. WP8M one-gang, cast aluminum, gasketed with single latched lift cover suitable for duplex receptacle, NEMA 3R rating raintite while in use.

3.0 EXECUTION

3.01 INSTALLATION

- A. Switches shall be installed adjacent to strike side of door openings. Prior to roughing in, Contractor shall verify which side of the door opening is the strike side. Devices and cover plates to be absolutely plumb and horizontal with no visible gaps around edge of plates. Install top and bottom of box at nearest block joint.
- B. Install cover plates on all devices.
- C. Install galvanized, blank, screw or hinge covers on all junction boxes.
- D. Install gang plates on gang devices.
- E. Install engraved flush switch plates at all locations indicated on the Drawings.
- F. Connect green insulated ground wire to each device grounding terminals. Wire to panel ground bar.

3.02 COORDINATION

- A. Contractor shall verify conductor ampacity/voltage and NEMA type plug configuration of equipment being connected with Equipment Supplier to insure proper final connection.

END OF SECTION 26 27 26

SECTION 26 28 00 DISCONNECT SWITCH

1.0 GENERAL

1.01 DESCRIPTION

- A. Provide disconnect switches, fused and non-fused, where indicated on the drawings and in the specifications, and where required by the NEC.

2.0 PRODUCTS

2.01 MATERIALS

- A. Disconnect switches shall be listed by Underwriter's Laboratories and shall be manufactured by Square D, Siemens, Westinghouse, G.E. or Cutler Hammer. All starters and disconnect switches shall be of the same manufacturer unless otherwise approved.
- B. Switches shall be Heavy-Duty Type, NEMA 1 enclosures, non-fused except where fuses are specified or required to protect wiring from overload; provide raintight NEMA 3R type enclosures for outdoor applications unless otherwise noted.
- C. Disconnect switches shall be quick-make, quick-break, externally operated with door interlocked with operating handle. Provide solid neutral and ground bars where indicated or where required by the application.
- D. The fuse holders shall be designated for Class "R" rejection type fuses.
- E. Refer to "Electrical Identification" Section for nameplates requirements.

3.0 EXECUTION

3.01 INSTALLATION

- A. Mount top of wall mounted disconnect switch 5'-0" above floor where space permits.
- B. Coordinate location of disconnect switches to avoid interference with other equipment and trades.

END OF SECTION 26 28 00

SECTION 26 51 00 LIGHTING FIXTURES AND LAMPS

1.0 GENERAL

1.01 DESCRIPTION

- A. Refer to schedule on the drawings for information on fixtures, lamps and manufacturers. Fixtures of manufacturers other than those listed, if offered, shall be on a substitute basis and so listed as a substitute with the bid.
- B. The catalog numbers listed on the schedule do not necessarily have complete prefix and suffix designations for placing the fixture order. The Contractor shall verify these numbers and include in his base bid the necessary plaster frames, trim, mounting hardware, etc. to achieve a coordinated installation.
- C. Fixtures, ballasts and individual components shall bear UL label.

2.0 PRODUCTS

2.01 MATERIALS

- A. Schedule – reference drawings.
- B. Lamp holders shall be highest quality ETL approved.
- C. Where located outside or subject to effect from cold, HID and fluorescent ballasts shall be low temperature type.
- D. All recessed incandescent fixtures shall be furnished with an automatically resetting thermal protection device.

3.0 EXECUTION

3.01 INSTALLATION

- A. Fixture Hanging and Supporting:
 - 1. Support each surface mounted or suspended fixture in a minimum of two locations and where fixtures are in a continuous row, they shall be fastened together on each end in two places.
 - 2. Recessed fixtures shall be supported at all four corners. Additionally, securely fasten each fixture to the ceiling framing member by mechanical means such as bolts, screws, rivets or approved clips; install a minimum of one on each of the four sides of fixture. This Contractor shall coordinate fixture locations and fixture weight with the trade installing the ceiling system to assure adequate hangers are installed to support the weight of the ceiling plus twice the weight of each fixture.
 - 3. Surface or flush fluorescent fixtures in ceilings of the suspended lay-in type shall be installed so that the long dimension of the fixture is supported on the main support members of the ceiling system.
- B. Alignment and Cleaning:

1. Fixtures shall be mounted straight, level and true to the building lines. Warped or damaged fixtures shall be replaced or repaired to the satisfaction of the Architect and Owner.
 2. Immediately preceding the final inspection, this Contractor shall thoroughly clean all fixtures of dust, dirt, grease, fingermarks, etc. All lamps shall be operating at the time of Owner's acceptance.
 3. Coordinate location of fixtures carefully with the Architectural reflected ceiling plan. Verify that no surface mounted fixture interferes with door swings.
- C. Battery Powered Emergency Lighting Fixtures:
1. Each unit shall consist of a battery, lights, lamps, automatic controls and connection to the lighting circuit ahead of all switches. Operation shall be such that the battery is maintained constantly charged under normal conditions; upon a loss of normal power, the light shall be switched on and the operating current obtained from the stored energy.
 2. Units shall be UL approved. Refer to drawings for mounting, capacity and manufacturer.
 3. Fasten battery operated emergency lighting units to wall or ceiling using factory-furnished bracket and make rear concealed electrical connection.
 4. Electric source shall be from unswitched active lighting circuits only, to assure that battery will be charged from an active circuit.

END OF SECTION 26 51 00

SECTION 26 60 00 EQUIPMENT HOOK-UP AND FINAL CONNECTION

1.0 GENERAL

1.01 DESCRIPTION

- A. Contractor shall provide rough-in and final connection for each piece of equipment requiring power, including, but not limited to, the following:
 - 1. Mini Split HVAC
 - 2. Condenser Units
 - 3. Lighting

1.02 COORDINATION

- A. This Contractor is responsible for coordinating the electrical requirements of equipment with the supplying Contractor or Manufacturer.

END OF SECTION 26 60 00

SECTION 26 70 00 CONTROL AND INTERLOCK WIRING

1.0 GENERAL

1.01 SCOPE

- A. Provide all power and control and interlock wiring and conduit, relays, control transformers to provide complete and operating control systems.
- B. Systems shall be wired to perform the operation required.

1.02 WIRING DIAGRAMS

- A. It will be the responsibility of the Security Contractor to provide a full set of detailed wiring diagrams for the use of the Electrical Contractor.

1.03 ADDITIONAL REMARKS

- A. Electrical Contractor will be responsible for providing any additional relays, auxiliary contacts, control power transformers and fuses required to affect the proper sequence of operation of each equipment subsystem.

END OF SECTION 26 70 00