

PROJECT MANUAL

DEFIANCE COUNTY EAST BUILDING AND CANOPY REROOF 1300 East Second Street Defiance, Ohio 43512

November 12, 2021

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Registered Architect #9482



Project C1-4772

PROJECT MANUAL CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS

Division 00 – Procurement and Contracting Requirements

00 1113	Advertisement for Bids
00 2113	Instructions to Bidders
00 4114	Bid Forms
00 4313	Bid Guaranty and Contract Bond
00 4343	Hourly Rates and Markups
00 4519	Non-Collusion Affidavit
00 4535	Nondiscrimination Agreement
00 6113	Contract Bond
00 6246	Property Tax Affidavit
00 6277	Construction Contract Tax Exemption Certificate
00 6520	Contractor's Affidavit of Payment of Debts and Claims and Release of Liens
00 7200	General Conditions
00 7300	Supplementary Conditions
00 7343	Wage Rate Requirements

SPECIFICATIONS

GENERAL REQUIREMENTS

Division 01 – General Requirements

01 1000	Summary of Work
01 2200	Unit Prices
01 2900	Payment Procedures
01 3100	Project Management and Coordination
01 3200	Construction Progress Documentation
01 3300	Submittal Procedures
01 4000	Quality Requirements
01 4210	Abbreviations
01 5000	Temporary Facilities and Controls
01 6000	Product Requirements
01 7000	Execution Requirements
01 7700	Closeout Requirements

FACILITY CONSTRUCTION

Division 02 – Existing Conditions

02 4119	Selective Demolition
---------	----------------------

Division 06 – Wood, Plastics, and Composites

06 0573 Wood Treatment

06 1050 Miscellaneous Rough Carpentry

Division 07 – Thermal and Moisture Protection

07 5000 Membrane Roofing

07 7100 Roof Specialties

07 9200 Joint Sealants

END OF CONTENTS

ADVERTISEMENT FOR BIDS

Sealed Bids will be received by the Board of Defiance County Commissioners, c/o Ms. Stephanie Metz, in their office, 500 Court Street, Suite A, Defiance, Ohio 43512, until **11:00 a.m. EST, Monday, December 20, 2021**, when they will be opened and read, for the **Defiance County East Reroof**, located at 1300 E. Second Street, Defiance, Ohio 43512, in accordance with the Drawings and Specifications prepared by Beilharz Architects, Inc.

Contract Documents may be reviewed without charge during business hours at the office of the Architect and various plan rooms obtaining documents. Contract Documents may be purchased from Newfax Corporation, 333 W. Woodruff, Toledo, OH 43604, 419-241-5157 or 800-877-5157, www.newfaxcorp.com, at the cost of reproduction and shipping. Addenda will be distributed to registered plan holders only.

All bids must be accompanied by a Bid Guaranty in the form of either a Bid Guaranty and Contract Bond for the full amount of the bid (base bid plus all add alternates) or a certified check, cashier's check, or an irrevocable letter of credit in an amount equal to 10% of the bid (base bid plus all add alternates), in accordance with the Instructions to Bidders.

Each Contractor will be required to furnish an Affidavit of Contractor or Supplier on Non-Delinquency of Personal Property Tax (O.R.C. 5719.042).

Prevailing Wage Rates, as published by the Ohio Department of Commerce, shall be complied with throughout the entire project in accordance with O.R.C. 4115.03 et. seq.

No bidder may withdraw its bid for a period of 60 days after the opening thereof. The Owner reserves the right to waive irregularities in bids, to reject any or all bids, and to conduct such investigation as necessary to determine the responsibility of any bidder.

BY ORDER OF: DEFIANCE COUNTY COMMISSIONERS
 DEFIANCE, OHIO

Advertising Date: November 30, 2021.

This notice is posted on the Defiance County web site at www.defiance-county.com; click on County Information and Public Notices.

INSTRUCTIONS TO BIDDERS

1. EXAMINATION OF CONTRACT DOCUMENTS AND PROJECT SITE:

- A. Each Bidder shall visit the site prior to the bid date and shall be responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the site, the character and extent of the existing work within or adjacent to the site, and any other work being performed thereon at the time.
 - 1. Obtain all relevant information of conditions relating to transportation, handling and storage of materials, availability of electric power, utility company requirements, existing structures and equipment and all other facilities in the area which will impact the performance of work.
- B. Each Bidder shall examine all Contract Documents for requirements which may affect the Bidder's Work in any way.
- C. Failure of a Bidder to be acquainted with all available information will not be considered as a basis for additional compensation or extension of time, nor relief from responsibility for proper performance of the work.
- D. Site visits may be arranged by contacting the Owner's Representative, Ron Cereghin, phone 419-782-4761.

2. PROJECT SCHEDULE:

- A. Refer to Section 01 1000 – Summary of Work.

3. BIDDERS' QUESTIONS:

- A. Questions and technical communications during bidding should be directed to the Architect by email (architects@beilharzarchitects.com). Requests for lists of bidders, and other communications of an administrative nature, should be directed to the Architect by email (architects@beilharzarchitects.com). A list of bidders and plan holders will be posted on the Architect's web site at www.beilharzarchitects.com.
- B. If a Bidder finds any perceived ambiguity, conflict, error, omission or discrepancy on or between any of the Contract Documents, submit a written request for interpretation or clarification to the Architect as directed above. Failure of a Bidder to make such request prior to bidding will result in rejection of claims for additional compensation or extension of time based on insufficiency of the Contract Documents.
- C. Questions submitted later than 4 business days prior to the scheduled bid opening may not be answered.
- D. Requests for Product Substitutions: Refer to Section 01 6000. Product substitution requests must be made by Prime Bidders only.

- E. Information affecting all bidders will be distributed by written Addendum. The receipt of each Addendum shall be acknowledged in the space provided on the Bid Form. A list of Addenda issued will be posted on the Architect's web site at www.beilharzarchitects.com.
- F. Statements made orally by the Architect or Owner, or in any form other than a written Addendum, will not be binding.
- G. All Addenda will be issued, except as hereafter provided, and mailed or otherwise furnished to all plan holders of record, at least 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 72 hour period, then the time for opening of bids shall be extended one week with no further advertising of bids required.
- H. If a Bidder fails to indicate receipt of all Addenda through the last Addendum issued by the Architect on its Bid Form, the bid of such Bidder will be deemed to be responsive only if:
 - 1. 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
 - 2. 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.

4. BID FORMS:

- A. Submit bids in duplicate on Bid Forms issued with the bidding documents. Fill in all blank spaces, typewritten or in ink. Submit original Bid Forms as follows:
 - 1. Corporation: State full legal name of corporation and State of Incorporation; apply original signature of authorized officer or officers; type or print name and corporate title beneath each signature.
 - 2. Partnership: State the full names of all partners; apply original signature of authorized partner or other representative; type or print name and title beneath signature.
 - 3. Sole Proprietor: Apply original signature of bidder; type or print name and title beneath signature, followed by the words "Sole Proprietor".
 - 4. When requested by Owner, furnish evidence of agency or authority of any person signing on behalf of another.
- B. Submit two originals, or one original and one photocopy, of all attachments to Bid Forms.
- C. Submit only the Bid Forms and required attachments. Do not submit Project Manuals or sets of Drawings as part of the bid.
- D. The bid will be rejected if it contains an alteration or erasure, unless alteration is made by crossing out without obscuring the original information, and the correct information

is printed in ink or typed adjacent thereto and initialed in ink by the person signing the bid.

- E. The Bidder shall take the following precautions in preparing the bid:
 - 1. Sign the Bid Form and ensure that all blank spaces are filled in with requested information and that the Bid Guaranty is included in a sealed opaque envelope addressed as provided herein.
 - 2. Where 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.
 - 3. Where the Bid Form provides for quoting a unit price, the Bidder should quote the unit price.
 - 4. When applicable, make sure that the Bid Guaranty is properly executed and signed by:
 - a. The Bidder.
 - b. The Surety or Sureties.
 - 5. Make sure that the amount of the Bid Guaranty is for a specific sum in an amount equal to the base bid amount plus all add alternates or is left blank.

5. MODIFICATION AND WITHDRAWAL OF BIDS:

- A. Modification: A Bidder may modify its bid by written communication to the Owner at any time prior to the scheduled closing time for receipt of bids, provided such written communication is received by the Owner prior to the closing time. 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.
- B. Withdrawal Prior to Bid Closing: Bids may be withdrawn pursuant to a written request submitted by Bidder or Bidder's agent and received by the Owner prior to the time fixed for closing of bids, without prejudice to the right of the Bidder to file a new bid. Withdrawn bids will be returned unopened. Negligence on the part of the Bidder in preparing a bid confers no right for withdrawal of bid after it has been opened.
- C. Withdrawal After Bid Closing: A Bidder may withdraw its bid after the bid closing time 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.
 - 4. The Bidder provides written notice to the Owner within two business days after the bid opening for which the right to withdraw is claimed.
- D. Bids shall remain valid and no bid may be withdrawn, except as permitted by applicable law, for a period of 60 days after the day set for the opening thereof, unless a longer period is stated on the Bid Form.

6. BID GUARANTY AND CONTRACT BOND:

- A. Each bid shall be accompanied by a Bid Guaranty in one of the following forms, in the name of or payable to the order of the Owner. Any bid which is not accompanied by a completed Bid Guaranty in one of these forms will be considered “NO BID” and will be returned to the maker unrecorded.
 - 1. A completed Bid Guaranty and Contract Bond with a satisfactory Surety Company, on the form included in this Project Manual.
 - 2. A certified check, cashier’s check, or irrevocable letter of credit made payable to the Owner in the amount of 10% of the maximum amount of the bid, including add alternates and excluding deduct alternates.
 - a. 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 amount of the bid, shall furnish to the Architect a Contract Bond as prescribed in Ohio Revised Code Section 153.57 in an amount equal to 100% of the Contract Sum, on the form included in this Project Manual, within 3 days of being notified of the Owner’s intent to award the contract to the successful Bidder.
- B. For purposes of these Instructions to Bidders, a satisfactory surety company for the issuance of either a Bid Guaranty and Contract Bond or a Contract Bond is a surety company (“Surety”) authorized by the Ohio Department of Insurance to transact business in the State of Ohio. 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 determined acceptable by the Owner.
- C. All bonds shall be signed by an authorized agent of an acceptable Surety and by the Bidder. Affix Corporate Seals to all copies. The name and address of the Surety and the name and address of the Surety’s Agent must be typed or printed on each bond.
- D. Surety bonds shall be supported by credentials showing the Power of Attorney of the agent including the monetary limit of the power, a certificate showing the legal right of the Surety to do business in the State of Ohio, and a financial statement of the Surety.
- E. All bid securities, except those of the two lowest qualified bidders, will be returned to their makers within 10 days after bid opening. All such retained securities will be returned immediately after signing of the Contract by the successful bidder.

7. ATTACHMENTS TO BID FORM:

- A. Non-Collusion Affidavit: Each bidder shall submit with the bid a completed Non-Collusion Affidavit.
- B. Nondiscrimination Agreement: Each bidder shall submit with the bid a completed Nondiscrimination Agreement.

- C. Out-of-State Corporations: Corporations incorporated in jurisdictions other than the state of Ohio shall submit with the bid a Certificate of Good Standing from the Ohio Secretary of State and the name and address of the Ohio Statutory Agent.
- D. Hourly Rates and Markups: Each bidder shall submit the following on the form provided in the Project Manual. The Owner reserves the right to reject any bid not including this information. This data will be included by reference in the Owner-Contractor Agreement and shall form the basis for Change Order pricing and evaluation for this project.
 - 1. Hourly labor rates for each classification of labor performed by the Contractor's own forces.
 - 2. Hourly usage rates for each classification of construction equipment owned by the Contractor.
 - 3. Proposed percentage markup on materials, supplies, and equipment rentals. Refer to Section 01 2900 for limitations.
 - 4. Proposed percentage markup on subcontracts. Refer to Section 01 2900 for limitations.

8. BID OPENING:

- A. Bids will be publicly opened and read aloud at the date, time, and place stated in the Advertisement for Bids.
- B. Bid results will not be available from the Architect for at least 24 hours after the bid opening, excluding weekends and holidays.

9. BID EVALUATION CRITERIA:

- A. The Owner reserves the right to reject all bids or any bid, and to award the Contract to the lowest and best Bidder as determined by the Owner. The Owner also reserves the right to reject any alternate prices for additions to, or deductions from, the Base Bid, or to accept any or all of such alternate prices in any order.
- B. The Owner reserves the right to waive, or allow any Bidder a reasonable opportunity to cure, a minor irregularity or technical deficiency in a bid, provided the amount of the bid is not affected and the Bidder does not thereby gain a competitive advantage.
- C. Factors which may be considered by the Owner in evaluating bids may include, without limitation:
 - 1. Whether the bid responds to the Contract Documents in all material respects. Noncompliance with any requirement of the Contract Documents may cause a bid to be rejected.
 - 2. The experience, financial condition, bonding experience, licenses and certifications of the Bidder.
 - 3. The conduct and performance of the Bidder on previous contracts, including compliance with applicable laws, rules, and regulations.
 - 4. The management skills of the Bidder, and the ability of the Bidder to perform the Work in accordance with the Contract Documents.

5. The experience and capabilities of the Bidder's key personnel and subcontractors to be employed on the Project.
 6. The equipment and facilities of the Bidder.
 7. Additional factors as the Owner may determine to be appropriate.
- D. The Owner may obtain from the lowest Bidder, and such other Bidders determined to be appropriate, any information determined to be relevant to the consideration of the above factors. The Owner may also obtain such information from, and verify such information with, third parties as may be considered relevant. By submitting a bid, each Bidder authorizes the Owner to obtain relevant third party information including, but not limited to, references and credit reports.
- E. Each Bidder's information will be considered separately and not comparatively. If the lowest Bidder is determined not to be responsible, the bid will be rejected and the Bidder will be notified of such action. Each next lowest Bidder will then be considered in sequence until the Contract is awarded or all bids are rejected.
- F. By submitting its bid, the Bidder agrees that the Owner's determination of responsiveness and responsibility shall be final and conclusive, and that if the Bidder, or any person at the Bidder's urging, directly or indirectly challenges such determination in any legal proceeding and such challenge is not successful, the Bidder will reimburse the Owner for all legal fees and expenses incurred by the Owner that are related to such challenge, including the cost of collection.
- G. The Owner further 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.
- H. 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 has included alternates, which may include deduct alternates as well as add alternates, to give it the flexibility in building the Project with the funds that are 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 what 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 lowest responsible and responsive Bidder 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. Refer to Section 012300 for further provisions related to Alternates.

10. REGULATORY REQUIREMENTS:

- A. Sales and Use Taxes: Refer to Section 014000.

- B. Statement of Personal Property Tax Status: After award of contract, and as a condition of entering into the contract, the successful bidder shall submit an Affidavit of Personal Property Taxes disclosing the amount, if any, of delinquent personal property taxes on the general tax list of personal property of any county in which the Owner has territory.
- C. Prevailing Wage Rates: The prevailing wage rates of public improvements are required inasmuch as public money is used for this project. Prevailing rates of wages are a part of the Supplementary Conditions and have been incorporated in this Specification.

11. EXECUTION OF CONTRACT:

- A. Notice of Intent to Award Contract. The successful Bidder will be notified of the award of the contract and provided with three copies of the Agreement between Owner and Contractor ("Agreement") in the form described in the Project Manual.
- B. The successful Bidder shall sign and return the original forms to the Owner, or as otherwise directed, for execution by the Owner. The contract will be submitted to the Owner at its next regularly scheduled Board meeting for approval by the Owner. The successful Bidder will be provided with a fully executed copy of the Agreement for its records.
- C. If the successful Bidder does not return the executed contracts to the Owner within 5 business days of its receipt of the contracts from the Owner, the Owner reserves the right to reject the bid and award the contract to the next low responsible Bidder.

12. EQUAL EMPLOYMENT OPPORTUNITY/NONDISCRIMINATION:

- A. Minority, female, and disadvantaged businesses will be afforded full opportunity to submit bids, and Bidders will not be discriminated against on the grounds of race, color, religion, sex, age, handicap, ancestry, or national origin in the consideration of an award. The successful Bidder(s) shall include a provision in any subcontract entered into for the Project that requires that each of its Subcontractors not discriminate against any employee or applicant for employment on the basis of race, religion, color, sex, age, handicap, ancestry, or national origin in any actions that it takes. Such actions include, without limitation, employment, upgrading, demotion, transfer recruitment or recruiting advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeships.

END OF DOCUMENT

BID FORM

(Submit two copies of Bid Form and all attachments)

BIDDER: _____

PROJECT:

Defiance County East Reroof
1300 East Second Street
Defiance OH 43512

BIDS DUE AT:

Defiance County Commissioners
500 Court Street, Suite A
Defiance OH 43512

BIDS DUE BY: Monday, December 20, 2021, 12:00 Noon EST

Having read the bid documents and specifications and examined the drawings prepared by the Architect, Beilharz Architects, Inc., Defiance, Ohio, for the item of work described above, and having inspected the site and the conditions affecting and governing the construction of the said project, and acknowledging that the bid documents, specifications and drawings are adequate for the performance of the Work, the undersigned hereby proposes to furnish all materials and perform all labor, as described in the specifications and shown on the drawings, for the following sum. Bid shall be good for 60 days.

BASE BID:

Complete Work for the Stipulated Sum of \$ _____

UNIT COST BID U-1:

Roof Insulation Replacement ADD \$ _____ / Sq. Ft.

Addenda received and included in this Bid: No. _____, _____, _____, _____, _____.

Attachments to Bid Form (submit 2 copies):

- ☐ Bid Guaranty and Contract Bond (or certified check)
- ☐ Non-Collusion Affidavit
- ☐ Nondiscrimination Agreement
- ☐ Out-of-State Corporation Information (if applicable)
- ☐ Hourly Rates and Markups

SIGNED:

(Signature)

(Name of Company or Corporation)

(Printed Name)

(Business Address)

(Title)

(Date of Signature)

(Phone)

BID GUARANTY AND CONTRACT BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned,

(Name and Address of Contractor)

as Principal and _____

(Name of Surety)

as Surety, are hereby held and firmly bound unto the Owner, the Board of Defiance County Commissioners, hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on _____

(Date)

to undertake the project known as: _____

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternate proposals 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 above line is left blank, the penal sum will be the full amount of the Principal's bid, including add alternates. Alternatively, if completed, 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.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above named Principal has submitted a bid on the above referred 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 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 will pay the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmissions, of printing new contract documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be void, otherwise to remain in full force and effect. If the Obligee accepts the bid of the Principal and the Principal within ten 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; and

IF THE SAID Principal shall well and faithfully perform each and every condition of such contract; and indemnify the Obligees against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications and bills of material therefor; 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 Obligees 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 said contract or in or to the plans and specifications therefor shall in any ways affect the obligations of said Surety on this bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this _____ day of _____, _____.

PRINCIPAL:

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By:

(Signature)

(Printed Name)

(Title)

SURETY:

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By:

(Signature of Attorney-in-Fact)

(Printed Name)

(Agency Name)

(Street Address)

(City, State, ZIP)

(Telephone Number)

(Fax Number)

(Email)

HOURLY RATES AND MARKUPS

(Attach additional sheets if needed)

BIDDER: _____

LABOR RATES:

<u>Classification</u>	<u>Hourly Rate</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

EQUIPMENT RATES:

<u>Classification</u>	<u>Hourly Rate</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

MARKUPS:

(including overhead and profit; refer to Section 01 2900 for limitations)

	<u>Add Change Orders</u>	<u>Deduct Change Orders</u>
Materials and Supplies:	_____ %	_____ %
Equipment Rental:	_____ %	_____ %
Subcontracts:	_____ %	_____ %

NON-COLLUSION AFFIDAVIT

STATE OF OHIO

TO: Defiance County Commissioners
Defiance, Ohio 43512

The undersigned, being first duly sworn, having bid on a contract by you for

(Name of Project)

hereby states that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, or connived or agreed with any bidder or anyone else to put in a sham bid, or that any one shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with any one to fix the bid price of said bidder or of any other bidder, or to fix any overhead, profit, or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or any one interested in the proposed contract; that all statement contained in such bid are true; and, further, that said bidder has not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such persons as have a partnership or other financial interest with said bidder in his general business.

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By: _____
(Signature)

(Printed Name)

(Title)

Sworn to before me and subscribed in my
presence this _____ day of

_____, 20 ____.

(Notary Public)

My commission expires:

NONDISCRIMINATION AGREEMENT

O.R.C. 153.59

STATE OF OHIO

TO: Defiance County Commissioners
Defiance, Ohio 43512

The undersigned, being first duly sworn, having authority to agree on behalf of the above named contractor, and having bid on a contract by you for

(Name of Project)

do hereby understand and agree:

A) That, in compliance with the provision of Chapter 153.59, Ohio Revised Code, the hiring of employees for the performance of work under this Contract or any subcontract shall not discriminate by reason of race, creed, sex, handicap, color, or age against any person qualified to perform the work herein concerned.

B) That no contractor, subcontractor, or any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed, sex, handicap, color, or age.

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By: _____
(Signature)

(Printed Name)

(Title)

Sworn to before me and subscribed in my
presence this _____ day of
_____, 20 ____.

(Notary Public)

My commission expires:

CONTRACT BOND
(O.R.C. § 153.57)

INSTRUCTIONS: The Contract Bond form 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.

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned, _____

(Name and Address of Contractor)

as Principal and _____
(Name of Surety)

as Surety, are hereby held and firmly bound unto the Board of Defiance County Commissioners, 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.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above named Principal did on the _____ day of _____, 20____, enter into a contract with the Board of Defiance County Commissioners for the construction of _____,

(Project)

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 said contract or in or to the plans and specifications therefor shall in any wise affect the obligations of said Surety on its bond, and does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this _____ day of _____, _____.

PRINCIPAL:

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By:

(Signature)

(Printed Name)

(Title)

SURETY:

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By:

(Signature of Attorney-in-Fact)

(Printed Name)

(Agency Name)

(Street Address)

(City, State, ZIP)

(Telephone Number)

(Fax Number)

(Email)

**AFFIDAVIT OF CONTRACTOR OR SUPPLIER ON NON-DELINQUENCY OF
PERSONAL PROPERTY TAX**

O.R.C. 5719.042

STATE OF OHIO

TO: Defiance City School District
Defiance, Ohio 43512

The undersigned, being first duly sworn, having bid on a contract by you for

(Name of Project)

hereby states that we are not charged at the time the bid was submitted with any delinquent personal property taxes on the general tax list of personal property of any county in which you as a taxing district have territory and that we were not charged with delinquent personal property taxes on any such tax list.

In consideration of the award of the above contract, the above statement is incorporated in said contract as a covenant of the undersigned.

(Name of Company or Corporation)

(Street Address)

(City, State, ZIP)

By: _____
(Signature)

(Printed Name)

(Title)

Sworn to before me and subscribed in my
presence this _____ day of

_____, 20 ____.

(Notary Public)

My commission expires:



Sales and Use Tax Construction Contract Exemption Certificate

Identification of Contract:

Contractee's (owner's) name Defiance County Commissioners

Exact location of job/project 1300 East Second Street, Defiance OH 43512

Name of job/project as it appears on contract documentation Defiance County East Reroof

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

<input type="checkbox"/>	A building used exclusively for charitable purposes by a nonprofit organization operated exclusively for charitable purposes as defined in Ohio Revised Code (R.C.) section 5739.02(B)(12);	<input type="checkbox"/>	Real property that 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;
<input checked="" type="checkbox"/>	Real property under a construction contract with the United States government, its agencies, the state of Ohio or an Ohio political subdivision;	<input type="checkbox"/>	A computer data center entitled to exemption under R.C. 122.175;
<input type="checkbox"/>	A horticulture structure or livestock structure for a person engaged in the business of horticulture or producing livestock;	<input type="checkbox"/>	A building under a construction contract with an organization exempt from taxation under section 501(c)(3) of the Internal Revenue Code of 1986 when the building is to be used exclusively for the organization's exempt purposes;
<input type="checkbox"/>	A house of public worship or religious education;	<input type="checkbox"/>	A hospital facility entitled to exemption under R.C. section 140.08;
<input type="checkbox"/>	The original construction of a sports facility under R.C. section 307.696;	<input type="checkbox"/>	Building and construction materials and services sold for incorporation into real property comprising a convention center that qualifies for property tax exemption under R.C. 5709.084 (until one calendar year after the construction is completed).
<input type="checkbox"/>	Real property outside this state if such materials and services, when sold to a construction contractor in the state in which the real property is located for incorporation into real property in that state, would be exempt from a tax on sales levied by that state;		

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 _____

Street address _____

City, state, ZIP code _____

Date _____

Subcontractor

Name _____

Signed by _____

Title _____

Street address _____

City, state, ZIP code _____

Date _____

Owner/Contractee

Name Defiance County Commissioners

Signed by _____

Title _____

Street address 500 Court Street, Suite A

City, state, ZIP code Defiance OH 43512

Date _____

Political Subdivision

Name same as Owner

Signed by _____

Title _____

Street address _____

City, state, ZIP code _____

Date _____

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS AND RELEASE OF LIENS

OWNER: ☐ **Defiance County Commissioners**
500 Court Street, Suite A
Defiance, OH 43512

PROJECT: **Defiance County East Reroof**
Defiance, OH
ARCHITECT'S PROJECT NO: **C1-4772**

ATTN: ☐

CONTRACT FOR:
CONTRACT DATE:

STATE OF: _____

COUNTY OF: _____

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

EXCEPTIONS:

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

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

☐ Consent of Surety to Final Payment
(required whenever Surety is involved)
on AIA Document G707, Consent of
Surety, or equivalent.

☐ Contractor's Release or Waiver of Liens,
conditional upon receipt of final payment.

☐ Separate Releases or Waivers of Liens
from Subcontractors and material and
equipment suppliers, to the extent required
in accordance with Section 01 2900.

CONTRACTOR:
(name and address)

By: _____

(signature of authorized representative)

(printed name and title)

Subscribed and sworn to before me on: _____

(date)

Notary Public: _____

My Commission Expires: _____

GENERAL CONDITIONS

- A. AIA Document A201-2017, General Conditions of the Contract for Construction, hereinafter referred to as "General Conditions," is hereby made part of the Contract Documents, as if attached hereto or repeated herein. Bidders and Contractors shall consult this document and become thoroughly familiar with its contents before submitting bids or proposals. Copies are available for purchase from the American Institute of Architects, www.aiacontracts.org, phone 800-942-7732.
- B. AIA General Conditions are hereinafter supplemented and amended by Supplementary Conditions. All supplementary provisions shall be considered as added thereto. Where any article is amended, deleted or superseded hereby, unaltered provisions of such article shall remain in effect.
- C. In case of conflict, Supplementary Conditions shall take precedence.

END OF DOCUMENT

SUPPLEMENTARY CONDITIONS

1. MODIFICATIONS TO GENERAL CONDITIONS

- A. These Supplementary Conditions supplement, modify, change, delete from, or add to the General Conditions. Where a portion of the General Conditions is modified or deleted by Supplementary Conditions, the unaltered portions of the General Conditions remain in effect.

2. ARTICLE 1 – GENERAL PROVISIONS

A. 1.1 Basic Definitions

1. Revise the last sentence of 1.1.1 to read as follows: Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, sample forms, or other information furnished by the Owner in anticipation of receiving bids or proposals.
2. Add the following at the end of 1.1.2: The Contractor acknowledges and agrees that the Contract Documents are sufficient to provide for the completion of the Work and include all Work, whether or not shown or described, which reasonably may be inferred to be required or useful for the completion of the Work in accordance with all applicable laws, codes, and professional standards.
3. Modify 1.1.5 – The Drawings: Add the following:
 - a. Refer to the List of Drawings for a listing of Drawings issued.
 - b. The word “Plans” shall be construed to include all Drawings, except in the context of a horizontal section view of the Project or a specific portion thereof.
4. Modify 1.1.6 – The Specifications: Add the following:
 - a. The requirements of each Section of Division 01 apply to all Specification Sections.
5. Add the following definitions:
 - a. 1.1.9 – Project Manual: The Project Manual is the written document assembled for the Work which may include Procurement and Contracting Requirements, Conditions of the Contract, and Specifications. Refer to the Project Manual Contents for a complete listing.
 - b. 1.1.10 – The Architect: The Architect is Beilharz Architects, Inc., 701½ West First Street, Defiance, Ohio 43512, phone 419-782-6211.
 - c. 1.1.11 – The Owner: The Owner is the Board of Defiance County Commissioners, 500 Court Street, Suite A, Defiance, Ohio 43512.
 - d. 1.1.12 – Contractor: Inasmuch as this Project is bid on a single prime contract basis, the terms “General Contractor,” “Plumbing Contractor,” “HVAC Contractor,” “Electrical Contractor,” etc. shall mean “the Contractor.” Responsibility for completion of all portions of the Project, except where

specifically noted otherwise, shall be borne by the Contractor. The Contractor may use the reference to separate contracts, and to Plumbing, Electrical and other contractors, as an aid in establishing major subcontract responsibilities, but by so doing shall in no way relieve himself of the final responsibility for proper completion of the Work.

B. 1.2 Correlation and Intent of the Contract Documents

1. Modify 1.2.2 by replacing the period at the end of the paragraph with a comma and adding the following: “nor shall the Architect by reason thereof become an arbiter to establish subcontract limits between Subcontractors of any Prime Contractor. Where responsibility for particular work is assigned to a particular trade or contract, that trade or contract shall not be released from that responsibility by reason of the location of the assigning of responsibility. The Contractor shall be responsible for all work assigned to him, even though that responsibility may be shown only in that portion of the Contract Documents typically pertaining to another contract or trade.”
2. Add the following after 1.2.3:
 - a. 1.2.3.1 – Furnish, Install, Provide: Wherever the words “furnish,” “install,” “provide,” or equivalent words are used, without further limitation, they shall be construed to mean the responsibility to supply and place in position for use the devices, equipment or material named, together with all associated devices, equipment, materials, wiring, piping, and related components as may be required for a complete and operating installation.
 - b. 1.2.3.2 – Warranty and Guarantee: The words “warranty” and “guarantee” shall have the same meaning and shall be defined as “legally enforceable assurance of the duration of satisfactory performance or quality of a product or work.”
3. Add 1.2.4 – Complete sets of Contract Documents are intended, and the Contract will include all documents referenced in the List of Drawings and Project Manual Contents. It is the Contractor’s responsibility to request missing documents from the Architect in writing before submitting a bid.
4. Add 1.2.5 – Reference to standards, codes, or specifications, or to manufacturer’s specifications, instructions, recommendations, requirements or directions, require that the Contractor become fully and adequately informed of the contents of such documents, and shall properly apply the information therein so that the best possible intended use of the item, material or technique is achieved.

C. 1.7 Digital Data Use and Transmission

1. Modify 1.7 by inserting “or equivalent” after the title of the AIA Document.

D. 1.8 Building Information Models Use and Reliance

1. Modify 1.8 by inserting “or equivalent” after the title of each AIA Document.

3. ARTICLE 2 – OWNER

A. 2.1 General

1. Revise 2.1.2 to read as follows: The Owner will prepare a Notice of Commencement for the Project in accordance with the Ohio Revised Code and furnish a copy to the Contractor or a subcontractor or supplier within a reasonable time upon receipt of a written request. The Contractor shall furnish a copy of the Notice of Commencement to a Subcontractor or supplier within fifteen days after receipt of a written request.

B. 2.2 Evidence of the Owner’s Financial Arrangements

1. Replace 2.2.1 through 2.2.4 with the following: The Owner shall attach to the Agreement with the Contractor, the certificate of available resources required by Ohio Revised Code Section 5705.41, as evidence of available funds to fulfill the Owner’s obligations under the Contract.

C. 2.3 Information and Services Required of the Owner

1. Add the following at the end of 2.3.6: The Contractor may purchase additional copies of the Contract Documents at the cost of reproduction and delivery.

D. 2.5 Owner’s Right to Carry Out the Work

1. Add 2.5.1 – Notwithstanding anything to the contrary in the Contract and without limiting Owner’s rights and remedies, it is agreed and understood by the Contractor that if there is a work stoppage or delay of Contractor’s work, directly or indirectly, involving Contractor’s employees, and if any such work stoppage or delay is not resolved to the satisfaction of the Owner within seven calendar days from the commencement of said work stoppage or delay, the Owner may terminate the Contract for cause as provided in Section 14.2.

4. ARTICLE 3 – CONTRACTOR

A. 3.2 Review of Contract Documents and Field Conditions by Contractor

1. Modify 3.2.2, 3.2.3, and 3.2.4; change “request for information” to “request for interpretation.”
2. Add 3.2.5 – If, in the Contractor’s opinion, any portion of the Work is indicated or specified in a manner that makes it impossible to produce work of the required quality, the Contractor shall report this to the Architect as a request for interpretation in such form as the Architect may require, before proceeding with that portion of the Work. If Contractor fails to make such request, no excuse will be entertained for failure to carry out that portion of the Work in a satisfactory manner.
3. Add 3.2.6 – If the Contract Documents disagree as to the quality or quantity of Work required, the better quality or greater quantity shall be provided, but not before referring the points in question to the Architect for approval.

B. 3.3 Supervision and Construction Procedures

1. Add 3.3.4 – Contractor shall not erect vertically and independently to a height greater than one scaffold from the foundation, masonry walls, structural steel, or any other building feature dependent on connection with other portions of the structure for support or anchorage without sufficient bracing, tying, or other approved method. The Contractor shall be responsible for the design and erection of all bracing, shoring, and sheathing as required for safety and the proper execution of the work, and shall remove such components when the work is completed.

C. 3.10 Contractor's Construction and Submittal Schedules

1. Modify 3.10.3; change “submitted to” to “approved by.”

D. 3.11 Documents and Samples at the Site

1. Modify 3.11; delete the word “field” from the phrase “indicate field changes.”

E. 3.12 Shop Drawings, Product Data and Samples

1. Add the following at the end of 3.12.7: Work commenced by Contractor prior to final approval of the Shop Drawings or other submittals is at the risk that no payment will be approved or made by the Owner for such Work.
2. Add the following at the end of 3.12.10: The Contractor shall defend, indemnify and hold harmless the Owner, Architect, and Architect's consultants from and against all claims, losses, liabilities and damages arising out of or resulting from any professional services rendered by or on behalf of the Contractor, or failure to render such services. The Contractor shall require that any design professionals retained to provide such services provide similar indemnities in favor of the Owner, Architect, and Architect's consultants.

F. 3.13 Use of Site

1. Add 3.13.1 – Before commencing work, Contractor shall verify with Owner and receive Owner's permission to use areas in the immediate vicinity of construction for storage of materials and for activities related to construction. Contractor shall confine construction activities to these agreed areas.

G. Add 3.19 Workmanship

1. Add 3.19.1 – Work shall be of the specified quality and conform to normal industry standards. Work of substandard quality (as determined by the Architect or inspecting authorities) shall be removed and replaced to conform to the quality standards of the trades concerned, or otherwise corrected to the satisfaction of the complainant, at Contractor's expense.

5. ARTICLE 4 – ARCHITECT

A. 4.2 Administration of the Contract

1. Add 4.2.2.1 – The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work.
2. Modify 4.2.14; change “request for information” to “request for interpretation” at both locations.

6. ARTICLE 5 – SUBCONTRACTORS

A. 5.3 Subcontractual Relations

1. Add 5.3.1 – Nothing contained in the Contract Documents shall be construed as creating any contractual relationship between any Subcontractor and the Owner. The Divisions and Sections of the Specifications are not intended to control the Contractor in dividing the Work among Subcontractors or to limit the work performed by any trade. The Contractor shall be as fully responsible to the Owner for the acts and omissions of Subcontractors and of persons employed by them, as for the acts and omissions of persons directly employed by the Contractor. The Contractor shall be responsible for the coordination of the trades, Subcontractors and Suppliers, and persons engaged upon the Contractor’s work. The Contractor shall, without additional expense to the Owner, utilize the services of specialty Subcontractors on those parts of the work which are required by the Contract Documents to be performed by specialty Subcontractors. The Owner or Architect shall not undertake to settle any differences between the Contractor and Subcontractors, or between Subcontractors. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to give the Contractor the same power as regarding termination of any subcontract that the Owner may exercise over the Contractor under any provisions of the Contract Documents.
2. Add 5.3.2 – If any Contractor, Subcontractor, or Sub-subcontractor desires to obtain the services of any other Contractor, Subcontractor or Sub-subcontractor, the party hired to do the work shall become a Subcontractor or Sub-subcontractor under the party hiring them, and shall be subject to all provisions of the Contract Documents which pertain to Subcontractors and Sub-subcontractors, as applicable.

7. ARTICLE 7 – CHANGES IN THE WORK

A. 7.2 Change Orders

1. Add 7.2.2 – Agreement on any Change Order shall constitute a final settlement of all matters related to the change in the Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs and cumulative

impact associated with such change, and all adjustments to the Contract Sum and the Contract Time.

8. ARTICLE 8 – TIME

A. 8.2 Progress and Completion

1. Add 8.2.4 – The Contractor shall obtain insurance and permits, file documents and notices as required and necessary, and perform other duties required under the Contract Documents, in a timely manner so as not to impede progress of the Work.

B. 8.3 Delays and Extensions of Time

1. Modify 8.3.3 by replacing the period at the end of the paragraph with a comma and adding the following: “except that extensions of time arising from adjustments to the Construction Schedule affecting multiple Contractors, and not made primarily for the convenience of the Owner, shall not be grounds for claims for Consequential Damages as defined in Section 15.1.7.”

9. ARTICLE 9 – PAYMENTS AND COMPLETION

A. 9.9 Partial Occupancy or Use

1. Add 9.9.4 – If it becomes necessary at any time during construction to move materials which are to enter into the construction, or equipment which has been temporarily placed, the Contractor furnishing said materials or equipment shall, when directed by the Owner, move them or cause them to be moved without charge to Owner. Once such materials and equipment are stored at the site they may not be removed from the site without the Owner’s permission.

10. ARTICLE 10 – PROTECTION OF PERSONS AND PROPERTY

A. 10.2 Safety of Persons and Property

1. Revise 10.2.1 by renumbering .3 to .4 and adding a new .3: materials, equipment, and completed Work of Separate Contractors; and

B. 10.3 Hazardous Materials and Substances

1. Add the following at the end of 10.3.1: Hazardous substance shall mean any substance that is toxic, ignitable, reactive, or corrosive and that is regulated by any local, state, or federal government agency or entity; any and all material or substance that is defined as “hazardous waste”, “extremely hazardous waste”, or a “hazardous substance” under any local, state, or federal law or regulation; and all petroleum products.
2. Add the following at the end of 10.3.5 – Contractor shall not cause or permit any hazardous substance, including those necessary for execution of the Work, to be used, stored, generated, or disposed of on or in the site without first obtaining

Owner's written consent. Regardless of whether Contractor has obtained Owner's written consent, if any contamination of any kind whatsoever occurs during Contractor's use of the site, or if Contractor violates any local, state, or federal law or regulation relating to hazardous substances or environmental contamination, Contractor shall indemnify and hold harmless the Owner from any and all claims, damages, fines, judgments, penalties, costs, liabilities, or losses, including without limitation, any and all sums paid for settlement of claims, attorney's fees, consultant fees, and expert fees arising during or after the Contract period.

3. Add 10.3.7 – Contractor shall have no liability for environmental damages resulting from hazardous materials not addressed in the Contract Documents which were present at the site prior to the date of commencement of the Work.
4. Add 10.3.8 – Upon request of the Owner, the Contractor and each direct Subcontractor to the Contractor shall certify that all materials are free of asbestos fibers and other hazardous carcinogenic ingredients.

C. 10.4 Emergencies

1. Revise 10.4 to read as follows: In case of an emergency which threatens loss or injury of property and/or safety of life, the Contractor shall act, in the absence of previous instructions from the Owner or the Architect, as the situation may warrant, and shall notify the Architect immediately thereafter of the nature of the emergency and the action taken. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 7 and Article 15.

D. Add 10.5 Contractor Responsibilities

1. Add 10.5.1 – The Contractor shall be the custodian of the building and premises and shall (1) provide protection as required against rain, wind, and storms to maintain work free from damage by same; (2) provide temporary closures to protect against intrusion of building once enclosure is attained; and (3) furnish and maintain temporary stairs, ladders, ramps, and similar access facilities, as required for safe and proper execution of the work of all trades.
2. Add 10.5.2 – The Contractor shall be fully responsible for initiating and maintaining all procedures necessary to prevent damage to physical property or personnel. Contractor shall be especially careful to maintain optimum fire safety programs at all times, including control of rubbish, fire watches, fire-fighting equipment, maintenance of exit ways and alarm systems, and all other techniques necessary.
3. Add 10.5.3 – The Contractor shall comply with all applicable provisions of the Occupational Safety and Health Act, and shall be responsible for fines and costs incurred as a result of violations or alleged violations.

4. Add 10.5.4 – The Contractor shall provide and maintain protection of approved type for all floors, passageways, and other surfaces subject to damage, involved in the execution of the work.
5. Add 10.5.5 – The Contractor shall provide and maintain suitable temporary walks, passageways, barricades, fences, railings, and similar facilities, and all necessary lights, signs, and warnings, as required by law and necessary for the protection of the public and others having access to the site.
6. Add 10.5.6 – The Contractor shall make good any such loss or damage without expense to Owner.
7. Add 10.5.7 – The Contractor shall make good any loss or damage due to water leakage caused by the Contractor's and Subcontractors' work without expense to the Owner.
8. Add 10.5.8 – Methods of protection shall be subject to the approval of the Architect and protection shall be maintained until the completion of the Work or until removal is directed by the Architect.
9. Add 10.5.9 – The Contractor shall post warning signs at each entrance to the construction site prohibiting anyone from entering upon the premises with firearms or concealed firearms, and shall enforce this prohibition with respect to its employees, Subcontractors, Suppliers, and other parties under its control.

11. ARTICLE 13 – MISCELLANEOUS PROVISIONS

A. 13.4 Tests and Inspections

1. Add 13.4.7 – When any work is being performed away from the site, the Contractor shall notify the Architect, within a reasonable time in advance, of the location where such work is being done, and when it will be ready for inspection, so that the Architect may inspect the same from time to time prior to delivery, at Owner's request.
2. Add 13.4.8 – The Contractor shall not be relieved of responsibility for proper completion of the Work in accordance with the Contract Documents due to the Architect's observation of faulty Work or Work not in accordance with the Contract Documents.

12. ARTICLE 15 – CLAIMS AND DISPUTES

A. 15.2 Initial Decision

1. Replace 15.2.6 with the following: When a written decision of the Initial Decision Maker states that the decision is final but subject to mediation or binding dispute resolution, failure to demand mediation or to file an action in the Court of Common Pleas for the county in which the Project is located, within 30 days after the date on which the party making the demand receives the written decision, shall result in the decision becoming final and binding upon the Owner and the

Contractor, unless in conflict with applicable law. If the Initial Decision Maker renders a decision after mediation or binding dispute resolution has been initiated, such decision may be entered as evidence, but shall not supersede the proceedings, unless the decision is acceptable to all parties concerned.

B. 15.4 Arbitration

1. Delete Section 15.4 in its entirety.
2. Delete references to arbitration wherever they occur in the General Conditions.

END OF DOCUMENT

WAGE RATE REQUIREMENTS

This contract is subject to Ohio Prevailing Wage Laws, Chapter 4115 of the Ohio Revised Code and the Contractor and all subcontractors shall comply with all provisions contained therein or as otherwise provided in this note. The Contractor guarantees that the prevailing wage scale to be paid to all laborers and mechanics employed on this contract shall be in accordance with the schedule of the prevailing hourly wage and fringe benefits as determined by the Ohio Department of Commerce for the County in which the work is being performed. The failure to pay prevailing wages to all laborers and mechanics employed on this project shall be considered a breach of contract. Such a failure may result in the revocation of the contractor's and/or subcontractor's certificate of qualification and debarment. A schedule of the most current prevailing wage rates may be accessed by registering with the Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration at the following web address: <https://wagehour.com.ohio.gov/w3/webwh.nsf/wrlogin/?openform>.

If you are unable to obtain a copy of the most current prevailing wage rates, you may obtain a copy at the Defiance County Commissioners' Office, 500 Court Street, Defiance, Ohio 43512.

The Contractor and all subcontractors shall compensate the employees on this contract at a pay rate of not less than the hourly wage and fringe rate listed on the website noted above, for the applicable job classification or as modified by the Ohio Department of Commerce, Division of Labor and Worker Safety Wage and Hour Bureau, when new prevailing wage rates are established.

Overtime shall be paid at one and one-half times the basic hourly rate for any hours worked beyond 40 hours during a pay week. The Contractor and all subcontractors shall pay all compensation by company check to the worker and fringe benefit program.

The wage and fringe rates determined for this project or as may be later modified, shall be posted by the Contractor in a prominent and accessible place on the project, field office or equipment yard where they can be easily read by the workers or otherwise made available to the workers. On the first pay date of contract work the Contractor and all subcontractors shall furnish each employee covered by prevailing wage a completed form whpw1512 in accordance with section 4115.05 Ohio Revised Code, showing the classification, hourly pay rate, fringes, and identifying District Prevailing Wage Coordinator (DPWC), if such employees are not covered by a collective bargaining agreement or understanding between employers and bona fide organizations of labor. These forms shall be signed by the Contractor or subcontractor and the employee and kept in the Contractor's or subcontractor's payroll files.

The Contractor and all subcontractors shall submit to the DPWC or other designated Department representative, certified payrolls on form whpw1509 or equivalent, in accordance with sections 4115.07 and 4115.071(C) of the Ohio Revised Code, three weeks after the start of work and every subsequent week until the completion of the contract. Additionally, a copy of the "Apprentice Certification" obtained from the USDOL, Bureau of Apprenticeship and Training, must accompany the first certified payroll submitted for all apprentices working on this project. Upon completion of the contract and before the final payment, the Contractor shall submit to the DPWC a final wage affidavit in accordance with section 4115.07 of the Ohio Revised Code stating that wages have been paid in conformance with the minimum rates set forth in the contract. Please be aware that it is ultimately the responsibility of the prime Contractor to ensure that all laws relating to prevailing wages in Chapter 4115 of the Ohio Revised Code are strictly adhered to by all subcontractors.

The Contractor and all subcontractors shall make all of its payroll records available for inspection, copying or transcription by any authorized representative of the contracting agency. Additionally, the Contractor and all subcontractors shall permit such representatives to interview any employees during working hours while the employee is on the job.

If the Contractor or any subcontractor fails to comply with any of the provisions contained in this proposal note, the Department may terminate the contract, debar the Contractor or subcontractor and/or withhold or suspend pay estimates after written notice and a reasonable opportunity to comply has been provided.

END OF DOCUMENT

SECTION 01 1000 – SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Contract description.
 - 2. Project estimate.
 - 3. Contract time schedule.
 - 4. Liquidated damages.
 - 5. Work restrictions.
 - 6. Use of site.

1.02 CONTRACT DESCRIPTION:

- A. Award of Contracts: Contracts will be written with a single Prime Contractor.
- B. Form of Contract: Document A101-2017, Standard Form of Agreement Between Owner and Contractor.
 - 1. Binding Dispute Resolution: Arbitration will not be selected as the method of binding dispute resolution in Article 6 of the Agreement.
 - 2. Insurance: Insurance requirements will be included in the Agreement using AIA Document A101-2017 Exhibit A.
 - a. Commercial General Liability and all other liability coverage shall have policy limits of not less than \$1,000,000 per each occurrence, accident, employee, or claim, \$1,000,000 in the aggregate, and \$1,000,000 aggregate for products-completed operations hazard.
 - (1) The Commercial General Liability insurance shall include coverage for property damage resulting from defective work of Contractor and Subcontractors.
 - b. The Contractor shall purchase and maintain insurance for physical damage to property while it is in storage and in transit to the construction site on an “all-risks” completed value form.
 - c. The second sentence of paragraph A2.3.1.1 will be deleted. The Owner does not intend to provide coverage for error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials.

1.03 PROJECT ESTIMATE:

- A. In accordance with Section 153.12, ORC, the estimate of construction cost for this project, for the prime contract described above, is \$120,000.

1.04 CONTRACT TIME SCHEDULE:

A. Schedule of Completion Dates:

1. Award of Contract: Owner intends to award contracts within 30 days after receipt of bids. Contract awards made later than 60 days after receipt of bids are subject to consent of the Contractor.
2. Notice to Proceed: To be determined.
3. Substantial Completion: April 29, 2022.
4. Final Completion: 7 days after Substantial Completion.

B. Description of Completion Dates:

1. Award of Contract: The date that Contractor is notified of Owner's intent to enter into contract. At this time, the Contractor shall begin generating all required submittals and ordering long lead-time materials.
2. Notice to Proceed: The date that Contractor is allowed to commence work in the subject area. Notification shall be made by separate communication from the above Schedule.
3. Substantial Completion: The date by which the subject area is sufficiently completed to be fully occupied by the Owner. The Architect will perform a walk-through review of the work and compile an itemized punch list of non-conforming or unsatisfactory work.
 - a. The Contractor shall obtain the Certificate of Occupancy from local governing authorities by this date.
4. Final Completion: The date by which all punch list items and any other required work in subject area is 100% complete. Contractor's superintendent for the subject area may not leave until this date.
 - a. For a work item to be considered complete, all contract closeout submittals must be received by the Architect. If necessary, and only if actual work has been completed on items, seven additional calendar days will be allowed for contract closeout submittals.
 - b. In the event the date of Substantial Completion is modified by Change Order, the date of Final Completion shall be correspondingly modified by the same number of days unless specifically provided otherwise.

1.05 LIQUIDATED DAMAGES:

- A. In the event the Contractor has failed to achieve Substantial Completion by the specified date, the Owner shall be entitled to retain or recover from the Contractor as liquidated damages, and not as a penalty, the amount scheduled below for each day until Substantial Completion has been achieved or until the specified date for Final Completion, whichever occurs first.
 - 1. Subject Area: 0.067% of the Contract Sum per calendar day (annual rate of 24%); minimum \$25 per calendar day.
- B. In the event Substantial Completion has not been achieved by the date specified for Final Completion, liquidated damages for Substantial Completion as specified above shall accrue for the period between the specified dates for Substantial Completion and Final Completion. Beginning with the specified date for Final Completion, the Owner shall be entitled to retain or recover from the Contractor as liquidated damages, and not as a penalty, the amount scheduled below for each day until Final Completion has been achieved.
 - 1. Subject Area: 0.115% of the Contract Sum per calendar day (annual rate of 42%); minimum \$50 per calendar day.
- C. In the event Substantial Completion has been achieved by the specified date, but Final Completion has not been achieved by the specified date, the Owner shall be entitled to retain or recover from the Contractor as liquidated damages, and not as a penalty, the amount scheduled below for each day until Final Completion has been achieved.
 - 1. Subject Area: 0.115% of the Contract Sum per calendar day (annual rate of 42%); minimum \$50 per calendar day.
- D. Completion Date Conflicts:
 - 1. Bids shall be based solely on the Contract Time Schedule indicated. Do not include any anticipated liquidated damages costs in the Base Bid price.
 - 2. If, in any bidder's opinion, the Contract Time Schedule dates do not seem obtainable, such bidder may submit a proposal for revised completion dates, along with any cost adjustments necessary, on a separate sheet attached to the Bid Form.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 WORK RESTRICTIONS:

- A. The Owner will occupy the premises during the entire period of construction for the conduct of normal operations.
- B. Schedule, coordinate and perform all Work to minimize disruption to Owner's activities.
 - 1. Allow for Owner occupancy and use by the public.

2. Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site and to avoid peak traffic hours.
 3. Maintain means of egress from existing building exits at all times designated for public occupancy.
 4. Shutdowns of existing systems shall be limited to minimum time required and scheduled with other involved parties. Provide minimum two days written notice of shutdown to Architect and Owner. Shutdowns shall not interfere with scheduled activities. For shutdowns performed outside normal working hours, include overtime and premium labor costs.
- C. Special Requirements for Reroofing Work:
1. Workers may access roof areas only from the building exterior. Interior ladders and roof hatches may not be used unless specifically approved by the Owner.
 2. Operations requiring the use of power equipment may be performed only over unoccupied areas of the building. Work over occupied building areas is limited to the use of hand tools only.

3.02 USE OF SITE:

- A. The Contractor shall prepare a proposed Project Use Site Plan, also referred to as a Site Logistics Plan, for approval by Architect and Owner.
- B. Confine operations at the site to areas within the boundaries indicated and approved on the Project Use Site Plan, and as permitted by law, ordinances, and permits. Site shall not be unreasonably encumbered with materials, products, or construction equipment.
- C. The Project Use Site Plan shall include access to buildings for construction purposes, storage of materials and products, employee parking, temporary facilities including offices, storage, and workshop sheds or portable trailers, and unloading space.
- D. The Owner's right to perform work or to retain other Contractors on portions of the Project limits Contractor's use of the premises.
- E. Where a temporary fence is to be provided, show any additional area needed in the Contractor's use of the site beyond that which may be indicated on the Drawings. Where additional fencing is required, such fencing shall be included at no additional cost to the Owner.
- F. The Owner will designate which portions of existing parking lots and other site areas can be used for construction activities. Damage to existing parking lots, unpaved areas, or other existing site features shall be repaired at the expense of the Contractor responsible for damage.

END OF SECTION

SECTION 01 2200 – UNIT PRICES

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Unit price procedures.
 - 2. Unit price schedule.
- B. Related Requirements:
 - 1. Section 01 2900 – Payment Procedures.

1.02 UNIT PRICE PROCEDURES:

- A. Contracts will be awarded on a Stipulated Sum basis and shall not be considered a unit price contract. Unit prices will be used only for changes in the work.
 - 1. Where actual quantities exceed contract quantities, obtain written authorization from Architect before proceeding with the additional work.
 - 2. Owner reserves the right to increase, decrease or delete entirely scheduled quantities after execution of the Contract.
 - 3. All items of work not listed as unit price items on the Bid Form shall be included in the Base Bid, and no additional compensation will be allowed.
- B. Measurement:
 - 1. Measurement methods are delineated in the individual specification sections.
 - 2. Architect will verify measurements and compute quantities accordingly. Provide and assist in the taking of measurements.
- C. Adjustment of the Contract Sum resulting from unit prices will be made by Change Order. Payment for unit price work in excess of contract quantities may be included in Applications for Payment only after final reconciliation and approval of Change Order.
- D. Payment Includes: Full compensation for required labor, materials, Products, tools, equipment, plant, transportation, delivery and handling, services and incidentals; erection, application, or installation of an item of Work; overhead and profit; and applicable taxes.
- E. Defect Assessment: Replace the Work, or portions of the Work, not conforming to specified requirements. If, in the opinion of the Architect, it is not practical to remove and replace the Work, the Architect will direct an appropriate remedy or adjust payment.

1.03 UNIT PRICE SCHEDULE:

- A. Roof Insulation Replacement: Where existing roof insulation is damaged or otherwise deteriorated as determined by the Architect, remove existing insulation and

install new insulation to match existing type and thickness. Unit price bids should be based on a thickness of 4 inches, and are subject to equitable adjustment if the average replacement thickness varies by more than 50 percent.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 2900 – PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Contract modification procedures.
 - 2. Schedule of values.
 - 3. Notices of commencement and furnishing.
 - 4. Application for payment.
- B. Related Requirements:
 - 1. Section 01 2200 – Unit Prices.
 - 2. Section 01 7700 – Closeout Requirements.

1.02 CONTRACT MODIFICATION PROCEDURES:

- A. The Owner shall have the right at any time, with reasonable notice to Contractor and resulting adjustment to Contract Sum or Contract Time, if any, to require alterations, additions to or deductions from the Work described in the Contract Documents.
- B. Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time by issuing an Order for Minor Changes.
- C. Architect may issue a Request for Proposal which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications. Contractor shall promptly prepare and submit a detailed itemized proposal for revising the Contract Sum or Contract Time, or both, to incorporate the proposed change. Do not proceed with the proposed changes until a Construction Change Directive or Change Order is issued.
- D. Architect may issue a Construction Change Directive approved by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum or Contract Time. Promptly execute the change.
 - 1. Maintain detailed records of work performed. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- E. Contractor may propose changes by submitting a request for change to the Architect, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation, and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance

with Section 01 6000. Architect and Owner reserve the right to accept or reject such proposed changes, or to request modifications thereto.

- F. Accompany all proposals, whether Contractor initiated or in response to a Request for Proposal or Construction Change Directive, with a detailed itemized breakdown including the following:
 - 1. Materials: Indicate quantities and unit costs.
 - 2. Labor: Indicate man hours of labor and hourly rates for each classification of labor involved.
 - 3. Direct Costs: Fuel, supplies, scaffolding, construction equipment, insurance, taxes and related items.
 - 4. Overhead and Profit: In no case will a rate greater than 10 percent of the sum of the above items be approved for an amount to include overhead, profit, insurance, and bonds.
 - a. For deduct change orders, the rate shall be a minimum of 5 percent of the sum of the above items, but need not exceed the rate charged for add change orders.
- G. Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.03 SCHEDULE OF VALUES:

- A. Submit Schedule of Values within 15 days after Notice to Proceed. Revise and resubmit as required by Architect prior to initial Application for Payment.
- B. Submit on forms attached to this Section. Electronic copies of the form are available from the Architect on request. Utilize the Table of Contents of this Project Manual. Identify each line item with the number and title of the specification Section.
- C. Include separate line items for each of the following: General Requirements, bonds, insurance, submittals, progress cleaning, final cleaning, punch list work, and project record submittals.
- D. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including construction progress schedules, schedule of submittals, and lists of subcontractors, products, principal suppliers and fabricators.
- E. Obtain itemized quotations from Subcontractors and suppliers performing work under multiple Sections. "Package bids" will not release Contractor from the responsibility of furnishing values for each Section of the Work.
- F. Revise schedule with each Application for Payment to list approved Change Orders.
- G. Architect reserves the right to use the Schedule of Values for guidance in evaluating Change Order proposals and claims submitted by the Contractor.

1.04 NOTICES OF COMMENCEMENT AND FURNISHING:

- A. Architect will prepare a Notice of Commencement (NOC) in accordance with the Ohio Mechanics' Lien Law (Section 1311 O.R.C.) and deliver a copy to the Contractor.
- B. Contractor shall post the NOC at the job site adjacent to the building permit, plan approval certificate, or zoning permit, and shall distribute copies upon request to Subcontractors and suppliers.
- C. If the Contractor has not received an NOC within 10 days after construction begins, the Contractor shall deliver to the Owner a written request for a Notice of Commencement.
- D. Prior to submitting each Application for Payment, deliver to the Owner a written request for a list of all parties who have requested NOCs from the Owner or delivered Notices of Furnishing to the Owner.

1.05 APPLICATION FOR PAYMENT:

- A. Submit each Application for Payment to the Architect on the forms attached to this Section. No other Application for Payment document will be processed. Electronic copies of the form are available from the Architect on request.
- B. Submit sequentially numbered typewritten and notarized applications. Electronic submittal in PDF format is preferred. For hard copy applications, submit one original and two copies, keeping embossed seals away from areas intended for Architect's signature and notations.
- C. Content and Format: Rounding to whole dollar amounts is preferred.
 - 1. Value of labor, materials, and equipment incorporated in the Work or delivered and stored at the site. Utilize Schedule of Values for listing items of Work.
 - 2. Deduction of retainage.
 - 3. Deduction of all previously approved payments.
 - 4. New amount applied for.
- D. Contractor shall pay for transportation, services, materials, tools, expendables, and Subcontractor work. Each payment shall be in an amount equal to the percentage of completion allowed to the Contractor for each item or category, less the percentage retained from payments to the Contractor. Contractor shall make payments to Subcontractors.
- E. Change Orders for additional work may be included in progress payments after approval by all parties.

- F. **Payment Period:** Progress payments will be made at monthly intervals, from the date of the Notice to Proceed to the date specified for Substantial Completion. Each monthly payment shall be in an amount determined in accordance with Paragraph 9.3 of the General Conditions and the Supplementary Conditions.
1. After the payment of the last scheduled progress payment, no further progress payments will be made until the Certificate of Substantial Completion has been issued. In the event that changes in the work result in an extension of time, the number of scheduled progress payments may be changed in accordance with the extension of time granted by Change Order.
 2. After Substantial Completion, no further payment will be made until the final Application for Payment is approved.
- G. **Retainage:** In making progress payments, 8 percent of the total labor performed to date, and 8 percent of stored materials, will be retained.
1. After the work is 50 percent complete, as evidenced by approved Applications for Payment of at least 50 percent of the Contract Sum, no additional labor retainage shall be made, and all funds retained in accordance with this Section pursuant to Sections 153.12 and 153.14 of the Ohio Revised Code shall be deposited in the escrow account designated in Section 153.63 of the Revised Code.
 2. At Substantial Completion, provided there exists no other reason to withhold retainage, the retained percentages held in connection with the partial payments shall be released from escrow and paid to the Contractor, withholding only that amount necessary to assure completion.
 3. Within 30 days of Final Completion, funds in escrow account not heretofore paid, with accumulated interest, shall be paid to the Contractor in accordance with Section 153.63 (A) (2) of the Ohio Revised Code.
- H. **Initial Application for Payment:** Submittals that must precede or coincide with submittal of the first Application for Payment include the following:
1. Certificates of insurance.
 2. Construction schedule in accordance with Section 01 3200.
 3. Submittal Schedule, List of Subcontractors, and List of Products in accordance with Section 01 3300.
- I. **Submit the following additional forms with each Application for Payment.** Applications will not be processed without receipt of the proper forms.
1. Updated construction progress schedule in accordance with Section 01 3200.
 2. Waivers of Lien on a form acceptable to Owner, for the Prime Contractor and each of the following:
 - a. All parties who have filed Notices of Furnishing with the Contractor or Owner.
 - b. All parties who have requested Notices of Commencement from the Contractor or Owner.
 - c. All Subcontractors performing work or suppliers providing material during the period covered by the application.

- J. Submit the following additional forms with final Application for Payment. Applications will not be processed without receipt of the proper forms.
1. Waivers of Lien on a form acceptable to Owner, for the Prime Contractor and each of the following:
 - a. All parties who have filed Notices of Furnishing with the Contractor or Owner.
 - b. All parties who have requested Notices of Commencement from the Contractor or Owner.
 - c. All Subcontractors performing work or suppliers providing material during the 21 days preceding the date of the application.
 2. Closeout submittals in accordance with Section 01 7700.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 ATTACHMENTS:

- A. Application and Certificate for Payment Form.
- B. Schedule of Values Form.

END OF SECTION

APPLICATION AND CERTIFICATE FOR PAYMENT

TO OWNER: Defiance County Commissioners
500 Court Street, Suite A
Defiance, OH 43512

PROJECT: Defiance County East Reroof
1300 East Second Street
Defiance, OH 43512

APPLICATION NO:
PERIOD TO:
ARCHITECT'S PROJECT NO: C1-4772

FROM CONTRACTOR: Beilharz Architects, Inc.
701½ West First Street
Defiance, OH 43512

VIA ARCHITECT:

CONTRACT FOR:
CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Schedule of Values, Document G703, is attached.

1. ORIGINAL CONTRACT SUM \$

2. CHANGE ORDERS

a. Changes Approved in Previous Periods \$

C.O. #

b. Changes Approved This Period \$

C.O. #

c. Net change by Change Orders

3. CONTRACT SUM TO DATE (Line 1 + Line 2c) \$

4. WORK COMPLETED TO DATE

a. Labor Completed to Date \$

b. Material Completed to Date \$

c. Stored Material \$

d. Total Completed and Stored to Date \$

5. RETAINAGE

a. Completed Labor (8% of Line 4a) \$

(same as previous application if Line 6a on previous application is >50%)

b. Stored Material (8% of Line 4c) \$

c. Total Retainage \$

6. TOTAL EARNED LESS RETAINAGE

(Line 4d less Line 5c)

a. Percent Complete (Line 6/Line 3) %

CONTRACTOR:

By: Date:

State of Ohio

County of:

Subscribed and sworn to before me

this day of , 20

Notary Public:

My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

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

AMOUNT CERTIFIED \$

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

Beilharz Architects, Inc.

By: Date:

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

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT

(Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE

(Line 6 less Line 7)

9. BALANCE TO FINISH, INCLUDING RETAINAGE

(Line 3 less Line 6)

01 2900 01-1

SCHEDULE OF VALUES

CONTRACTOR:
CONTRACT FOR:

APPLICATION NO:
APPLICATION DATE:

PROJECT:
ARCHITECT'S PROJECT NO:

Defiance County East Reroof
C1-4772

LINE NO	SECTION NO.	DESCRIPTION OF WORK	LABOR			MATERIALS			TOTAL COMPLETED AND STORED TO DATE	%
			SCHEDULED VALUE	WORK COMPLETED PREVIOUS APPLICATION	WORK COMPLETED THIS PERIOD	SCHEDULED VALUE	WORK COMPLETED PREVIOUS APPLICATION	WORK COMPLETED THIS PERIOD		
1	00 6113	Bonds								
2	00 7200	Insurance								
3	01 1000	General Requirements								
4	01 3300	Submittals								
5	01 7000	Progress Cleaning								
6	01 7700	Final Cleaning								
7	01 7700	Punch List Work								
8	01 7700	Project Record Submittals								
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		SHEET TOTALS								
		PROJECT TOTALS								

SCHEDULE OF VALUES

CONTRACTOR: CONTRACT FOR:

APPLICATION NO: APPLICATION DATE:

PROJECT: ARCHITECT'S PROJECT NO:

Defiance County East Reroof C1-4772

LINE NO.	SECTION NO.	DESCRIPTION OF WORK	LABOR			MATERIALS			TOTAL COMPLETED AND STORED TO DATE	%
			SCHEDULED VALUE	PREVIOUS APPLICATION	WORK COMPLETED THIS PERIOD	SCHEDULED VALUE	PREVIOUS APPLICATION	WORK COMPLETED THIS PERIOD		
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SHEET TOTALS										
PROJECT TOTALS										

SECTION 01 3100 – PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Project coordination.
 - 2. Requests for interpretation.
 - 3. Facility services coordination.
 - 4. Project meetings.
 - 5. Alteration project procedures.

1.02 PROJECT COORDINATION:

- A. The Contractor shall assign one person who will be on site full-time and who will have authority to speak and act on behalf of the Contractor. This person shall supervise and direct the work using their best skill and attention, and shall coordinate all trades and Subcontractors and provide adequate labor, equipment and materials as needed.
 - 1. Communications to the Contractor's superintendent shall be as binding as if given directly to the Contractor.
 - 2. Upon Notice to Proceed, Contractor shall notify the Owner of the proposed superintendent, and if requested by the Owner shall also submit a summary of qualifications and experience, including references.
 - 3. Contractor shall not change their superintendent without prior written notice to the Owner, including justification for the change and identification and qualifications of the proposed replacement.
 - 4. Owner reserves the right to reject proposed superintendents within 30 days, in which case Contractor shall provide an acceptable replacement without adjustment of Contract Sum or Contract Time.
- B. Maintain a constant check on the progress of the Project; coordinate and sequence work with that of others to facilitate progress of the Project; provide reasonable advance notification to all parties concerned of any special provisions regarding the placing, setting, or preparation of work that will affect the work of others; afford others every reasonable opportunity for installation and execution of their work and storage of their materials.
- C. Alterations to work already placed and necessitated by failure to properly coordinate work shall be accomplished at the expense of the negligent party.
- D. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- E. Before installing any work, and before purchasing any equipment, carefully check Contract Documents for conflicts or lack of coordination between or among required

Work, Contract Documents, and job conditions; immediately report same to Architect in writing.

1. In the event of failure to bring such lack of coordination between or among Contract Documents, work of other trades, and job conditions to Architect's attention in writing before work is performed or before equipment is purchased, resulting conflicts shall be corrected as directed by the Architect, without adjustment of Contract Sum or Contract Time.
- F. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.03 REQUESTS FOR INTERPRETATION (RFI):

- A. In the event the Contractor determines that some portion of the Contract Documents requires clarification or interpretation, submit a Request for Interpretation in writing on forms approved by the Architect.
- B. Each RFI shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed, the date by which a response is requested, and shall include his interpretation or understanding of the contract requirements along with reasons why such an understanding was reached.
- C. RFIs shall be submitted by the Prime Contractor only and shall not be used for routine project communication, to transmit submittals, to request substitutions, or for other correspondence. Documents which are not RFIs will be returned for resubmittal on the proper form.
- D. Minor detail items related to shop drawing submittals shall be highlighted on the shop drawings and do not require an RFI.
- E. Submit each RFI in sufficient time to avoid delaying the project, allowing minimum one week for Architect's response. If the Architect determines that a longer time is necessary to provide an adequate response, the Architect will advise of the anticipated response time within one week of receipt of the RFI. Adjustment of Contract Time will not be granted due to the Architect's response time.
- F. Responses to RFIs shall be considered interpretations and clarifications of the contract requirements and do not change the Contract Documents. If the Contractor believes that a response constitutes a change to the Contract Documents, Contractor shall promptly give written notice.
- G. In the event of an excessive number of RFIs where the requested information is available from the Contract Documents, field observations, or prior Project correspondence or documentation, the Owner shall be entitled to deduct from the

Contract Sum all reasonable costs charged by the Architect to the Owner for additional services required for the processing of such RFIs.

1.04 FACILITY SERVICES COORDINATION:

- A. Contract Documents: Facility Services work (Fire Suppression, Plumbing, HVAC, Electrical, Communications, and Electronic Safety and Security) may be shown throughout the Drawings. Information required for proper coordination of the work may be contained in specifications of other trades. Become thoroughly familiar with all documents referenced in the Project Manual Contents and List of Drawings and coordinate the Work with all provisions thereof.
- B. System Layout: Facility Services drawings are diagrammatic and are intended to show the approximate locations of components. Field verify dimensions shown on the Drawings. Do not scale drawings to obtain exact dimensions.
 - 1. Coordinate space requirements and installation of work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
 - 2. The exact location of items not located by dimensions on the Drawings shall be determined in the field with consideration given to appearance, clearances, and potential conflicts, and is subject to approval by the Architect.
 - 3. Before beginning installation, verify required clearances for the erection of finish beams, columns, pilasters, walls, casework, and other structural and architectural work shown on the Drawings. If any work is installed and it later develops that the architectural design cannot be followed, make such changes as the Architect may direct to facilitate completion of the architectural work in accordance with the Contract Documents.
 - 4. Report actual and potential interferences and conflicts among Facility Services work and the work of other trades to the Architect as soon as they are discovered. The Architect's decision shall be final in regard to the rearrangement of conflicting work, regardless of which was first installed.
 - 5. Field verify exact locations of apparatus, fixtures, and equipment supplied by the Owner and others, and install the work accordingly. If the installer fails to ascertain such locations before proceeding with the work, the work shall be changed at the installer's expense when so ordered.
 - 6. Throughout the course of the work, up to the time of roughing-in and installation, minor changes and adjustments to the installation may be requested by the Architect. Make such adjustments without modification to the Contract Sum or Contract Time, where such adjustments are necessary to facilitate proper installation and operation within the intent of the Contract Documents. This does not include work already completed.
 - 7. Position fixtures, equipment, devices, switches, outlets, and related components, to avoid interferences with and to assure proper coordination with work of other trades, partitions, walls, cabinets, counters, wall, floor and ceiling patterns, and

- architectural features. Coordinate recessed devices and fixtures with wall, floor and ceiling patterns.
8. Equipment and piping shall not be installed or run above electrical switchgear or panelboards, nor in or above the access space in the immediate vicinity of the electrical switchgear or panelboards, in accordance with the applicable electrical code. Failure to notify the Architect of conflict and to provide adequate coordination will result in costs incurred at the expense of the negligent party.
 9. Maintain service access clearances to equipment as indicated on submittals. Verify that filter replacement, scheduled maintenance, and repair parts replacement can be performed without obstruction by other systems or components.
 10. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- C. Utility Coordination: Contact each utility company providing service to the project and determine or verify their requirements.
1. Make all arrangements with each utility company and pay all service charges associated with temporary or new services or modifications to existing services.
 2. Utility tie-ins shall be arranged with local utility company and other involved parties for minimum interruption of service.
- D. Equipment Requirements: Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
1. The current to building for light and power will be 60 cycle, A.C. Verify voltage, amperage, and phase requirements for the work with the service available at the building.
 2. Prior to ordering electrically operated items, verify requirements so that they will operate on the voltage, amperage, and phase provided for them.
 3. Prior to ordering gas fired items, verify requirements so that they will operate on the type of gas and available pressure provided for them.
 4. Any item delivered to the job which will not operate on the current or fuel provided will be rejected or the Contractor will stand the expense of changing the wiring or piping to accommodate the equipment.
 5. Verify equipment can be installed and removed through permanent building openings. Where necessary, provide modular components which can be disassembled and reassembled. Bring exceptions to the attention of the Architect and provide lintels, knockout panels, and other construction as directed to facilitate installation and future removal of equipment.
- E. Structural Supports: Except as otherwise noted, furnish the main supporting structure and provide floor, wall, and roof openings, as shown on the structural Drawings.
1. Coordinate requirements for floor, wall, and roof openings, including openings not shown on the Drawings, before the structure is erected. Perform cutting and patching, where required, in accordance with Section 01 7000.

2. Where equipment is supported by the building structure, the structural Drawings indicate supports and other design considerations which are based on the use of the scheduled equipment. Where products of another listed manufacturer are supplied, or where substitutions are approved, coordinate dimensions, clearances, structural supports, and other conditions as required for proper installation.
 3. Provide supplemental framing, rods, supports, and hangers required to install or mount equipment indicated, and as necessary to provide a complete working system. Do not support equipment, piping, conduit, or any other components from metal deck, or from open web framing members at any locations other than panel points.
- F. Identification and Labeling: Where room numbers are used for identification of Facility Services components, utilize the Owner's final room names and numbers, which may vary from room names and numbers on the Drawings. Coordinate with interior signage and other permanent room identification.

1.05 PROJECT MEETINGS:

- A. Preconstruction Meeting: Architect will schedule a meeting after Notice of Award.
1. Attendance Required: Owner, Architect, and Contractor.
 2. Agenda:
 - a. Execution of Owner-Contractor Agreement.
 - b. Submission of executed bonds and insurance certificates.
 - c. Distribution of Contract Documents.
 - d. Submission of list of Subcontractors, list of Products, schedule of values, and project schedule.
 - e. Designation of personnel representing the parties in Contract, and the Architect.
 - f. Procedures and processing of field decisions, submittals, substitutions, applications for payment, change procedures, and contract closeout procedures.
 - g. Use of premises by Owner and Contractor.
 - h. Construction facilities, controls, and temporary utilities provided by Owner.
 - i. Security and housekeeping procedures.
 - j. Procedures for maintaining record documents.
 - k. Scheduling.
 3. Record minutes and distribute copies within two days after meeting to Architect, Owner, participants, and those affected by decisions made.
- B. Progress Meetings: Schedule and administer meetings throughout progress of the Work at maximum monthly intervals, scheduled to coordinate with preparation of payment requests. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings. Notify parties, including Architect, at least four days in advance.
1. Attendance Required: Representatives of Contractor, major Subcontractors and suppliers, as appropriate to agenda topics for each meeting.

2. Agenda:
 - a. Review minutes of previous meetings.
 - b. Review of Work progress.
 - c. Field observations, problems, and decisions.
 - d. Identification of problems which impede planned progress.
 - e. Review of submittals schedule and status of submittals.
 - f. Review of off-site fabrication and delivery schedules.
 - g. Maintenance of progress schedule.
 - h. Corrective measures to regain projected schedules.
 - i. Planned progress during succeeding work period.
 - j. Coordination of projected progress.
 - k. Maintenance of quality and work standards.
 - l. Effect of proposed changes on progress schedule and coordination.
 - m. Other business relating to Work.
 3. Record minutes and distribute copies within two days after meeting to Architect, Owner, participants, and those affected by decisions made.
- C. Preinstallation Meetings: When required in individual specification sections, convene a preinstallation meeting prior to commencing work of the section.
1. Require attendance of parties directly affecting, or affected by, work of the specific section.
 2. Notify Architect four days in advance of meeting date.
 3. Prepare agenda and preside at meeting:
 - a. Review conditions of installation, preparation and installation procedures.
 - b. Review coordination with related work.
 4. Record minutes and distribute copies within two days after meeting to Architect, Owner, participants, and those affected by decisions made.

1.06 ALTERATION PROJECT PROCEDURES:

- A. Existing Conditions: Existing equipment, piping, ducts, conduit, and other existing items in place shown or noted on the Drawings, may be relied upon only for general layout. Field verify all measurements, grades, relative elevations and locations, and obtain additional information as necessary to assure the proper fit and coordination of new work with existing.
- B. Existing Hazardous Materials: If the existence of asbestos, mold, or other hazardous material in the structure or building is observed during the course of construction or work, promptly notify the Owner. The Owner or their consultant will provide direction regarding removal or encapsulation of the material. Do not perform any work which may affect the hazardous material prior to receipt of special instructions from the Owner.

- C. Materials: As specified in Product sections; match existing Products and work for patching and extending work.
- D. Employ skilled and experienced installer to perform cutting and patching in accordance with Section 01 7000.
- E. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- F. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- G. Refinish existing visible surfaces to remain, to renewed condition for each material, with a neat transition to adjacent finishes.
- H. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- I. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Architect for review.
- J. Where a change of plane of ¼ inch or more occurs, submit recommendation for providing a smooth transition to Architect for review.
- K. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- L. Finish surfaces as specified in individual Product sections.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 3200 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Construction progress documentation.

1.02 CONSTRUCTION PROGRESS DOCUMENTATION:

- A. Submit initial construction schedule in triplicate within 15 days after date of Notice of Award.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a horizontal bar chart with separate line for each section of Work, identifying first work day of each week. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, critical path, float dates, and duration.
- E. Indicate estimated percentage of completion for each item of Work at each submission.
- F. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.
- G. Schedule shall begin with Notice to Proceed and conclude with the date of final completion of the project. Float or slack time within the construction schedule is not for the exclusive use or benefit of either the Owner or Contractor but is a jointly owned, expiring project resource available to both parties as needed to meet contract milestones and the contract completion date.
- H. No time extensions will be granted nor delay damages paid until a delay occurs that impacts the project's critical path, consumes all available float or contingency time, and extends the work beyond the contract completion date.
 - 1. Delays arising from multiple causes which may have concurrent or interrelated effects on the progress of the Work shall be combined into a single unit for the purposes of determining the appropriate time extension, if any.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 3300 – SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. General requirements for submittals.
2. List of subcontractors and products.
3. Shop drawings, product data and samples.
4. Manufacturer's installation instructions and certificates.

B. Related Requirements:

1. Section 01 6000 – Product Requirements: Submittals for substitutions.
2. Section 01 7700 – Closeout Requirements: Contract warranties, operation and maintenance data, and closeout submittals.

1.02 GENERAL REQUIREMENTS FOR SUBMITTALS:

A. Electronic Submittals: Submittals (except samples, color selectors, and submittals requiring certification by a registered professional) shall be submitted in electronic format.

1. Only PDF files will be accepted, unless otherwise approved in advance.
2. For submittals to be reviewed by Architect's consultants, confirm in advance that electronic submittals will be accepted.
3. For submittals to be distributed to governing authorities, electronic submittals shall be used for review by Architect and Architect's consultants. If requested, provide the number of paper submittals required for use by authorities having jurisdiction.
4. Submittals shall be accompanied by a statement from the submitter indicating approval.
5. Color selections will not be made from electronic submittals. Hard copy color selectors or samples will be required.
6. Submittals will be returned in electronic format. Architect's notations may be included in the submittal file or in a separate document, and shall be distributed with all copies of the reviewed submittals.

B. Paper Submittals:

1. Transmit each submittal with Transmittal Letter, AIA Form G810 or equivalent. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
2. Apply Contractor's stamp, signed or initialed, indicating approval.
3. Submit three copies, unless individual specification sections require a greater number of copies. One copy will be returned to the Contractor. Additional copies will not be processed or returned.

- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, date, and specification section number, as appropriate.
- D. Use standard letter, tabloid, and architectural page sizes only. Provide space on first page for Architect, and professional subconsultant review stamps, minimum 1½ x 3 inch each space.
- E. Where items are identified in the Contract Documents by number, letter or similar mark, include the same identification on submittals. Arrange items within the submittal in the same sequence as the identification in the Contract Documents, unless another sequence is approved in advance by the Architect.
- F. By approving and submitting submittals, the Contractor represents that he has reviewed and verified field dimensions, quantities, adjacent construction Work, field construction criteria, materials, catalog numbers, specified design requirements and performance requirements, and similar data, and coordinated information in accordance with the requirements of the Work and Contract Documents.
- G. Submittals stamped “For Approval Only” or “Not For Construction” will not be accepted.
- H. Where individual specification sections require submittals to be prepared under the supervision of a Professional Engineer or other registered professional, apply the registered professional’s seal and signature to such submittals.
- I. All responsibility for the submittal shall be that of the submitter. The contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Architect shall not be altered from the Contract Documents by mention or inference otherwise in any submittal.
- J. Identify deviations from Contract Documents, and Product or system limitations which may be detrimental to successful performance of the completed Work.
- K. Correct returned submittals marked “Revise and Resubmit” or “Not Approved”; identify all changes made since previous submission. Review of revised submittals will be limited to previously noted items, unless other changes are specifically called out. Direct specific attention in writing on resubmittals to revisions other than the corrections requested on previous submissions.
- L. Distribute copies of reviewed submittals as appropriate, including distribution to separate Contractors whose work connects to or interfaces with the submittal item. Instruct parties to promptly report any inability to comply with provisions.
- M. Submittals not requested will not be acknowledged or processed.
- N. Submittals for Review: Architect’s review of submittals is limited to conformance with the design concept and to compliance with requirements of the Contract Documents.
 - 1. Architect’s review of submittals is a gratuitous assistance, and the Architect’s action does not relieve the submitter of responsibility for deviations from the

requirements of the Contract Documents unless the Architect has been informed in writing of the deviation at the time of submission and has given written approval to the specific deviation, nor shall the Architect's action relieve the submitter from responsibility for errors or omissions in the submittals. Such errors, omissions, or deviations shall be made good by the submitter, irrespective of the receipt, checking, review, or approval of submittals by the Architect, and even though the Work is performed in accordance with approved submittals.

2. Contractor retains all responsibility for quantities, field dimensions, fabrication, installation, construction means, methods, techniques, sequences, procedures, safety precautions and programs, and coordination with Work by others. The content of the submittal and wording of the Contractor's review stamp shall not serve to limit responsibility for the above items.
 3. For submittals requiring approval by governing authorities, Architect's approval of the submittal is contingent upon and subject to approval by authorities having jurisdiction.
 4. Architect's notations and remarks added to submittals are to ensure compliance with Contract Documents and do not constitute, imply or require a contract modification.
 5. The Architect's review of an individual item does not indicate review of an assembly in which the item is included.
- O. Submittals for Information: The following categories of submittals, and additional submittals identified in individual specification sections, will not be approved by the Architect or returned to the Contractor, but will be retained for record purposes. When requested by Contractor, Architect will acknowledge receipt. Submittals may be rejected for not complying with requirements.
1. Manufacturer certificates, material certificates, material safety data sheets, and material test reports.
 2. Manufacturer's guide specifications.
 3. Installer certificates, welding certificates, and installer qualification data.
 4. Work plans, waste management plans, and similar representations of construction means, methods, sequences, and procedures.
 5. Insurance certificates and bonds.
 6. Test reports.
 7. Environmental product declarations.
 8. Engineering calculations.
 9. Installation instructions and maintenance recommendations.
 10. Manufacturer's field reports.
 11. Construction photographs.

1.03 SUBMITTAL SCHEDULE:

- A. Prepare a complete schedule of submittals within 10 days of Notice to Proceed.
 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Construction Schedule.

2. Organize the schedule by Project Manual Contents. Provide the following information for each specification Section:
 - a. Scheduled date for the first submittal.
 - b. Name of Subcontractor.
 - c. For each submittal for review, including revised submittals, allow 15 working days excluding delivery time.
 3. Allow time for review by Architect and Architect's consultants, including delivery time. Allow time for one resubmittal after the initial submittal without delaying the Construction Schedule.
 4. Review of submittals and resubmittals will be prioritized by date indicated on the Submittal Schedule.
 5. Alterations or additional work required because of Contractor's failure to make timely submittals shall be corrected without additions to the Contract Sum.
- B. Prioritize the submittal of critical schedule items, long lead items, items requiring coordination between trades, and submittals that may affect final plan approval.

1.04 LIST OF SUBCONTRACTORS:

- A. Within 15 days after date of Notice to Proceed, submit list of Subcontractors proposed for use, with postal addresses, email addresses, and telephone numbers. Indicate all sections of Work to be performed by each Subcontractor.
- B. Sections of Work for which a Subcontractor is not listed will be construed to be done by the Prime Contractor.
- C. Notify the Architect in writing in advance of any proposed changes to the list of Subcontractors.

1.05 LIST OF PRODUCTS:

- A. Within 15 days after date of Notice to Proceed, submit list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.
- B. For Products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.
- C. Notify the Architect in writing in advance of any proposed changes to the list of Products.

1.06 SHOP DRAWINGS:

- A. Prepare neat, legible, accurate drawings at scales adequate to fully illustrate all pertinent data. Where applicable, include plan, elevation, and section views complete with dimensions, notes, and other data sufficient to demonstrate compliance with requirements of Contract Documents and to show relationships and connections to adjacent materials and related work by others.

- B. Electronic Base Drawings: Contractors may obtain drawings from the Architect in Autocad format for use in preparing shop drawings. Drawings will remain the property of the Architect, and will be subject to a License Agreement which must be completed prior to distribution of the Drawings.
 - 1. The Architect makes no representation regarding the accuracy or completeness of electronic drawings. Addenda, Change Orders, and other revisions may or may not be included. Electronic drawings are not contract documents, and in case of discrepancy or conflict, the contract documents shall govern.
 - 2. Use of electronic drawings does not relieve the user of duty to check, confirm, and coordinate all dimensions and details, field verify dimensions and conditions, and coordinate the work with that of others.
- C. Submit for review. After review, produce copies and distribute as required for fabrication and construction, and for record documents purposes as described in Section 01 7700.
- D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. Structural Calculations: State specific loads on which calculations are based. References to code requirements without listing specific loads are not sufficient.
- F. Wiring Diagrams: When specified in individual specification sections, submit detailed point-to-point wiring diagrams indicating each component, locations and quantities, and interconnecting wiring between components. Manufacturer's generic system layouts are not normally sufficient without modification to indicate specific Project requirements.

1.07 PRODUCT DATA:

- A. Identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.
- B. Submit for review. After review, distribute as required for fabrication and construction, and for record documents purposes as described in Section 01 7700.
- C. Indicate electrical characteristics, including voltage, amperage, and phase.
- D. Indicate special utility characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.08 SAMPLES:

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work so that adjacent or coordinating materials may be reviewed together.
- B. Submit samples of the precise article proposed to be furnished.

- C. Submit samples whenever a choice of color or pattern is available in a specified material or Product. Include the full range of manufacturer's standard colors, textures, and patterns for selection.
- D. Include identification on each sample, with full Project information.
- E. Submit the number of samples specified in individual specification sections, or two samples where not otherwise specified; one of which may be retained by Architect.
- F. Reviewed samples which may be used in the Work are indicated in individual specification sections.

1.09 MANUFACTURER'S INSTALLATION INSTRUCTIONS:

- A. Maintain on site one printed or electronic copy of manufacturer's instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing.
- B. When specified in individual specification sections, or upon request, submit instructions to Architect for information.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.10 MANUFACTURER CERTIFICATES:

- A. When specified in individual specification sections, or upon request, submit certification by manufacturer to Architect.
- B. Indicate material or 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.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 4000 – QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Regulatory requirements.
 - 2. References.
 - 3. Quality assurance and control.
- B. Related Requirements:
 - 1. Section 01 3300 – Submittal Procedures: Submittals of manufacturer's instructions and certificates.
 - 2. Section 01 6000 – Product Requirements: Requirements for material and product quality.

1.02 REGULATORY REQUIREMENTS:

- A. General Requirements:
 - 1. Perform Work in conformance with the codes and standards listed in this Section, and with the requirements of federal, state and local authorities having jurisdiction.
 - 2. Become familiar with all regulatory requirements which may affect the Work.
 - 3. Standards which apply to specific portions of the Work are listed in individual specification sections.
 - 4. Comply with regulatory requirements in effect on the date for receiving bids, or on date of Contract Documents if there were no bids, except where a specific date is established.
 - 5. In the event of conflict between regulatory requirements and the Contract Documents, comply with regulatory requirements, but not before referring the points in question to the Architect for approval.
- B. Codes and Regulations:
 - 1. Building Code: Ohio Building Code.
 - 2. Handicapped Accessibility Code: ICC A117.1.
 - 3. Mechanical Code: Ohio Mechanical Code.
 - 4. Plumbing Code: Ohio Plumbing Code.
 - 5. Electrical Code: National Electrical Code, NFPA 70.
 - 6. All work involving refrigerants, including servicing of and modifications to existing systems, shall comply with the Clean Air Act and current Amendments, and applicable EPA regulations.

C. Standards: Ensure products and installation are in conformance with applicable recommendations and requirements of the following:

1. Factory Mutual Engineering.
2. Owner's insurance underwriter.
3. Americans with Disabilities Act (ADA) Standards for Accessible Design.
4. National Electrical Manufacturers Association (NEMA).
5. National Fire Protection Association (NFPA).
6. Occupational Safety and Health Administration (OSHA).
7. Underwriters Laboratories (UL).
8. Local utility companies.
9. Products requiring electrical connection shall be listed and classified by Underwriters Laboratories, Inc., or other testing firm acceptable to the authority having jurisdiction, as suitable for the purpose specified and indicated.

D. Taxes:

1. Bidders and Contractors shall be responsible for informing themselves of tax laws, requirements, regulations, and interpretations as they apply to this project.
2. The Owner is a political subdivision of the State of Ohio. Building materials purchased for incorporation into the improvements will be exempt from the state sales and use taxes, if the Contractor provides a properly completed and executed sales tax exemption certificate to the vendors or Suppliers at the time of the acquisition of the materials. The Owner will execute properly completed certificates on request.
 - a. Contractor shall not charge Owner, and Owner shall not be liable for payment of, taxes from which Owner is exempt by law.
 - b. Purchases of expendable items such as form lumber, tools, oils, fuel, or equipment rentals are subject to the application of the Ohio Sales or Use Tax.
3. Contractor shall pay all income taxes and payroll taxes required by local jurisdictions.

E. Permits and Fees:

1. The Architect will apply for Building Plan Approval from the Ohio Department of Commerce. Contractor will not be responsible for initial filing fees.
 - a. All communications related to plan approval, including shop drawing submittals, are required to be made through the Architect.
 - b. Coordinate shop drawing submittals and correction letter responses with the project schedule, planned not to exceed the allowable number of resubmittals. Fees for additional resubmittals resulting from delinquent, incomplete, or incorrect information will be the responsibility of the Contractor.

2. Except as noted above, each Contractor shall procure from the proper authorities and pay all fees for permits, taps, licenses, inspections, and other charges applicable to their Work, as required by state laws, city and county ordinances, and regulations pertaining to the work.
 - a. All costs shall be borne by the Contractor responsible for the work.
 - b. Arrange for inspections to be performed, giving notice to inspecting authorities in ample time so that work can be inspected and approved as it progresses.
 - c. Do not cover or conceal work requiring inspection until inspection has been performed.
 - d. At the conclusion of the installation, secure a certificate of final inspection and approval by enforcement authorities.

1.03 REFERENCES:

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except where more rigid requirements are indicated in the Contract Documents or are required by applicable codes.
- B. Conform to edition of reference standard current on date of Contract Documents, except where a specific edition is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Submit one copy of any referenced standard when requested by Architect.
- E. The contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Architect shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.04 QUALITY ASSURANCE AND CONTROL:

- A. General Requirements:
 1. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
 2. Comply with manufacturer's instructions, including each step in sequence.
 3. If manufacturer's instructions conflict with Contract Documents, request clarification from Architect before proceeding.
 4. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
 5. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

6. Coordinate with Owner for procedures to mitigate risk of infectious diseases according to current regulatory requirements, and recommendations of the Centers for Disease Control and Prevention.

B. Personnel:

1. Perform work by persons qualified to produce workmanship of specified quality.
2. The Owner may direct the removal and replacement of personnel for the following:
 - a. Consistently poor workmanship or production of low quality work.
 - b. Failure to actively cooperate with the Owner, Architect, or other Contractors in the construction effort.
 - c. Theft, vandalism or fraudulent acts.
 - d. Dangerous or unsafe practices.
 - e. Use of alcohol or drugs; possession or sale of illegal substance of any kind.
 - f. Any activity in, on, or about the premises, or in connection with the work, that violates any ordinance, statute, or other regulation of any governmental body having jurisdiction over the premises.
3. Upon receipt of a written directive from the Owner requiring removal of an employee for one of the above causes, immediately remove the employee from the Project. The removal or replacement of an employee for the above causes shall not be cause for additional compensation. Any such dismissed worker shall not be reemployed in any other capacity for work on the Project.

C. Tolerances:

1. Monitor tolerance control of installed Products to produce acceptable Work. Do not permit tolerances to accumulate.
2. Comply with manufacturer's tolerances. Should manufacturer's tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
3. Adjust Products to appropriate dimensions; position before securing Products in place.

D. Manufacturers' Field Services and Reports:

1. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, adjustment and balancing of equipment, as applicable, and to initiate instructions when necessary.
2. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
3. Submit report in duplicate within 30 days of observation to Architect for information.

E. Mockups:

1. When specified in individual specification sections, construct full-size representations of construction, materials, and finishes to demonstrate aesthetic effects, quality of workmanship, and coordination of elements.
2. Build mockups in locations and size indicated, or if not indicated, as directed by Architect.
3. Notify Architect minimum 7 days in advance of scheduled date for construction of mockup.
4. Construct mockup using workers to be employed for the construction illustrated by the mockup, and under the direction of the supervisory personnel who will direct the work.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting fabrication or construction of the work, allowing minimum 7 days for initial review and each subsequent review of each mockup.
7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 4210 – ABBREVIATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Definition of abbreviations used in the Contract Documents.

1.02 ABBREVIATIONS – TERMS:

- A. Listed below are terms and abbreviations which may be found in the Contract Documents. Common English language terms have not been included. Refer also to Drawings and individual specification Sections for terms and abbreviations specific to those documents. Acronyms used to refer to associations and organizations are listed separately below. Where multiple definitions are listed for an abbreviation, refer to the context for the intended meaning. For abbreviations not listed, and where the intended meaning is not obvious, request interpretation from the Architect.

AC	air conditioning; alternating current	BSMT.	basement
A.B.	anchor bolt	BTU	British thermal unit
ACC.	accessible	BTUH	British thermal unit per hour
ACOUST.	Acoustical	C	Celsius; channel
ADA	Americans with Disabilities Act, Standards for Accessible Design	CAB.	cabinet
ADJ.	adjacent; adjustable	CAP.	capacity
A.F.F.	above finished floor	CAT.	catalog
A.F.G.	above finished grade	CATV	community antenna (cable) television
AFUE	annual fuel utilization efficiency	CAV.	cavity
AHU	air handling unit	CB	catch basin; cementitious (backer) board
ALT.	alternate	CCF	hundred cubic feet
ALUM.	aluminum	CFM	cubic feet per minute
AMP	ampere	CHW	chilled water; circulating hot water
ANOD.	anodized	CI	cast iron; curb inlet
APPROX.	approximate	CJ	construction joint; control joint
ARCH.	Architect	CKT.	circuit
ASSY.	assembly	CL	center line; class
ATTN.	attention	CLG.	ceiling; cooling
AUTO.	automatic	CLOS.	closet; closure
AUX.	auxiliary	CMU	concrete masonry unit
AWG	American wire gauge	CO	cased opening; cleanout; company
B&B	balled and burlapped	COEFF.	coefficient
BD.	board	COL.	column
B.F.F.	below finished floor	CONC.	concrete; concentric
BHP	brake horsepower	COND.	condenser; condensate
BLDG.	building	CONF.	conference
BLKG.	blocking	CONN.	connection
BLKHD.	bulkhead	CONT.	continue; continuous
BM	beam; benchmark	CONTR.	contract; contractor
BN	bullnose	CONV.	convert; conventional
BOT.	bottom	COORD.	coordinate
BRG.	bearing	CORR.	corridor; correct

CPT	carpet	EXH.	exhaust; exhibit
CPVC	chlorinated polyvinyl chloride	EXIST.	existing
CT	ceramic tile; countertop; current transformer	EXP.	expansion; exposed
CTR.	center	EXT.	exterior; extinguisher
CU	cubic; copper; coefficient of utilization	F	Fahrenheit; female
CUH	cabinet unit heater	FACP	fire alarm control panel
CW	cold water	FC	footcandle
CYL.	cylinder	FCO	floor cleanout
D	deep; depth; penny (nail)	FD	floor drain
DAT.	datum	FDN.	foundation
DB	decibel; dry bulb	FE	fire extinguisher
DBL.	double	FFE	finish floor elevation
DC	direct current	FH	fire hydrant
DDC	direct digital control	FHMS	flat head metal screw
DEG.	degree	FIG.	figure
DEL.	delete; deliver	FIN.	finish
DEPT.	department	FIXT.	fixture
DET.	detail	FL	flow line
DF	drinking fountain	FLA	full load amps
DI	ductile iron	FLG.	flange; flashing
DIA.	diameter	FLR.	floor
DIAG.	diagonal; diagram	FLUOR.	fluorescent
DIFF.	difference; diffuser	FOUND.	foundation
DIM.	dimension	FP	fire protection
DISC.	disconnect	FR	fire rating
DISP.	dispenser; disposal	FRP	fiber reinforced polyester
DIST.	distance; district; distribution	FRTW	fire retardant treated wood
DL	dead load	FS	Federal Specification
DOC.	document	FT	feet; foot
D.P.	down pipe	FTG.	footing
DR.	door	FURN.	furnace; furnish; furniture
DW	dishwasher	FXT.	fixture
DWG.	drawing	GA	gage
DWV	drain, waste and vent	GAL.	gallons
EA.	each	GALV.	Galvanized
E.C.	Electrical Contractor	GBF	granular backfill
EIFS	exterior insulation and finish system	G.C.	General Contractor
EJ	expansion joint	GCO	grade cleanout
EL.	elevation	GF	gas furnace
ELEC.	electric	GFCI	ground fault circuit interrupter
ELEV.	elevator	GL	glass
EP	edge of paving; electrical panel	GLULAM	glued laminated wood
EPDM	ethylene propylene diene monomer	GPM	gallons per minute
EPS	expanded polystyrene	GYP.	gypsum
EQUIP.	equipment	H	height
EQUIV.	equivalent	HB	hose bibb
ESMT.	easement	HC	HVAC Contractor; hollow core
ESP	external static pressure	HDO	high density overlay
EST.	estimate	HDW.	hardware
EW	each way	HID	high intensity discharge
EWC	electric water cooler	HM	hollow metal
		HORIZ.	horizontal
		HP	high pressure; horsepower

HPS	high pressure sodium	MISC.	miscellaneous
HT.	height	MLDG.	molding
HVAC	heating, ventilating and air conditioning	M.O.	masonry opening; motor operated
HW	hot water	MOD	motor operated damper
ID	inside diameter; identification	MON.	monument
IN.	inches	MSB	mop service basin
INCAND.	incandescent	MT.	mount
INCL.	included	MTD.	mounted
INSUL.	insulation	MTG.	mounting
INT.	interior	MTL.	metal
INV.	invert	NC	noise criteria; normally closed
IPS	international pipe standard; iron pipe size	NEC	National Electrical Code (NFPA 70)
IR	infrared	NIC	not in contract; noise isolation class
JAN.	janitor	NO	number; normally open
JST.	joist	NOC	notice of commencement
JT	joint	NRC	noise reduction coefficient
KD	kiln dried; knocked down	N.T.S.	not to scale
KIT.	kitchen	OA	outside air; overall
KO	knockout	OAI	outside air intake
KSF	thousand square feet	OC	on center
KVA	kilovolt amperes	OCC.	occupant
KW	kilowatt	OD	outside diameter
L	angle; liter	OH	overhead
LAM.	laminate	OPG.	opening
LAV	lavatory	OPP.	opposite
LB	pound; load bearing	OPT.	optional; optimum
LDG.	landing; loading	OZ.	ounce
LED	light emitting diode	P	pole
LF	linear feet (foot)	PART.	partial
LH	left hand	PC	Plumbing Contractor; point of curve
LL	live load; lead lined	PEND.	pendant
LLH	long leg horizontal	PERF.	perforated
LLV	long leg vertical	PERIM.	perimeter
LONG.	longitudinal	PERM.	permanent
LPG	liquid petroleum gas	PERP.	perpendicular
LRA	locked rotor amps	PH	phase
LTWT	lightweight	PI	point of intersection
LTG.	lighting	PIV	post indicator valve
MAINT.	maintenance	PKG	package; parking
MAN.	manual	PL	plate; property line
MATL.	material	P. LAM.	plastic laminate
MAX.	maximum	PLBG.	plumbing
MBH	thousand BTU per hour	PLYWD.	plywood
M.C.	HVAC Contractor; moisture content	PNL.	panel
MCA	minimum circuit amps	PORC.	porcelain
MDO	medium density overlay	PORT.	portable
MECH.	mechanical	POS	positive; position
MED.	medium; medical	PREF.	preference
MFR.	manufacturer	PREFAB.	prefabricated
MH	manhole	PREFIN.	prefinished
MIN.	minimum; minute	PRELIM.	preliminary
		PREV.	previous
		PROJ.	project

PSF	pounds per square foot	SV	sheet vinyl
PT	preservative treated	SW	switch
PVC	polyvinyl chloride	SWR.	sewer
QT	quarry tile	SYM.	symbol; symmetrical
QTY.	quantity	SYS.	system
R	radius; thermal resistance	T&G	tongue and groove
RA	return air	TAN.	tangent
RCB	rubber cove base	TB	through bolt; test boring
RD	roof drain	TC	top of curb
REBAR	reinforcing steel bars	TEL.	telephone
RECIRC.	recirculation	TEMP.	temporary; temperature; tempered
RECEPT.	reception; receptacle	TERM.	terminal
RECT.	rectangular	THK.	thickness
REF.	reference; refrigerator	TOIL.	toilet
REFL.	reflected	TP	top of pavement; telephone pole; toilet paper
REINF.	reinforcing; reinforced	TRANS.	transparent; transverse; transom
REQD.	required	TS	tube steel
RESIL.	resilient	TYP.	typical
REV.	revision	U	heat transfer coefficient
RH	right hand; relative humidity	UC	under cabinet
RM.	room	UG	underground
R.O.	rough opening	UH	unit heater
RPM	revolutions per minute	UNO	unless noted otherwise
RS	rough sawn; rapid start	UR.	urinal
RSB	rubber straight base	UTIL.	utility
RTU	rooftop unit	UV	unit ventilator; ultraviolet
R/W	right of way	V	volt
S4S	surfaced four sides	V.B.	vapor barrier
SA	supply air	VCT	vinyl composition tile
SAN.	sanitary	VERT.	vertical
SAT	suspended acoustical tile	VFY.	verify
SC	Site Contractor; solid core; shading coefficient	VNR	veneer
SCHED.	schedule	VOC	volatile organic compound
SCWD	solid core wood	VOL.	volume
SENS	sensible	VTR	vent through roof
SF	square feet (foot)	VWC	vinyl wall covering
SGFT	structural glazed facing tile	W	watt; width; west; wall
SHT.	sheet	W/	with
SIM.	similar	W/O	without
SM.	small	WC	water closet; water column
SP	static pressure	WCO	wall cleanout
SPKR.	speaker	WD	wood
SQ.	square	WDW.	window
SS	service sink; stainless steel	WH	wall hydrant; water heater
ST	storm	WOLM.	preservative treated
STC	sound transmission class	WT	weight
STD.	standard	WWF	welded wire fabric
STL.	steel	XFMR	transformer
STOR.	storage	XFR	transfer
STRUCT.	structural	XPS	extruded polystyrene
SURF.	surface	YD	yard
SUSP.	suspended		

1.03 ABBREVIATIONS – ASSOCIATIONS AND ORGANIZATIONS:

AASHTO	American Association of State Highway and Transportation Officials
ABAA	Air Barrier Association of America
ACI	American Concrete Institute
ADC	Air Diffusion Council
AFPA	American Forest and Paper Association
AGA	American Gas Association
AHA	American Hardboard Association
AHRI	Air Conditioning, Heating, and Refrigeration Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ALA	American Laminators Association
ALSC	American Lumber Standards Committee
ANSI	American National Standards Institute
APA	The Engineered Wood Association
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builder's Hardware Manufacturer's Association
BIA	Brick Institute of America
BICSI	Building Industry Consulting Service International
CDHS	California Department of Health Services
CISCA	Ceilings and Interior Systems Contractors Association
CISPI	Cast Iron Soil Pipe Institute
CPSC	Consumer Products Safety Commission
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DHI	Door Hardware Institute
DIN	Deutsches Institut für Normung
DOC	Department of Commerce
ECIA	Electronic Components Industry Association
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FGIA	Fenestration & Glazing Industry Alliance
FM	Factory Mutual Engineering Corporation
FSC	Forest Stewardship Council
GA	Gypsum Association
HMMA	Hollow Metal Manufacturers Association
HPVA	Hardwood Plywood and Veneer Association
IAPMO	International Association of Plumbing and Mechanical Officials
ICC	International Code Council
ICC-ES	International Code Council Evaluation Service
ICEA	Insulated Cable Engineers Association
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IETF	Internet Engineering Task Force

ISO	International Organization for Standardization
MBMA	Metal Building Manufacturers Association
MIC	Masonry Industry Council
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NCMA	National Concrete Masonry Association
NCPWB	National Certified Pipe Welding Bureau
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NFSHSA	National Federation of State High School Associations
NHLA	National Hardwood Lumber Association
NJATC	National Joint Apprenticeship and Training Committee for the Electrical Industry
NLGA	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NSI	Natural Stone Institute
NTMA	National Terrazzo & Mosaic Association
NWWDA	National Wood Window and Door Association
OBC	Ohio Building Code
ODOT	Ohio Department of Transportation
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PDI	Plumbing and Drainage Institute
PS	Product Standards
RFCI	Resilient Floor Covering Institute
SDI	Steel Deck Institute
SDI	Steel Door Institute
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPRI	Single Ply Roofing Industry
SSPC	Society for Protective Coatings
TCNA	Tile Council of North America
TIA	Telecommunications Industry Association
TPS	Technical Preservation Services, National Park Service
UBC	Uniform Building Code
UL	Underwriters Laboratories
USC	University of Southern California
USGBC	U. S. Green Building Council
WDMA	Window and Door Manufacturers Association

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 5000 – TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Temporary Utilities: Electricity; lighting; telephone and internet; water.
2. Construction Facilities: Temporary buildings; sanitary facilities.
3. Access facilities.
4. Temporary barriers, enclosures, fencing, and security.
5. Temporary Controls: Fire protection; snow removal.

B. Related Requirements:

1. Section 01 7000 – Execution Requirements: Progress cleaning, waste management and disposal; protecting installed construction.
2. Section 01 7700 – Closeout Requirements: Final cleaning.

1.02 REGULATORY REQUIREMENTS:

A. Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

1. Building code requirements.
2. Health and safety regulations.
3. Utility company regulations.
4. Police, fire department, and rescue squad rules.
5. Environmental protection regulations.

B. Engage the appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.

1. Arrange with company and existing users for a time when service can be interrupted.
2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked in services.

C. Provide plan approvals and permits for temporary buildings, where required by authorities having jurisdiction.

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

1.03 PROJECT CONDITIONS:

A. Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the work

progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on site.

- B. Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

1.04 TEMPORARY ELECTRICITY:

- A. Connect to Owner's existing power service. Do not disrupt Owner's need for continuous service. Exercise measures to conserve energy.
- B. Provide grounding and ground fault circuit protection as required.
- C. Provide adequate distribution equipment, wiring, and outlets to provide circuits for power and lighting.
 - 1. Provide 20 ampere duplex outlets on single phase branch circuits for power tools and fractional horsepower motors for every 2500 sq ft of active work area, located so that extension cords need not exceed 100 feet. Install outlets in outlet boxes with cover plates.
 - 2. Provide 20 ampere single phase branch circuits for lighting.
 - 3. Provide temporary service to field offices.
- D. Use of temporary electrical power system for welding operations is prohibited.
- E. Electrical Power Cords: Grounded extension cords; hard service type where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length voltage ratio.
- F. Upon changeover to permanent electrical service, remove portions of the temporary electrical service no longer needed, including power and lighting distribution and utilization equipment and wiring.

1.05 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES:

- A. Provide and maintain lighting for construction operations to achieve a minimum lighting level of 5 footcandles. Provide additional lighting for performance of tasks.
- B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes to achieve a minimum lighting level of 1 footcandle.
- C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- D. Provide guard cages or tempered glass enclosures where exposed to breakage. Provide wet location rated fixtures where exposed to moisture.
- E. Maintain lighting and provide routine repairs. Relocate temporary lighting as required during progress of the work.

- F. Permanent lighting may be utilized during construction. Relamp as necessary so that all lighting is operable at Substantial Completion.

1.06 TEMPORARY TELEPHONE AND INTERNET SERVICE:

- A. Provide, maintain, and pay for telephone service where required in connection with the work. Use of Owner's existing telephone service is not permitted. Use of cellular mobile phone system is acceptable, if adequate reception can be maintained.
- B. Provide, maintain, and pay for internet service where required in connection with the work. Use of Owner's internet service is not permitted. Use of cellular data system is acceptable, if adequate reception can be maintained.
- C. Post a list of emergency telephone numbers at a clearly marked location accessible to all construction personnel, including but not limited to fire, police, ambulance, poison control, and each utility company providing service to the site.
- D. Contractor and each subcontractor shall provide cell phone service with minimum one phone for the on-site superintendent.

1.07 TEMPORARY WATER SERVICE:

- A. Provide and maintain suitable quality water service for construction operations, temporary toilets, wash facilities, and drinking water. Connect to Owner's existing water system. Owner will pay cost of water used. Exercise measures to conserve water.
- B. Provide temporary piping system of sufficient capacity to meet needs of construction operations, with minimum 1 inch piping and vacuum breakers. Comply with local utility regulations. Sterilize temporary water piping prior to use.
- C. Extend branch piping with outlets located so water is available in areas where work is in progress, using maximum 100 ft hoses with threaded connections.
- D. Water Hoses: Minimum $\frac{3}{4}$ inch, heavy duty, abrasion resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- E. Provide temporary pipe insulation to prevent freezing. Replace piping and hoses damaged by freezing or other causes.

1.08 TEMPORARY BUILDINGS:

- A. Temporary buildings, where provided, shall meet the following requirements.
- B. Offices: Prefabricated mobile units; weather tight, with lighting, electrical outlets, heating and cooling equipment, equipped with sturdy furniture, drawing rack, shelving, bulletin board, and drawing display table with minimum 36 x 48 inch top. Provide space for project meetings with table and chairs to accommodate minimum one representative of the Architect, Owner, Contractor, and each major Subcontractor. Provide first aid kit and portable fire extinguisher.

- C. Sheds: Weather tight, substantial, of sufficient size to hold on-site materials which are subject to weather damage. Raise floors minimum 6 inches above ground on heavy joists or sleepers.
- D. Locate temporary buildings in approved locations, a minimum distance of 30 ft from existing and new structures.
- E. Provide walks for access to office from parking areas and from building.

1.09 TEMPORARY SANITARY FACILITIES:

- A. Provide and maintain temporary toilets in quantity and location required by applicable codes and regulations.
- B. Maintain facilities daily in clean and sanitary condition. Provide toiletry supplies.

1.10 ACCESS FACILITIES:

- A. Construct and maintain culverts, ramps, steps, platforms, scaffolds, and other means of access so that no portion of the Work is delayed or handicapped due to a lack of such facilities.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Vehicular Access and Parking:
 - 1. Limit construction traffic on existing on-site roads to designated routes.
 - 2. Limit parking for private vehicles of Contractor and Subcontractor personnel to designated areas.
 - 3. When site space is not adequate, provide additional off-site parking.

1.11 TEMPORARY BARRIERS:

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and public walkways required by governing authorities for public rights-of-way and for public access to existing buildings.
- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.
- E. Provide and maintain barrels with reflective tape and battery operated flashers to direct vehicular traffic away from work areas.
- F. Provide barriers as required by applicable regulations at edges of openings and other hazards, painted with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against.

1.12 EXTERIOR ENCLOSURES:

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
- B. Close openings of 25 square feet or less with plywood or similar materials. Close larger openings with plywood or fire retardant reinforced polyethylene securely attached to fire retardant treated wood framing.
- C. Close openings through roofs, and horizontal surfaces with load bearing, wood framed construction.
- D. Maintain required exits for protection of life and property.

1.13 TEMPORARY FENCING:

- A. Construction: Commercial grade chain link fence.
- B. Provide 6 ft high fence around construction area and material storage areas; equip with vehicular and pedestrian gates with locks.
- C. Where required due to construction operations and sequence, relocate or remove and reinstall temporary fencing. Repair damaged fencing.
- D. Where construction sequence requires multiple relocations of temporary fencing, relocatable sections of fencing in maximum 12 foot lengths may be used, subject to approval.

1.14 SECURITY:

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Limit entry into construction areas to the following:
 - 1. Contractor, including employees and Subcontractors.
 - 2. Architect, Owner, and persons authorized by them.
 - 3. Regulatory agency personnel legally entitled to inspect the project.
- C. Limit construction personnel to designated construction areas and access routes.
 - 1. Limit construction activities to Owner's property, street and highway rights-of-way, and permanent easements.
 - 2. Do not enter on or occupy with workers, tools, equipment, or material any ground outside the designated construction areas without written consent of the Owner of such property.
 - 3. Provide approved temporary signage as required to provide directional information to construction personnel and visitors.

1.15 TEMPORARY FIRE PROTECTION:

- A. Provide and maintain portable fire extinguishers, readily accessible throughout areas where work is in progress, in accordance with applicable fire code and local fire department regulations. At minimum, provide one 20 lb. ABC extinguisher for each 3000 square feet of roof area.
- B. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher. Provide additional extinguishers at locations where hazardous work is in progress, including but not limited to painting, welding, or using torches or open flames for heating or cutting.
- C. Store combustible materials in containers in fire safe locations.
- D. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, and access routes for fighting fires.
- E. Prohibit smoking in hazardous fire exposure areas.
- F. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

1.16 SNOW REMOVAL:

- A. Owner will provide snow removal from Owner occupied roads, parking areas and building entrances.
- B. Remove snow from construction roads and parking areas, work areas, material storage areas and field offices as required.
- C. Do not allow the accumulation or drifting of snow on roof areas in excess of design loads.

1.17 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS:

- A. Maintain temporary utilities, equipment, and facilities as long as needed for safe and proper completion of the Work.
- B. Relocate temporary utilities, equipment, and facilities as necessary to correct interference with permanent construction or to facilitate operations of other trades.
- C. Remove temporary utilities, equipment, facilities, and materials as rapidly as progress of the Work allows. Perform final removal prior to Final Application for Payment.
- D. Remove underground installations to a minimum depth of 3 ft. Grade site as indicated.
- E. Clean and repair damage caused by installation or use of temporary work.
- F. Restore existing facilities to original condition. Restore permanent facilities used during construction to specified condition. Repair damage to existing pavement and roads caused by construction operations.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 6000 – PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Basic product requirements.
 - 2. Product options.
 - 3. Substitution procedures.
 - 4. Product delivery requirements.
 - 5. Product storage and handling requirements.

1.02 BASIC PRODUCT REQUIREMENTS:

- A. Provide new equipment and materials meeting quality standards of the manufacturer. Defective, damaged, reconditioned, or substandard equipment and materials are not acceptable. Remove unacceptable materials incorporated in the Work, replace with sound materials meeting specified criteria, and perform related corrective work to meet approval of Architect.
- B. Provide all equipment and materials required for complete assemblies and systems. Omissions of specific reference to incidental parts or accessories required does not constitute a release from furnishing such items.
- C. Products of the same type shall be provided by the same manufacturer unless specifically approved by the Architect.
- D. Products requiring electrical connection shall be listed and classified by Underwriters Laboratories, Inc., or other testing firm acceptable to the authority having jurisdiction, as suitable for the purpose specified and indicated.
- E. Do not use materials containing asbestos.
- F. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- G. Provide interchangeable components of the same manufacture, for components being replaced.
- H. Finishes:
 - 1. Where multiple colors, patterns, or finishes are available, selection will be made from manufacturer's standard range unless specifically indicated otherwise. Submit samples for selection under the provisions of Section 01 3300.
 - 2. If not otherwise specified, provide equipment with manufacturer's standard baked enamel finish or equal. Do not field paint equipment unless specifically noted in the Contract Documents.

1.03 PRODUCT OPTIONS:

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers, Fabricators, or Installers: Products of manufacturers, fabricators, or installers named and meeting specified criteria, standards and description. Submit a request for substitution in accordance with the following article for any manufacturer, fabricator, or installer not named.
 - 1. Where a manufacturer is listed by name only without model numbers or specific product reference, a request for substitution is not required. Where products of another manufacturer are listed by model number, provide the closest equivalent product meeting the specified requirements.
 - 2. All Products must meet specified criteria, standards and descriptions. For manufacturers listed by name only without model numbers or specific product reference, standard products may require modifications and accessories, which shall be included.
 - 3. Drawings and details incorporate design parameters specific to the products of manufacturers listed by model number in the specifications and schedules. Where equivalent products of other listed manufacturers are provided, coordinate related work and the work of other trades with the requirements of the products provided. Items requiring coordination include, but are not limited to, unit dimensions and clearances, roof openings and curbs, unit weight and structural supports, housekeeping pad dimensions, piping, venting, electrical requirements, controls, panelboard and light fixture dimensions and clearances, motor controls and connections, and equipment connections.
 - 4. Where a product listed by model number or specific product reference has been superseded or replaced by a different Product from the same manufacturer, provide the replacement Product, but not before submitting product data in accordance with Section 013300 for approval, specifically indicating all differences between the specified Product and the replacement Product.
- C. The phrase “or equal” or similar language does not exempt substitutions from compliance with the following Substitution Procedures. No substitutions are permitted unless specifically approved in writing for this Work by the Architect.

1.04 SUBSTITUTION PROCEDURES:

- A. Architect will consider requests for Substitutions only prior to receipt of bids or within 15 days after date of Notice to Proceed. Due to time constraints, requests made later than 5 business days prior to the scheduled bid opening may not be reviewed. Submit request for Substitution to the Architect.
- B. Requests for Substitutions may be made by Prime Bidders/Contractors only. Requests made by others will not be considered unless made jointly with a Prime Bidder/Contractor.

- C. Bids shall include specified Products only, unless Substitution is approved by Addendum issued prior to receipt of bids.
- D. Substitutions requested more than 15 days after date of Notice to Proceed may be considered or rejected without consideration, at the discretion of the Architect, and are limited to the following circumstances:
 - 1. Specified Products become unavailable through no fault of the Contractor. Such Substitutions shall not result in additions to the Contract Sum or Contract Time.
 - 2. The Substitution offers the Owner a substantial advantage in initial cost, life cycle cost, time, energy conservation, sustainable design, or other considerations, after deducting costs for redesign and coordination. Requests for such Substitutions shall include detailed information on the changes to the Contract Sum and Contract Time, including that of separate Contractors.
 - 3. None of the specified Products can meet the requirements of the Contract Documents, or receive necessary approval by a governing authority, and the Contractor certifies that the Substitution will meet the requirements. Such Substitutions shall not result in additions to the Contract Sum or Contract Time, except to the extent caused by regulatory requirements enacted or modified after the bid date.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitutions will be reviewed for general conformance with the intent of the Contract Documents but not for detailed compliance with all specified requirements. Approval of substitutions does not relieve the Contractor of the responsibility to comply with the Contract Documents, unless the variation is specifically identified in the substitution request.
- G. Substitutions incorporated in the Work without Architect's approval shall be removed and replaced with specified Products without additions to the Contract Sum or Contract Time.
- H. Substitution Submittal Procedure: Submit Substitution Request Form attached, or provide a cover letter with equivalent information. Limit each request to one proposed Substitution.
 - 1. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents. Documentation shall specifically note variations from specified Products in function, dimensions, weight, appearance, quality, code compliance, durability, availability of service and parts, and interfaces with related construction.
 - 2. Submit product data, certified test results, and other supporting data sufficient to demonstrate the proposed Product equivalence. Burden of proof is on proposer.

At Architect's option, installation references and samples of actual products may be required.

3. For products specified to receive warranty coverage, Substitution request shall include a preliminary copy of the specific warranty.
4. Submittal of a Substitution request, or incorporation in the Work of an approved Substitution, constitutes a representation that the submitter:
 - a. Has personally investigated proposed Product and determined that it meets or exceeds the function, appearance, sustainable design requirements, and quality level of the specified Product.
 - b. Will provide the same warranty for the Substitution as for the specified Product.
 - c. Will coordinate installation and make changes to other Work, including the Work of separate Contractors, which may be required for the Work to be complete without additions to the total Contract Sum or Contract Time.
 - d. Waives claims for additional costs or time extension which may subsequently become apparent.
 - e. Will reimburse Owner and Architect for review or redesign services if re-approval by authorities is required.
5. Architect will notify submitter of decision to accept or reject request. Architect's decision is final.
6. Architect reserves the right to reject requests not containing sufficient information to enable Architect to completely evaluate the request without delay in the scheduled bid opening.

1.05 PRODUCT DELIVERY REQUIREMENTS:

- A. Schedule deliveries to coordinate with installation schedule, to minimize long term storage at site and to minimize possibility of damage, deterioration, theft and other losses.
- B. Transport and handle Products in accordance with manufacturer's instructions.
- C. Accept Products at site, including unloading and uncrating. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.

1.06 PRODUCT STORAGE AND HANDLING REQUIREMENTS:

- A. Store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store sensitive Products in weather tight, climate controlled enclosures.
- C. For exterior storage of fabricated Products, place on sloped supports, above ground.

- D. Provide off-site storage and protection when site does not permit on-site storage or protection.
- E. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of Product.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store and handle Products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of Products to prevent overcrowding and to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.
- I. Do not exceed manufacturer's shelf life limitations. Discard and replace Products not installed prior to stated expiration date.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 ATTACHMENTS:

- A. Substitution Request Form.

END OF SECTION

SUBSTITUTION REQUEST FORM

Specified Product:

Section	Paragraph	Description
---------	-----------	-------------

Proposed Substitution: _____

Attachments: _____

The undersigned requests consideration of this Substitution and certifies that the attached product data and other supporting information indicates all variations from the specified Product, in accordance with the requirements and representations of Section 01 6000, and that the following statements are correct unless modified by attachments:

1. The Prime Bidder/Contractor has personally investigated proposed Product and determined that it meets or exceeds the function, appearance, sustainable design requirements, and quality level of the specified Product.
2. The same warranty will be provided for the Substitution as for the specified Product.
3. Installation will be coordinated with other Work, including the Work of separate Contractors, without additions to the total Contract Sum or Contract Time.
4. The Prime Bidder/Contractor will pay for changes to the building design if additional design or detailing is required to properly integrate the Substitution into the Work, and for additional services required to obtain the approval of governing authorities.

SUBMITTER:
(if other than Prime Bidder/Contractor)

PRIME BIDDER/CONTRACTOR:
(must be completed)

Name of Company or Corporation

Phone

email

By: _____
Signature

Printed Name

Name of Company or Corporation

Phone

email

By: _____
Signature

Printed Name

ARCHITECT'S RESPONSE:

____ Addendum or contract modification to be issued	____ Not approved
____ Additional information needed	____ Received too late

By: _____ Date: _____

Notes: _____

SECTION 01 7000 – EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Examination.
2. Preparation.
3. Field engineering.
4. Execution.
5. Progress cleaning.
6. Construction waste management and disposal.
7. Protecting installed construction.

B. Related Requirements:

1. Section 01 7700 – Closeout Requirements: Final cleaning.
2. Section 02 4119 – Selective Demolition.

1.02 SUBMITTALS FOR INFORMATION: In accordance with Section 01 3300.

A. Construction Waste Management Plan: Identify material types and estimated quantities for recycling, reuse, or sorting. Describe separation requirements, on-site storage requirements, destinations and transportation methods for each type of material. For waste that cannot be recycled, identify disposal locations and methods.

1. Provide copy of construction waste management plan to each worker, subcontractor, and supplier when they first begin work on site. Provide periodic training and enforcement as necessary.

1.03 EXAMINATION:

- A. Verify that existing site conditions, field measurements, and substrate surfaces are acceptable for subsequent Work. Beginning new Work indicates acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct location.

1.04 PREPARATION:

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

1.05 FIELD ENGINEERING:

- A. Locate and preserve survey control and reference points, and establish elevations, lines and levels, under the supervision of experienced engineering and surveying personnel utilizing recognized engineering survey practices.
- B. Where existing survey control points are indicated on Drawings, verify locations prior to starting work. Protect and maintain survey control points at all times; preserve permanent reference points during construction.
- C. Arrange for replacement of dislocated or destroyed survey control points, or relocation required by changes in grade or other reasons, based on original survey control. Permanent points removed or destroyed during progress of the Work shall be reinstalled at the expense of the party responsible for their removal.
- D. Verify setbacks and easements; confirm Drawing dimensions and elevations.

1.06 EXECUTION:

- A. Install, erect, and apply Products in accordance with manufacturer's instructions and recommendations. In the event of conflict with requirements of the Contract Documents, request resolution in accordance with Section 01 3100.
- B. Cutting and Patching:
 - 1. New Construction: Provide chases, openings, and recesses in new construction, where required by the work of each trade; provide and set in place all boxes, sleeves, inserts, and similar components.
 - 2. Existing Walls, Floors and Ceilings: Work shall be done by persons skilled and experienced in the applicable trade. Finish work shall match material and quality of adjacent construction to the approval of the Architect.
 - 3. Slabs, Walks, and Pavements: Saw cut existing materials to provide a neat joint at removal limits, except where removal terminates at an existing joint. Pin new concrete to existing with #5 bars, minimum 24 inches long, spaced at 18 inches o.c. and embedded minimum 12 inches into existing concrete.
 - 4. Submit written request in advance of cutting or altering elements which may affect:
 - a. Structural integrity of element.
 - b. Integrity of weather-exposed or moisture-resistant elements.
 - c. Efficiency, performance, maintenance, useful life, or safety of element.
 - d. Visual qualities of elements exposed to view.
 - e. Work of Owner or separate Contractor.

5. Execute cutting, fitting, and patching, including excavation and fill, to complete Work, and to:
 - a. Fit the several parts together, to integrate with other Work.
 - b. Uncover work to install or correct ill-timed Work.
 - c. Remove and replace defective and non-conforming Work.
 - d. Remove samples of installed Work for testing.
 - e. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
 6. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
 7. Cut masonry and concrete materials using masonry saw or core drill.
 8. Do not cut, notch, or bore holes in metal framing members without approval; utilize factory punch-outs or holes where present. Do not cut or notch flanges.
 9. Restore Work with new Products in accordance with requirements of Contract Documents.
 10. Refinish surfaces to match adjacent finishes in all respects, including color, size and texture. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
 11. Identify hazardous substances and conditions exposed during the Work to the Architect for decision or remedy.
- C. Items Removed for Reinstallation:
1. Items removed which are to be relocated, reused, or reinstalled in existing locations, shall be stored on site in approved locations until progress of the work permits reinstallation.
 2. Contractor removing the items shall be responsible for their storage and protection.

1.07 PROGRESS CLEANING:

- A. Maintain areas free of waste materials, debris, packaging materials, and rubbish. Maintain site in clean and orderly condition.
- B. Clean dirt, debris, and mud from on-site locations as directed. Clean and wash down construction vehicles prior to leaving the site as required to minimize tracking of dirt, debris, and mud onto public roads. Clean dirt, debris, and mud from public roads as directed.
- C. Remove debris and rubbish from plenums, attics, and other limited access or remote spaces, prior to enclosing the space.
- D. Collect non-hazardous waste materials, debris, packaging materials, and rubbish daily and place in dumpsters or approved locations for recycling or salvage.

- E. Clean and organize work areas daily. Maintain cleanliness in all work areas to assist other Contractors, suppliers, and the Owner in the timely installation of equipment and implementation and completion of concurrent responsibilities.

1.08 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL:

- A. Provide and maintain containers of adequate size to receive scrap construction materials, packaging and debris generated by performance of the work.
 - 1. Do not dispose of construction waste materials in trash receptacles or recycling containers designated for Owner's use.
 - 2. Do not allow waste materials to accumulate on site. Change out loaded containers for empty containers as demand requires.
 - 3. Remove and promptly dispose of contaminated or vermin infested materials.
 - 4. Post approved temporary signage at waste collection areas to assist workers in achieving waste management goals.
- B. Recyclable and Recoverable Material: Materials may be separated, stored, protected, and handled at the project site, or transported off-site for separation. Arrange for regular collection, transport, and delivery to respective approved recycling centers to keep site clear and prevent contamination of materials.
- C. Salvaged Materials: Temporarily store on site in approved locations, neatly stacked and arranged; remove from the Owner's property promptly. Salvaged material shall not be sold on site.
- D. Hazardous Substances: Collect and remove from site daily, and dispose of off-site in a legal location and manner, all hazardous substances in aerosol cans, tubes, pails, buckets, barrels, canisters or other factory packaged containers. Do not dispose of hazardous substances on-site or in containers for materials to be recycled, salvaged, or disposed of in landfills.

1.09 PROTECTING INSTALLED CONSTRUCTION:

- A. Protect equipment and materials from damage during installation. Replace or repair equipment, material or facilities damaged by the Contractor during, or due to, or in the performance of the Work, as directed by the Architect.
- B. Protect installed Work; provide special protection where specified in individual specification sections.
 - 1. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
 - 2. At the end of each work day, protect all work likely to be damaged from weather, rain, wind, storms, frost, heat, and other causes of injury or damage.
 - 3. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
 - 4. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

5. Upon installation of finish materials and construction exposed to view, and where existing work and finish materials are not indicated to be removed or modified by the work of this project, protect such construction against damage or injury, using materials that may be easily removed without leaving residue or permanent stains.
 6. During construction, cap, plug, or cover open ends of ducts, piping, and conduit, and equipment openings, to prevent entry of foreign material.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, follow recommendations for protection from waterproofing or roofing material manufacturer.
- D. Prohibit traffic from landscaped areas.
- E. Properly and carefully repair materials and finishes which are cut, damaged, disturbed or interfered with to match adjacent and surrounding surfaces, to the approval of the Architect. If repairs cannot be made satisfactorily, replace or refinish with new materials.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 7700 – CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Final cleaning.
 - 2. Closeout procedures.
 - 3. Project record documents.
 - 4. Operation and maintenance data.
 - 5. Warranties.
 - 6. Spare parts and maintenance materials.
- B. Related Requirements:
 - 1. Section 01 2900 – Payment Procedures.
 - 2. Section 01 3100 – Project Management and Coordination.
 - 3. Section 01 7000 – Execution Requirements: Progress cleaning.

1.02 FINAL CLEANING:

- A. Execute final cleaning prior to final project assessment. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of work to the condition expected from a commercial cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Upon completion of the work, remove debris, tools, machines, construction equipment, and other items pertaining to the work.
- C. The following are examples, but not by way of limitation, of cleaning levels required.
 - 1. Remove labels not required as permanent labels.
 - 2. Clean exposed hard-surfaced materials to a dirt-free condition, free of dust, stains, films, and noticeable distracting substances.
 - 3. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces.
 - 4. Wipe surfaces of mechanical and electrical equipment clean; remove excess lubrication and other substances.
 - 5. Remove spatters or other deposits of paint, mortar, concrete, adhesives, roofing, dirt, soil, oil, or any other material foreign to the surface involved.
 - 6. Clean debris from roofs, gutters, down pipes, and drainage systems.
 - 7. Clean site areas affected by construction, including landscaped and developed areas, free from litter and foreign substances; sweep paved areas broom clean, remove stains, petrochemical spills, and other foreign deposits; rake clean ground surfaces not landscaped or paved, to a smooth, even textured surface.
 - 8. Remove waste and surplus materials, rubbish, and construction facilities from the site; dispose of lawfully.

- D. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.
- E. Comply with governing regulations and safety standards for cleaning operations.
- F. Additional cleaning required after final cleaning due to punch list work and warranty repairs shall be performed by the Contractor responsible for the additional work.

1.03 CLOSEOUT PROCEDURES:

- A. At Substantial Completion, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents (except for punch list items attached to certification) and ready for Architect's review.
- B. Submit the following to Architect. Final Application for Payment will not be processed until all submittals are received.
 - 1. Closeout Submittals in accordance with this Section, including project record documents, operation and maintenance data, and warranties.
 - 2. Receipt signed by Owner, acknowledging delivery of spare parts and maintenance materials. List specific items and quantities.
 - 3. Copy of Certificate of Plan Approval, Certificate of Occupancy, and other required regulatory approvals, with signatures of all inspectors. Originals shall remain on site; obtain receipt from Owner.
 - 4. Affidavit of Payment of Debts and Claims (00 6520).
 - 5. Consent of Surety to Final Payment (AIA Document G707).
 - 6. Final Waiver of Lien from each subcontractor.
 - 7. Certificates of Insurance indicating that required insurance coverage will remain in effect until the end of the correction period.
 - 8. Prevailing Wage Affidavit of Compliance.
- C. Submit final Application for Payment in accordance with Section 01 2900.

1.04 PROJECT RECORD DOCUMENTS:

- A. Maintain one set of the following record documents on site; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed submittals including shop drawings and product data.
 - 6. Manufacturer's instructions for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.

- C. Store record documents separate from documents used for construction. Label each document "Project Record Documents" in stamped or printed letters, on front cover or other conspicuous place.
- D. Record information concurrent with construction progress, before internal or hidden construction is concealed.
- E. Make documents available to Architect at all times.
- F. Record Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name, product model and number, and supplier.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- G. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 2. Changes made by Addenda and modifications.
 - 3. Field changes of dimension and detail.
 - 4. Details not on original Contract drawings.
- H. Record Submittals: Approved product data and manufacturer's installation instructions, marked to record field changes.
- I. Remove Architect title block and seal from all documents.
- J. Submit to Architect prior to or together with final Application for Payment.

1.05 OPERATION AND MAINTENANCE DATA:

- A. General Requirements:
 - 1. Submit to Architect for review; allow sufficient time for review and revision prior to final Application for Payment. Upon approval, submit final copies to Owner and Architect.
 - 2. Submittals to Architect and Owner shall be in electronic format. At Owner's option, also submit up to two hard copy sets.
 - 3. Electronic Submittals: Data submitted in electronic format shall be limited to PDF files on DVD or USB drive, unless otherwise approved in advance by Architect.
 - 4. Hard Copy Submittals:
 - a. Submit data bound in 8½ x 11 inch format, organized in three-ring binders with durable rigid covers. Provide multiple volumes where appropriate; organized and labeled in a coordinated set with matching appearance.
 - b. Prepare binder cover with printed title of manual and title of project. Identify subject matter of binder on cover and spine.

- c. Include a Table of Contents for each volume.
 - d. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titles clearly printed under reinforced plastic tabs.
- B. Operation and Maintenance Manuals:
 - 1. Directory: List names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, suppliers, and maintenance providers.
 - 2. Operation and Maintenance Instructions: Arrange by system and subdivide by specification section. For each category, identify the following as applicable to the Product or system:
 - a. Significant design criteria.
 - b. List of products, clearly identifying specific product or part installed, with options and accessory items indicated.
 - c. Maintenance instructions, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - d. Information required for reordering specially manufactured products.
 - 3. Project Documents and Certificates: Include the following:
 - a. Test reports for each item with specified field or laboratory testing.
 - b. Warranty documents in accordance with this Section. Indicate names, addresses, telephone numbers, and procedures for filing a claim and obtaining warranty services.

1.06 WARRANTIES:

- A. General Requirements:
 - 1. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on Work that incorporates products.
 - 2. Include in Operation and Maintenance Manuals.
 - 3. For items of Work delayed beyond date of Substantial Completion, provide updated submittal prior to or together with final Application for Payment, listing date of actual completion as start of warranty period.
 - 4. Written warranties made to Owner are in addition to contractual, implied, and expressed warranties, and shall not limit duties, obligations, rights and remedies otherwise required by Contract Documents and available under law.
 - 5. Warranty claims shall be resolved in the same venue and using the same dispute resolution method as provided for the Prime Contract.
- B. Contractor's Warranty: Contractor shall provide warranties, and shall correct nonconforming Work, in accordance with the General Conditions.

C. Specific Warranties: Provide written documentation for each warranty specified in individual specification sections.

1. At the time of shop drawing and product data submittal, submit a preliminary copy of each specific warranty for review in accordance with Section 01 3300.
2. Provide full warranty for parts and labor, without dollar amount limitation or proration based on period of use, unless specifically indicated in individual specification sections.
3. Warranty periods begin on the Date of Substantial Completion, unless specifically indicated in individual specification sections. Where manufacturer warranties begin at an earlier date, such as the date of shipment or installation, coordinate procurement and scheduling so that specified warranty periods are not compromised. Provide extended warranty coverage where necessary.
 - a. In the event that items of Work covered by a warranty have punch list work remaining on the Date of Substantial Completion, the warranty period shall not begin until all such work is complete.
4. Where Warranties from Subcontractors, suppliers or manufacturers are limited to material only, Contractor shall include warranty coverage for labor, shipping, equipment, and other costs required to remove defective Work and install replacement materials.
5. Warranty provisions requiring Owner to provide notice to manufacturer shall allow a minimum time period of 30 days for such notice.
6. If the terms of a warranty require Owner signature, registration, or other action prior to commencement of warranty coverage, Contractor shall take all necessary steps to ensure validity of the warranty, and shall indemnify Owner for loss of warranty coverage caused by failure to do so.

D. Manufacturer Warranties: Where a manufacturer provides a standard product warranty that exceeds the duration of the Contractor's warranty or a Specific Warranty, Contractor shall take all necessary actions to ensure that the manufacturer warranty remains in effect beyond the expiration of the shorter warranty periods.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS:

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.
- B. Extra materials shall be from the same lot as installed materials.
- C. Provide protective covering for storage; identify with appropriate labels.
- D. Deliver to project site and place in location as directed.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 02 4119 – SELECTIVE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Minor demolition and removal for remodeling.
- B. Related Requirements:
 - 1. Section 01 3100 – Project Management and Coordination: Alteration project procedures.
 - 2. Section 01 5000 – Temporary Facilities and Controls: Temporary enclosures.
 - 3. Section 01 7000 – Execution Requirements: Cutting and patching; items removed for reinstallation; progress cleaning; construction waste management and disposal.

1.02 REGULATORY REQUIREMENTS:

- A. Comply with all applicable codes and regulations in addition to being responsible for the prevention of any damage to the adjoining materials and site.
- B. Permits: Secure and pay for all necessary permits required for this portion of the work.
- C. Do not close or obstruct egress width to any building or site exit unless approved in writing.
- D. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.
- E. Comply with requirements of Ohio Environmental Protection Agency and U.S. EPA.
 - 1. If notification of demolition or renovation is required, provide all required documentation to the appropriate agency.
 - 2. If testing, inspection, or analysis of potential asbestos-containing material is required, employ a certified Asbestos Hazard Evaluation Specialist to perform such work.
 - a. The amount of regulated asbestos-containing material (RACM) to be removed or disturbed, if any, is anticipated to be less than the quantity regulated by the National Emission Standards for asbestos.
 - b. If testing, inspection, or analysis reveals quantities of RACM sufficient to subject the project to the requirements of the National Emission Standards for asbestos, promptly notify the Architect and the Owner, and do not disturb any materials identified as RACM. The Owner will issue special instructions relating to the disposition of such material. The Owner reserves the right to contract independently for the removal of any or all hazardous materials.
 - 3. If required to do so, employ an individual trained in the provisions of the National Emission Standards for asbestos. This individual shall be on site at all times during the removal of RACM.

1.03 PROJECT CONDITIONS:

- A. Provide labor, materials, equipment, insurance and services necessary for the proper and entire completion of the demolition work required for the project.
- B. Visit the site prior to bidding and ascertain pertinent local conditions such as location, accessibility and general character of the site, the character and extent of the existing work within or adjacent to the site, and any other work being performed thereon at the time.
- C. Include the removal and disposition (or the incorporation in the new work, as the case may be) of all existing portions of the work which are indicated as being removed, or when it becomes necessary to remove such in order to properly complete the new work as shown.
- D. Maintain adequate safety measures at all times to protect the existing building, adjacent buildings, their occupants, employees, pedestrians and anyone who may have occasion to frequent the premises in the course of maintaining normal operations. There shall be complete cooperation among Architect, Owner and Contractors to see that all safety requirements are carried out.
- E. Where adjoining construction or site improvements are in a condition that might be misconstrued as damage caused by demolition operations, prepare photographs or video of sufficient detail to document existing conditions; deliver to Architect prior to beginning demolition.
- F. Furnish all necessary shoring, signs, barricades, dust curtains, etc., to ensure the safety of persons in adjacent areas and other workers in same area.
- G. During working hours the Contractor shall be on the job personally or shall be represented by a competent superintendent. The Contractor shall coordinate all trades and subcontractors and provide adequate labor, equipment and materials as needed.
- H. Conduct demolition to minimize interference with occupied building areas.
- I. Cease operations immediately if structure appears to be in danger; notify Architect. Do not resume operations until directed.
- J. Ownership of Removed Materials:
 - 1. Salvageable and reusable equipment and materials removed are the property of Owner, and shall be delivered to the locations directed by Owner.
 - 2. Removed materials that are obviously not reusable shall be removed from the site and disposed of.
 - 3. Items in question shall be brought to the attention of the Owner's representative, who shall determine whether they are to be salvaged or removed from the site and disposed of.

1.04 SEQUENCING AND SCHEDULING:

- A. Perform and complete demolition work in a timely manner so as not to disrupt adjacent activities any longer than necessary.
- B. Coordinate scheduling of noisy, odor-producing and dusty work with Owner to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Provide labor, materials, tools, and equipment as necessary to complete demolition work.

PART 3 EXECUTION

3.01 PREPARATION:

- A. Provide, erect and maintain temporary barriers and partitions where required to prevent spread of dust, odors and noise to occupied areas, in accordance with Section 01 5000.
- B. Erect and maintain weatherproof closures for exterior openings in roofs in accordance with Section 01 5000.
- C. Protect existing materials and surfaces which are not to be demolished.
- D. Prevent movement of structure; provide bracing and shoring.
- E. Mark location and termination of utilities.
- F. Provide appropriate temporary signage including signage for exit or building egress.

3.02 DEMOLITION:

- A. Disconnect, remove, cap and identify designated utilities.
- B. Demolish in an orderly and careful manner. Protect existing supporting structural members.
- C. Disposal: Remove demolished materials from site except items to be retained by Owner or reinstalled in the work, or as specifically noted otherwise. Do not burn or bury materials on site. Pay fees for transportation and disposal of removed materials.
 - 1. Dispose of materials removed from the site in a legal location and manner.
 - 2. Do not dispose of demolished materials other debris in wetlands, flood plains, stream corridors, environmentally sensitive areas, surface waters or storm sewers, even with the permission of the property owner.
 - 3. Do not engage in open burning of debris removed from the project, except in compliance with the regulations of all authorities having jurisdiction, and with all required permits.

- D. Remove materials as work progresses. Upon completion of work, leave areas in clean condition.
- E. Remove temporary work.

3.03 PROTECTION:

- A. Exercise caution to avoid damage to existing surrounding materials and structures which are to remain.
- B. Protect path of travel from demolition areas to waste collection areas to prevent damage to existing construction to remain.
- C. Prevent damage to adjoining properties, existing buildings, pavement, sidewalks, landscaping, and similar features. Make all necessary repairs where required and do all patching to meet existing conditions.

END OF SECTION

SECTION 060573 – WOOD TREATMENT

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Preservative treatment of wood.
- B. Related Requirements:
 - 1. Section 061050 – Miscellaneous Rough Carpentry.

PART 2 PRODUCTS

2.01 PRESERVATIVE TREATMENT:

- A. Wood Preservative (Pressure Treatment): AWP A P5 and AWP A T1; water borne preservative with 0.25 percent retainage. Kiln dry after treatment to specified moisture content, maximum 19 percent.
- B. Wood Preservative (Surface Application for Site Treatment and Touch-up): Clear type, compatible with pressure treatment preservative.

PART 3 EXECUTION

3.01 SITE APPLIED WOOD TREATMENT:

- A. Apply preservative treatment in accordance with manufacturer's instructions and AWP A M4.
- B. Brush apply two coats of preservative treatment on wood in contact with cementitious materials, roofing, and metal flashings.
- C. Treat site-sawn cuts in factory treated wood.
- D. Allow preservative to dry prior to erecting members.

3.02 SCHEDULES:

- A. Preservative Treated Wood Locations: Framing and blocking above grade in contact with cementitious materials, roofing, and metal flashings.
 - 1. Exterior, Roof, and Parapet Locations: AWP A Use Category UC3B.
 - 2. Applications Not Otherwise Scheduled: AWP A U1 Table 3-1.

END OF SECTION

SECTION 06 1050 – MISCELLANEOUS ROUGH CARPENTRY

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Roof curbs and perimeter nailers.
- B. Related Requirements:
 - 1. Section 01 5000 – Temporary Facilities and Controls: Temporary enclosures and barriers.
 - 2. Section 06 0573 – Wood Treatment.

1.02 QUALITY ASSURANCE:

- A. Perform Work in accordance with the following agencies:
 - 1. Lumber Grading Agency: Certified by ALSC.
 - 2. Plywood Grading Agency: Certified by APA.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Lumber Grading Rules: AFPA, SPIB, and NLGA.
- B. Miscellaneous Framing and Blocking: Southern Pine or Spruce-Pine-Fir, Utility or better grade, 2 to 4 inches thick, 19 percent maximum moisture content.

2.02 ACCESSORIES:

- A. Fasteners: Hot dipped galvanized steel for treated wood locations and all exterior locations; unfinished steel elsewhere.
- B. Anchors:
 - 1. Toggle bolt type for anchorage to hollow masonry.
 - 2. Expansion shield and lag bolt type for anchorage to solid masonry.
 - 3. Bolt or ballistic fastener for anchorage to steel.

PART 3 EXECUTION

3.01 FRAMING:

- A. Set members level and plumb, in correct position. Accurately saw-cut members to seat square on bearings. Fit closely into proper location.
- B. Frame, anchor, tie and brace members to develop strength and rigidity required for intended purposes. Do not stress members in excess of design strength. Secure members permanently in position with proper fastenings to render parts rigid.
- C. Place horizontal members with crown side up.

- D. Construct load bearing members full length without splices.
- E. Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members.
- F. Coordinate installation of blocking with requirements of items to be anchored thereto or supported thereby.

3.02 TOLERANCES:

- A. Framing Members: $\frac{1}{4}$ inch from true position, maximum.

END OF SECTION

SECTION 07 5000 – MEMBRANE ROOFING

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Fully adhered single ply roof system.
 - 2. Preparation for reroofing.
- B. Related Requirements:
 - 1. Section 06 1050 – Miscellaneous Rough Carpentry: Wood nailers, curbs, and blocking.
 - 2. Section 07 7100 – Roof Specialties.

1.02 DESIGN REQUIREMENTS:

- A. Conform to applicable building code for roof assembly fire hazard requirements.
- B. ASTM E108/UL 790: Class A Fire Hazard Classification.
- C. FM 4470: Roof Assembly Classification, of Class 1 construction, wind uplift requirement of 1-60, in accordance with FM Construction Bulletin 1-28.
- D. Ground Roughness Factor: B.

1.03 PERFORMANCE REQUIREMENTS:

- A. System Integrity: Roof assembly, including flashings and accessories, shall not permit the passage of liquid water, and shall withstand wind loads, thermally induced movement, and exposure to weather and ultraviolet radiation without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another and with adjacent materials under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.

1.04 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings: Indicate layout of membrane sheets, location and type of field splices; termination, penetration and attachment details showing specific wall and deck construction, entire roof assembly and additional blocking as required; conditions of interface with other materials; walkway layout pattern.
 - 1. Standard catalog cuts, if used, shall be supplemented by additional detail drawings approved by membrane manufacturer as necessary to show project specific conditions. Submit proof of manufacturer approval to Architect.
 - 2. Field changes to approved shop drawings will not be considered unless accompanied by written approval from membrane manufacturer.
 - 3. Submit results of fastener pullout tests. Indicate test locations on shop drawings.

B. Product Data:

1. Provide characteristics on membrane materials, flashing materials, walkways, and accessories.
2. Indicate installation requirements for membrane, including procedures and materials for flashing, splicing and bonding.
3. The membrane manufacturer shall provide the Installer and Architect with a comprehensive listing of chemicals, solutions, oils, compounds, or materials which may be injurious to the sheet membrane, including those materials normally found to exist in the roof environment or likely to occur on this roof.

C. Installer Certificates: Submit evidence of approval, authorization, or license from membrane manufacturer to install specified system, including documentation of specified training. Provide list of completed projects with project names and addresses, and architect and owner contact information.

D. Manufacturer's Approval: Submit membrane manufacturer's approval of all components of the roof assembly, including insulation and roof edge securement; project review and acceptance for warranty, including approval of installer.

E. Warranty Form: At time of shop drawing submittal, submit preliminary copy of manufacturer's warranty.

F. Manufacturer's Field Reports: Submit under provisions of Section 01 4000. Indicate procedures followed, ambient temperatures, humidity, wind velocity during applications, and items requiring corrective action.

1.05 QUALITY ASSURANCE:

A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.

B. Provide proper attachment of roofing to accessory or related work in contact with, or which becomes an integral part of the roofing or flashing system, including when such accessory or related work is provided under other Sections.

C. Membrane Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.

D. Installer Qualifications: Company specializing in performing the work of this Section with minimum five years documented experience; approved by membrane manufacturer.

1. Provide adequate number of qualified roofers who are experienced and thoroughly trained in the techniques required to properly install the specified roofing system and related work.
2. Installer's Project Superintendent shall have experience installing the specified roofing system with minimum 5 years experience on projects of similar size and scope, shall be familiar with the requirements of this project, and shall provide on-site supervision at all times when roofing system work is in progress. Training shall

include completion of membrane manufacturer's in-house training course and on-site training.

E. Preinstallation Meeting: In accordance with Section 01 3100.

1. Schedule after approval of submittals.
2. Attendance: Installer; Owner; Architect; Owner's insurer, if applicable; membrane manufacturer's representative; installers of roof specialties and accessories.
3. Agenda:
 - a. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - b. Examine deck substrate conditions and finishes for compliance with requirements.
 - c. Review loading limitations of deck during and after roofing.
 - d. Review flashings, special roofing details, roofing drainage, roof penetrations, equipment curbs, and other conditions that will affect roofing.
 - e. Review governing regulations and requirements for insurance, certificates, and inspection and testing, if applicable.
 - f. Review temporary protection requirements for roofing system during and after installation.
 - g. Review roof observation and repair procedures after roofing installation.

1.06 DELIVERY, STORAGE, AND HANDLING: In accordance with Section 01 6000.

- A. Store materials, except membrane, between 60 degrees F and 80 degrees F. If exposed to lower temperature, restore to minimum 60 degrees F before using.
- B. Store materials, except membrane, in dry area and protect from water and direct sunlight.

1.07 ENVIRONMENTAL REQUIREMENTS:

- A. Do not apply roofing system during inclement weather, or to damp or frozen surfaces.
- B. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

1.08 WARRANTY: In accordance with Section 01 7700.

- A. Correct defective Work within a two year period after Date of Substantial Completion for damage resulting from failure to prevent penetration of water.
- B. Provide 15 year manufacturer "total system" warranty without dollar amount limitation for roofing assembly including flashing, roof edge securement, and accessories, covering leaks, failures, and wind damage.
 1. Coordinate with Section 07 7100 to ensure that insulation, roof edge securement, and accessories are included in warranty.

C. Warranty Coverage Requirements:

1. Wind Speed Coverage: 72 mph, measured at 10 meters above ground. Reference to “gale force winds” or similar language without a specific wind speed and elevation will not be accepted.
2. Warranty claims may be excluded only for the following:
 - a. Abuse or misuse of roof system by the Owner.
 - b. Acts of God and other “natural disasters” except wind as limited above.
 - c. Fire (after occupancy).
3. Warranty coverage shall commence on date of inspection and approval by manufacturer’s representative. After inspection and approval, warranty exclusions for improper design and installation will not be accepted.
4. Warranty provisions requiring Owner to provide notice of leaks to manufacturer shall allow a minimum time period of 30 days for such notice.
5. For warranty repair work, provide full labor and materials required to restore roof system to weathertight condition without cost to the Owner.

D. Obligations of the Surety under the Contract Bond do not extend beyond the two year correction period.

PART 2 PRODUCTS

2.01 MEMBRANE MATERIALS:

A. Manufacturers: In accordance with Section 01 6000.

1. Carlisle Syntec Incorporated; Sure-Flex Adhered Roofing System.
2. Duro-Last Roofing, Inc.
3. Johns Manville Roofing Systems; Fully Adhered PVC Single Ply Roofing System.
4. Seaman Corporation; FiberTite.
5. Sika Sarnafil, Inc.; Sarnafil Adhered Roof System.
6. Versico Incorporated; VersiFlex Adhered Roofing System.

B. General Requirements:

1. Provide fire retardant membrane where required to meet specified fire hazard classification in combination with the membrane type, insulation type, roof slope, and related project conditions.
2. Provide membrane in largest sheet lengths possible as determined by job conditions.
3. Membrane materials shall conform to the minimum physical properties published in the roofing system manufacturer’s product literature where they exceed the Performance Requirements of this Section.

C. Thermoplastic Membrane: Polyester reinforced; white color.

1. Provide one of the following types at Contractor's option:
 - a. PVC (Polyvinyl Chloride) Membrane: ASTM D4434, Type III; minimum 0.060 inch nominal thickness.
 - b. KEE (Ketone Ethylene Ester) Membrane: ASTM D6754; polyester reinforced membrane; minimum 0.045 inch nominal thickness.
2. Factory Welded Seams: Minimum sheet width 60 inches.
3. Field Welded Seams: Minimum sheet width 75 inches. Use half width sheet size at roof perimeter.
4. Performance Requirements:
 - a. Breaking Strength: ASTM D751; minimum 200 lbf.
 - b. Tearing Strength: ASTM D751; minimum 45 lbf.
 - c. PVC Membrane:
 - (1) Thickness Over Reinforcing Scrim: ASTM D4434; minimum 0.0160 inch, top and bottom.
 - (2) Water Absorption: ASTM D471; maximum 3.0 percent.
 - (3) Linear Dimensional Change: ASTM D1204; maximum 0.5 percent.
 - (4) Low Temperature Brittleness: ASTM D2136 or D2137; pass at -40 degrees F.
 - (5) Puncture Resistance: ASTM D5602; minimum 33 lbf.
 - (6) Elongation at Break: ASTM D751; minimum 15 percent.
 - d. KEE Membrane:
 - (1) Thickness Over Reinforcing Scrim: ASTM D6754; minimum [0.0090] [0.0145] inch, top and bottom.
 - (2) Water Absorption: ASTM D471; maximum 3.7 percent.
 - (3) Linear Dimensional Change: ASTM D1204; maximum 0.63 percent.
 - (4) Low Temperature Brittleness: ASTM D2136 or D2137; pass at -30 degrees F.
 - (5) Puncture Resistance: ASTM D5602; minimum 95 lbf.
 - (6) Elongation at Break: ASTM D751; minimum 18 percent.

D. Seaming Materials: As recommended by membrane manufacturer.

E. Flexible Flashings: Same material as membrane; minimum 0.060 inch thick.

F. Stack Boots: Flexible boot and collar with clamps for pipe stacks through membrane.

2.02 ACCESSORIES:

- A. Provide bonding adhesive, splicing cement, cleaner, primer, lap sealant, water cut-off mastic, prefabricated pipe seals, overnight seal, pourable sealer, anchor bars and other related items as recommended and furnished by the membrane manufacturer for conditions of construction and as required for warranty and performance requirements.
 1. Adhesive may be factory applied or field applied.

- B. Insulating Foam Sealants: ASTM C1029, Type II; ASTM C1620; FGIA 812; single component, minimal expanding, low pressure build, semi-rigid closed cell polyurethane foam.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. DuPont de Nemours, Inc.; Great Stuff Pro.
 - b. Hilti Corp.; CF-812.
 - c. Tremco, Inc.; TremGlaze LEF.
 - 2. Density: ASTM D1622; minimum 1.5 pcf.
- C. Cover Boards: ASTM C1289, Type II; high density polyisocyanurate with coated glass fiber mat facers; 4 x 4 or 4 x 8 foot sheets; minimum ½ inch thick or as recommended by membrane manufacturer.
 - 1. Performance Requirements:
 - a. Compressive Strength: ASTM C473 or ASTM D1621; minimum 100 psi.
 - b. Mold Resistance: ASTM D3273.
 - c. R Value: ASTM C518, nominal 2.5.
 - 2. Adhesive: Non-combustible type, compatible with insulation facer.
 - 3. Joint Tape: Heat resistant type.
- D. Rubber Walkways: 30 or 36 inch wide roll, minimum 0.072 inch thick, with diamond tread pattern; color to contrast with roof membrane.
- E. Temporary Protection: Polyethylene sheet, fiber reinforced plastic sheet, or other materials with equivalent weather resistance; provide weights to retain sheeting in position.
- F. Provide additional accessories, such as preservative treated wood blocking, where required by manufacturer's standards, even when not otherwise indicated or specified.

PART 3 EXECUTION

3.01 PREPARATION FOR REROOFING:

- A. Remove existing roofing gravel, perimeter flashings, base flashings, counter flashings, vent stack flashings, roofing membrane, and damaged insulation.
 - 1. Perform removal work under provisions of Section 02 4119.
 - 2. Remove gravel from ballasted areas.
 - 3. Remove metal counter flashings not scheduled to remain. Fold up metal counter flashings scheduled to remain, to permit access to top edge of base flashings.
 - 4. Remove roofing membrane, perimeter base flashings, flashings around roof protrusions, pitch pans and pockets.
 - 5. Remove damaged portions of existing construction exposed by removal work.
 - 6. Remove damaged insulation and fasteners, cant strips and blocking.

- B. Do not remove existing roofing materials when weather conditions threaten the integrity of the building contents or intended continued occupancy.
 - 1. Remove only existing roofing materials that can be replaced with new materials as weather permits.
 - 2. Maintain continuous temporary protection prior to and during installation of new roofing system to keep building weather tight. Turn protective covers up over parapets and curbing. Retain in position with weights. Provide for surface drainage to existing drainage facilities.
 - 3. Schedule removal work to coincide with commencement of installation of new roofing system.
- C. Remove and reinstall roof mounted mechanical and electrical equipment where required for performance of indicated roofing work. Disconnect and reconnect wiring, ducts, gas piping, and other connections to equipment, as necessary. Contractor shall employ skilled and experienced mechanical and electrical Subcontractors approved by the Architect and Owner to perform this work.
- D. Coordinate the work with other affected mechanical and electrical work associated with roof penetrations.
- E. Roofing installer shall bear full responsibility for water intrusion during performance of the reroofing work, including damage to existing equipment, finishes, and building contents. Coordinate and pay for repairs as necessary.

3.02 EXAMINATION:

- A. Verify that surfaces and site conditions are ready to receive work and that no conditions exist which may adversely affect installation, permanence, or quality of work.
- B. Verify that blocking, curbs, and nailers are installed at required locations and securely anchored.
- C. Verify substrate is clean and smooth, free of depressions, waves, or projections, properly sloped as indicated on Drawings.
- D. Verify surfaces are dry and free of snow and ice.
- E. Perform fastener pullout tests to determine required fastener spacings.
- F. Verify roof openings, curbs, pipes, sleeves, and vents through roof are solidly set, and required accessories are in place.
- G. Apply insulating foam sealant to perimeter voids at roof penetrations (except flues) to maintain continuity of thermal barrier.
 - 1. Clean surfaces prior to application; remove oil and chemical substances that may prevent adhesion.
 - 2. Protect adjacent surfaces subject to damage from overspray or accidental contact.
 - 3. After initial curing, trim and remove excess material. Apply joint sealant or other protective material promptly to limit ultraviolet exposure.

- H. Verify that no substances listed in the contamination profile exist on the roofing area which cannot be positively isolated from the membrane.
- I. Verify that manufacturer's approval of all roof components has been obtained prior to beginning work.

3.03 PREPARATION:

- A. Do not place materials on the roof in a manner which would cause induced loads to exceed the roof deck design load at any point.
- B. Clean substrate of dust, debris, and other foreign substances. Remove sharp projections.
- C. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof drain plugs when no roof work is taking place or when rain is forecast.
- D. Install cover board perpendicular to roof slope with edges in continuous straight lines, with end joints staggered between rows and offset from joints in insulation board. Tightly butt boards together. Mechanically fasten to deck.

3.04 MEMBRANE APPLICATION:

- A. Install membrane in accordance with manufacturer's recommended procedures, specifications, approved shop drawings, and observing manufacturer's cautions and as required to meet or exceed specified wind rating.
- B. Isolate all materials and substances which may have a detrimental effect on the membrane.
- C. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- D. Shingle joints on sloped substrate in direction of drainage.
- E. Accurately align sheets and maintain uniform side and end laps of dimensions required by manufacturer, minimum 3 inches. Stagger end laps. Seal permanently waterproof using methods approved by manufacturer. Manually verify entire length of each seam for voids and deficiencies; correct as recommended by manufacturer.
 - 1. Heat Welding: Use approved automatic heat welding equipment. In areas inaccessible to machine, use hand held heat gun and teflon roller.
- F. Securely fasten membrane at terminations and perimeter. Provide base flashing at perimeters and edges of membrane abutting parapets, walls, curbs, or other construction. Provide prefabricated pipe seals for pipe and conduit penetrations, properly cemented to membrane and sealed to pipe or conduit with stainless steel clamp and top bead of sealant.
 - 1. At parapets adjacent to roof, extend base flashing or membrane up parapet, over top of wall, and terminate approximately 2 inches down the opposite side.

2. At independent parapets, provide membrane flashing over top of wall and extend down both sides approximately 2 inches.
 3. Counter flash gravel stops, cap flashing and copings with membrane lap flashing.
- G. Install walkways at all traffic concentration points (roof hatches, rooftop HVAC equipment, and similar locations) regardless of traffic frequency. Discontinue walkways over flashing or field seams for inspection purposes. Adhere walkway to roof membrane.
- H. Coordinate installation of roof drains, sumps, and related flashings.
- I. Install accessories and related items in accordance with manufacturer's instructions.
- J. Seal flashings and flanges of items penetrating membrane.

3.05 DAILY SEAL:

- A. Temporarily seal loose edges of membrane with overnight seal. Ensure that water does not flow beneath completed sections of the membrane system.
1. Mix the two components thoroughly according to the instructions on the label.
 2. Apply the overnight seal in accordance with manufacturer's recommendations. If necessary, use a trowel to spread material to achieve complete seal.
 3. After embedding membrane in overnight seal, check for continuous contact. Weight the edge, providing continuous pressure over the length of the cutoff, with 2½ inch rubber tubing filled with dry sand.
 4. When work is resumed, pull sheet free before continuing installation.

3.06 FIELD QUALITY CONTROL:

- A. Inspection: Manufacturer's representative shall inspect installation minimum 3 times during progress of the work or biweekly, whichever is more frequent, and certify compliance with manufacturer's installation requirements.
- B. Correct identified defects or irregularities.

3.07 PROTECTION: In accordance with Section 01 7000.

- A. Perform progress cleaning daily. Do not burn debris on the site. Dispose of all rubbish and scrap materials off-site in a legal manner.
- B. Protect landscaping, lawn areas, walks and drives, and building surfaces.
- C. Provide barricades, covered walkways and traffic direction as required to prevent personal injury.
- D. Where traffic must continue over finished roof membrane, protect surfaces.
- E. Coordinate and pay for repairs to existing components and the work of other sections damaged by performance of the work.

- F. Correct deficiencies and perform repairs as necessary to restore roofing system to a condition free of damage and deterioration at the time of Substantial Completion.

END OF SECTION

SECTION 07 7100 – ROOF SPECIALTIES

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Fascias and coping caps.
- B. Related Requirements:
 - 1. Section 06 1050 – Miscellaneous Rough Carpentry.
 - 2. Section 07 5000 – Membrane Roofing.
 - 3. Section 07 9200 – Joint Sealants.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- B. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.

1.03 QUALITY ASSURANCE:

- A. Perform Work in accordance with SMACNA Architectural Sheet Metal Manual and NRCA Roofing and Waterproofing Manual.
- B. Roof edge securement, except gutters, for low slope membrane roofs shall be designed in accordance with SPRI ES-1, for wind speeds determined by the applicable building code.

1.04 DELIVERY, STORAGE, AND PROTECTION: In accordance with Section 01 6000.

- A. Do not store materials with strippable film in areas exposed to direct sunlight.
- B. Prevent contact with substances which may discolor prefinished surfaces.

1.05 WARRANTY: In accordance with Section 01 7700.

- A. Provide minimum 10 year manufacturer warranty for prefinished surfaces to cover pre-finished color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading.
- B. Coordinate with Section 07 5000 to ensure that roof edge securement is included in the roof membrane manufacturer warranty.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Galvanized Sheet Steel: ASTM A755, galvanized to G90 coating class.

B. Aluminum: ASTM B209.

2.02 COMPONENTS:

A. Fascias and Coping Caps: SPRI ES-1; formed aluminum, 0.050 inch thick, or galvanized sheet steel, 24 gauge; maximum 10 ft lengths; shaped as indicated.

1. Manufacturers: In accordance with Section 01 6000.
 - a. Roof membrane manufacturer.
 - b. Architectural Products Co.
 - c. Metal-Era, Inc.
 - d. OMG Roofing Products.
2. Coping Cap Anchor Plates: Galvanized sheet steel, 22 gauge, minimum 12 inch lengths; locate at 5 ft o.c. maximum.
3. Backing Plates: Material and profile to match fascia or coping cap, except without hems; minimum 6 inch lengths; locate at each joint.
4. Cleats: Galvanized sheet steel, 22 gauge, maximum 10 ft lengths, spliced at backing plates only; shaped to engage bottom hem of fascia or coping cap.
5. Fasteners: No. 8 screws with neoprene washers; hot dipped galvanized steel.
6. Accessories: Prefabricated soldered and mitered corners; end closures; attachment clips.
7. Finish: 70 percent PVDF fluoropolymer; color as selected.

2.03 ACCESSORIES:

A. Fasteners: Concealed; hot dipped galvanized steel or stainless steel; size and type as required to penetrate substrate material minimum 1¼ inch; maximum 24 inch o.c. spacing.

1. Nails: Roofing nails with annular threads and minimum 3/16 inch diameter heads.
2. Bolts: Round head, ¼ inch minimum diameter.
3. Rivets: 1/8 inch minimum diameter; compatible with materials being fastened.

B. Sealant: As specified in Section 07 9200.

C. Solder: 50% block tin and 50% lead.

D. Flux: Muratic acid, diluted with equal parts of water.

2.04 FABRICATION:

A. Conform to SMACNA Architectural Sheet Metal Manual and NRCA Roofing and Waterproofing Manual.

B. Hem exposed edges minimum ½ inch.

C. Make all flat and lap seams in direction of flow.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify existing conditions before starting work.
- B. Verify that roof membrane, base flashing, and other items affecting work of this Section are in place and positioned correctly.

3.02 INSTALLATION:

- A. Install components in accordance with manufacturer's instructions.
- B. Conform to SMACNA Architectural Sheet Metal Manual and NRCA Roofing and Waterproofing Manual.
- C. Install components to provide for expansion and contraction of components and adjacent materials. Provide oversized or slotted holes with gasketed fasteners where necessary to accommodate thermal movement.
- D. Coordinate installation of components with installation of roof membrane and base flashings.
- E. Coordinate installation of sealants and coatings with work of this section to ensure water tightness.
- F. Touch up minor scratches and abrasions in finish work. Replace damaged components.

END OF SECTION

SECTION 07 9200 – JOINT SEALANTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Sealing of exterior joints.
- B. Related Requirements:
 - 1. Caulking and sealant work performed under other Sections shall be performed in accordance with the provisions of this Section.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Product Data: Provide manufacturer's standard details and installation instructions; identify substrates requiring primers, type of primer recommended by manufacturer, and surface preparation required.
- B. Samples: Submit full range of colors for selection.

1.03 QUALITY ASSURANCE:

- A. Installer Qualifications: Firm regularly engaged in installation of sealers of the type specified for not less than 5 years; all work performed by workers thoroughly skilled and specially trained in the techniques required.

1.04 DELIVERY, STORAGE AND HANDLING: In accordance with Section 01 6000.

- A. Store materials between 40 and 90 degrees F, and under conditions and for a period of time not longer than that recommended by manufacturer.

1.05 ENVIRONMENTAL REQUIREMENTS:

- A. Install sealants when air and substrate temperatures are over 40 degrees F and rising, but less than 100 degrees F, unless specific installation instructions are obtained from manufacturer.

1.06 WARRANTY: In accordance with Section 01 7700.

- A. Exterior Joints: Correct defective Work within a 5 year period after Date of Substantial Completion for damage resulting from adhesive or cohesive failure, and failure to prevent infiltration of water or air through the sealed joint.
 - 1. Obligations of the Surety under the Contract Bond do not extend beyond the initial two years of the correction period.

PART 2 PRODUCTS

2.01 JOINT SEALERS:

- A. Manufacturers: In accordance with Section 01 6000.
 - 1. Tremco, Inc.
 - 2. Dow Chemical Co.
 - 3. Master Builders Solutions.
 - 4. Pecora Corporation.
 - 5. Schnee-Morehead, Inc.
 - 6. Sika Corporation.
- B. Polyurethane Sealants: ASTM C920.
 - 1. One-Part Modified Polyurethane: Type S, Grade NS, Class 35, Use NT, M, A, and O; paintable. (Tremco Dymonic FC; MasterSeal NP1)
 - 2. Multi-Component Polyurethane: Type M, Grade NS, Class 50, Use T, I, M, A, and O. (Tremco Dymeric 240FC; Sikaflex 2c NS)
- C. Butyl Caulk: ASTM C1311; non-skinning isobutylene-isoprene copolymer. (SikaLastomer 511; Tremco Butyl Sealant)
 - 1. Tape Mastic: FGIA 800; isobutylene-isoprene copolymer tape. (SikaLastomer 65; Schnee-Morehead SM5227)
- D. Colors: As selected from manufacturer's standard colors.

2.02 ACCESSORIES:

- A. Primers: As recommended by sealant manufacturers. Provide primers where indicated, where recommended by manufacturer, and also where preconstruction tests indicate the need for primers to obtain optimum adhesion.
- B. Backer Rod: ASTM C1330; round, flexible, closed cell polyethylene, or as recommended by sealant manufacturer; chemically inert, solvent resistant.
 - 1. Size: Diameter 15% greater than joint width, continuous lengths.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that dimensions are correct and substrate is in proper condition for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Do not begin installation until substrates are clean, dry, and free of loose aggregate, laitance, paint, corrosion, oil, grease, tar, asphalt, mastic compounds, wax, waterproofing agents, release agents, and other deleterious substances.

3.02 PREPARATION:

A. Preconstruction Field Adhesion Testing: ASTM C1193.

1. Conduct field tests for adhesion of joint sealants to actual substrates using proposed joint preparation methods, for each type of sealant and substrate, prior to general installation.
2. Alteration and Repair Projects: Include areas typical of those requiring removal of existing sealants.
3. Use manufacturer's standard field adhesion test methods and joint preparation methods to verify proper priming and preparation techniques required to obtain optimum adhesion of sealants to substrate.
4. Repeat testing until satisfactory adhesion is achieved. Evaluate and report results.
5. Approved results shall become the standard of acceptability for the project.

B. Remove foreign substances from substrate. Clean substrate in accordance with manufacturer's instructions and the following general methods:

1. Porous Surfaces:
 - a. Remove laitance by acid washing, grinding or mechanical abrading.
 - b. Remove form oils by sandblasting.
 - c. Vacuum or blow out joints with oil-free compressed air to remove loose particles.
2. Non-Porous Surfaces:
 - a. Remove protective coatings using solvent recommended by sealant manufacturer.
 - b. If surface has been treated or coated with a special coating, contact sealant manufacturer for recommendations.

C. Mask adjacent finished surfaces and adjacent porous surfaces that would be damaged by primer, sealant, or cleaning agents.

D. Prime surfaces to receive sealant in accordance with manufacturer's instructions, and allow to dry before installing sealant. Do not apply primer to surfaces outside of joint. Prime surfaces prior to installing backer rod or bond-breaker tape.

E. Install joint backing. Do not puncture, twist, compress less than 25 percent or more than 50 percent, or stretch backer during installation.

1. Install joint backing to control joint depth as indicated and to prevent 3-sided bond.
2. Install to control depth at midpoint of sealant as follows, unless otherwise indicated. Do not exceed sealant manufacturer's recommended maximum width.
 - a. Joint Width $\frac{1}{4}$ to $\frac{1}{2}$ Inch: Depth equal to width.
 - b. Joint Width Greater Than $\frac{1}{2}$ Inch: $\frac{1}{2}$ inch depth.

3.03 APPLICATION:

- A. Install sealants in accordance with manufacturer's instructions and ASTM C1193.
- B. Gun Grade Sealants: Extrude sealant to completely fill joint using proper gun and nozzle. Tool to compress sealant against sides of joint and eliminate air bubbles. Leave a neat, slightly recessed concave surface, unless otherwise indicated.
- C. Self Leveling Sealants: Pour sealant to fill joint, slightly recessed below adjacent surfaces.
- D. Curing:
 - 1. Cure sealants in compliance with manufacturer's instructions to obtain high early bond strength, internal cohesive strength, and surface durability.
 - 2. Where joints are scheduled to be painted, allow sealant to cure before painting over joint.
 - 3. Advise the General Contractor of procedures required for curing and protection during the construction period, to prevent deterioration or damage (other than normal wear and weathering) at Substantial Completion.

3.04 CLEANING:

- A. Clean primer and sealant from adjacent surfaces. Wipe fresh sealant immediately from adjacent surfaces. Do not use cleaning agents which may damage finishes.
- B. Remove masking tape from completed joints.

3.05 SCHEDULE:

- A. General Purpose Exterior Applications: Multi-component polyurethane.
 - 1. Around both exterior and interior surfaces of penetrations in exterior construction.
 - 2. Wherever necessary to prevent infiltration of water or air into or through exterior building enclosure.
- B. Concealed Exterior Locations: Butyl caulk and tape mastic.
 - 1. Metal to metal joints within sheet metal flashing assemblies.
- C. Other Exterior Applications: One-part modified polyurethane.
 - 1. Between adjacent construction and copings, fascias, and other flashings.
 - 2. Top edge of surface mounted counterflashing.

END OF SECTION

