MADISON PUBLIC LIBRARY
ROOFING SERVICES

PROJECT MANUAL

Prepared for:

MADISON PUBLIC LIBRARY
EST 1919

Rev. 1

September 4, 2025

R.E. Warner Project No. 25524

Prepared by:

R. E. WARNER
ENGINEERS | ARCHITECTS | SURVEYORS

Dedicated to your operational success
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STATE OF OHIO
ANDREW V. HENLEY
1717159
REGISTERED ARCHITECT

Andrew V. Henley, 1717159
12/31/2025 expiration date

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PUBLIC NOTICE

Madison Public Library – Roof Services

Sealed bids will be received by the Board of Trustees of the Madison Public Library at 6111 Middle Ridge Road, Madison, Ohio 44057 until 12:00 noon on Wednesday November 5th, 2025 for furnishing the necessary labor, equipment, tools, materials, services and supervision for the Madison Public Library – Roof Services Project. Bids will be publicly opened and read immediately thereafter. The scope of work includes skylight replacement and roof repairs.

Bids must be in accordance with the specifications and drawings prepared by R.E. Warner and on the forms contained in the Project Manual. Project Manuals may be obtained by contacting library administration at finance@madison-library.info or visiting www.madison-library.info.

A pre-bid conference will be held on October 16th at 10:00 a.m.

This project is subject to prevailing wage requirements.

Publish: The News Herald

Monday,10/6/2025

Monday, 10/13/2025

INSTRUCTIONS TO BIDDERS

I. Definitions

A. "Architect" shall mean R.E. Warner & Associates, Inc.
B. "Bidder" shall mean any person, firm, or corporation submitting a bid for the work.
C. "Calendar Day" shall mean every day shown on the calendar.
D. "Contract Documents" shall mean collectively the Public Notice, Instructions to Bidders, Bidders' Bid and all Bid Forms, Bid Guaranty, Agreement, Specifications, Plans, Drawings, Addenda, Prevailing Wage Rates, and Payment and Performance Bonds.
E. "Owner" shall mean the Board of Trustees of the Madison Public Library.
F. "Project" shall mean the Madison Public Library – Roofing Services project.
G. "Project Location" shall mean 6111 Middle Ridge Road, Madison, Ohio 44057.

II. General

A. Sealed bids shall be received by the Owner at the Project Location and until the time and date specified in the Public Notice.
B. Bid Forms must be completed in ink or typewritten. Any corrections to the bid forms prior to submission must be initialed by the person signing the bid.
C. Failure to submit any bid forms or other required documents, or to fully fill out said forms or documents, may be cause for rejection of the bid at the sole discretion of the Owner.
D. Bids by business entities must be executed in the name of the business entity and must be signed by an officer with the authority to sign on behalf of the business entity. Bids by business entities must include the Business Entity Resolution form.
E. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature.
F. All names must be typed or printed below the signature.
G. Each Bidder must bid on all items contained in the Bid Forms.
H. A **pre-bid conference** will be held on October 16th at 10:00 a.m. at the Project Location, 6111 Middle Ridge Rd. Madison, Ohio 44057.

III. Withdrawing Bids

A. A Bidder may withdraw its bid prior to the opening of bids by providing written notice to the Owner at finance@madison-library.info before the time fixed for the opening of bids.
B. After the opening of bids, no Bidder may withdraw their bid for a period of 60 days.

IV. Examination of Contract Documents

A. Before submitting a bid, each Bidder must:
    1. Examine the Contract Documents thoroughly.
    2. Visit the Project Location to familiarize themselves with any conditions that may affect the Project and ensure that Bidder's observations correlate with the Contract Documents.

3. Familiarize themselves with Federal, State, and local laws, ordinances, rules and regulations that may be relevant to the Project or may in any manner affect cost, progress, or performance of the work.

B. The submission of a bid will constitute Bidder's representation that it has complied with every requirement of the Instructions to Bidders and that the Contract Documents are sufficient in scope and detail to convey understanding of all terms and conditions for the performance of the work.

V. Bidder Questions

A. Bidders requiring clarification or interpretation of the Contract Documents may submit written questions to cwilbur@rewarner.com. Questions must be submitted no later than 5:00 p.m. on October 23rd, 2025.

B. Interpretations, corrections, and changes to the Contract Documents will be made by Addendum. Interpretations, corrections, and changes of the Contract Documents made in any other manner will not be binding and Bidders shall not rely upon them.

VI. Bidder's Qualification

A. Bidder shall fully complete the Qualifications of Bidder form and submit it with its bid.

B. Bidder shall own, have rental or lease agreements for, or otherwise have readily available any and all equipment and tools necessary for proper execution of the work. The Owner reserves the right to request a list of equipment or tools available for the Project, including sources.

C. The Owner may require similar information on any or all subcontractors proposed by the Bidder.

VII. Subcontractors

A. The Bidder shall state on the appropriate form the names of all proposed subcontractors and the items of work they are to be assigned. All work not assigned to a subcontractor shall be assumed by the Owner to be performed by the Bidder.

B. The Owner reserves the right to approve all subcontractors proposed by the Bidder.

VIII. Prevailing Wage

The minimum wage to be paid to all labor employed on this Project shall be in accordance with the applicable prevailing wage rates established by the State of Ohio, Department of Commerce.

IX. Affidavits

Bids must be accompanied by the Non-Collusion Affidavit, Personal Property Tax Statement, and Unresolved Finding for Recovery Certification.

X. Bid Guaranty

A. Each bid must be accompanied by a certified check, cashier's check, or irrevocable letter of credit in the amount of 10% of the amount bid or an original bond in the amount of 100% of the amount bid in compliance with R.C. 153.54.

B. The surety's power of attorney and authorization to business in the state of Ohio shall be attached to all bid bonds.

C. All such guarantees shall be made payable to the Owner.

D. Bid guarantees shall be conditioned to provide that, if the bid is accepted, the Bidder will enter into a proper contract in accordance with the bid, plans, details, and specifications. If for any reason, other than as authorized by R.C. 9.31 or R.C. 153.54(G), the Bidder fails to enter into the contract, and the contracting authority awards the contract to the next lowest bidder, the Bidder and the surety on the Bidder's bond, if applicable, are liable to the Owner for the difference between the bid and that of the next lowest Bidder, or for a penal sum not to exceed ten per cent of the amount of the bond, whichever is less. If the Owner does not award the contract to the next lowest Bidder but resubmits the project for bidding, the Bidder failing to enter into the contract and the surety on the Bidder's bond are liable to the Owner for a penal sum not to exceed ten per cent of the amount of the bid or the costs in connection with the resubmission of printing new contract documents, required advertising, and printing and mailing notices to prospective Bidders, whichever is less.

XI. Contract Bond

If the Bidder enters into the contract, the Bidder, at the time the contract is entered to, shall file a bond for the amount of the contract to indemnify the Owner against all damage suffered by failure to perform the contract according to its provisions and in accordance with the plans, details, and specifications and to pay all lawful claims of subcontractors, material suppliers, and laborers for labor performed or material furnished in carrying forward, performing, or completing the contract; and agree and assent that this undertaking is for the benefit of any subcontractor, material supplier, or laborer having a just claim, as well as for the Owner.

XII. Substitutions

A. The materials, product, and equipment described in the Specifications establish a standard of required function, dimension, appearance, and quality. Bidders seeking a substitution must make a written request at least 10 days prior to the deadline for the submission of bids. Substitution requests may be submitted to **cwilbur@rewarner.com.**

B. Substitution requests must include the name of the material, product, or equipment for which it is to be substituted and a complete description of the proposed substitution, including all information necessary for a full evaluation of the proposed substitution.

C. No substitutions will be considered after bids are opened.

XIII. Bid Evaluation

A. The Owner reserves the right to reject any and all bids, to waive as an informality any and all irregularities, and to disregard all nonconforming, nonresponsive or conditional bids.

B. Pursuant to R.C. 3375.41, unless all bids are rejected, the Owner will award the contract based on the lowest responsible bid.

XIV. AWARD OF CONTRACT

Within ten (10) days after award of the contract, Bidder shall sign and deliver the Agreement to the Owner and furnish the bonds and certificates of insurance required by the Agreement.

BID

Having received, read, and examined the Contract Documents for the Madison Public Library – Roofing Services Project, and having inspected the Project Location, the undersigned hereby proposes to furnish the labor, equipment, and materials as specified, described, and/or shown in the Specifications, Drawings, and Addenda for all work necessary to complete the Project on a timely basis and in accordance with the Contract Documents.

1. Skylight replacement $_____
2. Roof repairs $_____
3. Contingency $_____

   Total $_____

	Labor	**Materials**
New Wood Nailer Strips per linear foot	$_____	$_____

Anticipated start date if awarded contract

_____

By submitting this Proposal, the undersigned represents that it has carefully reviewed and understands the Contract Documents and will enter into a contract if awarded the bid.

Bidder acknowledges receipt of the following Addenda:

Addenda No.	_____	_____	_____	_____	_____
Date	_____	_____	_____	_____	_____

Bidder Name:

_____

Address:

_____

_____

Phone No.:

_____

Email Address:_____

Signature:

_____

Printed Name:_____

Title:

_____

BUSINESS ENTITY RESOLUTION

I, _____, Secretary of _____ an
(Individual Name) (Business Entity Name)
_____ Corporation/Limited Liability Company (circle one) hereby certify that the
(State)

Board of Directors/Members of said Business Entity on the _____ day of

_____, adopted a resolution authorizing the

_____
(Title)
of the Company to sign bid proposals, sign and enter into any and all contracts and other instruments, sign and/or authorize bid guaranty and performance bonds for the purpose of furnishing labor and materials at such price and upon such terms and conditions, including any amendment or modifications thereto, as said _____ in
(Title)
his/her sole discretion shall deem best, and that said actions shall be binding upon the company. I further certify that _____ is the current
(Name)

_____ of _____.
(Title) (Business Entity Name)

IN WITNESS WHEREOF, I have hereunto set may hand and affixed the seal of said Company

at _____, _____ this _____ day of
(City) (State)

_____, and I further certify that said resolution is still in full force and effect.

_____
Secretary

NON-COLLUSION AFFIDAVIT

STATE OF _____)
) SS
COUNTY OF _____)

I, _____, having been duly sworn, deposes
(NAME)

and says that he/she is _____ for _____,
(POSITION) (COMPANY NAME)

the party making the foregoing proposal or bid, that such proposal or bid is genuine and not collusive or a sham; that said Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any Bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sough by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any other Bidder, or to secure any advantage against the Board of Trustees of Madison Public Library or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

_____ _____
DATE AFFIANT

Sworn to and subscribed before me, a Notary Public, on this _____ day of _____, 2025.

_____
NOTARY PUBLIC

My commission expires _____.

PERSONAL PROPERTY TAX STATEMENT

STATE OF _____)
) SS
COUNTY OF _____)

I, _____, having been duly sworn, state that I
(NAME AND TITLE)
am competent to testify to the following:

(COMPLETE APPLICABLE STATEMENT)

( ) At the time this bid was submitted, Bidder, _____, was not charged with delinquent personal property taxes on the General Tax List of Personal Property for Lake County, Ohio.

OR

( ) At the time this bid was submitted, Bidder, _____, was charged with delinquent personal property taxes on the General Tax List of Personal Property for Lake County, Ohio as follows: _____ owed in delinquent taxes, and _____owed as penalties and interest assessed against said delinquency. As part of the consideration for a contract to perform the work in the above stated bid, I hereby agree that this form be incorporated into said contract to perform work, and further agree that proceeds from said contract shall be paid to the Lake County Treasurer in the amount of said delinquent tax, including penalties and interest, prior to any payments being made to the Bidder or other person under the contract.

_____ _____
Date Signature

Sworn to and subscribed before me, a Notary Public on this _____day of _____, 2025.

_____
Notary Public

My commission expires _____.

Unresolved Findings for Recovery

CERTIFICATION

I, _____

(Name of person signing affidavit) (Title)

do hereby certify that _____ does not have an outstanding

(Company or Individual Name)

unresolved finding for recovery issued by the Auditor of the State of Ohio as defined by

Ohio Revised Code (ORC) Section 9.24 as of _____ .

(Current date)

_____

Signature of Officer or Agent

_____

Name (Print)

Sworn to and subscribed in my presence this _____ day of

_____ , 20 _____ .

_____

(Notary Public)

BID GUARANTY AND CONTRACT BOND

(O.R.C. § 153.571)

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

_____

as principal and _____ as sureties, are hereby held and firmly bound unto the Board of Trustees of Madison Public Library. as obligee in the penal sum of the dollar amount of the bid submitted by the principal to the obligee on . _____ to undertake the project known as . Madison Public Library - Roofing Services . 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 bids made by the principal on the date referred to above to the obligee, which are accepted by the obligee. In no case shall the penal sum exceed the amount of _____ dollars. (If the foregoing blank is not filled in, the penal sum will be the full amount of the principal's bid, including alternates. Alternatively, if the blank is filled in, the amount stated must not be less than the full amount of the bid including alternates, in dollars and cents. A percentage is not acceptable.) For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed this _____ day of _____, _____.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above named principal has submitted a bid for the above referenced 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 per cent of the penalty hereof between the amount specified in the bid and such larger amount for which the obligee may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the principal pays to the obligee the difference not to exceed ten per cent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising, and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if the obligee accepts the bid of the principal and the principal within ten days after the awarding of the contract enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein;

Now also, if the said principal shall well and faithfully do and perform the things agreed by the obligee to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, materials suppliers, 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 materials suppliers or laborer having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of the said contract or in or to the plans or specifications therefor shall in any wise affect the obligations of said surety on its bond.

Signed this _____ day of _____, _____

_____

(Principal)(Seal)

By: _____

Printed Name and Title:_____

_____

(Surety)(Seal)

By: _____

Printed Name and Title:_____

_____

Surety Company Name

Surety Company Address _____

_____

Surety Company's Telephone Number _____

Surety Company's Fax Number _____

_____

Surety Agency Name

Surety Agent's Address _____

_____

Surety Agent's Telephone Number _____

Surety Agent's Fax Number _____

QUALIFICATIONS OF BIDDER

Bidder Name: _____

1. Identify all other names under which your current organization does business or has done business in the past:

   _____

2. If Bidder is a business entity, please list the owners (shareholders, members, etc.) of the company:

   _____

3. Year business was established: _____
4. Number of employees: _____
5. HaS Bidder bid on any public projects within the last five years in which Bidder was disqualified:

   No ____ Yes ____

   If yes, explain

   _____

   _____

6. Has Bidder had any suspension or revocation of any professional licenses?
   No ____ Yes ____
   If yes, explain

   _____

   _____

7. Has Bidder ever sued or been sued by a public entity over a public project?
   No ____ Yes ____
   If yes, explain

   _____

   _____

8. Has Bidder had any performance bonds activated against it?
   No ____ Yes ____
   If yes, explain

   _____

_____

9. In the past five years, has Bidder been cited for violations of any laws, including, but not limited to, occupational safety and health laws, unemployment laws, workers' compensation laws, or prevailing wage laws?
   No ____ Yes ____
   If yes, explain
   _____
   _____
10. Has Bidder been fined or had penalties imposed due to untimeliness in completing a project?
    No ____ Yes ____
    If yes, explain
    _____

_____

11. Has Bidder, its owners, officers, director, and/or managerial employees been convicted of a criminal offense in connection with obtaining, attempting to obtain, and/or performing any public or private contract?
    No ____ Yes ____
    If yes, explain
    _____
    _____
12. Has Bidder, its owners, officers, director, and/or managerial employees been convicted of a felony, embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements under oath, tax evasion, and/or receiving or selling stolen property?
    No ____ Yes ____
    If yes, explain
    _____
    _____
13. Please provide a list of projects currently in progress or completed in the preceding 12 months. Include the owner name, the architect/engineer name, a description of the project, the bid price, the final price, the completion date, and the contact information for the owner's representative.

14. Please provide a list of similar public projects completed in the past 3 years. Include the owner name, the architect/engineer name, a description of the project, the bid price, the final price, the completion date, and the contact information for the owner's representative.

I hereby certify that the information in this Qualifications of Bidder form, including all attachments and referenced information is factual and complete.

_____	_____
Printed Name	Signature
_____	_____
Title	Date

PROPOSED SUBCONTRACTORS

The Bidder is required to state, in the spaces provided below, the subcontractors they propose to use to accomplish the work required by the Contract Documents. Describe the work to be performed by each subcontractor. Duplicate this sheet as needed.

1. Name:

   _____

   Address:

   _____

   _____

   Phone: _____ Amount: $ _____

   Description:

   _____

   _____

2. Name:

   _____

   Address:

   _____

   _____

   Phone: _____ Amount: $ _____

   Description:

   _____

   _____

3. Name:

   _____

   Address:

   _____

_____

Phone: _____ Amount: $ _____

Description:

_____

_____

4. Name:

_____

Address:

_____

_____

Phone: _____ Amount: $ _____

Description:

_____

_____

AGREEMENT

THIS AGREEMENT is entered into as of the date of the last party to sign below, by and between the Board of Trustees of the Madison Public Library ("Library"), with its principal place of business at 6111 Middle Ridge Road, Madison, Ohio, 44057, and _____ ("Contractor"), with a principal place of business at _____.

The parties hereby agree as follows:

I. CONTRACT DOCUMENTS

A. The Contract Documents consist of this Agreement, the Public Notice, Instructions to Bidders, Contractor's Bid and all Bid Forms, Bid Guaranty, Specifications, Plans, Drawings, Addenda, Prevailing Wage Rates, and Payment and Performance Bonds.

B. The Contract Documents are hereby incorporated by reference herein and shall be deemed to have the same force and effect as if set forth in full herein.

II. WORK

A. Contractor shall furnish all materials, labor, equipment, and tools necessary for the Madison Public Library-Roofing Services Project located at 6111 Middle Ridge Road, Madison, Ohio 44057 in accordance with Contractor's bid submitted on _____ and all Contract Documents.

B. Contractor agrees to perform all work in a professional, workmanlike manner, consistent with all industry standards, while adhering to all safety considerations for work of this nature.

C. Contractor shall obtain all permits and/or approvals necessary to perform the work described herein, and shall comply with all laws, regulations, and requirements necessary to perform such work.

D. All labor employed to perform any work on the project shall be paid not less than the minimum rate of pay for the applicable prevailing wage classification.

E. At all time during the performance of this work under this Agreement, Contractor shall keep the work site, grounds, and area surrounding the work site free from accumulation of waste materials and rubbish caused by its activities. Upon completion of the work under this Agreement, Contractor shall promptly remove all its waste materials and rubbish from and about the work site, as well as, its tools, equipment, machinery, and surplus materials.

III. COMPENSATION

A. Owner shall pay Contractor the contract sum of _____.

B. Within 7 calendar days after the effective date of this Agreement, Contractor shall provide Architect with a Construction Schedule and Schedule of Values.

C. Payment Applications shall be submitted on a monthly basis to the Architect and shall reflect the amount of work completed as of the date of the application for payment.

D. Owner shall make progress payments on account of the Contract Sum within 14 days of the certification of the Application for Payment by the Architect.

E. Payments shall be made at the rate of 96% of the amount certified by the Architect. The retained amount will be paid to Contractor no later than 30 days from the date of Substantial Completion, except for an amount reasonably necessary for final completion of the project. Any retained funds withheld after Substantial Completion of the project shall be paid to Contractor not later than thirty days after Final Completion of the project.

IV. BONDS

Contractor will furnish performance and payment bonds as security for the faithful performance and payment of all its obligations under the contract documents. These bonds shall be for the total amount of the contract price (which is the bid price), or a certified check, cashier's check, or letter of credit for ten percent of the contract price.

V. INDEMNIFICATION

Contractor, to the fullest extent of the law and without limitation, agrees to indemnify and hold harmless the Board of Trustees of Madison Public Library, it officers, officials, employees, volunteers, agents, and representatives (collectively "Indemnified Parties") from any and all legal action, suits, charges, demands, and/or judgments for damages, losses, injuries, or expenses of any type which arise from or out of any and all failures, omissions, negligence, or actions of Contractor, its agents, employees, or workers in connection with the work performed pursuant to this Agreement.

VI. INSURANCE

A. Contractor shall carry and maintain throughout the duration of this Agreement such bodily injury and property damage liability insurance as will protect it and the Indemnified Parties against any and all claims for personal injury or property damages which may arise out of or result from any and all failures, omissions, negligence, or actions of Contractor, its agents, employees, or workers in connection with the work performed pursuant to this Agreement.

B. Prior to the commencement of this Agreement, Contractor shall provide the Owner with current certificates of insurance, and shall maintain such insurance throughout the term of this Agreement. Said certificates shall name the Owner as an additional insured. Said insurance shall, at a minimum, include the following:

1. Worker's Compensation Insurance as required by Ohio law.
2. Commercial General Liability Insurance with coverage in an amount equal to or greater than one million dollars ($1,000,000.00) per occurrence.
3. Umbrella/Excess liability coverage in an amount equal to or greater than two million dollars ($2,000,000.00).
4. Automobile insurance in an amount equal to or greater than one million dollars ($1,000,000.00).

VII. TIME

A. The project shall commence on _____.

B. The project shall be substantially completed by _____. Weather permitting, repairs shall within 90 days of the start date. Contractor shall submit a written request for inspection to the Architect at least 10 days prior to the Date the work will be completed and ready for inspection.

C. The project shall be finally completed by _____. Contractor shall submit a written request for inspection to the Architect at least 10 days prior to the Date the work will be completed and ready for inspection.

VIII. LIQUIDATED DAMAGES

A. Time is of the essence. The date of beginning and the time for completion of the work are essential conditions of the Contract Documents.

B. The Contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between Contractor and Owner, that the contract time for completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

C. If Contractor fails to reach substantial completion within the contract time, or be granted an extension of time by Owner, then Contractor will pay as liquidated damages to the Owner the amount of five hundred dollars ($500.00) per calendar day.

D. Contractor shall not be charged with liquidated damages when the delay in completion of the work is due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, such as fires, floods, and epidemics. Should such unforeseen circumstances occur, Contractor will promptly provide notice to the Owner.

IX. TERMINATION

A. Owner may immediately terminate this Agreement if Contractor is in default.

B. Each of the following constitutes default by the Contractor:
   1. Failure to commence the project by the date specified in this Agreement;
   2. Failure to make adequate progress so as to endanger completion of the project in accordance with the terms of this Agreement;
   3. Failure to comply with material terms of this Agreement;
   4. Failure to supply enough properly skilled employees or sufficient proper materials or equipment;
   5. Failure to make payment to subcontractors or suppliers;
   6. Failure to comply with all applicable laws, regulations, and industry standards;
   7. Does any act which is incompetent or negligent as determined in the sole discretion of the Owner;
   8. Engages in misfeasance, malfeasance, or nonfeasance as determined in the sole discretion of the Owner.

C. In the event of the Contractor's default, Owner has the authority to find alternative means to complete the project. Contractor shall be liable for any excess cost to the Owner incurred for such alternative means of completing the project. The rights and remedies in Section IX are in addition to any other rights and remedies provided by law or under this Agreement.

D. When Owner terminates this Agreement due to default by the Contractor, Contractor shall not be entitled to any further payment until the work is completed.

E. Owner may terminate this Agreement for any reason by providing Contractor 14 days' notice.

X. INDEPENDENT CONTRACTOR

A. This Agreement shall not render Contractor or any of its agents, employees, or workers, an employee, partner, or agent of Owner for any purpose. Owner shall not be responsible for withholding taxes with respect to the compensation herein. Contractor shall have no claim against Owner for vacation time, sick leave, retirement, social security, workers' compensation, health, or disability benefits, unemployment compensation or insurance, or any other employee benefits of any kind.

B. No persons and/or entities entering into this contract, nor any individual employed by any person or entity entering into this contract, are public employees for purposes of contributions to the Ohio Public Employees Retirement System by virtue of any work performed or services rendered pursuant to this Agreement.

XI. NON-DISCRIMINATION

A. Contractor agrees that in the hiring of employees for the performance of work under the contract or any subcontract, no contractor or subcontractor, by reason of race, color, religion, sex, age, disability or military status as defined in section 4112.01 of the Revised Code, national origin, or ancestry, shall discriminate against any citizen of this state in the employment of a person qualified and available to perform the work to which the contract relates.

B. Contractor further agrees that no contractor, subcontractor, or person acting on behalf of any contractor or subcontractor, in any manner, shall discriminate against, intimidate, or retaliate against any employee hired for the performance of work under the contract on account of race, color, religion, sex, age, disability or military status as defined in section 4112.01 of the Revised Code, national origin, or ancestry.

XII. GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the law of the state of Ohio. Any lawsuit arising out of this Agreement shall be filed in a court of competent jurisdiction in Lake County, Ohio

XIII. ASSIGNMENT

Contractor shall not assign this Agreement.

XIV. ENTIRE AGREEMENT

A. This Agreement shall constitute the entire agreement between the parties. Any prior understanding or representation of any kind preceding the date of execution of this Agreement is not binding upon either party except to the extent set forth in this Agreement.

B. Changes to this Agreement must be by Change Order or otherwise made in writing signed by both parties.

XV. PARAGAPH HEADING

The titles to the paragraphs of this Agreement are solely for convenience purposes and are not to be construed to limit, enlarge, or affect the scope or intent of this Agreement.

XVI. NOTICES

Any notice from either party to the other shall be in writing and shall be directed by certified or registered mail to the address set forth in the first paragraph of this Agreement.

XVII. UNENFORCEABILITY

If any provision(s), or portion thereof, of this Agreement is held to be unenforceable, then the remainder of this Agreement shall nevertheless remain in full force and effect.

XVIII. GUARANTEE

A. Contractor shall provide all applicable manufacturer warranties upon Substantial Completion, or earlier as directed by the Architect.

B. Contractor agrees to guarantee all services performed herein for a period of two (2) years after completion of said services. Contractor agrees to promptly remedy any defects in the services at no additional cost to Owner. This provision shall survive any termination of this Agreement.

IN WITNESS WHEREOF, the parties, by and through their authorized representatives, set forth their signatures below and hereby execute this Contract as of the date of the last party to sign.

CONTRACTOR	**BOARD OF TRUSTEES OF THE MADISON PUBLIC LIBRARY**
_____	_____
Signature	Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

Document 00 61 13 - Performance and Payment Bond Form
State of Ohio Standard Requirements for Public Facility Construction

(Form of Bond prescribed by Ohio Revised Code Section 153.57 - Not to be used as Bid Guaranty)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned _____ _____, as Principal, and _____ as Sureties, are hereby held and firmly bound unto the Board of Trustees of Madison Public Library _____ as Obligee(s), in the penal sum of _____ dollars, for the payment of which well and truly to be made, we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

SIGNED AND SEALED this _____ day of _____, _____.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal did on the _____ day of _____, _____, enter into a Contract with the Obligee, which said Contract is made a part of this Bond the same as though set forth herein and which is more fully described as:

Project Number: _____

Project Name: Madison Public Library-Roofing Services

Contract Description: Roofing
(e.g., General Trades, Plumbing, HVAC, Electrical)

NOW, THEREFORE, if the above-named Principal shall well and faithfully do and perform the things agreed by the Obligee to be done and performed according to the terms of said Contract; and shall pay all lawful claims of Subcontractors, Material Suppliers, 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 Subcontractor, Material Supplier 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 Sureties for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

THE SAID Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of the said Contract or in or to the Plans and Specifications therefor shall in any wise affect the obligations of said Surety on its bond, and it does hereby waive notice of any such modifications, omissions or additions in or to the terms of the Contract, the Work or the Contract Documents, including without limitation the Plans and Specifications.

PRINCIPAL:

_____
Principal Signature

By: _____

Title: _____

SURETY:

_____
Surety Signature

By: _____
Attorney-in-Fact

SURETY INFORMATION:

_____
Street

_____
City State Zip

_____
Telephone Number

SURETY AGENT'S INFORMATION:

_____
Agency Name

_____
Street

_____
City State Zip

_____
Telephone Number

_____
Email Address

END OF DOCUMENT

CF. 3

NOTICE OF AWARD

TO:

PROJECT: MADISON PUBLIC LIBRARY - ROOFING SERVICES

You are hereby notified that your bid, dated _____, has been accepted for items in the amount of _____. You are required by the Instructions to Bidders to execute the Agreement and furnish the required Performance and Payment Bonds and Certificates of Insurance within ten (10) calendar days from the date of this Notice.

Failure to comply with these conditions in the time stated will entitle the Owner to consider your Bid in default, to annul this Notice, and to declare your Bid Security forfeit.

_____ By:
_____
Date Board of Trustees of Madison Public Library

Title:
_____

ACKNOWLEDGEMENT

Receipt of this Notice is hereby acknowledged this _____ date of _____, 2025.

Company:_____
By:_____

Title:
_____

NOTICE TO PROCEED

TO:

PROJECT: MADISON PUBLIC LIBRARY - ROOFING SERVICES

OWNER: BOARD OF TRUSTEES OF MADISON PUBLIC LIBRARY

You are hereby notified to commence work in accordance with the Agreement. All work shall be completed by _____.

_____ By:
_____
Date Board of Trustees of Madison Public Library

Title:
_____

ACKNOWLEDGEMENT

Receipt of this Notice is hereby acknowledged this _____ date of _____, 2025.

Company:_____
By:_____

Title:
_____

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

B. SECTION 07 56 10 - ROOFING RESTORATION

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Purchase contracts.
4. Access to site.
5. Work restrictions.
6. Specification and drawing conventions.
7. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: Madison Public Library – Roofing Services

Project Location: 6111 Middle Ridge Rd, Madison, OH 44057

B. Owner: Madison Public Library

1. Owner's Representative: Shawna Goostree – Fiscal Officer

C. Architect: R. E. Warner and Associates, Inc.

1. Project Manager: Clinton Wilber

1.4 WORK COVERED BY CONTRACT DOCUMENTS

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

1. Removal of existing and Installation of a new translucent panel skylight system.
2. Roof repair/maintenance coating of exposed membranes.
3. Metal edge and coping cap replacement.
4. Repair/replace roof drains as required
5. Flashing repair/replacement.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.6 ACCESS TO SITE

A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

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

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

1. Limits: Confine construction operations to the area shown on the drawings.

1.7 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work in the existing building to normal business working hours of Monday through Thursday 9:00 a.m. to 7:00 p.m., Friday 9:00 a.m. to 4:00 p.m. No holidays or weekend work unless otherwise indicated or approved by Owner.

1.8 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.

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

END OF SECTION 01 10 00

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SECTION 01 12 50 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

A. Payment for various items of the Bid, as further specified herein, shall include all compensation to be received by the contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents. Work also includes all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the State of Ohio, and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid, and all costs therefore shall be included in the prices named in the Bid for various appurtenant items of work.

B. Payment for each respective item shall include such costs for the furnishing of drawings, submittals, samples, tools and appliances necessary to complete the work as specified and shown on the Contract Drawings.

C. Payment for each item shall include the cost for documentation, record drawings, O&M manuals, training, and start-up services.

D. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant services, field offices, layout surveys, sanitary requirements, testing, safety devices, approval drawings, record drawings, water supplies, power, maintaining traffic, removal of waste, watchman, bonds, insurance, and all other requirements of the Contract Documents. Compensation for all such services, things and materials shall be included in the prices stipulated for the lump sum and unit price Pay Items as identified in the Contract.

E. The contractor shall verify the rating and horsepower of the equipment he proposes to furnish and shall provide for any necessary electrical changes to accommodate the equipment furnished at no change in the contract price.

F. Where work is to be paid for by units of length, area, weight or volume, all Work accepted under this Contract will be measured by the Owner’s project manager and the quantities of various items of Work performed will be determined by the Owner’s project manager, as the basis for final settlement. For the calculation of quantities in which the computation of area by geometric methods would be comparatively laborious, use of automated calculation tools, such as AutoCAD, may be used with prior Owner’s project manager approval.

1.3 RELATED PROVISIONS SPECIFIED ELSEWHERE

A. Payments to contractor: Refer to General Conditions.

B. Changes in Contract Price: Refer to General Conditions.

1.4 PROJECT BID ITEMS

A. Gross price items, contract Lump Sum for all work as specified and shown in the drawings and specifications.

a. Description: All work specified in the Contract Documents. All work shall be in accordance with the administrative and procedural requirements specified in Division 01 as well as the broader requirements of the General Conditions.

b. Measurement and Payment: The lump sum payment shall be full compensation for the furnishing of all labor, equipment, materials, and superintendent for all work specified or shown.

B. Contingency Item

1. See Section 011800 CONTINGENCY ALLOWANCE.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 02 50

SECTION 01 13 00 – PROJECT DATES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Definitions of Deliverables, Substantial Completion, Milestones and Final Acceptance are as defined in Section 01 13 00. The contractor shall provide services, as described in these Specifications, in accordance with the schedule for the installation work:

1. Deliverable(s)

a. Construction Schedule – Within 7 calendar days after the Effective Date of the Agreement.

b. Schedule of Values – Within 7 calendar days after the Effective Date of the Agreement.

2. Substantial Completion: The stage in the progress of the Work when the Work designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. Notwithstanding anything in the Contract Documents to the contrary, this shall include, but not limited to, start up and successful testing of all systems and equipment.

a. Completion of all Work described in Section 01 10 00 within 90 calendar days from Date of Commencement, except as indicated below.

3. Final Completion: Work is complete in all respects in accordance with the Contract Documents, and the Contractor has submitted to the Owner, all the required documents.

a. All remaining completion items (i.e. Punch list) shall be completed to Owner's satisfaction as set forth in the Owner-Contractor Agreement for the Project.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 03 00

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SECTION 01 18 00 – CONTINGENCY ALLOWANCE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Contractor shall include in the proposed Total Lump Sum Contract Price Bid a Lump Sum Contingency amount as described in detail below. The Contingency amount establishes a pre-defined amount that may be used by Owner to pay the cost of approved extra Work items as directed by Owner.

B. Authorization and use of Contingency amount shall be accomplished through the Contract Change Order process as directed and approved in writing by Owner. The Contingency amount is only for the extra work as directed and will be used for such extra work, when directed by Owner, to cover the cost of extra work.

C. Contingency Change Orders shall cover the cost of labor and material or equipment, and contractor's markup.

1.2 CONTRACT WORK

A. The contractor shall include in his Lump Sum Bid the 10% Contingency Allowance in the final present bid.

B. Contingency amount will be as authorized to the contractor in writing in whole, in part, or not at all depending on the direction of Owner. Unused Contingency amounts will be credited to Owner by means of a change order.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 18 00

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SECTION 01 21 00 - PRECONSTRUCTION CONFERENCE

PART 1 - GENERAL

1.1 Date, Time, and Location: Conference will be held within ten (10) working days after execution of the Contract and before construction work begins at the site. The Owner's project manager will fix the date, time, and location of the meeting,

1.2 The Contractor shall prepare an agenda, preside over the meeting, and prepare and distribute minutes to all parties.

1.3 The Contractor shall provide data required and be prepared to discuss all items on the agenda.

1.4 REQUIRED ATTENDANCE

A. Contractor and major Subcontractors/suppliers.

D. Architect.

E. Owner's project manager.

1.5 MINIMUM AGENDA

A. Contract Compliance.

B. Prevailing Wage Rates.

C. Designation of personnel responsible.

D. Subcontractors.

E. Coordination with other contractors.

F. Project Schedule.

G. Submittals process.

H. Change Order Request process – NO VERBAL AUTHORIZATION.

I. Requirements for copies of Contract Documents.

J. Insurance in force.

K. Schedule of Values.

L. Schedule of Payments.

M. Use of premises.

N. Safety.

O. Security.

P. Housekeeping.

Q. Field Offices.

R. Project Record Documents.

S. Line of Authority.

T. Lines of Communications.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 21 00

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

B. Related Requirements:

1. Section 01 12 50 "Measurement and Payment".

1.3 DEFINITIONS

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased. This unit price is not included as any portion of your base bid; it is for work above or below the base bid contract sum.

1.4 PROCEDURES

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

B. Unit prices shall be used solely for the purpose of determining the adjustment to the Contract Sum for differences between the estimated quantities shown in the schedule in Part 3 and the actual installed quantities.

C. Measurement: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in Specification Section 01 02 50.

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

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

F. The unit prices below are intended to address small areas of additional work (not more than estimated quantities). If there is a large or complete replacement or repair needed the unit prices may not be used, and a different means may be pursued by the owner.

The following unit prices can be used by the owner for additional work added or removed from the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price 1: New Wood Nailer Strips.

1. Description: Provide the material and labor for providing new wood nailer strip (2”x4”, 6”, 8”, 10”).
2. Unit of Measurement: LIN. FT.
3. Estimated Quantity: 750 LIN. FT.

END OF SECTION 01 22 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

1.3 DEFINITIONS

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

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use contractor’s standard form.

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified products, fabrication or installation cannot be provided, if applicable.

b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effects, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project.
j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

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

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

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

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Revise conditions in subparagraphs below. If required, insert more restrictive conditions to limit consideration of proposed substitutions.
b. Requested substitution is consistent with the Contract Documents and will produce indicated results.
c. Substitution request is fully documented and properly submitted.
d. Requested substitution must provide cost savings, schedule reduction or quality increase to the project.
e. Requested substitution has received necessary approvals from authorities having jurisdiction. With approval being included within the submittal.
f. Requested substitution is compatible with other portions of the Work.
g. Requested substitution has been coordinated with other portions of the Work.
h. Requested substitution provides specified warranty.
i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
j. The request must accompany the original basis of design or base bid item with any and all differences outlined.

k. Requested substitution must reflect the same sustainable attributes as the basis of design or base bid item. Documentation of this must be included in the submittal.

B. Substitutions for Convenience: Not allowed

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.

2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

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

1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect to issue a Change Order for signatures of Owner and Contractor on AIA Document G701

1.5 CONSTRUCTION CHANGE DIRECTIVE

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

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

B. Determine Prevailing Wage Rates Before Bidding on the Job. Contact the Ohio Department of Commerce, Division of Labor and Worker Safety, Wage and Hour Bureau for current rate information:

https://com.ohio.gov/divisions-and-programs/industrial-compliance/wage-and-hour/guides-and-resources/view-prevailing-wage-rates

1.3 DEFINITIONS

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

1.4 SCHEDULE OF VALUES

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

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

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

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

3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.

4. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.

5. Subschedules for Separate Design Contracts: Where the Owner has retained design professionals under separate contracts who will each provide certification of payment requests, provide subschedules showing values coordinated with the scope of each design services contract as described in Section 011000 "Summary."

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

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

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

2. Arrange schedule of values consistent with format of AIA Document G703 as provided by owner.

3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:

   a. Related Specification Section or Division.
   b. Description of the Work.
   c. Name of subcontractor.
   d. Name of manufacturer or fabricator.
   e. Name of supplier.
   f. Change Orders (numbers) that affect value.
   g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

      1) Labor.
      2) Materials.
      3) Equipment.

4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

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

6. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored but not yet installed.

    a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.

7. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

8. Allowances and Contingency: Provide a separate line item in the schedule of values for each allowance and the contingency. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

9. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.

10. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

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

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

1.5 APPLICATIONS FOR PAYMENT

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

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

B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

C. Payment Application Times: Submit Application for Payment to Architect by an agreed upon time, determined in the pre-construction meeting. The period covered by each Application for

Payment is one month, ending on the same day each month. The day of the month that will be considered the end will be decided upon within the pre-construction meeting.

1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

D. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment as supplied by the owner.

E. Application Preparation: Complete every entry on the form. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions are made.

2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.

3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

F. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.

2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.

3. Provide summary documentation for stored materials indicating the following:

   a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
   b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
   c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

G. Transmittal: Submit three signed original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien, any required documentation by Owner and similar attachments if required.

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

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

1. Schedule of values.

2. Contractor's construction schedule (preliminary if not final).

3. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.

4. Schedule of unit prices.

5. Submittal schedule (preliminary if not final).

6. Certificates of insurance and insurance policies.

7. Performance and payment bonds.

8. Contractor’s Workers’ Compensation Certificate.

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

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

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

1. Consult Owner about the need for additional affidavits and other requirements.

2. Evidence of completion of Project closeout requirements.

3. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.

4. Retain first subparagraph below if a surety is involved.

5. AIA Document G707, "Consent of Surety to Final Payment," as provided by owner.
6. Evidence that claims have been settled.
7. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1. General coordination procedures.
2. Coordination drawings.
3. Requests for Information (RFIs).
4. Project Web site if available.
5. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

1.3 DEFINITIONS

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

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A, or something similar. Include the following information in tabular form:

1. Name, address, and telephone number of entities performing subcontract or supplying products.

2. Number and title of related Specification Section(s) covered by subcontract.

3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, on Project Web site if applicable and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence are required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.

B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence are required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.

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

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

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

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

E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in the performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:

a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
c. Indicate functional and spatial relationships of components of Architectural, structural, civil, mechanical, and electrical systems.
d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.

f. Indicate required installation sequences.
g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:

1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.

2. File Preparation Format: DWG operating in Microsoft Windows operating system.

3. File Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.

4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.

a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
b. Digital Data Software Program: Drawings are available in DWG in Autocad 2012 format.
c. The contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

1.7 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.

2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.

2. Project number.

3. Date.

4. Name of Contractor.

5. Name of Architect.

6. RFI number, numbered sequentially.

7. RFI subject.

8. Specification Section number and title and related paragraphs, as appropriate.

9. Drawing number and detail references, as appropriate.

10. Field dimensions and conditions, as appropriate.

11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

12. Contractor's signature.

13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

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

1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect’s Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect’s response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:

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

2. Architect’s action may include a request for additional information, in which case Architect’s time for response will date from time of receipt of additional information.

3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log at each construction progress meeting with a software log including not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within 7 days if Contractor disagrees with response.

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

2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.8 PROJECT MEETINGS

A. Preconstruction Conference: Contractor will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.

d. Designation of key personnel and their duties.
e. Lines of communications.
f. Procedures for processing field decisions and Change Orders.
g. Procedures for RFIs.
h. Procedures for testing and inspecting.
i. Procedures for processing Applications for Payment.
j. Distribution of the Contract Documents.
k. Submittal procedures.
l. Sustainable design requirements.
m. Preparation of record documents.
n. Use of the premises.
o. Work restrictions.
p. Working hours.
q. Owner's occupancy requirements.
r. Responsibility for temporary facilities and controls.
s. Procedures for moisture and mold control.
t. Procedures for disruptions and shutdowns.
u. Construction waste management and recycling.
v. Parking availability.
w. Office, work, and storage areas.
x. Equipment deliveries and priorities.
y. First aid.
z. Security.
aa. Progress cleaning.

4. Minutes: The Contractor will record and distribute meeting minutes.

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

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

a. Contract Documents.
b. Options.
c. Related RFIs.
d. Related Change Orders.
e. Purchases.
f. Deliveries.
g. Submittals.
h. Sustainable design requirements.
i. Review of mockups.

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

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.

4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to the performance of the Work and reconvene the conference at earliest feasible date.

C. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.

2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.

3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

a. Preparation of record documents.
b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
c. Submittal of written warranties.
d. Requirements for completing sustainable design documentation.

e. Requirements for preparing operations and maintenance data.
f. Requirements for delivery of material samples, attic stock, and spare parts.
g. Requirements for demonstration and training.
h. Preparation of Contractor's punch list.
i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
j. Submittal procedures.
k. Coordination of separate contracts.
l. Owner's partial occupancy requirements.
m. Installation of Owner's furniture, fixtures, and equipment.
n. Responsibility for removing temporary facilities and controls.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

D. Progress Meetings: Progress meetings will be held at intervals as determined at the Pre-Contruction meeting.

1. Coordinate dates of meetings with preparation of payment requests.

2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.

3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

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

1) Review schedule for next period.

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

1) Interface requirements.
2) Sequence of operations.
3) Resolution of BIM component conflicts.
4) Status of submittals.
5) Status of sustainable design documentation.
6) Deliveries.
7) Off-site fabrication.
8) Access.

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1.3 DEFINITIONS

A. Retain terms that remain after this Section has been edited for a project.

B. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

C. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

D. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

E. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.

    a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's final release or approval.
    g. Scheduled date of fabrication.
    h. Scheduled dates for purchasing.
    i. Scheduled dates for installation.
    j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

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

1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.

    a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
    b. Digital Drawing Software Program: The Contract Drawings are available in AutoCAD DWG format.
    c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittals will be returned to Architect before being returned to Contractor.

D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.

4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software or any form acceptable to Owner and Architect, containing the following information:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Construction Manager.
    e. Name of Contractor.
    f. Name of firm or entity that prepared submittal.
    g. Names of subcontractor, manufacturer, and supplier.
    h. Category and type of submittal.
    i. Submittal purpose and description.
    j. Specification Section number and title.
    k. Specification paragraph number or drawing designation and generic name for each of multiple items.
    l. Drawing number and detail references, as appropriate.
    m. Location(s) where product is to be installed, as appropriate.
    n. Related physical samples submitted directly.
    o. Indication of full or partial submittal.
    p. Transmittal number, numbered consecutively.
    q. Submittal and transmittal distribution record.
    r. Other necessary identification.
    s. Remarks.

5. All submittals will be returned by the Architect without review if they are not accompanied by an approval stamp from the Contractor.

E. Options: Identify options requiring selection by Architect.

F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. Contractor to submit a schedule of submittals two weeks prior to the submission of the first submittal. This schedule shall be updated monthly or anytime there is a schedule revision causing a submittal to change its submission date by more than two weeks.

B. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Post electronic submittals as PDF electronic files directly to Project Web site specifically established for Project.

    a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2. Submit electronic submittals via email as PDF electronic files.

    a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

3. Retain "Action Submittals" and "Informational Submittals" subparagraphs below as default requirements for paper copies of submittals; other quantity requirements may be included with individual submittal requirements elsewhere in this article. Additional copies may be required for projects with a construction manager or a commissioning authority.
4. Action Submittals: Submit all submittals via electronic mail or Project Web site.
5. Informational Submittals: Submit all submittals via electronic mail or Project Web site.
6. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

    a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.

    b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.
    d. Statement of compliance with specified referenced standards.
    e. Testing by recognized testing agency.
    f. Application of testing agency labels and seals.
    g. Notation of coordination requirements.
    h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

    a. Wiring diagrams showing factory-installed wiring.
    b. Printed performance curves.
    c. Operational range diagrams.
    d. Clearances required for other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.

6. Submit Product Data in the following format:
    a. PDF electronic file

D. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Identification of products.
    b. Schedules.
    c. Compliance with specified standards.
    d. Notation of coordination requirements.
    e. Notation of dimensions established by field measurement.
    f. Relationship and attachment to adjoining construction clearly indicated.
    g. Seal and signature of professional Architect if specified.

2. Submit Shop Drawings in the following format:

    a. PDF electronic file.

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

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

    a. Generic description of Sample.
    b. Product name and name of manufacturer.
    c. Sample source.
    d. Number and title of applicable Specification Section.
    e. Specification paragraph number and generic name of each item.

3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

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

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit two sets of Samples. Owner will retain one Sample sets; the other will be returned.

1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

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

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.
5. Submit product schedule in the following format:

a. PDF electronic file.

G. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of Architects and owners, and other information specified.

H. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

I. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

J. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

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

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

M. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

N. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

O. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

P. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

Q. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

R. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

S. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

2.3 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

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

2.4 ARCHITECT'S ACTION

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:]

1. Reviewed
2. Reviewed – Furnish as Noted
3. Rejected – Resubmit
4. No review required
5. Incomplete – Resubmit
6. Revise and Resubmit

B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 01 33 00

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous construction waste.
2. Recycling nonhazardous construction waste.
3. Disposing of nonhazardous construction waste.

1.3 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 PERFORMANCE REQUIREMENTS

A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:

1. Construction Waste:

    a. Masonry and CMU.
    b. Lumber.
    c. Wood sheet materials.
    d. Wood trim.
    e. Metals.
    f. Roofing.
    g. Insulation.
    h. Carpet and pad.
    i. Gypsum board.
    j. Piping.
    k. Electrical conduit.
    l. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:

        1) Paper.
        2) Cardboard.
        3) Boxes.
        4) Plastic sheet and film.
        5) Polystyrene packaging.
        6) Wood crates.
        7) Plastic pails.

1.5 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 30 days of date established for the Notice to Proceed

1.6 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use a mutually agreed upon form that includes the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons.
4. Quantity of waste salvaged, both estimated and actual in tons.
5. Quantity of waste recycled, both estimated and actual in tons.
6. Total quantity of waste recovered (salvaged plus recycled) in tons.
7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.7 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan including responsibilities of waste management coordinator, should one exist.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Use a mutually agreed upon form that includes estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. A mutually agreed upon form that includes points of

waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with operation, termination, and removal requirements in Section 01 50 00 "Temporary Facilities and Controls."
2. Should the processing facility separate waste from recyclables, separate receptacles as noted below are not required on site.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to everyone concerned within three days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Section 01 50 00 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue mutually to Owner and Contractor.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

    a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.3 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.4 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials and dispose of at designated spoil areas on Owner's property.

D. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 01 74 19

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final Completion procedures.
3. List of incomplete items.
4. Submittal of Project warranties.
5. Final cleaning.

B. Related Requirements:

1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.

1.2 DEFINITIONS

A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of cleaning agent.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

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

B. Submittals Prior to Substantial Completion: Complete the following a minimum of [**10**] days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.

3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of [**10**] days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.

2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.

3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

4. Complete final cleaning requirements.

5. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of [**10**] days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, the Architect either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for Final Completion.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:

1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."

2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list will state that each item has been completed or otherwise resolved for acceptance.

3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, **starting with exterior areas first**, **and proceeding from lowest floor to highest floor**.

2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.

3. Include the following information at the top of each page:

a. Project name.

b. Date.

c. Name of Architect.

d. Name of Contractor.

e. Page number.

4. Submit list of incomplete items in the following format:

a. PDF Electronic File: Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

1. Submit **by email to Architect**.

D. Warranties in Paper Form:

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch.

2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.

3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

E. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

a. Clean Project site of rubbish, waste material, litter, and other foreign substances.

b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.

d. Remove tools, construction equipment, machinery, and surplus material from Project site.

e. Remove snow and ice to provide safe access to building.

f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

g. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.

i. Remove labels that are not permanent.

j. Wipe surfaces of mechanical, electrical and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

k. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.

l. Clean strainers.

m. Leave Project clean and ready for occupancy.

C. Construction Waste Disposal: Comply with waste-disposal requirements in **S Section 017419 "Construction Waste Management and Disposal."**

END OF SECTION 017700

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

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

1.2 SUMMARY:

A. This portion of the specification sets forth the general requirements, including the quality and type of materials required for the installation of all lumber used for wood curbs, nailing strips, miscellaneous blocking material, unexposed fillers, fascia, edging strips, deck replacement, etc

B. Provide new wood nailers and blocking as needed for roof areas 8 and 9.

1.3 STORAGE:

A. All material specified herein shall be stored (after delivery to the site) so that it will be fully protected from damage and weather, and shall be piled to prevent warpage. All lumber shall be fully protected to maintain the original required moisture content as specified in item titled "Moisture Content".

1.4 OTHER REQUIREMENTS:

A. Dimensions indicated on the drawings are nominal dimensions (except where details show actual sizes) and shall be subject to the standard reductions required for surfacing or tolerances permitted by the grading rules. Unless otherwise indicated on drawings, all material shall be S4S (surfaced four sides).

1.5 PROTECTION:

A. All finished work shall be adequately protected against damage from any source.

1.6 COORDINATION:

A. Carpenters shall coordinate their work with that of the other trades so that progress continues without interruption.

PART 2 - PRODUCTS

2.1 WOOD - FRAMING AND CURBS:

A. GRADING RULES, GRADES, AND SPECIES

1. Lumber: Southern Pine, yellow pine, Douglas fir, spruce, ponderosa pine, larch or Hemlock and shall meet the following minimum grade requirement of construction standard (75% #1 and 25% #2); free from warping and visible decay. Lumber shall be graded according to the standard grading rules of the Southern Pine Inspection Bureau, the West Coast Lumber Inspection Bureau, or the Western Wood Products Association. TREATED LUMBER IS NOT TO BE USED.

B. MOISTURE CONTENT

1. All lumber shall be air-dried or kiln-dried before treatment, so that the moisture content is not more than 19%. After treatment, it shall be kiln-dried at temperatures not exceeding 160 degrees F. (71 degrees C) so that the moisture content is not more than 19% at time of shipment

C. PLYWOOD:

Grade: CDX or Cyme exterior Grade.

Description: 5/8" thick.

2.2 MECHANICAL FASTENERS:

A. WOOD TO STEEL:

1. Acceptable Manufacturers:
   a. Stainless Roofgrip screw; plastic disc - Buildex Div. of ITW, Itasca, IL.
   b. Stainless Dekfast screw: plastic disc - Construction Fasteners, Inc., Wyomissing, PA.
   c. Fabco Fastening Systems, West Newton, PA: Stainless Insul-Fixx screw with; plastic plate, Stainless Plate-Fixx screw
   d. Stainless Kwik-Deck; plastic disc - Atlas Bolt & Screw Div., Trans Union Fastener Corp., Ashland, OH.
   e. Olympic #12-11 Stainless Steel Deck Screw or #14-10 Heavy Duty All Purpose Screw; three inch diameter plastic - Olympic Manufacturing Group, Inc., Agawam, MA.
   f. Glasfast (plastic disc) - Owens-Corning Fiberglas Corp., Toledo, OH.
   g. Perma Fastener, stainless, plastic plate - International Permalite, Inc., Oak Brook, IL.

2. Screw Length: Sufficient to engage steel, wood deck 1 inch.

B. WOOD TO WOOD:

1. Type: Stainless Steel, common, annular ring nail. Length: Sufficient to penetrate underlay blocking 1-1/4 inches.

2. Acceptable Manufacturers:

a. Hillwood Manufacturing Co., Cleveland, OH.
b. Independent Nail, Inc., Bridgewater, MA.
c. W.H. Maze Co., Peru, IL.
d. National Nail Corp., Grand Rapids, MI.

C. WOOD TO MASONRY:

1. Acceptable Manufacturers:

a. Tapcon 1/4" diameter, Phillips pan head anchor - Buildex Div. of ITW, Itasca, IL.
b. Confas - Construction Fasteners, Inc., Wyomissing, PA.
c. Con-fixx - Fabco Fastening Systems, West Newton, PA.
d. #14-10 Heavy Duty all Purpose Screw - Olympic Manufacturing Group, Inc., Agawam, MA.
e. Tru-Fast fastener (stainless steel) - The Tru-Fast Corp., Bryan, OH.

2. Length: Sufficient to provide 1-1/2 inch embedment.

D. WOOD TO HOLLOW MASONRY:

1. Acceptable Manufacturers:

a. Sleeve Anchor by Hilti Fastening Systems, Tulsa, OK.
b. Rawly Hollow Masonry Anchor by the Rawlplug Co., Inc., New Rochelle, NY.

2. Length: As recommended by manufacturer

PART 3 - EXECUTION

3.1 CARPENTRY:

A. At roof edge to receive metal fascia, around all roof top penetration perimeters, and under any flashing component that is to have a roof flange mechanically fastened to roofing substrate; Mechanically attach wood blocking. Blocking thickness: Equal to common 1 x 4”, 1 x 6” 2x4”, 2x6”, 2x8”, 2x10”, 2x12”.

B. Fasteners shall be installed in two rows staggered. Spacing in any one row shall not exceed 24 inches. Within eight feet of outside corners, spacing shall not exceed twelve inches in any one row.

C. Where required, offset blocking layers twelve inches, weave corners.

D. Lumber shall be accurately cut to the work requirements and shall be well fastened.

E. Bolted fastenings shall have washers of adequate size under both heads and nuts. Nails shall be of correct size and quantity for proper fastening. Oversized nails that will result in splitting shall not be used. All fasteners shall be stainless steel.

END OF SECTION 06 10 00

SECTION 07 56 10 ROOFING MAINTENANCE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Mineral Modified Bitumen Surface Roof Restoration

B. Accessories

1.2 RELATED SECTIONS

A. All provided sections.

1.3 SCOPE OF WORK

A. Remove all roof debris from the entire roof and thoroughly clean drain areas.

B. Remove all caulking where the edge metal meets the roof membrane and apply a generous bead of new caulking

C. Remove all loose mastic from the vertical flashing seams.

D. Brush back the loose gravel from all flashings (perimeter flashings, wall flashing, curb flashing, etc.), expansion joints, and smooth drain sumps so that the gravel does not impede with the roof coating application. Prime the flashings and drain sumps at the rate of .33 gallons per 100 square feet.

E. Apply a base coating of 3 gallons per 100 square feet, immediately embed the specified fabric, and allow to dry for 24 to 48 hours.

F. Apply a top coating of 2 gallons per 100 square feet. Clean all overlapping metal expansion joints and apply a generous bead of caulking.

G. Clean all overlapping metal expansion joints and apply a generous bead of caulking.

H. Prime the bare roof membrane areas (prior repair patches) at the rate of .33 gallons per 100 square feet. Apply a base coating of 3 gallons per 100 square feet, immediately embed the specified fabric, and allow to dry for 24 to 48 hours. Apply a top coating of 2 gallons per 100 square feet.

I. Prime the roof hatch flashings with an asphalt-based primer and install a new cap ply over the exiting flashings using cold adhesive. Coat with the specified silicon at the rate of 2 gallons per 100 square feet. No embedded scrim is required. Secure with slip metal counter flashings and fasteners with neoprene washers. Any screws that penetrate through the hatch wall need to be cut flush.

J. Install new drain inserts throughout.

K. Remove a 2' x 2' area of gravel around the drain. Care must be taken not to damage the existing roofing plies. Install gravel guards set in roof mastic with the flange sealed using the 3 course method. Seal the entire drain sump with Cool Sil per the manufacturer's instructions.

1.4 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

B. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, and color.

C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

D. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic inspection and maintenance of all completed roofing work. Provide product warranty executed by the manufacturer.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with manufacturer's current Application and Installation Guidelines and the NRCA Roofing and Waterproofing Manual.

B. Manufacturer Qualifications: Manufacturer: Company specializing in manufacturing products specified in this section with documented ISO 9001 certification and minimum twelve years and experience.

C. Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience and a certified Pre-Approved Garland Contractor.

D. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress.

E. Product Certification: Provide manufacturer's certification that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.

F. Source Limitations: Obtain all components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.

1.6 PRE-INSTALLATION CONFERENCE

A. Convene a pre-roofing conference approximately two weeks before scheduled commencement of roofing system installation and associated work.

B. Require attendance of installers of deck or substrate construction to receive roofing, installers of rooftop units and other work in and around roofing which must precede or follow roofing work including mechanical work, Architect, Owner, roofing system manufacturer's representative.

C. Objectives include:
   1. Review foreseeable methods and procedures related to roofing work, including set up and mobilization areas for stored material and work area.
   2. Tour representative areas of roofing substrates, inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work.
   3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
   4. Review roofing system requirements, Drawings, Specifications and other Contract Documents.
   5. Review and finalize schedule related to roofing work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
   6. Review required inspection, testing, certifying procedures.
   7. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing.
   8. Record conference including decisions and agreements reached. Furnish a copy of records to each party attending.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.

B. Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4 inches above ground level and covered with "breathable" tarpaulins.

C. Stored in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on end on a clean flat surface. No wet or damaged materials will be used in the application.

D. Storage temperatures should be between 60 degrees F to 80 degrees F (15.6 degrees to 26.7 degrees C). Indoor ventilated storage is recommended. Ensure jobsite storage is in a shaded and ventilated area. Do not store in direct sunlight. Keep materials away from open flame or welding sparks.

E. Avoid stockpiling of materials on roofs without first obtaining acceptance from the Architect/Engineer.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. Weather Condition Limitations: Product application must not be done when rain or other conditions such as fog or heavy dew are possible within a 24 hour period. Roof surface must be at least 6 Fahrenheit degrees or 3 Celsius degrees above the dew point and rising.

C. Proceed with roofing work only when existing and forecasted weather conditions will permit unit of work to be installed in accordance with manufacturer's recommendations and warranty requirements.

D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

E. When applying materials with spray equipment, take precautions to prevent over spray from damaging or defacing surrounding walls, building surfaces, vehicles or other property. Care should be taken to do the following:
   1. Close air intakes into the building.
   2. Have a dry chemical fire extinguisher available at the jobsite.
   3. Post and enforce "No Smoking" signs.

F. Avoid inhaling spray mist; take precautions to ensure adequate ventilation.

G. Protect completed roof sections from foot traffic for a period of at least 48 hours at 75 degrees F (24 degrees C) and 50 percent relative humidity or until fully cured.

H. Take precautions to ensure that materials do not freeze.

I. Minimum temperature for application of White-Knight Plus/ White-Stallion Plus, White-Knight Plus WC, LiquiTec and Cool-Sil coatings is 50 degrees F (10 degrees C) and rising.

1.9 WARRANTY

A. Warranty Period: Product Only - 10 years.

B. Warranty Period: Installer is to guarantee all work against defects in materials and workmanship for a period indicated following final acceptance of the Work.
   1. Warranty Period:
      a. 1 year from date of acceptance.

1.10 JOB SITE INSPECTIONS

A. The manufacturer will provide a minimum of 2 site visits per week. Pictorial reports outlining the work in progress will be provided to all applicable parties. A 3-party inspector is not acceptable.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis of Dsign: Garland Company, Inc. (The); 3800 E. 91st St., Cleveland, OH 44105. ASD. Toll Free: 800-321-9336. Phone: 216-641-7500. Fax: 216-641-0633. Web Site: http://www.garlandco.com.

B. Or Equal provided the products meet or exceeded the basis of design. The job site inspections must also be provided.

2.2 MINERAL MODIFIED BITUMEN SURFACE ROOF COATING

A. Cool Sil HB:
   1. Cool-Sil Bleed Block Primer (For priming asphalt surfaces).
   2. Base: Cool Sil HB (Roller Grade).
   3. Coating: Cool Sil HB (Roller Grade).
   4. Flashing: Cool Sil.
   5. Reinforcement: Partial reinforcement over existing membrane seams and all flashing penetrations.
      a. Partial Reinforcement: Fabric reinforcement over existing membrane seams and all flashing penetrations.
         1) Reinforcement Materials:
            a) Grip Polyester Soft.

B. Roof Hatch Flashing Plies – Stress Ply Plus

C. Roof Cement – Flashing Bond

D. Drain Inserts – OMG Hercules Retro Drain, Zurn, or Approved Equal.

E. Drain Insert Roofing Plies – Flex Base 80 Base Sheet and Stress Ply Plus Cap Sheet

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Verify that work penetrating the roof deck, or which may otherwise affect the roofing, has been properly completed.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 ROOF PREPARATION AND REPAIR

A. General: All necessary field and flashing repairs must be done according to good construction practices, including the removal of all wet insulation and defective materials as identified through a moisture detection survey such as an infrared scan and replacement with like-materials.
   1. Remove damaged roof flashings from curbs and parapet walls down to the surface of the roof. Remove damaged existing flashings at roof drains and roof penetrations.

2. Remove all wet, deteriorated, blistered or delaminated roofing membrane or insulation and fill in any low spots with like materials occurring as a result of removal work to create a smooth, even surface for application of new roof membranes.
3. Install new wood nailers as necessary to accommodate insulation/recovery board or new nailing patterns.
4. When mechanically attached, the fastening pattern for the insulation/recovery board shall be as recommended by the specific product manufacturer.
5. Existing roof surfaces shall be primed as necessary and allowed to dry prior to installing the roofing system.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Repair all defects such as deteriorated roof decks, saturated materials, loose or brittle membrane or membrane flashings, etc. Verify that existing conditions meet the following requirements:
1. Existing membrane is either fully adhered or that the membranes mechanical fasteners are secured and functional.
2. Application of roofing materials over a brittle, damaged or poor condition roof membrane is not permitted.

D. Remove all loose dirt and foreign debris from the roof surface. Do not damage roof membrane in cleaning process.

E. Clean and seal all parapet walls, gutters and coping caps, and repair any damaged metal where necessary. Seal watertight all fasteners, pipes, drains, vents, joints and penetrations where water could enter the building envelope.

F. Confirm local water run-off ordinances and restrictions prior to cleaning roof. Clean the entire roof surface by removing all dirt, algae, mold, moss, paint, oil, talc, rust or other foreign substance. Use a bio-degradable cleaner like Simple Green Oxy Solve when necessary and warm water. Scrub heavily soiled areas with a brush. Power wash roof thoroughly with an industrial surface cleaner equipped with one piece balanced spray rotating jets for streak free close contact cleaning. Rinse with fresh water to completely remove all residuals. Allow roof to dry thoroughly before continuing.

G. Repair existing roof membrane as necessary to provide a sound substrate for the liquid membrane. All surface defects must be repaired/renovated and be made watertight. Any repairs must be with be only with materials compatible with the fluid-applied roofing restoration system.

3.3 INSTALLATION

A. General Installation Requirements:
1. Install in accordance with manufacturer's current Application and Installation Guidelines and the NRCA Roofing and Waterproofing Manual.
2. Adequate coating thickness is essential to performance. If the applicator is unfamiliar in gauging application rates, we suggest that a controllable area be measured and the

specified material be applied. In all cases, all minimum specified material must be applied and proper minimum dry film thicknesses must be achieved. Care must be taken to ensure that all areas completed including all flashings, roof penetrations, etc. are coated sufficiently to ensure a watertight seal.

3. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing the roof system.
4. Insurance/Code Compliance: Where required by code, install and test the roofing system to comply with governing regulation and specified insurance requirements.
5. Protect work from spillage of roofing materials and prevent materials from entering or clogging drains and conductors. Replace or restore adjacent work damaged by installation of the roofing system.
6. All primers must be top coated within 24 hours after application, preferably immediately after drying. Clean and re-prime if more time passes after priming.
7. Coordinate counter flashing, cap flashings, expansion joints and similar work with work specified in other Sections under Related Work.
8. Coordinate roof accessories and miscellaneous sheet metal accessory items, including piping vents and other devices with work specified in other Sections under Related Work.

B. Mineral Modified Bitumen Surface Roof Restoration: Flashings, Drain Sumps, Exposed Membrane of Prior Repairs :
   1. Preparation:
      a. Brush back gravel. Prime with Bleed Blocker Primer, apply Coating, embed fabric reinforcement apply Top Coating.
   2. Primer: Prime roof surfaces at a rate of 0.33 gallons per 100 SF.
   3. Reinforced System:
      a. Reinforced Coating (Grip Polyester Soft)
         1) Always begin with flashing laps and details
         2) (Optional): To reduce the height of the overlap, apply a bead of Green Lock XL sealant or Tuff-Stuff MS or coating into side and end laps and allow to skin over.
         3) Apply coating at 3.0 gallons per 100 SF, extending 4" on each side of lap.
         4) Immediately roll fabric reinforcement into the coating and completely saturate surface ensuring full encapsulation of fabric without pinholes, voids or openings.
         5) Allow to cure thoroughly before applying top coating.
         6) Apply the top coating at the rate of 2 gallons per 100 square feet.

3.4 REPAIR OF EDGE TREATMENT AND ROOF PENETRATION FLASHING

A. General
   1. Repair flashing in accordance with the requirements/recommendations of the Membrane manufacturer and as indicated on the manufacturer's standard drawings. Provide system with base flashing, edge flashing, penetration flashing, counter flashing, and all other flashings required for a complete watertight system.
   2. Install and repair flashings concurrently with the roofing as the job progresses.

3. Terminate flashings as required by the membrane manufacturer.

B. Repairs of Existing Roof Penetrations and Flashings
1. Metal Edge:
a. Inspect the nailers to assure proper attachment and configuration.
b. Apply a generous bead of caulking between the edge metal and roof membrane.

2. Expansion Joint:
a. Apply a generous bead of caulking to the overlapping metal joints.

3. Roof Drain:
a. Plug drain to prevent debris from entering plumbing.

4. Roof Drain:
a. Install new drain inserts per the roof system manufacturer’s instructions.

3.5 CLEANING

A. Clean-up and remove daily from the site all wrappings, empty containers, paper, loose particles and other debris resulting from these operations.

B. Remove coating markings from finished surfaces.

C. Repair or replace defaced or disfigured finishes caused by Work of this section.

3.6 PROTECTION

A. Provide traffic ways, erect barriers, fences, guards, rails, enclosures, chutes and the like to protect personnel, roofs and structures, vehicles and utilities.

B. Protect exposed surfaces of finished walls with tarps to prevent damage.

C. Plywood for traffic ways required for material movement over existing roofs shall be not less than 5/8 inch (16 mm) thick.

D. In addition to the plywood listed above, an underlayment of minimum 1/2 inch (13 mm) recover board is required on new roofing.

E. Special permission shall be obtained from the Manufacturer before any traffic shall be permitted over new roofing.

3.7 FIELD QUALITY CONTROL

A. Require attendance of roofing materials manufacturers' representatives at site during installation of the roofing system.

B. Correct defects or irregularities discovered during field inspection.

3.8 FINAL INSPECTION

A. At completion of roofing installation and associated work, meet with Contractor, Architect, installer, installer of associated work, roofing system manufacturer's representative and others directly concerned with performance of roofing system.

B. Walk roof surface areas, inspect perimeter building edges as well as flashing of roof penetrations, walls, curbs and other equipment. Identify all items requiring correction or completion and furnish copy of list to each party in attendance.

C. If core cuts verify the presence of damp or wet materials, the installer shall be required to replace the damaged areas at his own expense.

D. Repair or replace deteriorated or defective work found at time above inspection as required to a produce an installation that is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

E. Notify Architect upon completion of corrections.

F. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.

3.9 SCHEDULES

A. Primers:
   1. Cool-Sil Bleed Blocker Primer:

B. Base and Top Coating:
   1. Base Coating: Coating: Cool-Sil HB Gray Silicone Coating (Roller Grade): Single - component 100% silicone, liquid waterproofing membrane.
      a. Tensile Strength: ASTM D 412, 350 psi
      b. Elongation: ASTM D 412, 174%
      c. Flash Point: ASTM D 93, 141 degrees F min. (60.6 degrees C)
      d. Solids Content: ASTM D 2369, Typical 95%
      e. VOC: < 50 g/l Non-Volatile: ASTM D 75, Typical 83%
   2. Base Coating: Cool-Sil HB GraySilicone Coating (Roller Grade): Highly reflective , multi-purpose, single-component 100% silicone, liquid waterproofing membrane.
      a. Tensile Strength: ASTM D 412, 350 psi
      b. Elongation: ASTM D 412, 174%
      c. Flash Point: ASTM D 93, 141 degrees F min. (60.6 degrees C)
      d. Solids Content: ASTM D 2369, Typical 95%
      e. VOC: < 50 g/l
      f. Reflectance: 0.89
      g. Emittance: 0.90
      h. SRI: 113ickness@ 2 gal./100 sq. ft. (0.82 l/m2)
      i. VOC: 50 g/l

C. Reinforcement:
   1. Grip Polyester Soft

END OF SECTION 07 56 10

SECTION 07 60 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Provide all labor, equipment, and materials fabricate and install the following.
1. Pre-manufactured metal edge, extenders and trim.
2. Surface mounted wall counterflashings over bituminous base flashing.
3. Metal flashings.
4. Counterflashings over bituminous base flashing.
5. Counterflashings at roof mounted equipment and vent stacks.
6. Counterflashings for roof accessories.
7. Counterflashings at walls and penetrations.
8. Lead flashing for bituminous membranes.
9. Other components.

1.2 RELATED SECTIONS

A. All Provided Sections

1.3 QUALITY ASSURANCE

A. Reference Standards

1. Comply with details and recommendations of SMACNA Manual for workmanship, methods of joining, anchorage, provisions for expansion, etc.

B. If required, fabricator/installer shall submit work experience and evidence of adequate financial Responsibility. The owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

C. Successful contractor must obtain all components of roof system from a single manufacturer including any roll good materials if required. Any secondary products that are required, which cannot be supplied by the specified manufacturer, must be recommended and approved in writing by primary manufacturer prior to bid submittal.

D. Manufacturer shall have in place a documented, standardized method for maintaining quality control such as ISO-9001 approval.

E. The roof material manufacturer shall conduct inspections a minimum of two (2) days a week shall furnish written documentation of all such inspections.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.

B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials which may cause discoloration or staining.

1.5 JOB CONDITIONS

A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for pre-formed metal roofing system.

B. Protection:

1. Provide protection or avoid traffic on completed roof surfaces.

2. Do not overload roof with stored materials.

3. Support no roof-mounted equipment directly on the roofing system.

C. Ascertain that work of other trades which penetrates the roof is to be made watertight by the roofer, is in place and approved prior to installation.

1.6 WARRANTIES

A. Material Manufacturer's Warranty

1. Pre-finished metal material shall require a written 20-year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D-2244 or chalking excess of 8 units per ASTM D-659. If either occurs material shall be replaced per warranty, at no cost to the Owner.

B. Contractor's Warranty

1. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of three (3) years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Metal systems (metal coping cap system, pre-manufactured metal edge system, slip flashings, etc.), are to be comprised of 22-gauge steel, coated on both sides with an epoxy primer and on the weathering surface with a polyvinylidene fluoride (Kynar) coated finish.

B. Equipment counter flashings and slip flashings shall be 22-gauge.

C. Pitch pockets shall be either 22-gauage stainless steel or 20 oz. copper, and have all corners welded or soldiered, and a continuous deck flange at corners.

D. Flat Stock = .22 gauge

E. Miscellaneous Metals and Flashings:

1. Surface Mounted Counter Flashings: matching color, 22-gauge.

2. Copper Slip Counterflashings: ASTM B370, temper HOO (cold-rolled), 20 oz. copper

3. Equipment Slip Flashing: Matching Color, 22-gauge thick.

4. Equipment Support Flashing: Matching Color, 22-gauge thick.

5. Solder for Stainless Steel: ASTM B 32, Grade Sn60, used with an acid flux of type recommended by stainless-steel sheet manufacturer; use a noncorrosive rosin flux over tinned surfaces.

6. Solder for Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.

7. Fasteners: Same metal as sheet metal flashing or other noncorrosive metal as recommended by sheet metal manufacturer. Match finish of exposed heads with material being fastened. Exposed fasteners shall have a neoprene or other suitable weatherproofing washer.

8. Asphalt Mastic: SSPC-Paint 12, solvent-type asphalt mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil dry film thickness per coat.

9. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

10. Sealing Tape: Pressure sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.

11. Adhesives: Type recommended by flashing sheet metal manufacturer for waterproof and weather-resistant seaming and adhesive application of flashing sheet metal.

12. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of Work, matching or compatible with material being installed; noncorrosive; size and thickness required for performance.

13. Roofing Cement: ASTM D 4586, Type I, asbestos free, asphalt based.

14. Zinc-Coated Steel Sheet: ASTM A526, 0.20% copper, 26 gage (0.0179"); designation G90 hot-dip galvanized, mill phosphatized.

15. Stainless Steel Sheet: Type 302/304, ASTM A167, 24-gauge, annealed except dead soft where fully concealed by other work, 2D (dull) finish.

16. Copper Sheet: ASTM B370, 20 oz., temper HOO (cold-rolled).

2.2 PREMANUFACTURED EDGE METAL

A. Pre-Manufactured Coping Cap: R-Mer Edge Coping Cap Cover and Splice Plate.
   1. Zinc-coated steel, ASTM A653, coating designation G-90, in thickness of 22 gauge, 36" to 48" by coil length, chemically treated, commercial or lock-forming quality.

B. Pre-Manufactured Coping Cap: R-Mer Edge Coping Chairs

C. Pre-Manufactured Edge Metal Finishes:
   1. Exposed and unexposed surfaces for mill finish flashing, fascia, and coping cap, as shipped from the mill.
   2. Exposed surfaces for coated panels:
      a. Steel Finishes: fluorocarbon finish. Epoxy primer baked both sides, .2-.25 mils thickness as approved by finish coat manufacturer. Weathering finish as referred by National Coil Coaters Association (NCCA). Provided with the following properties.
         1) Pencil Hardness: ASTM D3363, HB-H / NCCA II-2.
         2) Bend: ASTM D-4145, O-T / NCCA II-19.
         3) Cross-Hatch Adhesion: ASTM D3359, no loss of adhesion.
         4) Gloss (60 deg. angle): ASTM D523, 25+/-5%.

5) Reverse Bend: ASTM D2794, no cracking or loss of adhesion.
6) Nominal Thickness: ASTM D1005.
   a) Primer: 0.2 mils.
   b) Topcoat: 0.7 mils min.
   c) Clear Coat 0.3 mils.
7) Color: Provide as specified. (Subject to minimum quantities)

2.3 RELATED MATERIALS

A. Metal Primer: Zinc chromate type.

B. Plastic Cement: ASTM D 4586

C. Sealant: As required by material manufacturer.

D. Lead: Meets Federal Specification QQ-L-201, Grade B, four pounds per square foot.

E. Solder: ANSI/ASTM B32; 95/05 type.

F. Flux: FS O-F-506.

G. Underlayment: High Temperature R-Mer Seal.

H. Fasteners:

1. Nails and Fasteners: Non-ferrous metal or hot dipped galvanized fasteners complying with ASTM A153 and connectors complying with ASTM A653, Class G185; Type 304 or Type 316 stainless steel fasteners and connectors shall be used with new generation of pressure-treated wood; except that hard copper nails shall be used with copper; aluminum or stainless steel nails shall be used with aluminum; and stainless steel nails shall be used with stainless steel. Fasteners shall be self-clinching type of penetrating type as recommended by the manufacturer of the wood blocking/nailer material. Nails and fasteners shall be flush-driven through flat metal discs of not less than one (1) inch diameter. Omit metal discs when one-piece composite nails or fasteners with heads not less than one (1) inch diameter are used.

2. Fastening shall conform to ANSI/SPRI ES-1 and/or Factory Mutual 1-90 requirements or as stated on section details, whichever is more stringent and per the manufacturer's requirements.

I. Metal Termination Bars:

1. Shall be heavy flat bar aluminum unless otherwise recommended by membrane manufacturers.

2. Material shall be .125” x 1” (minimum) aluminum conforming to ASTM B-221, mill finish. Bars shall have holes for fasteners at 6” o.c. maximum.

PART 3 - EXECUTION

3.1 PROTECTION

A. Isolate contact areas of dissimilar metals with heavy asphalt or other approved coating, specifically made to stop electrolytic action.

3.2 GENERAL

A. Install work watertight, without waves, warps, buckles, fastening stress, or distortion, allowing for expansion and contraction.

B. Fastening of metal to walls and wood blocking shall comply with ANSI-SPRI ES-1, SMACNA Architectural Sheet Metal Manual, Factory Mutual 1-100 wind uplift specifications and/or manufacturer's recommendations whichever is of the highest standard.

C. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.

3.3 INSPECTION

A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets are in place, and nailing strips located.

B. Verify membrane termination and base flashings are in place, sealed, and secure.

C. Beginning of installation means acceptance of existing conditions.

D. Field measure site conditions prior to fabricating work.

3.4 SHOP FABRICATED SHEET METAL

A. Installing Contractor shall be responsible for determining if the sheet metal systems are in general conformance with roof manufacturer's recommendations.

B. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.

C. Hem exposed edges.

D. Angle bottom edges of exposed vertical surfaces to form drip.

E. All corners for sheet metal shall be lapped with adjoining pieces fastened and set in sealant.

G. Install sheet metal to comply with ANSI/SPRI, SMACNA and NRCA standards, and per the manufacturer's instructions.

3.5 ACCESSORY INSTALLATION

A. ROOF DRAIN

1. Prime lead at a rate of 100 square feet per gallon and allow to dry.

2. Set lead flashing (30" square minimum) in a 1/4" bed of mastic.

3. Install specified roof flashing system.

4. Install metal clamping ring and strainer. Stop all plies short of the clamping ring and seal edge with a three course application of the specified liquid applied flashing system and reinforcing mesh.

B. PLUMBING STACK

1. Prime flange and sleeve at a rate of 100 square feet per gallon and allow to dry.

2. Install properly sized sleeves in a 1/4" bed of roof cement.

3. Turn sleeve a minimum of 1" down inside of stack or lead caps on pipes 2" or less in diameter.

4. Caulk intersection of the membrane and flange with asphalt roof cement.

C. EQUIPMENT SUPPORTS/EXHAUST VENTS

1. Mill finished aluminum counterflashing and/or slip flashing extender shall be provided with watertight accessories such as miters, transitions, end caps, etc. and finished to match.

2. Accessories: Joint covers, corners, fasteners, strip flashing at joinings, fastening, and other accessories shall be included.

3. On small units, install an 0.040 mill finished aluminum extender will be installed under the existing counterflashing or curb lip to cover the newly installed roof flashing system by at least 4 inches. The new extender will be secured with fasteners and neoprene washers every 8 inches on center.

D. PITCH POCKET

1. Prime flange and sleeve at a rate of 100 square feet per gallon and allow to dry.

2. Install properly sized and prefabricated stainless steel or copper pitch pockets with welded watertight joints in a 1/4" bed of roof mastic.

3. Install specified two ply roof flashing system.

4. Caulk intersection of the flashing membrane and flange with asphalt roof cement.

5. In accordance with project the detail, fill pitch pocket with non-shrink grout and pourable sealer.

E. CURB DETAIL/AIR HANDLING STATION

1. Mill finish aluminum slip flashing extender shall be provided with watertight accessories such as miters, transitions, end caps, etc. and finished to match.

2. Accessories: Joint covers, corners, fasteners, strip flashing at joinings, fastening, and other accessories shall be included.

3. Over the termination bar, an 0.040 mill finished aluminum extender will be installed under the existing counterflashing or curb lip to cover the newly installed roof flashing system by at least 4 inches. New counterflashing will be secured with fasteners and neoprene washers every 8 inches on center.

END OF SECTION

SECTION 07 92 00 - JOINT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES: Requirements including but not limited to:

A. Control and expansion joints on exposed surfaces.

B. Perimeter joints between wall surfaces and other openings.

C. Joints as indicated or as necessary.

D. Accessories necessary for a complete installation.

1.2 RELATED SECTIONS

A. All Provided Sections.

1.3 REFERENCES

A. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.

B. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.

1.4 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

B. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

1.6 PRE-INSTALLATION CONFERENCE

A. Convene a pre-installation conference approximately two weeks before scheduled commencement of sealant installation and associated work.

B. Require attendance of installers of sealant products and other associated work which must precede or follow sealant work as well as, Architect, Owner, and sealant manufacturer's representative.

C. Objectives include:
   1. Review foreseeable methods and procedures related to sealant work, including set up and mobilization areas for stored material and work area.
   2. Tour representative areas of building substrates, inspect and discuss condition of substrate and preparatory work.
   3. Review Drawings, Specifications and other Contract Documents.
   4. Review and finalize schedule related to sealant work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
   5. Review required inspection, testing, certifying procedures.
   6. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary weather protection.
   7. Record conference including decisions and agreements reached. Furnish a copy of records to each party attending.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent deterioration or damage due to moisture, high/low temperatures, contaminants, or other causes.

1.8 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions: Weather Condition Limitations: Do not install sealant during inclement weather or when inclement weather is expected.
   1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg F (4.4 deg C).
   2. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

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

1.9 WARRANTY

A. Installer Warranty: Installer shall warrant all sealant work for two (2) years from the date of Substantial Completion for any failure or defects in installation and workmanship of sealant systems.

B. Manufacturer’s Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: Five (5) years from date of Substantial Completion.

1.10 JOB SITE INSPECTIONS

A. The manufacturer will provide a minimum of 2 site visits per week. Pictorial reports outlining the work in progress will be provided to all applicable parties. A 3-party inspector is not acceptable.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Garland Company, Inc. (The), which is located at: 3800 E. 91st St.; Cleveland, OH 44105; Toll Free Tel: 800-321-9336; Tel: 216-641-7500; Fax: 216-641-0633; Email:request info (jbosl@garlandind.com); Web:http://www.garlandco.com

B. Or Equal provided the products meet or exceeded the basis of design. The job site inspections must also be provided.

2.2 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:
   1. Provide selections for review and approval by Owner from manufacturer's full range of standard colors for products of type indicated.

2.3 JOINT SEALANTS

A. Sealant Standard: Provide manufacturer's recommended sealants that comply with ASTM C 920 and other requirements indicated on each joint sealant data sheet at the end of this section, including those requirements referencing ASTM C 920 classifications for Type, Grade, Class, and Uses.
   1. Silicone Polymer Hybrid Sealant
      a. Tuff-Stuff MS: One part, 100% solids, non-sag sealant as approved and furnished by the sealant manufacturer for cracks, movement and non-movement joints.
         1) Shrinkage: No measurable shrinkage after 14 days
         2) Elongation, ASTM D 412: 550%
         3) Hardness, Shore A, ASTM C 661: 24 +/-3
         4) Class: 50
   2. Silicone Polymer Hybrid Sealant
      a. GreenLock Sealant XL: One part, 100% solids, non-sag sealant as approved and furnished by the sealant manufacturer for cracks, movement and non-movement joints.
         1) Service Temp -40°F to 200°F (-40°C to 93°C)
         2) Elongation, ASTM D 412: 550%
         3) Hardness, Shore A, ASTM C 661: 24 +/-3
   3. Silicone Sealant
      a. All-Sil: One part, medium modulus, non-corrosive high performance silicone sealant as recommended and furnished by the sealant manufacturer for wet glazing and non-porous substrates.
         1) Tensile Strength, ASTM D 412: 190 psi
         2) Elongation, ASTM D 412: 650%
         3) Hardness, Shore A, ASTM C 661: 15
         4) Joint Movement Capability ASTM C 719: +/-50%

2.4 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non-extruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
   1. Proprietary, reticulated, closed-cell polymeric foam, non-out-gassing, with a density of 2.5 pcf and tensile strength of 35 psi per ASTM D 1623, and with water absorption less than 0.02 gms/cc per ASTM C 1083.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected at no cost to project by the responsible contractor.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
   3. Remove laitance and form release agents from concrete.
   4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply

primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
   1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
      a. Do not leave gaps between ends of joint fillers.
      b. Do not stretch, twist, puncture, or tear joint fillers.
      c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.
   2. Install bond breaker tape between sealants and joint-fillers, compression seals or back of joint where required to prevent third-side adhesion of sealant to back of joint.

D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes, and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

E. Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
   1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise noted.
      a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

3.4 CLEANING

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

3.5 PROTECTION

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

END OF SECTION

SECTION 08 45 23 - INSULATED TRANSLUCENT FIBERGLASS SANDWICH PANEL SKYLIGHT SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the insulated, translucent sandwich panel system and accessories as shown and specified. Work includes providing and installing:

1. Insulated, translucent flat sandwich panels
2. Aluminum clamptite installation system
3. Aluminum flashing attached to Skyroofs

B. Basis of Design: Kalwall 2-3/4” Skyroof

1.2 SUBMITTALS

A. Submit manufacturer’s product data. Include construction details, material descriptions, profiles, and finishes of components.

B. Submit shop drawings. Include plans, elevations, and details.

C. Submit manufacturer’s color charts showing the full range of colors available for factory finished exposed aluminum.

1. When requested, submit samples for each exposed finish required, in same thickness and material indicated for the work and in size indicated below.
   a. Sandwich panels: 7” x 12” units
   b. Factory finished aluminum: 3” long sections

D. Submit Installer Certificate, signed by installer, certifying compliance with project qualification requirements.

E. Submit product reports from a qualified independent testing agency indicating each type and class of panel system complies with the project performance requirements, based on comprehensive testing of current products. Previously completed reports will be acceptable if for current manufacturer and indicative of products used on this project.

1. Reports required (if applicable) are:
   a. Insulation U-Factor (NFRC 100)
   b. Air Leakage (ASTM E 283)
   c. Water Penetration (ASTM E 331)

1.3 CLOSEOUT SUBMITTALS

A. Provide field maintenance manual to include in project maintenance manuals.

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications:

1. Material and products shall be manufactured by a company continuously and regularly employed in the manufacture of specified materials for a period of at least ten consecutive years and which can show evidence of those materials being satisfactorily used on at least six projects of similar size, scope, and location. At least three of the projects shall have been in successful use for ten years or longer.
2. Panel system must be listed by an ANSI accredited Evaluation Service, which requires quality control inspections and fire, structural, and water infiltration testing of sandwich panel systems by an accredited agency.
3. Quality control inspections shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components, and production sandwich panels for conformance with AC177 "Translucent Fiberglass Reinforced Plastic (FRP) Faced Panel Wall, Roof and Skylight Systems" as issued by the ICC-ES.

1.5 PERFORMANCE REQUIREMENTS

A. The manufacturer shall be responsible for the configuration and fabrication of the complete panel system.

1. When requested, include span analysis data.
2. Standard panel system shall have less than 0.01 cfm/ft² air leakage by ASTM E 283 at 6.24 PSF (50 mph) and no water penetration by ASTM E 331 at 15 PSF; and structural testing by ASTM E 330.
3. Structural Loads. Provide Skyroof system capable of handling the following loads:
   a. Live Load (PSF): 30 PSF
   b. Snow Load (PSF): 30 PSF
   c. Drift Load (PSF): 0 PSF
   d. Wind Load (PSF): 20 PSF

B. Deflection Limits:

1. Skyroof: Limited to L/60 of clear span for each assembly component.

C. Thermal Movements: Allow for thermal movements from ambient- and surface-temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 110 deg F (43 deg C), ambient; 150 deg F (66 deg C), material surfaces.

D. Deliver panel system, components, and materials in manufacturer’s standard protective packaging.

E. Store panels on the long edge; several inches above the ground, blocked and under cover in accordance with manufacturer’s storage and handling instructions.

1.6 WARRANTY

A. Provide manufacturer's and installer's written warranties agreeing to repair or replace panel system work, which fails in material or workmanship, within five years from the commencement date. The commencement date of the warranty shall be the date of substantial completion, but no more than six months from date of delivery. Failure of material or workmanship shall include deterioration of finish on metal in excess of normal weathering; and defects in accessories; insulated, translucent sandwich panels; and other components of the work

PART 2 - PRODUCTS

2.1 PANEL COMPONENTS

A. Face Sheets:

1. Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.
   a. Thermoplastic (e.g. polycarbonate, acrylic) faces are not acceptable.
   b. Face sheets shall not deform, deflect, or drip when subjected to fire or flame.
2. Interior face sheets:
   a. Flame spread: Underwriters Laboratories (UL) listed, which requires periodic unannounced retesting, with flame spread rating no greater than 50 and smoke developed no greater than 450 when tested in accordance with UL 723.
   b. Burn extent by ASTM D 635 shall be no greater than 1”.
3. Exterior face sheets:
   a. Color stability: Full thickness of the exterior face sheet shall not change color more than 3 CIE Units DELTA E by ASTM D 2244 after 5 years outdoor South Florida weathering at 5° facing south as measured on a white sample, with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.
   b. Strength: Exterior face sheet shall be uniform in strength, impenetrable by hand held pencil and repel an impact minimum of 70 ft. lbs. without fracture or tear when impacted by a 3-1/4” diameter, 5 lb. free-falling ball per UL 972.
   c. Erosion Protection: Integral, embedded-glass erosion barrier.
4. Appearance:
   a. Exterior face sheet: Smooth, .070 thick and Crystal in color.
   b. Interior face sheet: Smooth, .045 thick and White in color.

c. Face sheets shall not vary more than ± 10% in thickness and be uniform in color.

B. Grid Core:

1. Thermally Broken Composite I-beam grid core shall be of alloy and temper recommended by manufacturer with provisions for mechanical interlocking of muntin-mullion and perimeter. Width of I-beam shall be no less than 7/16”.
2. I-beam Thermal break: Minimum 1”, thermoset fiberglass composite. Poured and de-bridged thermal break is not acceptable.

C. Laminate Adhesive:

1. Heat and pressure resin type adhesive engineered for structural sandwich panel use, with minimum 25-years field use. Adhesive shall pass testing requirements specified by the International Code Council “Acceptance Criteria for Sandwich Panel Adhesives".
2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C 297 after two exposures to six cycles each of the aging conditions prescribed by ASTM D 1037.
3. Minimum shear strength of the panel adhesive by ASTM D 1002 after exposure to four separate conditions:
   a. 50% Relative Humidity at 68° F: 540 PSI
   b. 182° F: 100 PSI
   c. Accelerated Aging by ASTM D 1037 at room temperature: 800 PSI
   d. Accelerated Aging by ASTM D 1037 at 182° F: 250 PSI

2.2 PANEL CONSTRUCTION

A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking I-beams. The adhesive bonding line shall be straight, cover the entire width of the I-beam and have a neat, sharp edge.

1. Thickness: 2-3/4 inches
2. Grid Core Insulation: Fill panel cores with fiberglass batt insulation
3. Panel U-factor by NFRC certified laboratory:
   a. 2-3/4” thermally broken grid: 0.14
4. Complete insulated panel system shall be NFRC certified.
5. Visible Light Transmittance (VLT): 13%
6. Solar heat gain coefficient: 0.15
7. Grid pattern as viewed: Nominal size: 8” x 20”; Shoji pattern

B. Standard panels shall deflect no more than 1.9” at 30 PSF in 10’-0” span without a supporting frame by ASTM E 72.

C. Panels shall meet the conditions of acceptance according to ASTM E2707 Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure:
1. Absence of flame penetration through the wall assembly at any time.
2. Absence of evidence of glowing combustion on the interior surface of the assembly at the end of the 60-min observation period.

3. Absence of evidence of flame, glow, and smoke if the test is terminated prior to the completion of the 60-min observation period.

D. Thermally broken, insulated panels: Minimum Condensation Resistance Factor of 80 by AAMA 1503 measured on the bond line.

E. Skyroof System:

1. Skyroof system shall pass Class A Roof Burning Brand Test by UL 790.

F. Skyroof System shall meet the fall through requirements of OSHA 1910.21 as demonstrated by testing in accordance with ASTM E 661, thereby not requiring supplemental screens or railings.

2.3 ALUMINUM CLAMPTITE INSTALLATION SYSTEM

A. Aluminum clamptite installation system:

1. Clamp-tite screw type closure system shall be of extruded aluminum alloy and temper as recommended by manufacturer.
2. Skyroof perimeter aluminum clampite installation system at curbs shall be factory sealed to panels.

B. Sealing tape: Manufacturer's standard, pre-applied to aluminum clamptite installation system at the factory under controlled conditions.

C. Fasteners: 300 series stainless steel screws for aluminum clamptite installation system, excluding final fasteners to the building.

D. Finish:

1. Manufacturer's factory applied finish, which meets the performance requirements of AAMA 2604. Color to be selected from manufacturer’s standards.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Installer shall examine substrates, supporting structure, and installation conditions.

B. Do not proceed with panel installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install the panel system in accordance with the manufacturer's fabrication drawings and suggested installation instructions.

1. Anchor component parts securely in place by permanent mechanical attachment system.
2. Accommodate thermal and mechanical movements.
3. Seal aluminum clamptite installation system as shown on the manufacturer's fabrication drawings and suggested installation instructions.

B. Install joint sealants at perimeter joints and within the panel system in accordance with manufacturers fabrication drawings and suggested installation instructions.

3.3 FIELD QUALITY CONTROL

A. Water Test: Installer to test a representative section of installed materials according to procedures in AAMA 501.2.

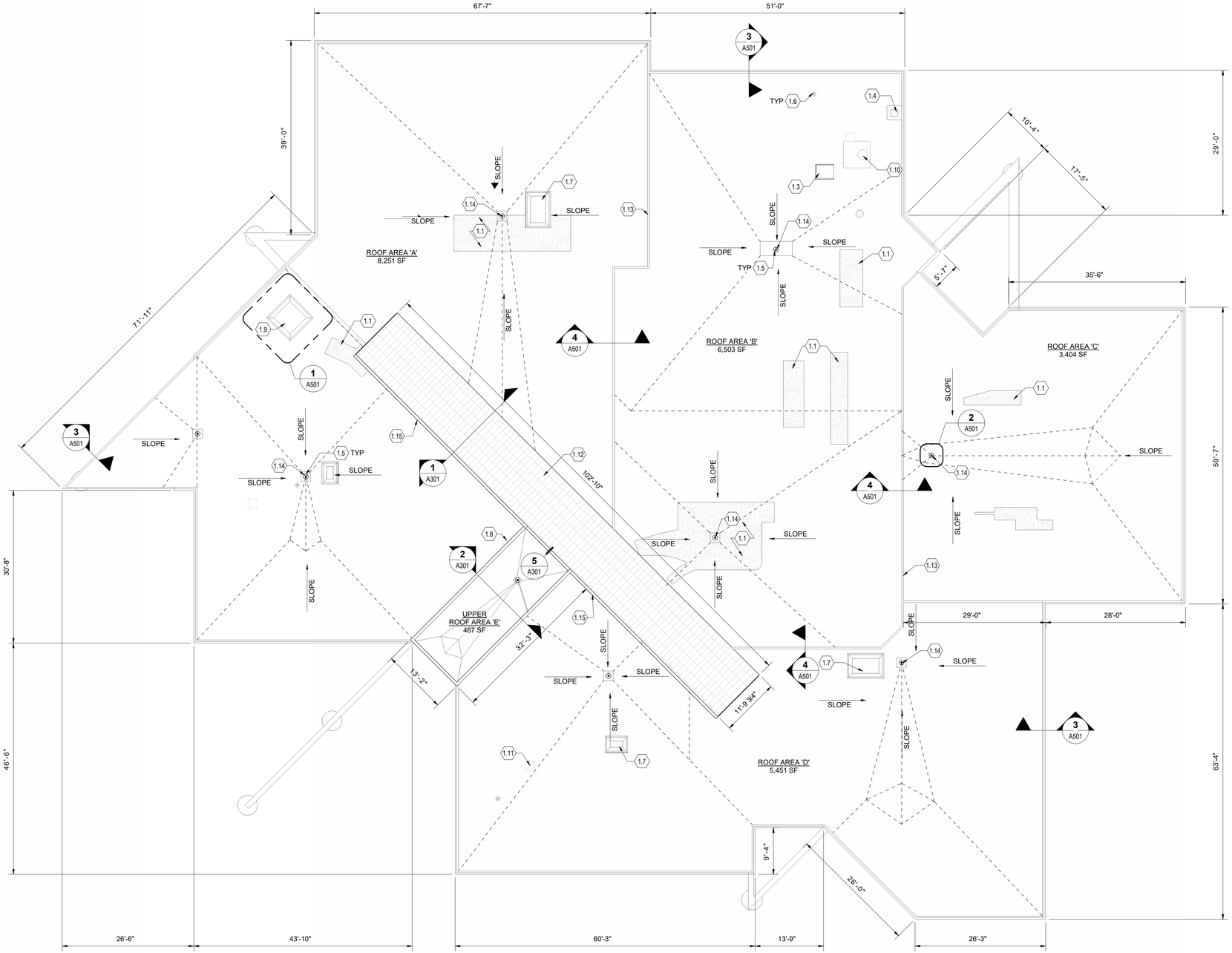
B. Repair or replace work that does not pass testing or that is damaged by testing and retest work.

3.4 CLEANING

A. Clean the panel system, interior and exterior, immediately after installation.

B. Refer to manufacturer's written recommendations.

END OF SECTION 084523



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A ROOF PLAN

SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. REMOVE ALL ROOF DEBRIS FROM THE ENTIRE ROOF AND THOROUGHLY CLEAN DRAIN AREAS.
2. REMOVE ALL CAULKING WHERE THE EDGE METAL MEETS THE ROOF MEMBRANE AND APPLY A GENEROUSE BEAD OF NEW CAULKING.
3. REMOVE ALL LOOSE MASTIC FROM VERTICAL FLASHING SEEMS.
4. BRUSH BACK ALL LOOSE GRAVEL AND PRIME ALL FLASHING, EXPANTION JOINTS AND SMOOTH DRAIN SUMPS.
5. COAT ALL FLASHING THROUGHOUT THE ENTIRE ROOF PER THE PROVIDED SPECIFICATIONS.
6. PROVIDE NEW WOOD NAILERS AND BLOCKING AS NEEDED.
7. DIMENSIONS PROVIDED ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO BIDDING.

KEYNOTES

#	DESCRIPTION
1.1	ALL AREAS OF EXPOSED ROOF MEMBRANE TO BE COATED PER THE PROVIDED SPECIFICATIONS.
1.3	EXISTING ROOF HATCH, PROTECT IN PLACE DURING CONSTRUCTION. PRIME THE ROOF HATCH FLASHINGS AND INSTALL NEW CAP PLY OVER THE EXISTING FLASHING PER THE PROVIDED SPECIFICATIONS
1.4	EXISTING CHIMNEY, PROTECT IN PLACE DURING CONSTRUCTION.
1.5	APPROXIMATE LOCATION OF EXISTING ROOF DRAIN. CLEAN AND INSPECT EACH DRAIN AND PROVIDE NEW DRAIN INSERT.
1.6	EXISTING VENT, PROTECT IN PLACE DURING CONSTRUCTION. REPAIR OR REPLACE FLASHING AS NECESARY, CLEAN AND SEAL ALL AROUND.
1.7	EXISTING RELIEF HOOD, PROTECT IN PLACE DURING CONSTRUCTION.
1.8	EXISTING ROOF ACCESS LADDER. TIGHTEN CONNECTIONS AND REPAIR PITCH POCKETS AT LEG BASE AS REQUIRED.
1.9	EXISTING OUTDOOR AIR INTAKE, PROTECT IN PLACE DURING CONSTRUCTION.
1.10	EXISTING AIR HANDLING UNIT OUTDOOR INTAKE AIR HOOD, PROTECT IN PLACE DURING CONSTRUCTION.
1.11	EXISTING EXHAUST RELIEF HOOD, PROTECT IN PLACE DURING CONSTRUCTION.
1.12	INSULATED TRANSLUCENT FIBERGLASS SANDWICH PANEL SKYLIGHT SYSTEM TO BE REMOVED AND REPLACED.
1.13	CAULK ALL OVERLAPPING SEAMS AT EXPANSION JOINT COPINGS PER SPECIFICATIONS.
1.14	REMOVE A 2'-X 2' AREA GRAVEL AROUND THE DRAIN. CARE MUST BE TAKEN NOT TO DEMAGE THE EXISTING ROOFING PLIES. INSTALL GRAVEL GUARDS SET IN ROOF MASTIC WITH THE FLANGE SEALED USING THE 3-COURSE METHOD. SEAL THE ENTIRE DRAIN SUMP WITH COOL SIL THE MANUFACTURER'S INSTRUCTIONS.
1.15	EXISTING METAL COPING TO BE REMOVED AND REPLACED. PROVIDE MEMBRANE WATERPROOFING OVER TOP OF PARAPET BEFORE COPING PLACEMENT. COORDINATE WITH NEW SKYLIGHT FLASHING INSTALLATION.

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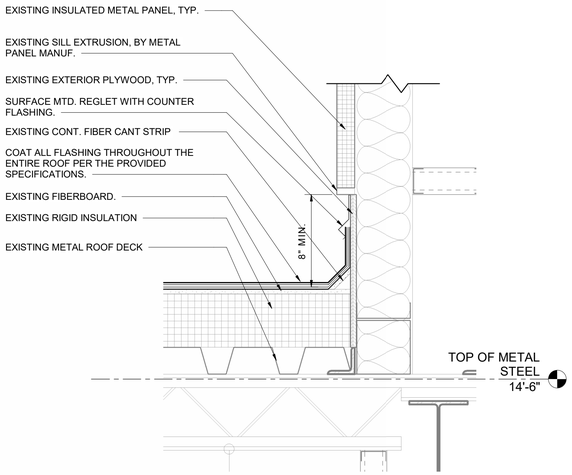
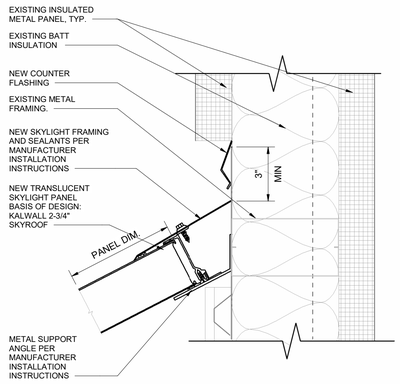


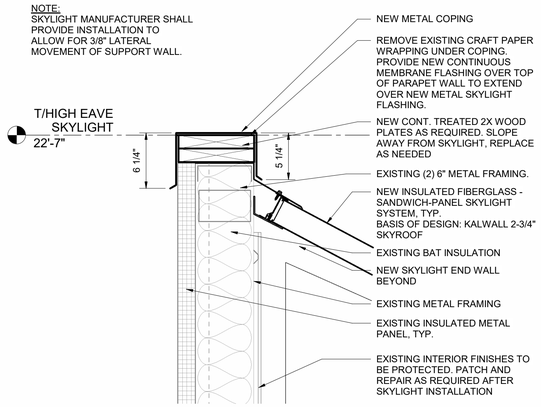
6 A301 PARAPET WALL BASE DETAIL

SCALE: 1 1/2" = 1'-0"



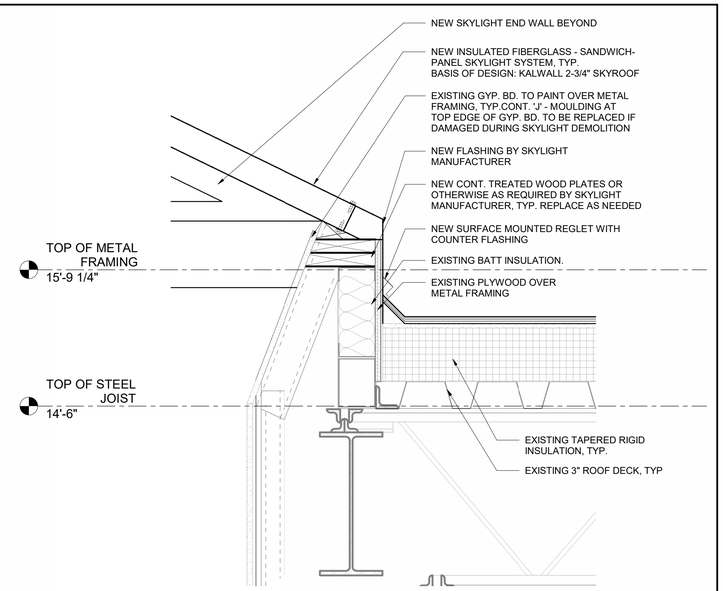
5 A101 SKYLIGHT PARAPET WALL DETAIL

SCALE: 3" = 1'-0"



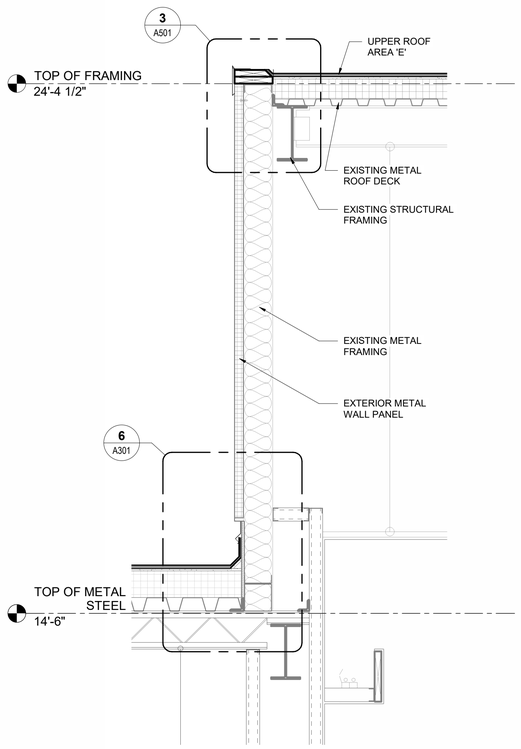
4 A301 SKYLIGHT HEAD DETAIL

SCALE: 1 1/2" = 1'-0"



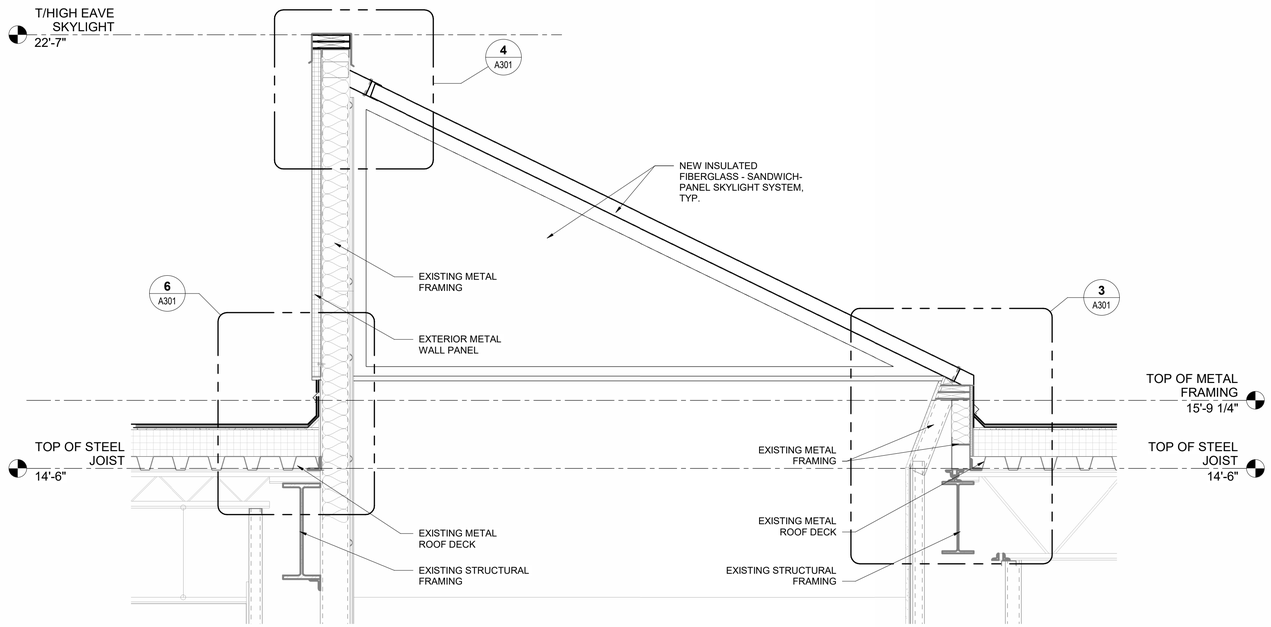
3 A301 SKYLIGHT SILL DETAIL

SCALE: 1 1/2" = 1'-0"



2 A101 PARAPET WALL SECTION

SCALE: 3/4" = 1'-0"



1 A101 SKYLIGHT SECTION

SCALE: 3/4" = 1'-0"

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Andrew V. Henley, 1717159
12/31/2025 expiration date

R. E. WARNER
ENGINEERS | ARCHITECTS | SURVEYORS
25000 Country Club Blvd., Suite 340,
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DRAWING TITLE:
ROOF SECTIONS AND SKYLIGHT DETAILS

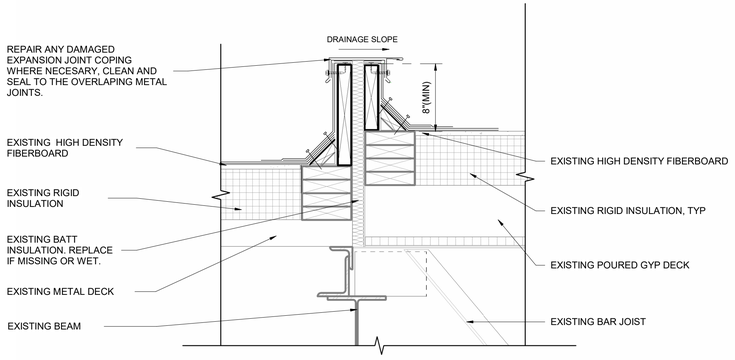
DRAWING NUMBER: **A301**

REV: **1**

9/3/2025 9:47:41 AM

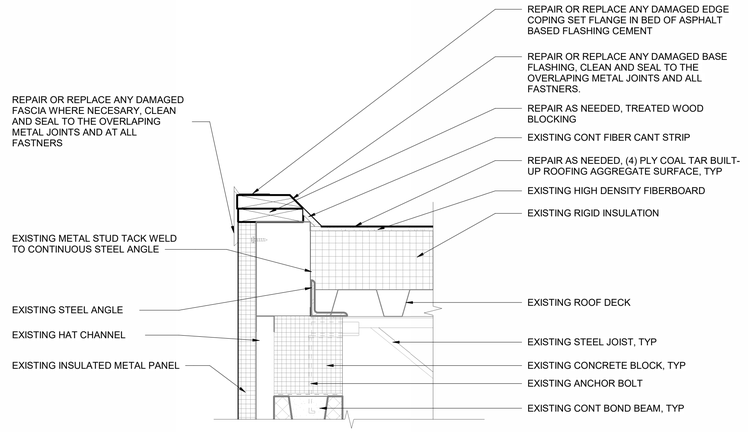
GENERAL NOTES

1. EXISTING ROOF DETAILS SHOWN FOR REFERENCE ONLY.



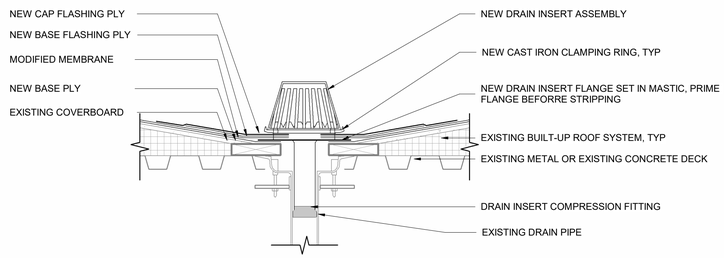
4 A101 EXPANSION JOINT DETAIL

SCALE: 1 1/2" = 1'-0"



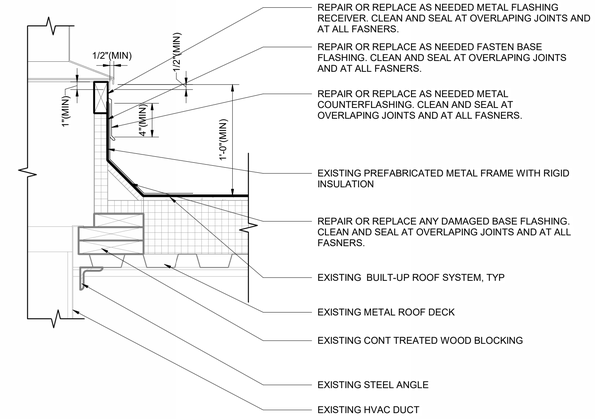
3 A101 EDGE COPING DETAIL

SCALE: 1 1/2" = 1'-0"



2 A101 ROOF DRAIN DETAIL

SCALE: 1 1/2" = 1'-0"



1 A101 CURB DETAIL

SCALE: 1 1/2" = 1'-0"

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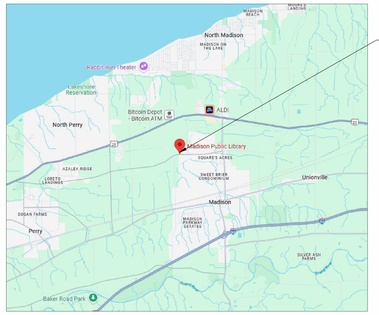
ABBREVIATIONS

A		G		PT	POINT
AB	ANCHOR BOLT	GA	GAGE (GAUGE)	PTD	PAINTED
ABV	ABOVE	GALV	GALVANIZE (D)	PTN	PARTITION
AC	AIR CONDITIONING (UNIT)	GB	GRAB BAR	PTR	PAPER TOWEL RECEPTACLE
ACT	ACOUSTIC CEILING TILE	GC	GENERAL CONTRACTOR	PVC	POLYVINYL CHLORIDE
AD	AREA DRAIN	GL	GLASS	PVMT	PAVEMENT
ADH	ADHESIVE	GLZ	GLAZE		
ADJ	ADJACENT	GSKT	GASKET	Q	
AFF	ABOVE FINISH FLOOR	GVL	GRAVEL	QTF	QUARRY TILE FLOOR
AGGR	AGGREGATE	GWB	GYPSUM WALL BOARD	QTY	QUANTITY
AL	ALUMINUM			QUAL	QUALITY
ALTN	ALTERNATE	H			
ANDZ	ANODIZE	HB	HOSE BIB	R	
AP	ACCESS PANEL	HC	HOLLOW CORE	R	RADIUS
APPROX	APPROXIMATE (LY)	HD	HEAVY DUTY	RA	RETURN AIR
ARCH	ARCHITECTURE	HDR	HEADER	RAB	RABBET
ASPH	ASPHALT	HDW	HARDWARE	RCP	REFLECTED CEILING PLAN
AUTO	AUTOMATIC	HDWD	HARDWOOD	RD	ROOF DRAIN
		HGT	HEIGHT	REF	REFERENCE
B		HM	HOLLOW METAL	REFLD	REFLECTED
BETW	BETWEEN	HNDRL	HAND RAIL	REFR	REFRIGERATOR
BEV	BEVEL	HORIZ	HORIZONTAL	REINF	REINFORCE (D), (ING)
BF	BIFOLD	HPT	HIGH POINT	REQ	REQUIRE
BJ	BAR JOIST	HR	HOUR	REQD	REQUIRED
BLDG	BUILDING	HTG	HEATING	RESIL	RESILIENT
BLK(G)	BLOCK (ING)	HVAC	HEATING/ VENTILATION/ AIR-CONDITIONING	REV	REVISION (S), (REVISE)
BLW	BELOW			REG	REGISTER
BM	BENCH MARK	HWH	HOT WATER HEATER	RH	RIGHT HAND
BOT	BOTTOM			RI	RISER (STAIRS)
BRD	BOARD	I		RLG	RAILING
BRG	BEARING	ID	INSIDE DIAMETER	RM	ROOM
BRK	BRICK	IDENT	IDENTIFY	RMV	REMOVE (D)
BRZ	BRONZE	INCL	INCLUDE (D), (ING)	RO	ROUGH OPENING
BS	BOTH SIDES	INSUL	INSULATION	RTN	RETURN
BSMT	BASEMENT	INT	INTERIOR	RVS	REVERSE
BUR	BUILT-UP ROOFING	INTLK	INTERLOCK	RW	RIGHT OF WAY
BW	BOTH WAYS			RWC	RAINWATER CONDUCTOR
		J			
C		JST	JOIST	S	
CAB	CABINET	JB	JUNCTION BOX	S	SOUTH
CARP	CARPET (ED)	JC	JANITOR'S CLOSET	SASU	SELF-ADHERING SHEET UNDERLAYMENT
CB	CATCH BASIN	JT	JOINT		
CEM	CEMENT			SATC	SUSPENDED ACOUSTIC-TILE CEILING
CHAM	CHAMFER	K		SCHED	SCHEDULE
CI	CAST IRON	KD	KNOCK DOWN	SCRN	SCREEN
CJ	CONTRACTION/ CONTROL JOINT	KIT	KITCHEN	SDG	SIDING
CKT	CIRCUIT	KO	KNOCKOUT	SCT	STRUCTURAL CLAY TILE
CL	CENTERLINE	KPL	KICK PLATE	SECT	SECTION
CLG	CEILING			SH	SHEET
CLKG	CAULKING	L		SHTH	SHEATHING
CLOS	CLOSURE	L	LENGTH	SIM	SIMILAR
CLR	CLEAR	LAB	LABORATORY	SLT	SKYLIGHT
CMU	CONCRETE MASONRY UNIT	LAD	LADDER	SLV	SLEEVE
CNVR	CONVEYOR	LAM	LAMINATE (D)	SNDPRF	SOUNDPROOF
COL	COLUMN	LAV	LAVATORY	SPCR	SPACER
CONC	CONCRETE	LBL	LABEL	SPEC	SPECIFICATION (S)
CONN	CONNECTION	LF	LINEAR FOOT (FEET)	SPKR	SPEAKER
CONSTR	CONSTRUCTION	LH	LEFT HAND	SQ	SQUARE
CONT	CONTINUOUS (CONTINUE)	LN	LINEAR	SQFT	SQUARE FOOT (FEET)
CONTR	CONTRACT (CONTRACTOR)	LKR	LOCKER	SS	STAINLESS STEEL
CORR	CORRUGATED	LL	LIVE LOAD	STD	STANDARD
CRCMF	CIRCUMFERENCE	LLH	LONG LEG HORIZONTAL	STL	STEEL
CT	CERAMIC TILE	LLV	LONG LEG VERTICAL	STOR	STORAGE
CTB	CERAMIC TILE BASE	LNTL	LINTEL	STRUC	STRUCURAL
CTC	CENTER TO CENTER	LP	LOW POINT	SUSP	SUSPEND
CTF	CERAMIC TILE FLOOR	LT	LIGHT	SYM	SYMBOL
CTR	COUNTER	LVR	LOUVER	SYMM	SYMMETRICAL
CUFT	CUBIC FEET	LWC	LIGHT WEIGHT CONCRETE	SYNTH	SYNTHETIC
CUYD	CUBIC YARD			SYS	SYSTEM
		M			
D		M	METER (S)	T	
D	DEPTH	MATL	MATERIAL	TOB	TOP OF BEAM
DEMO	DEMOLITION	MAX	MAXIMUM	TOM	TOP OF MASONRY
DET	DETAIL	MBR	MEMBER	TOS	TOP OF STEEL
DF	DRINKING FOUNTAIN	MC	MEDICINE CABINET	TD	TRENCH DRAIN
DIA	DIAMETER	MED	MEDIUM	TEL	TELEPHONE
DIAG	DIAGONAL	MECH	MECHANICAL	TEMP	TEMPORARY
DIM	DIMENSION	MEMB	MEMBRANE	TER	TERRAZZO
DISP	DISPENSER	MTL	METAL	TG	TONGUE AND GROOVE
DIV	DIVISION (DIVIDE)	MTLR	METAL ROOF	TH	TOILET PAPER HOLDER
DL	DEAD LOAD	MEZZ	MEZZANINE	THK	THICK
DN	DOWN	MFD	MANUFACTURED	THKNS	THICKNESS
DO	DOOR OPENING (DITTO)	MFR	MANUFACURE (R)	TMPD	TEMPERED
DP	DAMPROOFING	MH	MANHOLE	TOL	TOLERANCE
DR	DOOR	MIN	MINIMUM	TPTN	TOILET PARTITION
DS	DOWNSPOUT	MIR	MIRROR	TR	TRUSS
DWG	DRAWING	MISC	MISCELLANEOUS	TRA	TRANSOM
DWR	DRAWER	MLDG	MOLDING	TRD	TREAD (STAIRS)
		MO	MASONRY OPENING	TYP	TYPICAL
E		MR	MARBLE		
EXH	EXHAUST	MAS	MASONRY	U	
EXP	EXPOSED	MT	MOUNT	UL	UNDERWRITER'S LABORATORY
E	EAST	MTD	MOUNTED	UND	UNDER
EA	EACH	MTG	MOUNTING	UNFIN	UNFINISHED
EF	EACH FACE	MVBL	MOVABLE	UNO	UNLESS NOTED OTHERWISE
EL	ELEVATION			UOS	UNLESS OTHERWISE SPECIFIED
ELEC	ELECTRIC (AL)	N		UR	URINAL
ELEV	ELEVATOR	N	NORTH		
EMERG	EMERGENCY	NA	NOT APPLICABLE	W	
ENCL	ENCLOSURE (ENCLOSE)	NAT	NATURAL	W	WEST
EQL	EQUAL	NIC	NOT IN CONTRACT	W/	WITH
EQPT	EQUIPMENT	NO	NUMBER	W/O	WITHOUT
EST	ESTIMATE	NOM	NOMINAL	WA	WAINSCOT
EW	EACH WAY	NR	NOISE REDUCTION	WC	WATER CLOSET
EWC	ELECTRIC WATER COOLER	NRC	NOISE REDUCTION COEFFICIENT	WD	WOOD
EXC	EXCAVATE	NTS	NOT TO SCALE	WDW	WINDOW
EJ	EXPANSION JOINT			WGL	WIRE GLASS
EXIST	EXISTING	O		WI	WROUGHT IRON
EXT	EXTERIOR	OA	OVERALL	WM	WIRE MESH
		OB	OBSECURE	WP	WORKING POINT
F		OC	ON CENTER	WPG	WATERPROOFING
FBCK	FIREBRICK	OD	OUTSIDE DIAMETER	WS	WEATHER STRIPPING
FD	FLOOR DRAIN	OHD	OVERHEAD DOOR	WT	WEIGHT
FDN	FOUNDATION	OPA	OPAQUE	WTRPRF	WATERPROOF
FEC	FIRE EXTINGUISHER CABINET	OPNG	OPENING	WWF	WELDED WIRE FABRIC
FEXT	FIRE EXINGUISHER	OPP	OPPOSITE		
FFE	FINISH FLOOR ELEVATION	OH	OVERHEAD	Y	
FHC	FIRE HOSE CABINET			YD	YARD
FHR	FIRE HOSE RACK	P			
FL	FLASHING	PCF	POUNDS PER CUBIC FOOT		
FLEX	FLEXIBLE	PED	PEDESTAL		
FLG	FLOORING	PERF	PERFORATE (D)		
FLR	FLOOR	PL	PLATE		
FLUOR	FLUORESCENT	PLAM	PLASTIC LAMINATE		
FM	FACTORY MUTUAL	PLAS	PLASTER		
FNSH	FINISH	PLATF	PLATFORM		
FPRF	FIREPROOF	PWD	PLYWOOD		
FRES	FIRE RESISTANT	PNL	PANEL		
FRT	FIRE RETARTANT TREATED	PRCST	PRECAST		
FSTNR	FASTENER	PREFAB	PREFABRICATED		
FTG	FOOTING	PREFIN	PREFINISHED		
FURN	FURNISH (FURNITURE)	PRKG	PARKING		
FUT	FUTURE	PRL	PARALLEL		
FV	FIELD VERIFY	PROP	PROPOSED		
		PSF	POUNDS PER SQUARE FOOT		
		PSI	POUNDS PER SQUARE INCH		

LOCATION MAP



VICINITY MAP

SYMBOLS

1 A101 SIM. / 1 A101 SIM.	BUILDING SECTION	ROOM NAME 101	TYPICAL ROOM TAG
1 A101 SIM.	WALL SECTION	W Wall Finish; F Floor Finish; B Base Finish	ROOM FINISH TAG
1 A101	EXTERIOR ELEVATION TAG	EXIT: #1 CLEAR WIDTH: 68 OCCUPANT LOAD: 340	EGRESS DOOR TAG
X A101 X	INTERIOR ELEVATION TAG	ACT-1 10'-0"AFF	CEILING FINISH / ELEVATION TAG
TS1 X-1 X-1	FLOOR TRANSITION TAG	1	REVISION ID TAG
1 A101 SIM	CALLOUT TAG	XX	FURNITURE TAG
N	NORTH ARROW	X-1	MATERIAL TAG
Name / Elevation	LEVEL ID TAG	XX	KEYNOTE TAG
		X1	ACCESSORY / APPLIANCE TAG
		101	DOOR TAG
		1	WINDOW / STOREFRONT TAG
			CENTERLINE
		M#.1 AS 4'-0"	PARTITION TAG *SEE SHEET X---< FOR MORE INFO
		A	COLUMN GRID MARKER

MATERIALS

EARTH (DISTURBED) · BLOCKING / SHIM · CONCRETE BLOCK · BATT INSULATION

EARTH (UNDISTURBED) · NOMINAL CUT LUMBER · BRICK · GYPSUM BOARD

GRAVEL · WOOD GRAIN · STEEL · BRASS

POURED CONCRETE · PLYWOOD · RIGID INSULATION

SCOPE OF WORK

THIS PROJECT CONSISTS OF THE REPAIR AND MAINTENANCE OF AN EXISTING COAL TAR AGGREGATE ROOF. SCOPE OF WORK INCLUDES REPLACEMENT OF COPINGS AND FLASHINGS AND GENERAL ROOF SURFACE REPAIRS. THE EXISTING SKLYLIGHT AND ALL ASSOCIATED SUPPORTS AND FLASHINGS TO BE REPLACED AS REQUIRED FOR NEW, ENERGY EFFICIENT, TRANSLUCENT PANEL INSTALLATION.

DRAWING INDEX

SHEET #	NAME	REV	REVISION DATE
GENERAL			
G001	COVER SHEET	1	09/04/25
ARCHITECTURAL			
A101	ROOF PLAN	1	09/04/25
A301	ROOF SECTIONS AND SKYLIGHT DETAILS	1	09/04/25
A501	ROOF DETAILS	1	09/04/25

PROJECT DIRECTORY

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PROJECT MANAGER

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MADISON, OH 44057
(440)-428-2189
CONTACT:
SHAWNA GOOSTREE
FISCAL OFFICER

GENERAL NOTES

1. THE WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL BUILDING CODES.
2. CONTRACTOR SHALL REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THESE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO COMMENCING THE WORK.
3. CONTRACTOR SHALL CONTACT LOCAL UTILITIES AS REQUIRED. SUBMIT ALL APPLICABLE PERMIT DOCUMENTS, QUALIFICATIONS, ETC. AND BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH PERMITS, UTILITY EXTENSIONS, TAP-INSPECTIONS, ETC. THE ARCHITECT/ENGINEER SHALL SUBMIT DOCUMENTS FOR OWNER'S REVIEW AND PERMIT PLAN REVIEW, HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS, AND ALL ASSOCIATED PERMIT AND INSPECTION COSTS/FEES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS RESULTING FROM CONSTRUCTION WORK ON THIS PROJECT.
5. EACH SUBCONTRACTOR IS RESPONSIBLE TO COORDINATE AND SCHEDULE HIS WORK WITH THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS WHOSE WORK WILL BE AFFECTED BY THEIR WORK.
6. PARKING AT THE SITE BY CONSTRUCTION PERSONNEL SHALL BE LIMITED TO THE LOCATIONS DESIGNATED BY THE OWNER/OWNER'S REPRESENTATIVE.
7. ALL DIMENSIONS AND ELEVATIONS NOTED AS "(REF)" ARE FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO USING THEM FOR ANY SITE CLEARING/CONSTRUCTION ACTIVITIES.
8. THE CONTRACTOR IS TO PROTECT ALL ADJACENT SURFACES NOT INVOLVED IN THE WORK AND REPAIR ANY DAMAGES THAT OCCUR AS A RESULT OF WORK, AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER TIGHTNESS AND PROVIDE PROTECTION FOR ANY/ALL OPENINGS IN THE ROOF LEFT AT THE END OF EACH CONSTRUCTION DAY.

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