

**SPECIFICATIONS &
CONTRACT DOCUMENTS**

FOR



**ROOF REPLACEMENTS 2024
PAYNE RECREATION CENTER
GERHARDT CIVIC CENTER
MAINTENANCE SHOP**

CITY OF MORAINE, OHIO

MONTGOMERY COUNTY

APRIL 2024

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BIDDING REQUIREMENTS

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LEGAL NOTICE
ADVERTISEMENT FOR BIDS

The City of Moraine will receive sealed bid proposals for **ROOF REPLACEMENTS 2024 FOR CITY OF MORAINE** until **MAY 9, 2024 at 10:00 a.m.** local time, at the Moraine Municipal Building, 4200 Dryden, Moraine, Ohio, 45439 at which time and place they will be publicly opened and read aloud.

Copies of the specifications, proposal and contract forms are available on the City's website: www.ci.moraine.oh.us, "About the City" tab, "Legal Notices" on dropdown menu.

A mandatory pre-bid meeting and walk-through will be held on APRIL 25, 2024, at 10:00 a.m. at City of Moraine Municipal Building, 4200 Dryden Road, Moraine, Ohio 45439.

Each proposal shall be signed with the full name and business address of each interested company and shall be accompanied by a security bond issued by a bonding company authorized to do business in the State of Ohio, or by a certified check on a solvent bank in the amount of ten percent (10%) of the amount of the submitted main contract proposal. Bond or certified check must be payable to the City of Moraine as a guarantee that if the proposal is accepted, a contract will be executed and its performance secured by a satisfactory bond in the amount of one hundred percent (100%) of the contract price or irrevocable letter of credit.

The proposal must be made on the forms provided in the Contract Documents, or a copy thereof, with a price quoted for the proposed maintenance services.

City Council reserves the right to accept or reject any or all proposals, to waive any informalities or irregularities in the bids received, or to accept any proposal which is deemed most favorable to the City of Moraine.

Mike Davis, City Manager

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BIDDING INFORMATION

All bids must be submitted on forms provided in this packet. Bids must be regular in every respect and no changes, deletions, or special conditions shall be made or included in the bid form.

Bid documents shall be submitted in a sealed envelope, marked with the Bidder's return address, and be labeled "Bid Documents for Roof Replacements 2024 for the City of Moraine" and addressed as follows:

To: Mike Davis
City Manager
City of Moraine
4200 Dryden Road
Moraine, OH 45439

Bid Opening: May 9, 2024, at 10:00 a.m. local time.

No Bidder may withdraw its bid after the specified time of the opening of the bids.

Project Estimated Amount: \$695,000.00 for the Base Bid; \$60,000 for Add Alternate #1, \$25,000 for Add Alternate #2.

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INSTRUCTIONS TO BIDDERS

1. Bidding documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Legal Notice or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid for, and contract forms. The proposed Contract Documents consist of the form of agreement between the Owner and Contractor, Conditions of the Contract (General, Supplemental, and other Provisions), Specifications and all Addenda issued prior to the execution of this Contract.
2. The Bidder, by making a Bid, represents that:
 - A. The Bidder has read and understands the Bidding Documents and the Bid is made in accordance herewith.
 - B. The Bidder has read and understands the Bidding Documents or contract documents to the extent that such documentation relates to the work for which the Bid is submitted.
 - C. The Bidder has visited sites, become familiar with local conditions, become familiar with the equipment listed in the Contract Documents, and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents and shall report to the Superintendent errors, inconsistencies or ambiguities discovered.
 - D. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.
3. Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.
4. Addenda
 - A. Addenda will be mailed or delivered to all who are known by the issuing office to have received a complete set of Bidding Documents.
 - B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
 - C. No Addenda will be issued later than four (4) days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one that includes postponement of the date for receipt of Bids.

- D. Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and Bidder shall acknowledge receipt in the Bid.
5. Bidding Procedures – Form and Style of Bids
- A. Bids shall be submitted on forms identical to the form included with the Bidding Documents.
 - B. All blanks on the bid form shall be filled in by typewriter or manually in ink.
 - C. Where indicated by the makeup of the bid form, sums shall be expressed in both words and figures, and in case of discrepancy between the two, the amount written in words shall govern.
 - D. The signer of the Bid must initial alterations and erasures.
 - E. Each copy of the Bid shall include the legal name of the Bidder and a statement that the Bidder is a sole proprietor, partnership, corporation, or other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A bid by a corporation shall further give the State of incorporation and have the corporate seal affixed. A bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.
6. Bidding Procedures – Submission of Bids
- A. All copies of the Bid and other documents required for submission with the Bid shall be enclosed in a sealed envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the project name, and the Bidder's name and address. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
 - B. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.
 - C. Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
 - D. Oral, telephonic or telegraphic Bids are invalid and will not receive consideration.

- E. A Bid must remain open for acceptance for a period of sixty (60) days from the date of bid opening. A bid may be extended thereafter upon mutual agreement of the Owner and the Bidder.
7. Bidding Procedures – Modification or Withdrawal of Bid
- A. A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.
 - B. Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of such Bids. Such notice shall be in writing over the signature of the Bidder or by telegram. If by telegram, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.
 - C. Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided they are then in full conformance with these Instructions to Bidders.
8. The Owner is soliciting Bids pursuant to the bid process. If the Owner awards a Contract, it shall be to the lowest responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities or irregularities in a Bid. The Owner shall have the right to reject any or all Bids, reject a Bid not accompanied by any data required by the Bidding Documents, or reject a Bid that is in any way incomplete or irregular.
9. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the bidding Documents, and to determine the low Bidder on the basis of the sum of the base Bid and Alternates accepted.
10. Bidders to whom award of a Contract is under consideration shall submit a Contractor's Qualification Statement.
11. Persons and entities proposed by the Bidder and to whom the Owner and Superintendent have made no reasonable objection must be used on the work for which they were proposed and shall not be changed except with written consent of the Owner and Superintendent.
- 12. This is a prevailing wage job and the successful Bidder must comply with all applicable laws, rules and regulations applicable thereto.**

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Contractor's and Subcontractor's Insurance

SECTION 11. The Contractor and/or subcontractor on this work will be required to take out and maintain during the life of this Contract, the comprehensive commercial insurance listed below, and approval of the insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. The Contractor shall purchase the insurance listed below to protect the Owner and authorized representatives from all claims incurred by the action(s) of the Contractor and/or subcontractors in completion of this work.

- I. Compensation and Employees' General Liability Insurance
The Contractor shall procure and shall during the life of this Contract hold Workers Compensation coverage for all of Contractor's employees to be engaged in work under this Contract; and in case any such work is sublet, the Contractor shall require the subcontractor similarly to provide Workers Compensation coverage for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by the Contractor's Workers Compensation coverage. The Employees Liability limit shall be as provided by statutory requirements of the State. In case any class of employees is engaged in hazardous work protected under the Workers Compensation statute, the Contractor shall provide and shall cause each subcontractor to provide Employer's General Liability Insurance for the protection of such of his employees not otherwise protected.

- II. Public Liability and Owner's or Contractor's Protective Insurance
The Contractor shall take out and maintain this type of insurance and shall require any of his subcontractors performing work covered by the Contract to do the same in order to protect themselves from claims for damage to property which may arise from operations under this Contract, whether such operations be by Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them.
 - A. (Comprehensive) Automobile Liability Coverage:
 - i. Bodily injury including wrongful death in an amount not less than Five Hundred Thousand Dollars (\$500,000.00) for each person and One Million Dollars (\$1,000,000.00) for each accident.
 - ii. Property damage in an amount not less than One Hundred Thousand Dollars (\$100,000.00) for each accident.

 - B. (Comprehensive) General Liability Coverage:
 - i. Bodily injury including wrongful death in an amount not less than Five Hundred Thousand Dollars (\$500,000.00) for

each person and One Million Dollars (\$1,000,000.00) for each accident, and

- ii. Property damage in an amount not less than One Hundred Thousand Dollars (\$100,000.00) for each accident, and an aggregate liability of Two Hundred Fifty Thousand Dollars (\$250,000.00).

III. Scope of Insurance and Special Hazards

The insurance required under paragraph II hereof shall be primary insurance and provide adequate protection for the Owner, its elected officials, employees, or volunteers, Contractor and subcontractor respectively, against damage claims which may arise from operations under this Contract, whether such operations are by the insured or by anyone directly or indirectly employed by Contractor, and also against any of the special hazards which may be encountered in the performance of the Contract. Each of the aforesaid policies shall include the Owner as named insured and will provide that such policy will not be canceled until after the Owner shall have been given twenty (20) business days written notice of the proposed cancellation. Contractor's insurance shall be the primary insurance, and any insurance maintained by Owner, its elected officials, employees, or volunteers shall be excess to the Contractor's insurance and shall not contribute to it.

Contractor agrees to hold Owner harmless and indemnify Owner, its elected officials, employees, and volunteers for any and all claims resulting from the actions of the Contractor, its officials, employees, volunteers, and any subcontractors.

CONTRACTOR'S ALERT

REMINDER

If you are the successful bidder for work on any state, county, township, municipal corporation, school district, or other political subdivision of the State of Ohio, please keep in mind that if after award of the contract you are required to perform additional work as a result of the enactment or amendment of any statutes, ordinances, and regulations, including but not limited to those dealing with prevention of environmental pollution, then you are entitled to a change order for the cost of said additional work plus reasonable profit. The owner must issue a change order describing said additional work to you. **NOTE: You are not entitled to payment until an approved change order has been issued.**

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Bid Guaranty and Contract Bond

(ORC 153.571)

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

_____, as Principal, and

_____, as Surety, are hereby

held and firmly bound unto the *City of Moraine* 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 the

ROOF REPLACEMENTS 2024 – CITY OF MORaine

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall the penal sum exceed the amount of

_____ dollars

(\$_____).

(If above line is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, 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 _____, 2019.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above named Principal has submitted a bid for _____

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 and specifications; and in the event the Principal pays to the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the Obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal pays to the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with 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 award of the contract enters into a proper contract in accordance with the bid and specifications, which said contract is made a part of this bond the same as though set forth herein; and

IF THE SAID _____ shall well and faithfully do and perform the things agreed by the *City of Moraine, Ohio* to be done and performed according to the terms of said contract; and shall pay all lawful claims of

subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialman or laborer having a just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

THE SAID Surety hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of said contract or in or to the plans or specifications therefore shall in any way affect the obligations of said Surety on its bond.

Principal:

Surety:

By:_____

By:_____

Title:_____

Title:_____

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AFFIDAVIT

Regarding payment of Montgomery County Personal Property Taxes (Bidder to complete and execute either Part A or Part B).

STATE OF _____)

) SS:

COUNTY OF _____)

Part A. That _____, being duly sworn, affirms that as of _____, 2024, _____ is not charged with any delinquent personal property taxes on the general tax list of personal property of Montgomery County, Ohio.

Bidder

OR _____

Part B. That _____, being duly sworn, affirms that _____ is currently charged with Montgomery County delinquent personal property taxes in the amount of \$_____ with interest in the amount of _____, and penalties in the amount of \$_____, due to said Montgomery County, Ohio.

Bidder

SWORN TO and subscribed before me this _____ day of _____, 2024.

Notary Public in and for

_____ County, Ohio.

My commission expires: _____

NOTE: If this statement indicates that the taxpayer was charged with any such taxes, a copy of the statement shall be transmitted by the Director of Finance to the County Treasurer within thirty (30) days of the date it is submitted.

NOTE: A copy of this statement shall be incorporated into the contract, and no payment shall be made with respect to said contract unless such statement has been incorporated as a part thereof.

Affidavit of Compliance
NON-COLLUSION AFFIDAVIT

STATE OF _____)

) SS:

COUNTY OF _____)

_____, being first duly sworn, deposes and says that he/she is the

_____ (sole owner, partner, president, secretary, etc.) of

_____, the party making the foregoing proposal or bid; that such bid is genuine and not collusive or sham; and that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any other bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit, or cost element of said bid price, or of that of any other bidder, or to secure any advantage against any company, person or persons interested in the proposed contract; and that all statements contained in said proposal or bid are true. Further, that such bidder has not, directly or indirectly, submitted this bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

Affiant

SWORN TO and subscribed before me this _____ day of _____, 2024.

Notary Public in and for

_____ County, _____

state

My commission expires: _____

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AFFIDAVIT

(TO BE COMPLETED IF THE CONTRACTOR IS A CORPORATION)

STATE OF _____)

) SS:

COUNTY OF _____)

_____, being duly sworn, deposes and says that he/she is

_____ (president, secretary, etc.) of

_____, a corporation organized and existing under and by virtue of

the laws of the State of _____, and having its principal office at

_____.

(number and street)

_____, _____.

(city)

(state)

Affiant further states that he is familiar with the records, minute books and by-laws of

_____.

(name of corporation)

Affiant further states that _____,

(name)

(title)

of the corporation, is duly authorized to sign the contract for the provision of services for the **ROOF REPLACEMENTS 2024 – CITY OF MORAINÉ** or said corporation by virtue of

(State whether a provision of bylaws or a resolution of the Board of Directors. If by resolution, give date of adoption.)

Affiant

SWORN TO and subscribed before me this _____ day of _____, 2024.

Notary Public in and for

_____ County, _____
state

My commission expires: _____

AFFIDAVIT

Drug and Alcohol Abuse Prevention and Testing Policy and Procedure

This Affidavit is required when needed regarding existence of a program and compliance with the Omnibus Transportation Employee Testing Act of 1991 (the "Act"). The Act requires that any bidder who supplies operators of safety sensitive equipment provide a **Drug and Alcohol Abuse Prevention and Testing Policy and Procedure**. The program shall provide the minimal standards as stated in the Act and cover such issues as pre-employment, reasonable suspicion, random, post-accident, return-to-work, and follow-up testing of safety-sensitive employees.

The bidder is to complete and have notarized this Affidavit if successful in receiving the contract and may be required to provide a copy of the policy.

STATE OF _____)

) SS:

COUNTY OF _____)

_____, being duly sworn, affirms that as of _____, 20____,

_____ has developed and implemented a Drug and Alcohol Abuse Prevention and Testing Policy and Procedure in compliance with the Act.

Affiant

SWORN TO and subscribed before me this ____ day of _____, 2024.

Notary Public in and for

_____ County, _____

state

My commission expires: _____

NOTE: A copy of this statement shall be incorporated into the contract, and no payment shall be made with respect to said contract unless such statement has been incorporated as a part thereof.

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**AFFIDAVIT IN COMPLIANCE WITH SECTION 3517.13
OF THE OHIO REVISED CODE**

STATE OF _____

COUNTY OF _____ SS:

Personally appeared before me the undersigned, as an individual or as a

representative of _____ for a
(Name of Entity)

contract for **ROOF REPLACEMENTS 2024 – CITY OF MORaine** to be let by the City of Moraine, who, being duly cautioned and sworn, make the following statement with respect to prohibited activities constituting a conflict of interest or other violations under Ohio Revised Code Section 3517.13, and further states that the undersigned has the authority to make the following representation on behalf of himself or herself or of the business entity:

- 1) That none of the following have **individually** made within the previous twenty-four months and that, if awarded a contract for the purchase of goods or services aggregating more than \$10,000 in a calendar year, none of the following Individually will make, beginning on the date the contract is awarded and extending until one year following the conclusion of the contract, as an individual, one or more campaign contributions totaling in excess of \$1,000, to any member of the City of Moraine Council or their individual campaign committees:
 - a) myself;
 - b) any partner or owner of the partnership or other unincorporated business (if applicable);
 - c) any shareholder of the professional association organized under Chapter 1785 of the Ohio Revised Code (if applicable);
 - d) any trustee of the trust (if applicable);
 - e) any administrator or executor of the estate (if applicable);
 - f) any owner of more than 20% of the corporation or business trust (if applicable);
 - g) each spouse of any person identified in (a) through (f) of this section;
 - h) each child seven years of age to seventeen years of age of any person identified in divisions (a) through (f) of this section;
- 2) That none of the following have **collectively** made within the previous twenty-four months, and that, if awarded a contract for the purchase of goods or services aggregating more than \$10,000 in a calendar year, none of the following **collectively** will make, beginning on the date the contract is awarded and extending until one year following the conclusion of the contract, one or more campaign contributions totaling in excess of \$2,000, to any member of the City of Moraine Council or their individual campaign committees:
 - a) myself;

- b) any partner or owner of the partnership or other unincorporated business (if applicable);
 - c) any shareholder of the professional association organized under Chapter 1785 of the Ohio Revised Code (if applicable);
 - d) any trustee of the trust (if applicable);
 - e) any administrator or executor of the estate (if applicable);
 - f) any owner of more than 20% of the corporation or business trust (if applicable);
 - g) each spouse of any person identified in (a) through (f) of this section;
 - h) each child seven years of age to seventeen years of age of any person identified in divisions (a) through (f) of this section;
 - i) any political action committee affiliated with the corporation, business trust, partnership or other unincorporated business, association, estate or trust identified in (a) through (f) of this section;
 - j) Any combination of persons identified in (a) through (i) of this section;
- 3) I do hereby acknowledge that to knowingly make any false statement herein may subject me and/or the above-named entity to the penalties set forth in Section 3517.992 of the Ohio Revised Code.

Further, Affiant sayeth naught.

Signature _____

Title _____

Sworn to before me and subscribed in my presence this _____ day of _____, 2024.

Notary Public

My Commission Expires: _____

The requirements of Ohio Revised Code Section 3517.13 are only applicable to contributions made **on or after April 4, 2007** (Section 631.05, Amended Substitute Ohio House Bill 119).

Affidavit of Insurance

STATE OF _____)

) KNOW ALL MEN BY THESE PRESENTS

COUNTY OF _____)

BEFORE ME, the undersigned authority, on this day, personally appeared

_____, who being duly sworn, stated that he/she is
(Affiant)

_____, of _____,
(Title) (Contractor's Company Name)

the Contractor named and referred to within the Contract Documents; that he/she is fully competent and authorized to give this affidavit and that the attached original insurance certificate truly and accurately reflects the insurance coverage that is now available and will be available during the term of the Contract.

Affiant

SWORN AND SUBSCRIBED before me on the _____ day of _____, 2024.

Notary Public
In and for the County of _____
State of _____

My commission expires: _____

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Department of Commerce

Division of Industrial Compliance

Bureau of Wage and Hour Administration
6606 Tussing Road - PO Box 4009
Reynoldsburg, OH 43068-9009
Phone 614-644-2239 | Fax 614-728-8639
TTY/TDD 800-750-0750
www.com.ohio.gov
An Equal Opportunity Employer and Service Provider

John R. Kasich, Governor
Andre T. Porter, Director

Affidavit Of Compliance

PREVAILING WAGES

I, _____
(Name of person signing affidavit) (Title)

do hereby certify that the wages paid to all employees of

(Company Name)

for all hours worked on the

(Project name and location)

project, during the period from _____ to _____ are in
(Project Dates)

compliance with prevailing wage requirements of Chapter 4115 of the Ohio Revised Code. I further certify that no rebates or deductions have been or will be made, directly or indirectly, from any wages paid in connection with this project, other than those provided by law.

(Signature of Officer or Agent)

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

(Notary Public)

The above affidavit must be executed and sworn to by the officer or agent of the contractor or subcontractor who supervises the payment of employees. This affidavit must be submitted to the owner (public authority) before the surety is released or final payment due under the terms of the contract is made.

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*******FOR INSTRUCTIONAL USE ONLY*******

READ BEFORE COMPLETING YOUR DMA FORM

Forms not conforming to the specifications listed below or not submitted to the appropriate agency or office will not be processed.

To complete this form, you will need a copy of the Terrorist Exclusion List for reference. The Terrorist Exclusion List can be found on the Ohio Homeland Security Web site at the following address:

<http://www.homelandsecurity.ohio.gov/dma/dma.asp>

Be sure you have the correct DMA form. If you are applying for a state issued license, permit, certification or registration, the "State Issued License" DMA form must be completed (HLS 0036). If you are applying for employment with a government entity, the "Public Employment" DMA form must be completed (HLS 0037). If you are obtaining a contract to conduct business with or receive funding from a government entity, the "Government Business and Funding Contracts" DMA form must be completed (HLS 0038).

Your DMA form is to be submitted to the issuing agency or entity. "Issuing agency or entity" means the government agency or office that has requested the form from you or the government agency or office to which you are applying for a license, employment or a business contract. For example, if you are seeking a business contract with the Ohio Department of Commerce's Division of Financial Institutions, then the form needs to be submitted to the Department of Commerce's Division of Financial Institutions. Do NOT send the form to the Ohio Department of Public Safety UNLESS you are seeking a license from or employment or business contract with one of its eight divisions listed below.

Department of Public Safety Divisions:

Administration

Ohio Bureau of Motor Vehicles

Ohio Emergency Management Agency

Ohio Emergency Medical Services Ohio Homeland Security*

Ohio Investigative Unit

Ohio Criminal Justice Services

Ohio State Highway Patrol

* DO NOT SEND THE FORM TO OHIO HOMELAND SECURITY UNLESS OTHERWISE DIRECTED.
FORMS SENT TO THE WRONG AGENCY OR ENTITY WILL NOT BE PROCESSED.

*******FOR INSTRUCTIONAL USE ONLY*******

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GOVERNMENT BUSINESS AND FUNDING CONTRACTS
In accordance with section 2909.33 of the Ohio Revised Code

DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE TO A TERRORIST ORGANIZATION

This form serves as a declaration by an applicant for a government contract or funding of material assistance/non-assistance to an organization on the U.S. Department of State Terrorist Exclusion List ("TEL"). Please see the Ohio Homeland Security Division Web site for a copy of the TEL.

Any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided. Failure to disclose the provision of material assistance to such an organization or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree.

For the purposes of this declaration, "material support or resources" means currency, payment instruments, other financial securities, funds, transfer of funds, financial services, communications, lodging, training, safe houses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel, transportation, and other physical assets, except medicine or religious materials.

COMPLETE THIS SECTION ONLY IF YOU ARE AN INDEPENDENT CONTRACTOR

LAST NAME		FIRST NAME	
HOME ADDRESS			
CITY	STATE	ZIP	COUNTY
HOME PHONE ()		WORK PHONE ()	

COMPLETE THIS SECTION ONLY IF YOU ARE A COMPANY, BUSINESS OR ORGANIZATION

BUSINESS/ORGANIZATION NAME			PHONE ()
BUSINESS ADDRESS			
CITY	STATE	ZIP	COUNTY
BUSINESS/ORGANIZATION REPRESENTATIVE NAME			TITLE

DECLARATION

In accordance with section 2909.32 (A)(2)(b) of the Ohio Revised Code

For each question, indicate either "yes," or "no" in the space provided. Responses must be truthful to the best of your knowledge.

- | | | |
|--|-----|----|
| 1. Are you a member of an organization on the U.S. Department of State Terrorist Exclusion List? | Yes | No |
| 2. Have you used any position of prominence you have with any country to persuade others to support an organization on the U.S. Department of State Terrorist Exclusion List? | Yes | No |
| 3. Have you knowingly solicited funds or other things of value for an organization on the U.S. Department of State Terrorist Exclusion List? | Yes | No |
| 4. Have you solicited any individual for membership in an organization on the U.S. Department of State Terrorist Exclusion List? | Yes | No |
| 5. Have you committed an act that you know, or reasonably should have known, affords "material support or resources" to an organization on the U.S. Department of State Terrorist Exclusion List? | Yes | No |
| 6. Have you hired or compensated a person you knew to be a member of an organization on the U.S. Department of State Terrorist Exclusion List, or a person you knew to be engaged in planning, assisting, or carrying out an act of terrorism? | Yes | No |

If an applicant is prohibited from receiving a government contract or funding due to a positive indication on this form, the applicant may request the Ohio Department of Public Safety to review the prohibition. Please see the Ohio Homeland Security Web site for information on how to file a request for review.

CERTIFICATION

I hereby certify that the answers I have made to all of the questions on this declaration are true to the best of my knowledge. I understand that if this declaration is not completed in its entirety, it will not be processed and I will be automatically disqualified. I understand that I am responsible for the correctness of this declaration. I understand that failure to disclose the provision of material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List, or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree. I understand that any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided by myself or my organization. If I am signing this on behalf of a company, business or organization, I hereby acknowledge that I have the authority to make this certification on behalf of the company, business or organization referenced on page 1 of this declaration.

APPLICANT SIGNATURE X	DATE
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CERTIFICATE OF FISCAL OFFICER

As Fiscal Officer for the City of Moraine, Montgomery County, Ohio, I hereby certify that funds in the amount of _____ Dollars have been lawfully appropriated for the purpose of meeting the obligations of this contract with _____ duly authorized by Resolution No. _____ approved by the City of Moraine Council, Montgomery County, Ohio, and that they are in the treasury or in the process of collection to the credit of the City of Moraine free from any previous encumbrances.

Signed this _____ day of _____, 2024.

Fiscal Officer for the City of Moraine,
County of Montgomery,
State of Ohio

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PROPOSAL for:
Roof Replacements 2024

City of Moraine
Payne Recreation Center
Gerhardt Civic Center
Maintenance Shop

The undersigned, _____, having carefully inspected the sites and locations of the work proposed to be performed, and also the premises at and adjacent to the location of the proposed work and specified equipment and conditions thereof, and having also carefully examined the "Notice to Contractor," "Instruction to Bidders," "Form of Contract," "General Provisions," and the detailed specifications which shall govern the work to be done, NOW PROPOSES to furnish any and all materials, tools, labor, transportation, machinery, appliances and/or necessary appurtenances, and to prosecute to full completion the work called for under the Contract Documents, all upon the terms and the conditions and provisions set forth in the "Instructions to Bidder," "Form of Contract," "Contract Bond," and "General Provisions," detailed specifications of this Proposal; and in consideration thereof to accept from the Owner as full payment for the completion of each specified item and any required maintenance thereof as hereinafter provided, the price quoted for each item for work completed, the price of labor and materials to be stated separately.

The undersigned _____ agrees that if this Proposal shall be accepted, he will be prepared to discuss with the Owner in detail any matters relating to special features and the methods he proposes to follow for the general conduct of the work; that he will within twenty (20) business days after notice of acceptance of bid, complete the Contract Form with the Owner for the performance of the work and furnish evidence of required insurance policies.

The undersigned _____ hereby certifies that no person interested in this Proposal is directly or indirectly interested in or connected with any other bid or proposal for the said work and no member of the City of Moraine or any other person in the employ of said City is directly or indirectly interested therein, or in any portion thereof, and he will, if required by the Owner, execute and submit from himself as Principal Contractor and from any subcontractor, the non-collusion affidavits as provided herein.

SUM PROPOSAL PRICE FOR: Roof Replacements 2024

And having inspected the premises and all conditions affecting the work, the undersigned proposes to furnish all materials and perform all labor necessary for the performance and completion of the work indicated below, all in compliance with the documents named above, and further agrees that each separate item of trade or employment further agrees that, if any or all of said bids are accepted, he will enter into a Contract according to the form required by the Owner for the faithful performance of the labor and the furnishing of all materials included in such bid or bids so accepted.

Submitted by: _____
Contracting Firm

Having read and examined the Contract Documents, prepared by the Associate for the above-referenced Project, and the following Addenda:

Addendum No.	Date of Receipt
_____	_____
_____	_____
_____	_____

The undersigned Bidder having full knowledge of the site and the requirements of the Project proposes to perform all Work in accordance with the Contract Documents for the Sums as indicated on this Bid Form:

Base Bid Item 1 – Roof Replacement at Payne Recreation Center, ALL LABOR, MATERIALS, EQUIPMENT and PERMIT FEES for the total sum of

Roof Replacement	\$ _____
Contingency Allowance –	\$10,000 _____
Material Allowance #1 – Insulation Replacement	\$ _____
Material Allowance #2 – Rust Inhibitive Paint	\$ _____

Total Bid Amount including All Allowances

\$ _____ [FIGURES] \$ _____ [WORDS]

Base Bid Item 2 – Roof Replacement at Gerhardt Civic Center, ALL LABOR, MATERIALS, EQUIPMENT and PERMIT FEES for the total sum of

Roof Replacement \$_____

Contingency Allowance – \$10,000_____

Material Allowance #1 – Lightweight Fill \$_____

Total Bid Amount including All Allowances

\$_____ [FIGURES] \$_____ [WORDS]

Base Bid Item 3 – Roof Replacement at Maintenance Shop, ALL LABOR, MATERIALS, EQUIPMENT and PERMIT FEES for the total sum of

Roof Replacement \$_____

Contingency Allowance – \$5,000_____

Material Allowance #1 – Metal Deck Replacement \$_____

Material Allowance #2 – Wood Deck Replacement \$_____

Total Bid Amount including All Allowances

\$_____ [FIGURES] \$_____ [WORDS]

Combined Base Bid Item – All Work Associated with Bid item #1, Bid Item #2, and Bid Item #3, ALL LABOR, MATERIALS, EQUIPMENT and PERMIT FEES for the total sum of

Bid Item #1 – Payne Rec Center \$_____

Bid Item #2 – Gerhardt Civic Center \$_____

Bid Item #3 – Maintenance Shop \$_____

Total Combined Bid Amount

\$_____ [FIGURES] \$_____ [WORDS]

Add Alternate #1 – Skylight Replacement at Gerhardt Civic Center, ALL LABOR, MATERIALS, EQUIPMENT and PERMIT FEES for the total sum of

Skylight Replacement \$_____

Add Alternate #2 – Soffit Installation at Gerhardt Civic Center, ALL LABOR, MATERIALS, EQUIPMENT and PERMIT FEES for the total sum of

Framing / Soffit Installation at Gerhardt Civic Center \$_____

Unit Prices –

UP-1: Remove / Replace wet / damaged insulation +/- 2 3/4" thickness, cost per SF \$_____

UP-2: Apply rust inhibitive primer to existing metal deck, cost per SF \$_____

UP-3: Remove deteriorated / wet lightweight fill/ Insulated concrete with new lightweight fill patch or Tapered insulation of matching thickness, cost per SF \$_____

UP-4: Remove / Replace / Overlay 1 1/2" metal deck, cost per SF \$_____

UP-5: Remove / Replace existing wood plank deck, cost per SF \$_____

UP-6: Install roof drain insert, cost per EA \$_____

UP-7: Remove / Replace 2x6 wood nailer, cost per LF \$_____

UP-8: Remove / Replace 2x8 wood nailer, cost per LF \$_____



Signed at _____ **this** _____ **day of** _____, **2024.**

Firm: _____

By: _____

Title: _____

(SEAL)

Official Address:

(Telephone Number)

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PREVAILING WAGE REQUIREMENTS

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Prevailing Wage Rate Skilled Crafts

Name of Union: **Asbestos Local 50 Zone 2**

Change # : **LCN01-2024ibAsbLoc50Zone2**

Craft : **Asbestos Worker** Effective Date : **03/06/2024** Last Posted : **03/06/2024**

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Asbestos Insulation Mechanic	\$33.75	\$9.20	\$8.35	\$0.50	\$0.00	\$3.75	\$0.10	\$0.00	\$0.00	\$55.65	\$72.52	
Firestop Technician	\$33.75	\$9.20	\$8.35	\$0.50	\$0.00	\$3.75	\$0.10	\$0.00	\$0.00	\$55.65	\$72.52	
Apprentice	Percent											
1st year	57.12	\$19.28	\$8.96	\$0.00	\$0.44	\$0.00	\$0.50	\$0.10	\$0.00	\$0.00	\$29.28	\$38.92
2nd year	69.48	\$23.45	\$9.20	\$0.95	\$0.44	\$0.00	\$0.85	\$0.10	\$0.00	\$0.00	\$34.99	\$46.71
3rd year	80.94	\$27.32	\$9.20	\$2.38	\$0.44	\$0.00	\$1.25	\$0.10	\$0.00	\$0.00	\$40.69	\$54.35
4th year	88.68	\$29.93	\$9.20	\$2.38	\$0.44	\$0.00	\$1.50	\$0.10	\$0.00	\$0.00	\$43.55	\$58.51

Special Calculation Note : *other is labor mgt training fund

Ratio :

1 Journeyman to 1 Apprentice
4 Journeymen to 1 Apprentice thereafter

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, DARKE,
GREENE, MIAMI, MONTGOMERY,
PREBLE

Special Jurisdictional Note : In Butler County the following townships are included: (Lemon Twp, Madison Twp) In Warren County the following townships are included: (Clear Creek Twp, Franklin Twp, Massie Twp, Turtle Creek Twp, Wayne Twp)

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Asbestos Local 207 OH

Change # : LCN01-2018fbLoc207OH

Craft : Asbestos Worker Effective Date : 08/23/2018 Last Posted : 08/23/2018

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Asbestos Abatement	\$25.50	\$7.25	\$6.45	\$0.65	\$0.00	\$0.00	\$0.07	\$0.00	\$0.00	\$39.92	\$52.67
Trainee	\$16.50	\$7.25	\$1.50	\$0.65	\$0.00	\$0.00	\$0.07	\$0.00	\$0.00	\$25.97	\$34.22

Special Calculation Note :

Ratio :

3 Journeymen to 1 Trainee

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA*, ATHENS, AUGLAIZE, BROWN, BUTLER*, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARDIN, HARRISON, HIGHLAND, HOCKING, HOLMES, HURON, KNOX, LAKE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PORTAGE, PREBLE, RICHLAND, ROSS, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN*, WAYNE

Special Jurisdictional Note : Butler County:(townships of Fairfield,Hanover,Liberty,Milford,Morgan,Oxford,Ripley,Ross,StClair,Union & Wayne.) (Lemon & Madison) Warren County: (townships of: Deerfield, Hamilton, Harlan, Salem, Union & Washington). (Clear Creek, Franklin, Mossie, Turtle Creek & Wayne). Ashtabula County: (post offices & townships of Ashtabula, Austinburg, Geneva, Harperfield, Jefferson, Plymouth & Saybrook) (townships of Andover, Cherry Valley, Colbrook, Canneaut, Denmark, Dorset, East Orwell, Hartsgrove, Kingville, Lenox, Monroe,Morgan,New Lyme,North Kingsville, Orwell, Pierpoint, Richmond Rock Creek, Rome, Sheffield, Trumbull, Wayne, Williamsfield & Windsor) Erie County: (post offices & townships of Berlin, Berlin Heights,Birmingham,Florence ,Huron, Milan, Shinrock & Vermilion)

Details :

Asbestos & lead paint abatement including, but not limited to the removal or encapsulation of asbestos & lead paint, all work in conjunction with the preparation of the removal of same & all work in conjunction with the clean up after said removal. The removal of all insulation materials, whether they contain asbestos or not, from mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) is recognized as being the exclusive work of the Asbestos Abatement Workers.

On all mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) that are going to be demolished, the removal of all insulating materials whether they contain asbestos or not shall be the exclusive work of the Laborers.

An Abatement Journeyman is anyone who has more than 300 hours in the Asbestos Abatement field.

Prevailing Wage Rate Skilled Crafts

Name of Union: **Boilermaker Local 105**

Change # : **LCN02-2013fbLoc 105**

Craft : **Boilermaker** Effective Date : **10/01/2013** Last Posted : **09/25/2013**

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Boilermaker	\$35.26		\$7.07	\$13.28	\$0.89	\$0.00	\$3.00	\$0.55	\$0.00	\$0.00	\$60.05	\$77.68
Apprentice	Percent											
1st 6 months	70.03	\$24.69	\$7.07	\$11.30	\$0.89	\$0.00	\$2.10	\$0.55	\$0.00	\$0.00	\$46.60	\$58.95
2nd 6 months	75.02	\$26.45	\$7.07	\$11.30	\$0.89	\$0.00	\$2.25	\$0.55	\$0.00	\$0.00	\$48.51	\$61.74
3rd 6 months	80.00	\$28.21	\$7.07	\$11.30	\$0.89	\$0.00	\$2.40	\$0.55	\$0.00	\$0.00	\$50.42	\$64.52
4th 6 months	85.02	\$29.98	\$7.07	\$11.30	\$0.89	\$0.00	\$2.55	\$0.55	\$0.00	\$0.00	\$52.34	\$67.33
5th 6 months	87.52	\$30.86	\$7.07	\$13.28	\$0.89	\$0.00	\$2.63	\$0.55	\$0.00	\$0.00	\$55.28	\$70.71
6th 6 months	90.03	\$31.74	\$7.07	\$13.28	\$0.89	\$0.00	\$2.70	\$0.55	\$0.00	\$0.00	\$56.23	\$72.11
7th 6 months	92.50	\$32.62	\$7.07	\$13.28	\$0.89	\$0.00	\$2.78	\$0.55	\$0.00	\$0.00	\$57.19	\$73.49
8th 6 months	95.00	\$33.50	\$7.07	\$13.28	\$0.89	\$0.00	\$2.85	\$0.55	\$0.00	\$0.00	\$58.14	\$74.89

Special Calculation Note : Other is Supplemental Health and Welfare

Ratio :

5 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ATHENS, BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GREENE, GUERNSEY, HAMILTON, HIGHLAND, HOCKING, JACKSON, LAWRENCE, LICKING, MADISON, MEIGS, MIAMI,

MONTGOMERY, MORGAN,
MUSKINGUM, NOBLE, PERRY,
PICKAWAY, PIKE, PREBLE, ROSS,
SCIOTO, VINTON, WARREN

Special Jurisdictional Note :

Details :

Helper - May enter Apprentice Program after 90 day completionr												
First 90 Days	45.00	\$12.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.06	\$18.09

Special Calculation Note : Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

Medical Savings Account: The Medical Savings Account can only be deducted providing employee shows proof voluntary enrollment in the program. Minimum contribution of \$1.00 per hourworked with no maximum.

Ratio :

1 Journeyman 1 Apprentice
5 Journeyman 1 Apprentice
10 Journeyman 2 Apprentice
15Journeyman 3 Apprentice
20 Journeyman 4 Apprentice
25 Journeyman 5 Apprentice
8 Employees 1 Helper

Jurisdiction (* denotes special jurisdictional note) :

AUGLAIZE, CHAMPAIGN, CLARK,
CLINTON, DARKE, GREENE, HARDIN,
HIGHLAND, LOGAN, MERCER, MIAMI,
MONTGOMERY, PREBLE*, SHELBY

Special Jurisdictional Note : In Preble County the following townships are included: (Jackson, Monroe, Harrison, Twin and Washington)

Details :

Tile Layer Finishers shall do mixing of mortars & adhesives, cleaning & grouting of tile, unloading of all trucks, unpacking & handling of all tile & materials such as sand, lime, cement, tile, & all types of tile panels, prefabricated on job site. Marble Setter Finishers shall do all cleaning, waxing & polishing, grouting and pointing.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Dayton Tile Mechanic)

Change # : LCN01-2023ibLoc23DaytonTM

Craft : Bricklayer Effective Date : 07/05/2023 Last Posted : 07/05/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer Tile Marble Terrazzo Mechanics	\$30.00		\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.30	\$60.30
Terrazzo Worker	\$30.00		\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.30	\$60.30
Apprentice	Percent											
1st 6 Months	60.00	\$18.00	\$8.31	\$0.00	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$26.86	\$35.86
2nd 6 Months	65.00	\$19.50	\$8.31	\$0.00	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.36	\$38.11
3rd 6 Months	70.00	\$21.00	\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.30	\$46.80
4th 6 Months	75.00	\$22.50	\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.80	\$49.05
5th 6 months	80.00	\$24.00	\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.30	\$51.30
6th 6 months	85.00	\$25.50	\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.80	\$53.55
7th 6 months	90.00	\$27.00	\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.30	\$55.80
8th 6 months	95.00	\$28.50	\$8.31	\$6.44	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.80	\$58.05

Special Calculation Note : Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

Ratio :

Jurisdiction (* denotes special

5 Journeymen to 1 Apprentice
10 Journeymen to 2 Apprentice
15 Journeymen to 3 Apprentice
20 Journeymen to 4 Apprentice
25 Journeymen to 5 Apprentice

jurisdictional note) :

CHAMPAIGN, CLARK, CLINTON,
DARKE, GREENE, HIGHLAND, LOGAN,
MIAMI, MONTGOMERY, PREBLE*,
SHELBY

Special Jurisdictional Note : In Preble County the following townships are included: (Jackson, Jefferson, Monroe, Harrison, Twin and Washington)

Details :

** (Tile layers work) the laying, cutting or setting of all tile where used for floors, walls, ceilings, walks, promenade roofs, stair treads, stair risers, facings, hearths, fireplaces & decorative inserts together with any marble plinths, thresholds or window stools used in connection with any tile work. the building, shaping forming construction or repairing of all fireplace work, whether in connection with a mantel hearth facing or not, & the setting & preparing of all material such as cement, plaster, mortar, brickwork, iron work or other materials necessary for the proper, safe construction & completion of such work: except that a mantel made exclusively of brick, marble or stone shall be conceded to be bricklayers, marble setters or stonemasons' work respectively.

** Marble, mosaic, venetian enamel & terrazzo. Cutting and assembling of mosaics. all rolling of terrazzo work.

** Caulking of all expansion, perimeter & angle joints shall be the exclusive work of the tile mechanic.

** Marble masons shall consist of carving, cutting & setting of all marble, slate (including blackboards) stone, albereen, carrara, sanionyx, vitrolite & similar opaque glass, scagliola, what ever thickness or dimension.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Dayton)

Change # : LCN01-2023ibLoc23Dayton

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer Stone Mason Refractory	\$31.78		\$9.25	\$7.19	\$0.59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.81	\$64.70
Pointer/Caulker/Cleaner	\$31.78		\$9.25	\$7.19	\$0.59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.81	\$64.70
Improver Apprentices 25 day probationary period then												
1st 6 months	\$20.66		\$9.25	\$0.00	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.40	\$40.73
2nd 6 months	\$23.84		\$9.25	\$0.00	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.58	\$45.50
3rd 6 months	\$27.01		\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.64	\$56.15
4th 6 months	\$30.19		\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.82	\$60.92
Bricklayer Stone Mason Refractory and PCC Apprentice	Percent											
1st 6 months	60.00	\$19.07	\$9.25	\$0.00	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.81	\$38.34
2nd 6 months	65.00	\$20.66	\$9.25	\$0.00	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.40	\$40.73
3rd 6 months	70.02	\$22.25	\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.88	\$49.01
4th 6 months	75.00	\$23.83	\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.47	\$51.38
5th 6 months	80.00	\$25.42	\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.05	\$53.77
6th 6 months	85.00	\$27.01	\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.64	\$56.15
7th 6 months	90.00	\$28.60	\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.23	\$58.53
8th 6 months	95.00	\$30.19	\$9.25	\$5.89	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.82	\$60.92
Mason Trainee-1-90 Days	45.00	\$14.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.30	\$21.45
91-365 Days	45.00	\$14.30	\$9.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.55	\$30.70
2nd Year	50.00	\$15.89	\$9.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$25.14	\$33.09

Special Calculation Note : Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.
Note that the classification description is clarified after the local union number at the top of

the page.

Apprentice and Apprentice Improver, Health and Welfare after 30 days. Mason Trainees Health and Welfare after 90 days.

Ratio :

Bricklayer Stone Mason Refractory Worker:

1-2 Journeymen to 1 Apprentice

3-4 Journeymen to 2 Apprentice

5-6 Journeymen to 2 Apprentice

7-10 Journeymen to 3 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, CLINTON, DARKE,

GREENE, HIGHLAND, LOGAN, MIAMI,

MONTGOMERY, PREBLE*, SHELBY

Mason Trainee Ratio:

1 Apprentice permits 1 Mason Trainee

2 Apprentice permits 1 Mason Trainee

3 Apprentice permits 2 Mason Trainee

4 Apprentice permits 2 Mason Trainee

In order to utilize a Pre-Apprentice, you must have 1 registered apprentice in your employ.

Ratio of Improver Apprentices to Journeymen in no case shall their be no more than 1 Improver Apprentice to 6 Journeymen

Special Jurisdictional Note : In Preble County the following townships are included: Jackson, Monroe, Harrison, Twin, Jefferson and Washington

Details :

Apprentice Ratio's covers: Bricklayer, Stone Mason, Refractory worker and Pointer, Cleaner, Caulker.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (B)

Change # : LCN01-2023ibLoc23HevHwyB

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason Bricklayer Power Plants Tunnels Amusement Parks B	\$33.39		\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$52.70	\$69.39
Apprentice	Percent											
1st year	70.00	\$23.37	\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.68	\$54.37
2nd year	80.00	\$26.71	\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.02	\$59.38
3rd year	90.00	\$30.05	\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.36	\$64.39

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

Ratio :

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 2 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND,
ASHTABULA, ATHENS, AUGLAIZE,
BELMONT, BROWN, BUTLER,
CARROLL, CHAMPAIGN, CLARK,
CLERMONT, CLINTON, COLUMBIANA,
COSHOCOTON, CRAWFORD,
CUYAHOGA, DARKE, DEFIANCE,
DELAWARE, ERIE, FAIRFIELD,
FAYETTE, FRANKLIN, FULTON,
GALLIA, GEAUGA, GREENE,
GUERNSEY, HAMILTON, HANCOCK,
HARDIN, HARRISON, HENRY,
HIGHLAND, HOCKING, HOLMES,

HURON, JACKSON, JEFFERSON, KNOX,
LAKE, LAWRENCE, LICKING, LOGAN,
LORAIN, LUCAS, MADISON,
MAHONING, MARION, MEDINA,
MEIGS, MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM,
RICHLAND, ROSS, SANDUSKY, SCIOTO,
SENECA, SHELBY, STARK, SUMMIT,
TRUMBULL, TUSCARAWAS, UNION,
VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.
(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (A)

Change # : LCN01-2023ibLoc23HevHwyA

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason Bricklayer Sewer Water Works A	\$32.40		\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.70	\$67.90
Apprentice	Percent											
1st year	70.00	\$22.68	\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.98	\$53.32
2nd year	80.00	\$25.92	\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.22	\$58.18
3rd year	90.00	\$29.16	\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.46	\$63.04

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

Ratio :

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 3 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

- ADAMS, ALLEN, ASHLAND,
- ASHTABULA, ATHENS, AUGLAIZE,
- BELMONT, BROWN, BUTLER,
- CARROLL, CHAMPAIGN, CLARK,
- CLERMONT, CLINTON, COLUMBIANA,
- COSHOCTON, CRAWFORD,
- CUYAHOGA, DARKE, DEFIANCE,
- DELAWARE, ERIE, FAIRFIELD,
- FAYETTE, FRANKLIN, FULTON,
- GALLIA, GEAUGA, GREENE,
- GUERNSEY, HAMILTON, HANCOCK,
- HARDIN, HARRISON, HENRY,
- HIGHLAND, HOCKING, HOLMES,
- HURON, JACKSON, JEFFERSON, KNOX,
- LAKE, LAWRENCE, LICKING, LOGAN,

LORAIN, LUCAS, MADISON,
MAHONING, MARION, MEDINA,
MEIGS, MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM,
RICHLAND, ROSS, SANDUSKY, SCIOTO,
SENECA, SHELBY, STARK, SUMMIT,
TRUMBULL, TUSCARAWAS, UNION,
VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter & Pile Driver SW District HevHwy

Change # : LCN01-2023ibCarpSWHevHwy

Craft : Carpenter Effective Date : 05/03/2023 Last Posted : 05/03/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Journeyman	\$33.28		\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$53.99	\$70.63
Apprentice	Percent											
1st 6 Months	60.00	\$19.97	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$40.68	\$50.66
2nd 6 Months	65.00	\$21.63	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$42.34	\$53.16
3rd 6 Months	70.00	\$23.30	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$44.01	\$55.65
4th 6 Months	75.00	\$24.96	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$45.67	\$58.15
5th 6 Months	80.00	\$26.62	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$47.33	\$60.65
6th 6 Months	85.00	\$28.29	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$49.00	\$63.14
7th 6 Months	90.00	\$29.95	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$50.66	\$65.64
8th 6 Months	95.00	\$31.62	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$52.33	\$68.13

Special Calculation Note : Other is UBC National Fund.

Ratio :

1 Journeymen to 1 Apprentice

An employer shall have the right to employ one (1) Apprentice for one (1) Journeyman Carpenter in its employment for the first Apprentice employed, and 1 (1) Apprentice for two (2) Journeyman Carpenter for

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY, WARREN

additional Apprentices employed.
Thereafter, every third additional carpenter hired shall be an apprentice, if available, and if practical for the type of work being performed.

Special Jurisdictional Note :

Details :

Highway Construction, Airport Construction, Heavy Construction but not limited to: (tunnels,subways,drainage projects,flood control,reservoirs). Railroad Construction,Sewer Waterworks & Utility Construction but not limited to: (storm sewers, waterlines, gaslines). Industrial & Building Site, Power Plant, Amusement Park, Athletic Stadium Site, Sewer and Water Plants.

When the Contractor furnishes the necessary underwater gear for the Diver, the Diver shall be paid one and one half (1&1/2) times the journeyman rate for the time spent in the water.

Prevailing Wage Rate Skilled Crafts

**Name of Union: Carpenter & Pile Driver
SW Zone 1**

Change # : LCN01-2023ibLoc136SWZone1

Craft : Carpenter Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)		
Classification											
Carpenter	\$30.22	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$48.52	\$63.63
Pile Driver	\$30.22	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$48.52	\$63.63
Apprentice	Percent										
1st 3 Months	60.00	\$18.13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.13	\$27.20
2nd 3 Months	60.00	\$18.13	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$29.48	\$38.55
2rd 6 Months	60.00	\$18.13	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$29.48	\$38.55
3th 6 Months	65.00	\$19.64	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$30.99	\$40.81
4th 6 Months	65.00	\$19.64	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$30.99	\$40.81
5th 6 Months	70.00	\$21.15	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$39.45	\$50.03
6th 6 Months	75.00	\$22.66	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$40.97	\$52.30
7th 6 Months	80.00	\$24.18	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$42.48	\$54.56
8th 6 Months	85.02	\$25.69	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$43.99	\$56.84

Special Calculation Note : Other is for UBC National Fund

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, DARKE,
GREENE, LOGAN, MIAMI,

Special Jurisdictional Note :

Details :

Carpenter duties shall include but not limited to: Pile driving, milling, fashioning, joining, assembling, erecting, fastening, or dismantling of all material of wood, plastic, metal, fiber, cork, and composition, and all other substitute materials: pile driving, cutting, fitting, and placing of lagging, and the handling, cleaning, erecting, installing, and dismantling of machinery, equipment, and erecting pre-engineered metal buildings.

Pile Drivers work but not limited to: unloading, assembling, erection, repairs, operation, signaling, dismantling, and reloading all equipment that is used for pile driving including pile butts. pile butts is defined as sheeting or scrap piling. Underwater work that may be required in connection with the installation of piling. The diver and his tender work as a team and shall arrive at their own financial arrangements with the contractor. Any configuration of wood, steel, concrete, or composite that is jettied, driven, or vibrated onto the ground by conventional pile driving equipment for the purpose of supporting a future load that may be permanent or temporary.

Driving bracing, plumbing, cutting off and capping of all piling whether wood, metal, pipe piling or composite. loading, unloading, erecting, framing, dismantling, moving, and handling of pile driving equipment. piling used in the construction and repair of all wharves, docks, piers, trestles, caissons, cofferdams, and the erection of all sea walls and breakwaters. All underwater and marine work on bulkheads, wharves, docks, shipyards, caissons, piers, bridges, pipeline work, viaducts, marine cable and trestles, as well as salvage and reclamation work where divers are employed.

Rate shall include carpenters, acoustic, and ceiling installers, drywall installers, pile drivers, and floorlayers.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Floorlayer SW District G

Change # : LCN01-2023ibLocSWG

Craft : Carpenter Effective Date : 09/20/2023 Last Posted : 09/20/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Carpenter Floorlayer	\$29.02		\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$47.31	\$61.82
Apprentice	Percent											
1st 3 months	65.00	\$18.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.86	\$28.29
2nd 3 months	65.00	\$18.86	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$30.20	\$39.63
2nd 6 months	65.00	\$18.86	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$30.20	\$39.63
3rd 6 months	70.00	\$20.31	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$31.65	\$41.81
4th 6 months	75.00	\$21.76	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$33.11	\$43.99
5th 6 months	80.00	\$23.22	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$41.51	\$53.11
6th 6 months	85.00	\$24.67	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$42.96	\$55.29
7th 6 months	90.00	\$26.12	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$44.41	\$57.47
8th 6 months	95.00	\$27.57	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$45.86	\$59.64

Special Calculation Note : Other fs for UBC National Fund and Install

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN,

Special Jurisdictional Note :

Details :

Scope of work shall include, but not be limited to: receiving,unloading,handling,distribution and installation of all carpeting materials,carpet padding or matting materials and all resilient materials whether for use on walls, floors,counter, sink,table and all preparation work necessary in connection therewith, including sanding work. the installation of nonstructural under-layment and the work of removing, cleaning waxing of any of the above. Carpeting shall include any floor covering composed of either natural or synthetic fibers that are made in breadths to be sewed, fastened or directly glued to floors or over cushioning sound-proofing materials.Resilient Floors shall consist of and include the laying of all special designs of wood,wood block, wood composition, cork, linoleum, asphalt, mastic, plastic, rubber tile,whether nailed or glued.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Millwright Local 1090 SW Zone II

Change # : LCN01-2023ibLoc1090SW2

Craft : Carpenter Effective Date : 09/20/2023 Last Posted : 09/20/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Carpenter Millwright	\$33.50		\$8.13	\$6.95	\$0.62	\$0.00	\$7.47	\$0.18	\$0.00	\$0.00	\$56.85	\$73.60
Apprentice	Percent											
1st 6 months	60.00	\$20.10	\$8.13	\$4.27	\$0.62	\$0.00	\$4.48	\$0.18	\$0.00	\$0.00	\$37.78	\$47.83
2nd 6 months	65.00	\$21.78	\$8.13	\$4.61	\$0.62	\$0.00	\$4.86	\$0.18	\$0.00	\$0.00	\$40.17	\$51.06
3rd 6 months	70.00	\$23.45	\$8.13	\$4.94	\$0.62	\$0.00	\$5.23	\$0.18	\$0.00	\$0.00	\$42.55	\$54.28
4th 6 months	75.00	\$25.12	\$8.13	\$5.28	\$0.62	\$0.00	\$5.60	\$0.18	\$0.00	\$0.00	\$44.94	\$57.50
5th 6 months	80.00	\$26.80	\$8.13	\$5.61	\$0.62	\$0.00	\$5.98	\$0.18	\$0.00	\$0.00	\$47.32	\$60.72
6th 6 months	85.00	\$28.47	\$8.13	\$5.95	\$0.62	\$0.00	\$6.35	\$0.18	\$0.00	\$0.00	\$49.71	\$63.94
7th 6 months	90.00	\$30.15	\$8.13	\$6.28	\$0.62	\$0.00	\$6.72	\$0.18	\$0.00	\$0.00	\$52.08	\$67.16
8th 6 months	95.00	\$31.82	\$8.13	\$6.62	\$0.62	\$0.00	\$7.10	\$0.18	\$0.00	\$0.00	\$54.47	\$70.39

Special Calculation Note : Other (\$0.18) \$0.13 National Fund and \$0.05 for National Millwright Fund.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, DARKE,
GREENE, LOGAN, MIAMI,
MONTGOMERY, PREBLE, SHELBY

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter NE District Industrial Dock & Door

Change # : LCN01-2014fbCarpNEStatewide

Craft : Carpenter Effective Date : 03/05/2014 Last Posted : 03/05/2014

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter	\$19.70		\$5.05	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$25.90	\$35.75
Trainee	Percent											
1st Year	60.00	\$11.82	\$5.05	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.02	\$23.93
2nd Year	80.20	\$15.80	\$5.05	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22.00	\$29.90

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

1 Journeymen to 1 Trainee

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW,

MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM,
RICHLAND, ROSS, SANDUSKY,
SCIOTO, SENECA, SHELBY, STARK,
SUMMIT, TRUMBULL, TUSCARAWAS,
UNION, VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE, WILLIAMS,
WOOD, WYANDOT

Special Jurisdictional Note : Industrial Dock and Door is the installation of overhead doors, roll up doors and dock leveling equipment

Details :

10/27/10 New Contract jc

Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Local 132 (Dayton)

Change # : LCN01-2023ibLoc132

Craft : Cement Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason	\$28.32		\$8.05	\$7.35	\$0.85	\$0.00	\$2.35	\$0.06	\$0.00	\$0.00	\$46.98	\$61.14
Apprentice	Percent											
1st Six Months	70.00	\$19.82	\$8.05	\$7.35	\$0.85	\$0.00	\$2.35	\$0.06	\$0.00	\$0.00	\$38.48	\$48.40
2nd Six Months	80.00	\$22.66	\$8.05	\$7.35	\$0.85	\$0.00	\$2.35	\$0.06	\$0.00	\$0.00	\$41.32	\$52.64
3rd Six Months	90.00	\$25.49	\$8.05	\$7.35	\$0.85	\$0.00	\$2.35	\$0.06	\$0.00	\$0.00	\$44.15	\$56.89

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time. *Other is International Training

Ratio :

2 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, CLINTON,
DARKE, GREENE, MIAMI,
MONTGOMERY, PREBLE, SHELBY

Special Jurisdictional Note :

Details :

Other: Is Industry Promotion: Cement Masons on outrigger, swing, scaffolds, manlifts -\$.75 per hour above scale up to (25) feet and \$.75 per hour for each additional (25) feet or part of same. A Cement Mason operating a grinder- \$.30 per hour above the journeyman scale.

Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy

Change # : LCN01-2023ibCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason	\$33.74		\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$52.76	\$69.63
Apprentice	Percent											
1st Year	70.00	\$23.62	\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$42.64	\$54.45
2nd Year	80.00	\$26.99	\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$46.01	\$59.51
3rd Year	90.00	\$30.37	\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$49.39	\$64.57

Special Calculation Note : Other \$0.07 is for International Training Fund

Ratio :

1 Journeymen to 1 Apprentice
2 to 1 thereafter

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND,
ASHTABULA*, ATHENS, AUGLAIZE,
BELMONT, BROWN, BUTLER,
CARROLL, CHAMPAIGN, CLARK,
CLERMONT, CLINTON, COLUMBIANA,
COSHOCOTON, CRAWFORD,
CUYAHOGA*, DARKE, DEFIANCE,
DELAWARE, ERIE, FAIRFIELD,
FAYETTE, FRANKLIN, FULTON*,
GALLIA, GEAUGA*, GREENE,
GUERNSEY, HAMILTON, HANCOCK*,
HARDIN, HARRISON, HENRY*,
HIGHLAND, HOCKING, HOLMES,
HURON, JACKSON, JEFFERSON, KNOX,
LAKE*, LAWRENCE, LICKING, LOGAN,
LORAIN, LUCAS*, MADISON,
MAHONING, MARION, MEDINA,
MEIGS, MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,

MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM*,
RICHLAND, ROSS, SANDUSKY, SCIOTO,
SENECA, SHELBY, STARK, SUMMIT,
TRUMBULL, TUSCARAWAS, UNION,
VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE, WILLIAMS,
WOOD*, WYANDOT

Special Jurisdictional Note : (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site, Heavy Construction, Airport Construction Or Railroad Construction Work, Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facilities Construction.

*For Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facility Construction work in the following Counties: Ashtabula, Cuyahoga, Fulton, Geauga, Hancock, Henry, Lake, Lucas, Putnam and Wood Counties, those counties will use the Cement Mason Statewide Heavy Highway Exhibit B District 1 Wage Rate.

Details :

This rate replaces the previous Cement Mason Heavy Highway Statewide Rates (Exhibit A and Exhibit B rates), except for Cement Mason Statewide Heavy Highway Exhibit B Dist 1. sks

Prevailing Wage Rate

Skilled Crafts

**Name of Union: Electrical Local 71 DOT Traffic Signal Highway Lighting
American Line Builders**

Change # : LCN01-2024ibLoc71DOTClev

Craft : Lineman Effective Date : 02/07/2024 Last Posted : 02/07/2024

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lineman	\$44.52	\$7.25	\$1.34	\$0.45	\$0.00	\$8.90	\$0.50	\$0.00	\$0.00	\$62.96	\$85.22
Traffic Signal & Lighting Journeyman	\$42.93	\$7.25	\$1.29	\$0.42	\$0.00	\$8.59	\$0.50	\$0.00	\$0.00	\$60.98	\$82.45
Equipment Operator	\$39.11	\$7.25	\$1.17	\$0.39	\$0.00	\$7.82	\$0.50	\$0.00	\$0.00	\$56.24	\$75.79
Groundman 0 to 12 months (W/O CDL)	\$23.71	\$7.25	\$0.71	\$0.24	\$0.00	\$4.74	\$0.50	\$0.00	\$0.00	\$37.15	\$49.01
Groundman 0 to 12 Months (W CDL)	\$25.90	\$7.25	\$0.77	\$0.26	\$0.00	\$5.18	\$0.50	\$0.00	\$0.00	\$39.86	\$52.81
Groundman greater than 1 year (W CDL)	\$28.11	\$7.25	\$0.84	\$0.28	\$0.00	\$5.62	\$0.50	\$0.00	\$0.00	\$42.60	\$56.66
Traffic Apprentice											
1st 1000 hrs	\$25.76	\$7.25	\$0.77	\$0.26	\$0.00	\$5.15	\$0.50	\$0.00	\$0.00	\$39.69	\$52.57
2nd 1000 hrs	\$27.90	\$7.25	\$0.84	\$0.28	\$0.00	\$5.58	\$0.50	\$0.00	\$0.00	\$42.35	\$56.30
3rd 1000 hrs	\$30.05	\$7.25	\$0.90	\$0.30	\$0.00	\$6.01	\$0.50	\$0.00	\$0.00	\$45.01	\$60.03
4th 1000 hrs	\$32.20	\$7.25	\$0.97	\$0.32	\$0.00	\$6.44	\$0.50	\$0.00	\$0.00	\$47.68	\$63.78

5th 1000 hrs	\$34.34	\$7.25	\$1.03	\$0.34	\$0.00	\$6.87	\$0.50	\$0.00	\$0.00	\$50.33	\$67.50	
6th 1000 hrs	\$38.64	\$7.25	\$1.16	\$0.39	\$0.00	\$7.73	\$0.50	\$0.00	\$0.00	\$55.67	\$74.99	
Lineman Apprentice	Percent											
1st 1,000 Hours	60.00	\$26.71	\$7.25	\$0.80	\$0.27	\$0.00	\$5.34	\$0.50	\$0.00	\$0.00	\$40.87	\$54.23
2nd 1,000 Hours	65.00	\$28.94	\$7.25	\$0.87	\$0.29	\$0.00	\$5.79	\$0.50	\$0.00	\$0.00	\$43.64	\$58.11
3rd 1,000 Hours	70.00	\$31.16	\$7.25	\$0.93	\$0.31	\$0.00	\$6.23	\$0.50	\$0.00	\$0.00	\$46.38	\$61.97
4th 1,000 Hours	75.00	\$33.39	\$7.25	\$1.00	\$0.33	\$0.00	\$6.68	\$0.50	\$0.00	\$0.00	\$49.15	\$65.84
5th 1,000 Hours	80.00	\$35.62	\$7.25	\$1.07	\$0.36	\$0.00	\$7.12	\$0.50	\$0.00	\$0.00	\$51.92	\$69.72
6th 1,000 Hours	85.00	\$37.84	\$7.25	\$1.14	\$0.38	\$0.00	\$7.57	\$0.50	\$0.00	\$0.00	\$54.68	\$73.60
7th 1,000 Hours	90.00	\$40.07	\$7.25	\$1.20	\$0.40	\$0.00	\$8.01	\$0.50	\$0.00	\$0.00	\$57.43	\$77.46

Special Calculation Note : Other is Health Reimbursement Account

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

AUGLAIZE, CHAMPAIGN, CLARK, CLINTON, DARKE, GREENE, LOGAN, MERCER, MIAMI, MONTGOMERY, PREBLE, SHELBY

Special Jurisdictional Note :

Details :

A groundman when directed shall assist a Journeymen in the performance of his/her work on the ground, including the use of hand tools. Under no circumstances shall this classification climb poles, towers, ladders, or work from an elevated platform or bucket truck. This classification shall not perform work normally assigned to an apprentice lineman. No more than three (3) Groundmen shall work alone. Jobs with more that three Groundmen shall be supervised by a Groundcrew Foreman, Journeyman Lineman, Journeyman Traffic Signal Technician or an Equipment Operator.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 High Tension Pipe Type Cable

Change # : LCN01-2024ibLoc71HighTension

Craft : Lineman Effective Date : 02/07/2024 Last Posted : 02/07/2024

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lineman	\$50.66	\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Certified Lineman Welder	\$50.66	\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Certified Cable Splicer	\$50.66	\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Operator A	\$45.39	\$7.25	\$1.36	\$0.45	\$0.00	\$10.89	\$0.75	\$0.00	\$0.00	\$66.09	\$88.79
Operator B	\$40.18	\$7.25	\$1.21	\$0.40	\$0.00	\$9.64	\$0.75	\$0.00	\$0.00	\$59.43	\$79.52
Operator C	\$32.29	\$7.25	\$0.97	\$0.32	\$0.00	\$7.75	\$0.75	\$0.00	\$0.00	\$49.33	\$65.47
Groundman 0-12 months Exp	\$25.33	\$7.25	\$0.76	\$0.25	\$0.00	\$6.08	\$0.75	\$0.00	\$0.00	\$40.42	\$53.08
Groundman 0-12 months Exp w/CDL	\$27.86	\$7.25	\$0.84	\$0.28	\$0.00	\$6.69	\$0.75	\$0.00	\$0.00	\$43.67	\$57.60
Groundman 1 yr or more	\$27.86	\$7.25	\$0.84	\$0.28	\$0.00	\$6.69	\$0.75	\$0.00	\$0.00	\$43.67	\$57.60
Groundman 1 yr or more w/CDL	\$32.92	\$7.25	\$0.99	\$0.33	\$0.00	\$7.90	\$0.75	\$0.00	\$0.00	\$50.14	\$66.60
Equipment Mechanic A	\$40.18	\$7.25	\$1.21	\$0.40	\$0.00	\$9.64	\$0.75	\$0.00	\$0.00	\$59.43	\$79.52
Equipment Mechanic	\$36.23	\$7.25	\$1.09	\$0.36	\$0.00	\$8.70	\$0.75	\$0.00	\$0.00	\$54.38	\$72.50

B												
Equipment Mechanic C	\$32.29	\$7.25	\$0.97	\$0.32	\$0.00	\$7.75	\$0.75	\$0.00	\$0.00	\$49.33	\$65.47	
X-Ray Technician	\$50.66	\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18	
Apprentice	Percent											
1st 1000 hrs	60.00	\$30.40	\$7.25	\$0.91	\$0.30	\$0.00	\$7.30	\$0.75	\$0.00	\$0.00	\$46.91	\$62.10
2nd 1000 hrs	65.00	\$32.93	\$7.25	\$0.99	\$0.33	\$0.00	\$7.90	\$0.75	\$0.00	\$0.00	\$50.15	\$66.61
3rd 1000 hrs	70.00	\$35.46	\$7.25	\$1.06	\$0.35	\$0.00	\$8.51	\$0.75	\$0.00	\$0.00	\$53.38	\$71.11
4th 1000 hrs	75.00	\$38.00	\$7.25	\$1.14	\$0.38	\$0.00	\$9.12	\$0.75	\$0.00	\$0.00	\$56.64	\$75.63
5th 1000 hrs	80.00	\$40.53	\$7.25	\$1.22	\$0.41	\$0.00	\$9.73	\$0.75	\$0.00	\$0.00	\$59.89	\$80.15
6th 1000 hrs	85.00	\$43.06	\$7.25	\$1.29	\$0.43	\$0.00	\$10.33	\$0.75	\$0.00	\$0.00	\$63.11	\$84.64
7th 1000 hrs	90.00	\$45.59	\$7.25	\$1.37	\$0.46	\$0.00	\$10.94	\$0.75	\$0.00	\$0.00	\$66.36	\$89.16

Special Calculation Note : Other is Health Reimbursement Account

Operator "A"

John Henry Rock Drill, D-6 (or equivalent) and above, Trackhoe Digger, (320 Track excavator), Cranes (greater than 25 tons and less than 45 tons).

Operator "B"

Cranes (greater than 6 tons and up to 25 tons), Backhoes, Road Tractor, Dozer up to D-5, Pressure Digger- wheeled or tracked, all Tension wire Stringing equipment.

Operator "C"

Trench, Backhoe, Riding type vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton & below), Skid Steer Loaders, Material Handler.

*All Operators of cranes 45 ton or larger shall be paid the journeyman rate of pay.

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD,

CUYAHOGA, DARKE, DELAWARE,
FAIRFIELD, FAYETTE, FRANKLIN,
GALLIA, GEAUGA, GREENE,
GUERNSEY, HAMILTON, HARRISON,
HIGHLAND, HOCKING, HOLMES,
JACKSON, JEFFERSON, KNOX, LAKE,
LAWRENCE, LICKING, LOGAN,
LORAIN, MADISON, MAHONING,
MARION, MEDINA, MEIGS, MERCER,
MIAMI, MONROE, MONTGOMERY,
MORGAN, MORROW, MUSKINGUM,
NOBLE, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, RICHLAND, ROSS,
SCIOTO, SHELBY, STARK, SUMMIT,
TRUMBULL, TUSCARAWAS, UNION,
VINTON, WARREN, WASHINGTON,
WAYNE

Special Jurisdictional Note :

Details :

Heli - Arc Welding will be paid \$.30 above Journeyman rate. Additional compensation of 10% over the Journeyman Lineman and Journeyman Technician for performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75' above the ground.

Equipment Mechanic C	\$30.52	\$7.25	\$0.92	\$0.31	\$0.00	\$7.32	\$0.75	\$0.00	\$0.00	\$47.07	\$62.33	
Line Truck w/uuger	\$33.65	\$7.25	\$1.01	\$0.34	\$0.00	\$8.08	\$0.75	\$0.00	\$0.00	\$51.08	\$67.90	
Apprentice	Percent											
1st 1000 hrs	60.00	\$28.79	\$7.25	\$0.86	\$0.29	\$0.00	\$6.91	\$0.75	\$0.00	\$0.00	\$44.85	\$59.25
2nd 1000 hrs	65.00	\$31.19	\$7.25	\$0.94	\$0.31	\$0.00	\$7.49	\$0.75	\$0.00	\$0.00	\$47.93	\$63.53
3rd 1000 hrs	70.00	\$33.59	\$7.25	\$1.01	\$0.34	\$0.00	\$8.06	\$0.75	\$0.00	\$0.00	\$51.00	\$67.80
4th 1000 hrs	75.00	\$35.99	\$7.25	\$1.08	\$0.36	\$0.00	\$8.64	\$0.75	\$0.00	\$0.00	\$54.07	\$72.07
5th 1000 hrs	80.00	\$38.39	\$7.25	\$1.15	\$0.38	\$0.00	\$9.21	\$0.75	\$0.00	\$0.00	\$57.13	\$76.33
6th 1000 hrs	85.00	\$40.79	\$7.25	\$1.22	\$0.41	\$0.00	\$9.79	\$0.75	\$0.00	\$0.00	\$60.21	\$80.61
7th 1000 hrs	90.00	\$43.19	\$7.25	\$1.30	\$0.43	\$0.00	\$10.37	\$0.75	\$0.00	\$0.00	\$63.29	\$84.89

Special Calculation Note : Other is Health Reimburstment Account

Operator "A"

John Henry Rock Drill, D-6 (or equivalent) and above, Trackhoe Digger, (320 Track excavator), Cranes (greater then 25 tons and less than 45 tons).

Operator "B"

Cranes (greater than 6 tons and up to 25 tons), Backhoes, Road Tractor, Dozer up to D-5, Pressure Digger- wheeled or tracked, all Tension wire Stringing equipment.

Operator "C"

Trench, Backhoe, Riding type vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton & below), Skid Steer Loaders, Material Handler.

Ratio :

(1) Journeyman Lineman to (1) Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES,

JACKSON, JEFFERSON, KNOX, LAKE,
LAWRENCE, LICKING, LOGAN,
LORAIN, MADISON, MAHONING,
MARION, MEDINA, MEIGS, MERCER,
MIAMI, MONROE, MONTGOMERY,
MORGAN, MORROW, MUSKINGUM,
NOBLE, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, RICHLAND, ROSS,
SCIOTO, SHELBY, STARK, SUMMIT,
TRUMBULL, TUSCARAWAS, UNION,
VINTON, WARREN, WASHINGTON,
WAYNE

Special Jurisdictional Note :

Details :

Heli - Arc Welding will be paid \$.30 above Journeyman rate. Additional compensation of 10% over the Journeyman Lineman and Journeyman Technician for performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75' above the ground.

2nd 1000 hrs	85.00	\$30.95	\$7.25	\$0.93	\$0.31	\$0.00	\$7.43	\$0.75	\$0.00	\$0.00	\$47.62	\$63.09
3rd 1000 hrs	90.00	\$32.77	\$7.25	\$0.98	\$0.33	\$0.00	\$7.86	\$0.75	\$0.00	\$0.00	\$49.94	\$66.32
4th 1000 hrs	95.00	\$34.59	\$7.25	\$1.04	\$0.35	\$0.00	\$8.28	\$0.75	\$0.00	\$0.00	\$52.26	\$69.55

Special Calculation Note : Other: Health Reimbursement Account

Ratio :

(1) Journeyman Lineman to (1) Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

This work applies to projects designated for any outside Underground Residential Distribution construction work for electrical utilities, municipalities and rural electrification projects.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Voice Data Video Outside

Change # : LCN02-2024ibLoc71VDV

Craft : Voice Data Video Effective Date : 03/06/2024 Last Posted : 03/06/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)		
Classification											
Electrical Installer Technician I	\$35.39	\$7.25	\$1.06	\$0.00	\$0.00	\$1.77	\$0.00	\$0.00	\$0.00	\$45.47	\$63.17
Installer Technician II	\$33.37	\$7.25	\$1.00	\$0.00	\$0.00	\$1.67	\$0.00	\$0.00	\$0.00	\$43.29	\$59.97
Installer Repairman	\$33.37	\$7.25	\$1.00	\$0.00	\$0.00	\$1.67	\$0.00	\$0.00	\$0.00	\$43.29	\$59.97
Equipment Operator II	\$24.98	\$7.25	\$0.75	\$0.00	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$34.23	\$46.72
Cable Splicer	\$35.39	\$7.25	\$1.06	\$0.00	\$0.00	\$1.77	\$0.00	\$0.00	\$0.00	\$45.47	\$63.17
Ground Driver W/CDL	\$16.69	\$7.25	\$0.50	\$0.00	\$0.00	\$0.83	\$0.00	\$0.00	\$0.00	\$25.27	\$33.62
Groundman	\$14.57	\$7.25	\$0.44	\$0.00	\$0.00	\$0.73	\$0.00	\$0.00	\$0.00	\$22.99	\$30.28
Trainees	Percent										
Trainee F	50.02	\$17.70	\$7.25	\$0.53	\$0.00	\$0.89	\$0.00	\$0.00	\$0.00	\$26.37	\$35.22
Trainee E	58.00	\$20.53	\$7.25	\$0.62	\$0.00	\$1.03	\$0.00	\$0.00	\$0.00	\$29.43	\$39.69
Trainee D	66.00	\$23.36	\$7.25	\$0.70	\$0.00	\$1.17	\$0.00	\$0.00	\$0.00	\$32.48	\$44.16
Trainee C	74.00	\$26.19	\$7.25	\$0.79	\$0.00	\$1.31	\$0.00	\$0.00	\$0.00	\$35.54	\$48.63
Trainee B	82.00	\$29.02	\$7.25	\$0.87	\$0.00	\$1.45	\$0.00	\$0.00	\$0.00	\$38.59	\$53.10
Trainee A	90.00	\$31.85	\$7.25	\$0.96	\$0.00	\$1.59	\$0.00	\$0.00	\$0.00	\$41.65	\$57.58

Special Calculation Note :

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

1 Trainee to 1 Journeyman

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

Cable Splicer: Inspect and test lines or cables, analyze results, and evaluate transmission characteristics. Cover conductors with insulation or seal splices with moisture-proof covering. Install, splice, test, and repair cables using tools or mechanical equipment. This will include the splicing of fiber.

Installer Technician I: Must know all aspects of telephone and cable work. This is to include aerial, underground, and manhole work. Must know how to climb and run bucket. Must have all the tools required to perform these tasks. Must be able to be responsible for the safety of the crew at all times. Must also have CDL license and have at least 5 years experience.

Installer Repairman: Perform tasks of repairing, installing, and testing phone and CATV services.

Installer Technician II: Have at least three years of telephone and CATV experience. Must have the knowledge of underground, aerial, and manhole work. Must be able to climb and operate bucket. Must have CDL. Must have all tools needed to perform these tasks.

Equipment Operator II: Able to operate a digger derrick or bucket truck. Have at least 3 years of experience and must have a valid CDL license.

Groundman W/CDL: Must have a valid CDL license and be able to perform tasks such as: climbing poles, pulling down guys, making up material, and getting appropriate tools for the job. Must have at least 5 year's experience.

Groundman: Perform tasks such as: climbing poles, pulling down guys, making up material, and getting appropriate tools for the job. Experience 0-5 years.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Inside Lt Commercial South West

Change # : LCNO1-2021sksLoc82in

Craft : Electrical Effective Date : 03/30/2022 Last Posted : 03/30/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrician	\$33.25		\$6.47	\$9.35	\$0.72	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$53.29	\$69.91
CE-3 12,001- 14,000	\$24.66		\$6.47	\$0.74	\$0.72	\$0.00	\$0.74	\$0.00	\$0.00	\$0.10	\$33.43	\$45.76
CE-2 10,001- 12,000 Hrs	\$19.56		\$6.47	\$0.59	\$0.72	\$0.00	\$0.59	\$0.00	\$0.00	\$0.10	\$28.03	\$37.81
CE-1 8,001- 10,000 Hrs	\$17.86		\$6.47	\$0.54	\$0.72	\$0.00	\$0.54	\$0.00	\$0.00	\$0.10	\$26.23	\$35.16
CW-4 6,001- 8,000 Hrs	\$16.16		\$6.47	\$0.48	\$0.72	\$0.00	\$0.48	\$0.00	\$0.00	\$0.10	\$24.41	\$32.49
CW-3 4,001- 6,000 Hrs	\$14.46		\$6.47	\$0.43	\$0.72	\$0.00	\$0.43	\$0.00	\$0.00	\$0.10	\$22.61	\$29.84
CW-2 2,001- 4,000 Hrs	\$13.61		\$6.47	\$0.41	\$0.72	\$0.00	\$0.41	\$0.00	\$0.00	\$0.10	\$21.72	\$28.52
CW-1 0- 2,000 Hrs	\$12.76		\$6.47	\$0.38	\$0.72	\$0.00	\$0.38	\$0.00	\$0.00	\$0.10	\$20.81	\$27.19
Apprentice	Percent											
1st period 0 - 1000 hrs	42.00	\$13.97	\$4.07	\$0.62	\$0.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.89	\$25.88
2nd period 1001-2000 hrs	42.00	\$13.97	\$4.07	\$0.62	\$0.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.89	\$25.88
3rd period 2001-3500	47.00	\$15.63	\$6.92	\$4.39	\$0.27	\$0.00	\$1.65	\$0.00	\$0.00	\$0.00	\$28.86	\$36.67

hrs												
4th period 3501-5000 hrs	52.00	\$17.29	\$6.97	\$4.86	\$0.29	\$0.00	\$1.82	\$0.00	\$0.00	\$0.00	\$31.23	\$39.88
5th period 5001-6500 hrs	62.00	\$20.61	\$7.07	\$5.80	\$0.35	\$0.00	\$2.17	\$0.00	\$0.00	\$0.00	\$36.01	\$46.31
6th period 6501-8000 hrs	77.00	\$25.60	\$7.22	\$7.20	\$0.44	\$0.00	\$2.70	\$0.00	\$0.00	\$0.00	\$43.16	\$55.96

Special Calculation Note : *Misc amount is Administrative Fees

Ratio :

1 to 3 Journeymen to 3 Apprentices
4 to 6 Journeymen to 6 Apprentices
per job site

Jurisdiction (* denotes special jurisdictional note) :

CLINTON, DARKE, GREENE, MIAMI,
MONTGOMERY, PREBLE, WARREN*

Construction Electrician and Construction Wireman Ratio

There shall be a minimum ratio of one inside Journeyman to every (4) employees of different classification per jobsite. An inside Journeyman Wireman is required on the project as the fifth (5th) worker or when apprentices are used.

Special Jurisdictional Note : The following townships in Warren County are included: Clearcreek, Franklin and Wayne.

The scope of work for the light commercial agreement shall apply to the following facilities not to exceed 200,000 square feet; office buildings, shopping centers, auto sales agencies and garages, churches, funeral homes, nursing homes, hotels, retail and wholesale facilities, small stand-alone manufacturing facilities when free standing and not part of a larger facility (not to exceed 50,000 square fee), solar projects (500 panels or less) unless otherwise covered under the agreement, lighting retrofits (when not associated with remodels involving branch re-circuiting) lighting retrofits shall be defined as the changing of lamps and ballasts in existing light fixtures and shall also include the one for one replacement of existing fixtures, warehouses, gas stations, food service centers, restaurants, entertainment facilities, hospitals, clinics, motels, residential buildings.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Inside

Change # : LCR01-2023ibLoc82in

Craft : Electrical Effective Date : 12/27/2023 Last Posted : 12/27/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrician	\$36.00		\$7.55	\$9.83	\$0.61	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$57.99	\$75.99
Apprentice	Percent											
1st period 0 - 1000 hrs	42.00	\$15.12	\$4.14	\$0.65	\$0.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20.17	\$27.73
2nd period 1001-2000 hrs	42.00	\$15.12	\$4.14	\$0.65	\$0.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20.17	\$27.73
3rd period 2001-3500 hrs	47.00	\$16.92	\$7.02	\$4.62	\$0.29	\$0.00	\$1.88	\$0.00	\$0.00	\$0.00	\$30.73	\$39.19
4th period 3501-5000 hrs	52.00	\$18.72	\$7.07	\$5.11	\$0.32	\$0.00	\$2.08	\$0.00	\$0.00	\$0.00	\$33.30	\$42.66
5th period 5001-6500 hrs	62.00	\$22.32	\$7.17	\$6.10	\$0.38	\$0.00	\$2.48	\$0.00	\$0.00	\$0.00	\$38.45	\$49.61
6th period 6501-8000 hrs	77.00	\$27.72	\$7.32	\$7.57	\$0.47	\$0.00	\$3.08	\$0.00	\$0.00	\$0.00	\$46.16	\$60.02

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

1 to 3 Journeymen to 4 Apprentices
4 to 6 Journeymen to 8 Apprentices
per job site

Jurisdiction (* denotes special jurisdictional note) :

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE, WARREN*

Special Jurisdictional Note : The following townships in Warren County are

included: Clearcreek, Franklin and Wayne.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Lightning Rod

Change # : LCN02-2022ibLoc82

Craft : **Electrical** Effective Date : **12/05/2022** Last Posted : **11/23/2022**

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lightning Rod Technican	\$32.79	\$7.45	\$9.58	\$0.00	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$53.32	\$69.71

Special Calculation Note : No Apprentice approved by OSAC.

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE, WARREN*

Special Jurisdictional Note : The following townships in Warren County are included: (Clearcreek, Franklin and Wayne)

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Voice Data Video

Change # : LCN01-2023ibLoc82VDV

Craft : Voice Data Video Effective Date : 11/27/2023 Last Posted : 11/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)		
Classification											
Electrical Installer Technician A	\$27.70	\$6.70	\$6.83	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.76	\$55.61
Electrical Installer Technician B	\$26.32	\$6.70	\$6.79	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.31	\$53.47
JW Installer Technician	\$24.93	\$6.70	\$6.75	\$0.47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.85	\$51.32
NON BICSI Installer	\$18.01	\$3.94	\$0.54	\$0.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22.83	\$31.83
Apprentice	Percent										
1st 0-1000 hours	55.00	\$15.24	\$3.94	\$3.76	\$0.29	\$0.00	\$0.00	\$0.00	\$0.00	\$23.23	\$30.84
2nd 1001-2000 hours	55.00	\$15.24	\$3.94	\$3.76	\$0.29	\$0.00	\$0.00	\$0.00	\$0.00	\$23.23	\$30.84
3rd 2001-3000 hours	65.00	\$18.00	\$6.65	\$4.44	\$0.34	\$0.00	\$0.00	\$0.00	\$0.00	\$29.44	\$38.44
4th 3001-4000 hours	65.00	\$18.00	\$6.65	\$4.44	\$0.34	\$0.00	\$0.00	\$0.00	\$0.00	\$29.44	\$38.44
5th 4001-5000 hours	75.00	\$20.77	\$6.66	\$6.62	\$0.39	\$0.00	\$0.00	\$0.00	\$0.00	\$34.45	\$44.83
6th 5001-6000 hours	75.00	\$20.77	\$6.66	\$6.62	\$0.39	\$0.00	\$0.00	\$0.00	\$0.00	\$34.45	\$44.83
7th 6001-7000 hours	80.00	\$22.16	\$6.67	\$6.66	\$0.42	\$0.00	\$0.00	\$0.00	\$0.00	\$35.91	\$46.99

8th 7001 hours	80.00	\$22.16	\$6.67	\$6.66	\$0.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.91	\$46.99
Cable Puller	50.00	\$13.85	\$3.94	\$0.42	\$0.26	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$18.72	\$25.65

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

1 Journeymen to 2 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE, WARREN*

Special Jurisdictional Note : The following townships in Warren County are included: (Clearcreek, Franklin and Wayne)

Details :

Work covered but not limited to: installation which utilize transmission and/or transference of voice, sound, vision or digital for commercial, education, security and entertainment purposes for the following:

TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multimedia, multiplex, nurse call system, radio page, school intercom, sound and low voltage master clock systems.

Fire Alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit.

All HVAC control work is not covered by this wage rate but by the Inside Electrical wage rate.

Prevailing Wage Rate Skilled Crafts

Name of Union: Elevator Local 11

Change # : LCN01-2020fbLoc11

Craft : Elevator Effective Date : 01/05/2021 Last Posted : 01/05/2021

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Elevator Mechanic	\$48.82		\$15.88	\$10.46	\$0.64	\$3.91	\$8.85	\$1.56	\$0.00	\$0.00	\$90.12	\$114.53
Probationary Apprentice	50.00	\$24.41	\$0.00	\$0.00	\$0.00	\$1.46	\$0.00	\$0.78	\$0.00	\$0.00	\$26.65	\$38.86
1st year	55.00	\$26.85	\$15.88	\$10.46	\$0.64	\$1.61	\$8.85	\$0.86	\$0.00	\$0.00	\$65.15	\$78.58
2nd year	65.00	\$31.73	\$15.88	\$10.46	\$0.64	\$1.90	\$8.85	\$1.02	\$0.00	\$0.00	\$70.48	\$86.35
3rd year	70.00	\$34.17	\$15.88	\$10.46	\$0.64	\$2.05	\$8.85	\$1.09	\$0.00	\$0.00	\$73.14	\$90.23
4th year	80.00	\$39.06	\$15.88	\$10.46	\$0.64	\$2.34	\$8.85	\$1.25	\$0.00	\$0.00	\$78.48	\$98.00
Helper	70.00	\$34.17	\$15.88	\$10.46	\$0.64	\$2.05	\$8.85	\$1.09	\$0.00	\$0.00	\$73.14	\$90.23
Assistant Mechanic	80.00	\$39.06	\$15.88	\$10.46	\$0.64	\$2.34	\$8.85	\$1.25	\$0.00	\$0.00	\$78.48	\$98.00

Special Calculation Note : Other is Holiday Pay. Vacation calculated at 6%.

Ratio :

The total number of Helpers & Apprentices employed shall not exceed the number of Mechanics on any one job, except on jobs where (2) teams or more are working, (1) extra Helper or Apprentice may be employed for the first (2) teams and an extra Helper or Apprentice for each additional (3) teams.

- 1 Journeymen to 1 Apprentice
- 2 Journeymen to 5 Apprentice
- 3 Journeymen to 6 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, BROWN, BUTLER, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, HIGHLAND, MIAMI, MONTGOMERY, PREBLE, SCIOTO, SHELBY, WARREN

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Glazier Local 387

Change # : LCN01-2023ibLoc387

Craft : **Glazier** Effective Date : **11/22/2023** Last Posted : **11/22/2023**

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Glazier	\$31.95	\$6.50	\$11.25	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.15	\$66.12
Apprentice	Percent										
1st Year	65.00	\$20.77	\$6.50	\$7.86	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$35.58	\$45.96
2nd Year	75.00	\$23.96	\$6.50	\$8.83	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$39.74	\$51.72
3rd Year	85.00	\$27.16	\$6.50	\$9.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$43.91	\$57.49
4th Year	95.00	\$30.35	\$6.50	\$10.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$48.07	\$63.25

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

Each employer may employ and train Apprentices in the following ratio to journeymen workers employed.

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, FAYETTE*, GREENE, HAMILTON, HIGHLAND, MIAMI, MONTGOMERY, PREBLE, WARREN

Special Jurisdictional Note : Fayette County: Eastern portion of route #41 being the dividing line between locals 372 and 387. Local 387 has jurisdiction of projects built on property which borders route #41 East.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Labor Hwy 3

Change # : LCN01-2023ibLocalHwy3

Craft : Laborer Group 1 Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Laborer Group 1	\$34.62	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.42	\$65.73	
Group 2	\$34.79	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.59	\$65.98	
Group 3	\$35.12	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.92	\$66.48	
Group 4	\$35.57	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$49.37	\$67.15	
Watch Person	\$27.35	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$41.15	\$54.83	
Apprentice	Percent											
0-1000 hrs	60.00	\$20.77	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$34.57	\$44.96
1001-2000 hrs	70.00	\$24.23	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$38.03	\$50.15
2001-3000 hrs	80.00	\$27.70	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$41.50	\$55.34
3001-4000 hrs	90.00	\$31.16	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$44.96	\$60.54
More than 4000 hrs	100.00	\$34.62	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.42	\$65.73

Special Calculation Note : Watchmen have no Apprentices. Tunnel Laborer rate with air-pressurized add \$1.00 to the above wage rate.

Ratio :

- 1 Journeymen to 1 Apprentice
- 3 Journeymen to 1 Apprentice thereafter

Jurisdiction (* denotes special jurisdictional note) :

- ADAMS, ALLEN, ASHLAND, ATHENS,
- AUGLAIZE, BELMONT, BROWN,
- BUTLER, CARROLL, CHAMPAIGN,
- CLARK, CLERMONT, CLINTON,
- COLUMBIANA, COSHOCTON,
- CRAWFORD, DARKE, DEFIANCE,

DELAWARE, FAIRFIELD, FAYETTE,
FRANKLIN, FULTON, GALLIA, GREENE,
GUERNSEY, HAMILTON, HANCOCK,
HARDIN, HARRISON, HENRY,
HIGHLAND, HOCKING, HOLMES,
JACKSON, JEFFERSON, KNOX,
LAWRENCE, LICKING, LOGAN,
MADISON, MARION, MEIGS, MERCER,
MIAMI, MONROE, MONTGOMERY,
MORGAN, MORROW, MUSKINGUM,
NOBLE, PAULDING, PERRY, PICKAWAY,
PIKE, PREBLE, PUTNAM, RICHLAND,
ROSS, SCIOTO, SENECA, SHELBY,
TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON,
WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note : Hod Carriers and Common Laborers - Heavy, Highway, Sewer, Waterworks, Utility, Airport, Railroad, Industrial and Building Site, Sewer Plant, Waste Water Treatment Facilities Construction

Details :

Group 1

Laborer (Construction); Plant Laborer or Yardman, Right-of-way Laborer, Landscape Laborer, Highway Lighting Worker, Signalization Worker, (Swimming) Pool Construction Laborer, Utility Man, *Bridge Man, Handyman, Joint Setter, Flagperson, Carpenter Helper, Waterproofing Laborer, Slurry Seal, Seal Coating, Surface Treatment or Road Mix Laborer, Riprap Laborer & Grouter, Asphalt Laborer, Dump Man (batch trucks), Guardrail & Fence Installer, Mesh Handler & Placer, Concrete Curing Applicator, Scaffold Erector, Sign Installer, Hazardous Waste (level D), Diver Helper, Zone Person and Traffic Control.

*Bridge Man will perform work as per the October 31, 1949, memorandum on concrete forms, by and between the United Brotherhood of Carpenters and Joiners of America and the Laborers' International Union of North America, which states in; "the moving, cleaning, oiling and carrying to the next point of erection, and the stripping of forms which are not to be re-used, and forms on all flat arch work shall be done by members of the Laborers' International Union of North America."

Group 2

Asphalt Raker, Screwman or Paver, Concrete Puddler, Kettle Man (pipeline), All Machine-Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Skid Steer, Sheeting & Shoring Person, Surface Grinder Person, Screedperson, Water Blast, Hand Held Wand, Power Buggy or Power Wheelbarrow, Paint Stripper, Plastic fusing Machine Operator, Rodding Machine Operator, Pug Mill Operator, Operator of All Vacuum Devices Wet or Dry, Handling of all Pumps 4 inches and under (gas, air or electric), Diver, Form Setter, Bottom Person, Welder Helper (pipeline), Concrete Saw Person, Cutting with Burning Torch, Pipe Layer, Hand Spiker (railroad), Underground Person (working in sewer and

waterline, cleaning, repairing and reconditioning). Tunnel Laborer (without air), Caisson, Cofferdam (below 25 feet deep), Air Track and Wagon Drill, Sandblaster Nozzle Person, Hazardous Waste (level B), ***Lead Abatement, Hazardous Waste (level C)

***Includes the erecting of structures for the removal, including the encapsulation and containment of Lead abatement process.

Group 3

Blast and Powder Person, Muckers will be defined as shovel men working directly with the miners, Wrencher (mechanical joints & utility pipeline), Yarnier, Top Lander, Hazardous Waste (level A), Concrete Specialist, Curb Setter and Cutter, Grade Checker, Concrete Crew in Tunnels. Utility pipeline Tappers, Waterline, Caulker, Signal Person will receive the rate equal to the rate paid the Laborer classification for which the Laborer is signaling.

Group 4

Miner, Welder, Guniting Nozzle Person

A.) The Watchperson shall be responsible to patrol and maintain a safe traffic zone including but not limited to barrels, cones, signs, arrow boards, message boards etc. The responsibility of a watchperson is to see that the equipment, job and office trailer etc. are secure.

Prevailing Wage Rate Skilled Crafts

Name of Union: Labor Local 1410 Building

Change # : LCN01-2023ibLoc1410

Craft : Laborer Effective Date : 04/05/2023 Last Posted : 04/05/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Laborer Group 1	\$30.35		\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$43.10	\$58.28
Group 2	\$30.95		\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$43.70	\$59.17
Group 3	\$31.45		\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.20	\$59.92
Apprentice	Percent											
Building Laborer 1-1000 hrs	60.00	\$18.21	\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$30.96	\$40.07
1001-2000	70.02	\$21.25	\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$34.00	\$44.63
2001-3000	80.00	\$24.28	\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$37.03	\$49.17
3001-4000	89.99	\$27.31	\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$40.06	\$53.72
More than 4000 hrs	100.00	\$30.35	\$8.20	\$4.05	\$0.40	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$43.10	\$58.28

Special Calculation Note : \$0.10 LECET is for Labor Management.

Ratio :

1 Journeymen to 1 Apprentice
4 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, DARKE, GREENE, LOGAN, MIAMI, MONTGOMERY, PREBLE

Special Jurisdictional Note :

Details :

Group 1

Building & Construction Laborer, Railroad Laborer, Asbestos & Hazardous Waste (Levels A,B,C, & D), Concrete Crew, Form Setter, Pipelayer, Bottom Man, Burner (Cutting Torch), Welder Helper, All Machine & Power Driven Tools, Sandblaster
Yardman-Landscaping, Sewer Jet, Waterperson, Tool Cage Laborer, Unloading Furniture &

Fixtures, Final Clean-Up
Watchman, Residential Construction, Signal Men

Group 2

Mason Tender For Bricklayers, Flexcore, Firebrick Tender (Blast Furnaces, Soaking Pits, Stoves & Stacks), Plasterer Tenders & Lathers

Group 3

Tender Operator

Asbestos, Lead and Hazardous Material:

The removal, abatement or encapsulation of asbestos, lead and/or toxic and hazardous waste or materials is defined as all work included in the erection, moving servicing and dismantling of all enclosures, scaffolding, barricades, etc. and the operation of all tools and equipment (including generators, compressors and vacuums) normally used in the removal or abatement of asbestos, lead and toxic and hazardous waste or materials; the labeling, bagging, cartoning, crating or otherwise packaging of materials for disposal; as well as the clean-up of the work site and all other work incidental to the removal, abatement or encapsulation of asbestos, lead or toxic and hazardous waste materials.

Level A

Protective equipment is required when the area has been determined to contain extremely toxic contaminants or contaminants unknown but may be expected to be extremely toxic and/or immediately dangerous to life and health. This ensemble includes a fully encapsulated chemical suit, self contained breathing apparatus (SCBA) or airline fed respirator, and various types and numbers of boots and gloves.

Level B

Protective equipment includes a chemically resistant splash suit and a SCBA or airline respirator. This ensemble is required when the situation is very hazardous, such as oxygen deficient atmospheres, IDLH atmospheres, or confined space entries.

Level C

Protective equipment includes a protective suit and an air purifying respirator (APR) with the appropriate filter canisters.

Level D

To be worn only in established "safe zones" may consist of, from normal work clothes to normal skin protection such as gloves, face shields goggles, coveralls and occasionally respiratory protection.

Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - Building Local 18 - Zone III

Change # : LCN01-2023ibLoc18zone3

Craft : Operating Engineer Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate	
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)			
Classification												
Operator Group A	\$41.49	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.74	\$78.48	
Operator Group B	\$41.37	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.62	\$78.30	
Operator Group C	\$40.33	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$56.58	\$76.74	
Operator Group D	\$39.15	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$55.40	\$74.97	
Operator Group E	\$33.69	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.94	\$66.78	
Master Mechanic	\$41.74	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.99	\$78.86	
Cranes & Mobile Concrete Pumps 150'-180'	\$41.99	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$58.24	\$79.23	
Cranes & Mobile Concrete Pumps 180'-249'	\$42.49	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$58.74	\$79.98	
Cranes & Mobile Concrete Pumps 249' and over	\$42.74	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$58.99	\$80.36	
Apprentice	Percent											
1st Year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$37.00	\$47.37

2nd Year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$41.14	\$53.59
3rd Year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$45.29	\$59.81
4th Year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.44	\$66.04
Field Mechanic Trainee												
1st Year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$37.00	\$47.37
2nd Year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$41.14	\$53.59
3rd Year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$45.29	\$59.81
4th Year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.44	\$66.04

Special Calculation Note : Other: Education & Safety \$0.09; *Misc is National Training

Ratio :

For every (3) Operating Engineer Journeymen employed by the company there may be employed (1) Registered Apprentice or trainee Engineer through the referral when they are available. An apprentice, while employed as part of a crew per Article VIII, paragraph 78, will not be subject to the apprenticeship ratios in this collective bargaining agreement

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note :

Details :

Note: There will be a 10% increase for the apprentices on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if required to have CDL

Group A- Barrier Moving Machines; Boiler Operators or Compressor Operators, when compressor or boiler is mounted on crane (Piggyback Operation); Boom Trucks (all types); Cableways Cherry Pickers; Combination - Concrete Mixers & Towers; All Concrete Pumps with Booms; Cranes (all types); Compact Cranes, track or rubber over 4,000 pounds capacity; Cranes self-erecting, stationary, track or truck (all configurations); Derricks (all types); Draglines; Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Forklift (rough terrain with winch/hoist); Gradalls; Helicopter Operators, hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Horizontal Directional Drill; Hydraulic Gantry (lift system); Laser Finishing Machines; Laser Screed and like equipment; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Operator/Technician(Mechanic Operator/Technician and/or Welder); Mixers, paving (multiple drum); Mobile Concrete Pumps, with booms; Panelboards, (all types on site); Pile Drivers; Power Shovels; Prentice Loader; Rail Tamper (with automatic lifting and aligning device); Rotary Drills (all), used on caissons for foundations and sub-structure; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Trench Machines (over 24" wide); Tug Boats.

Group B - Articulating/end dumps (minus \$4.00/hour from Group B rate); Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs.; Bulldozers; CMI type Equipment; Concrete Saw, Vermeer-type; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats;, Rotomills (all), grinders and planers of all types.

Group C - A-Frames; Air Compressors, Pressurizing Shafts or Tunnels; All Asphalt Rollers; Bobcat-type and/or Skid Steer Loader with or without attachments; Boilers (15 lbs. pressure and over); All Concrete Pumps (without booms with 5 inch system); Fork Lifts (except masonry); Highway Drills - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled), Buck Hoists, Transport Platforms, Construction Elevators; Hydro Vac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Man Lifts; Material hoist/elevators; Mud Jacks; Pressure Grouting; Pump Operators (installing or operating Well Points or other types of Dewatering Systems); Pumps (4 inches and over discharge); Railroad Tie (Inserter/Remover); Rotovator (Lime-Soil Stabilizer); Submersible Pumps (4"and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24" and under); Utility Operators.

Group D - Backfillers and Tampers; Ballast Re-locator; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Mixers, more than one bag capacity; Concrete Mixers, one bag capacity (side loaders); All Concrete Pumps (without boom with 4" or smaller system); Concrete Spreader; Conveyors, used for handling building materials; Crushers; Deckhands; Drum Fireman (in asphalt plants); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators: Gunitite Machines; Hydro-seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2") discharge); Road Widening Trenchers; Rollers (except asphalt); Self-propelled sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepsfoot

post roller or grader; VAC/ALLS; Vibratory Compactors, with integral power; Welders.

Group E – Allen Screed Paver (concrete); Boilers (less than 15 lbs. pressure); Cranes- Compact, track or rubber (under 4,000 pounds capacity); Directional Drill “Locator”; Fueling and greasing +\$3.00; Inboard/outboard Motor Boat Launches; Light Plant Operators; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson, Submersible Pumps (under 4” discharge).

Master Mechanics - Master Mechanic

Cranes 150’ – 180’ - Boom & Jib 150 - 180 feet

Cranes 180’ – 249’ - Boom & Jib 180 - 249 feet

Cranes 250’ and over - Boom & Jib 250-feet or over

Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - HevHwy Zone II

Change # : LCN01-2023ibLoc18hevhwyl

Craft : Operating Engineer Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)		
Classification											
Operator Class A	\$41.49	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.74	\$78.48
Operator Class B	\$41.37	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.62	\$78.30
Operator Class C	\$40.33	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$56.58	\$76.74
Operator Class D	\$39.15	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$55.40	\$74.97
Operator Class E	\$33.69	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.94	\$66.78
Master Mechanic	\$41.74	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.99	\$78.86
Apprentice	Percent										
1st Year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$37.00	\$47.37
2nd Year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$41.14	\$53.59
3rd Year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$45.29	\$59.81
4th Year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$49.44	\$66.04
Field Mech Trainee Class 2											
1st year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$37.00	\$47.37
2nd year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$41.14	\$53.59
3rd year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$45.29	\$59.81
4th year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.05	\$49.44	\$66.04

Special Calculation Note : Other: Education & Safety Fund is \$0.09 per hour.

*Misc is National Training

Ratio :

For every (3) Operating Engineer Journeymen employed by the company, there may be employed (1) Registered Apprentice or Trainee Engineer through the referral when they are available. An Apprentice, while employed as part of a crew per Article VIII, paragraph 65 will not be subject to the apprenticeship ratios in this collective bargaining agreement

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

**Apprentices will receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if they are required to have CDL.

Class A - Air Compressors on Steel Erection; Asphalt Plant Engineers (Cleveland District Only); Barrier Moving Machine; Boiler Operators, Compressor Operators, or Generators, when mounted on a rig; Boom Trucks (all types); Cableways; Cherry Pickers; Combination- Concrete Mixers & Towers; Concrete Plants (over 4 yd capacity); Concrete Pumps; Cranes (all types); Compact Cranes track or rubber over 4,000 pounds capacity; Cranes self-erecting stationary, track or truck; Derricks (all types); Draglines; Dredges dipper, clam or suction; Elevating Graders or Euclid Loaders; Floating Equipment (all types); Gradalls; Helicopter Crew (Operator- hoist or winch); Hoes (all types); Hoisting Engines; Hoisting Engines, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial-type Tractors; Jet Engine Dryer (D8 or D9) diesel Tractors; Locomotives (standard gauge); Maintenance Operators/Technicians (class A); Mixers, paving (single or double drum); Mucking Machines; Multiple Scrapers; Piledriving Machines (all types); Power Shovels, Prentice Loader; Quad 9 (double pusher); Rail Tamper (with automatic

lifting and aligning device); Refrigerating Machines (freezer operation); Rotary Drills, on caisson work; Rough Terrain Fork Lift with winch/hoist; Side Booms; Slip Form Pavers; Survey Crew Party Chiefs; Tower Derricks; Tree Shredders; Trench Machines (over 24" wide); Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators.

Class B - Asphalt Pavers; Automatic Subgrade Machines, self-propelled (CMI-type); Bobcat-type and /or Skid Steer Loader with hoe attachment greater than 7000 lbs.; Boring Machine Operators (more than 48 inches); Bulldozers; Concrete Saws, Vermeer type; Endloaders; Horizontal Directional Drill (50,000 ft. lbs. thrust and over); Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Maintenance Operators/Technicians, Class B; Material Transfer Equipment (shuttle buggy) Asphalt; Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Rotomills (all), Grinders and Planners of all types, Groovers (excluding walk-behinds); Trench Machines (24 inch wide and under).

Class C - A-Frames; Air Compressors, on tunnel work (low Pressure); Articulating/straight bed end dumps if assigned (minus \$4.00 per hour); Asphalt Plant Engineers (Portage and Summit Counties only); Bobcat-type and/or skid steer loader with or without attachments; Drones; Highway Drills (all types); HydroVac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Locomotives (narrow gauge); Material Hoist/Elevators; Mixers, concrete (more than one bag capacity); Mixers, one bag capacity (side loader); Power Boilers (over 15 lbs. pressure); Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Inserter/Remover; Rollers, Asphalt; Rotovator (lime-soil Stabilizer); Switch & Tie Tampers (without lifting and aligning device); Utilities Operators, (small equipment); Welding Machines and Generators.

Class D – Backfillers and Tampers; Ballast Re-locator; Bar and Joint Installing Machines; Batch Plant Operators; Boring Machine Operators (48 inch or less); Bull Floats; Burlap and Curing Machines; Concrete Plants (capacity 4 yds. and under); Concrete Saws (multiple); Conveyors (highway); Crushers; Deckhands; Farm type tractors, with attachments (highway); Finishing Machines; Firemen, Floating Equipment (all types); Fork Lifts (highway), except masonry; Form Trenchers; Hydro Hammers; Hydro Seeders; Pavement Breakers (hydraulic or cable); Plant Mixers; Post Drivers; Post Hole Diggers; Power Brush Burners; Power Form Handling Equipment; Road Widening Trenchers; Rollers (brick, grade, macadam); Self-Propelled Power Spreaders; Self-Propelled Sub-Graders; Steam Firemen; Survey Instrument men; Tractors, pulling sheepsfoot rollers or graders; Vibratory Compactors, with integral power.

Class E - Compressors (portable, Sewer, Heavy and Highway); Cranes-Compact, track or rubber under 4,000 pound capacity; Drum Firemen (asphalt plant); Fueling and greasing (Primary Operator with Specialized CDL Endorsement Add \$3.00/hr); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oil Heaters (asphalt plant); Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson; Survey Rodmen or Chairmen; Tire Repairmen; VAC/ALLS.

Master Mechanic - Master Mechanic

Prevailing Wage Rate

Skilled Crafts

Name of Union: Painter Local 249 HevHwy

Change # : LCN03-2023ibLoc249

Craft : Painter Effective Date : 11/22/2023 Last Posted : 11/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Bridge Blaster Class 1	\$37.31		\$6.50	\$6.69	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.83	\$69.48
Bridge Painter, Rigger, Containment Builder, Spot Blaster Class 2	\$34.31		\$6.50	\$6.69	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.83	\$64.98
Equipment Operator/Field Mechanic, Grit Reclamation, Paint Mixer, Traffic Control, Boat Person, Driver Class 3	\$32.31		\$6.50	\$6.69	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.83	\$61.99
Concrete Sealing, Concrete Blasting/Power Washing/Etc. Class 4	\$30.31		\$6.50	\$6.69	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.83	\$58.98
Quality Control/Quality Assurance, Traffic safety, Competent Person Class 5	\$30.31		\$6.50	\$6.69	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.83	\$58.98
Apprentice	Percent											
30 day Probationary	50.00	\$18.66	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$25.93	\$35.26
1st Year	65.00	\$24.25	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.53	\$43.66
2nd Year	65.00	\$24.25	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.53	\$43.66

3rd Year	75.00	\$27.98	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.26	\$49.25
4th Year	85.00	\$31.71	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.99	\$54.85

Special Calculation Note :

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CLARK, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 249

Change # : LCN03-2023ibLoc249

Craft : Drywall Finisher Effective Date : 11/22/2023 Last Posted : 11/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Drywall Finisher	\$25.60		\$6.50	\$6.69	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.12	\$51.92
Apprentice	Percent											
30 Day Probationary	50.00	\$12.80	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20.08	\$26.48
1st Year	65.00	\$16.64	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.92	\$32.24
2nd Year	65.00	\$16.64	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.92	\$32.24
3rd Year	75.00	\$19.20	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$26.48	\$36.08
4th Year	85.00	\$21.76	\$6.50	\$0.45	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.04	\$39.92

Special Calculation Note :

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CLARK, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE

Special Jurisdictional Note :

Details :

Industrial work but not limited to:work done on industrial plants, repair garages, processing plants,storage tanks, warehouses, skeleton structures,bridges,whether new or old construction, office buildings in industrial sites and interior of shopping malls.

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639 Zone 2 Sign

Change # : LCN01-2023ibLoc639

Craft : Painter Effective Date : 03/22/2023 Last Posted : 03/22/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Sign Journeyman Tech/Team Leader Class A	\$25.28	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.68	\$0.00	\$0.00	\$27.87	\$40.51
Painter Sign Journeyman Tech/Team Leader Class B	\$25.28	\$1.70	\$0.21	\$0.00	\$0.49	\$0.00	\$0.68	\$0.00	\$0.00	\$28.36	\$41.00
Painter Sign Journeyman Tech/Team Leader Class C	\$25.28	\$1.70	\$0.21	\$0.00	\$0.97	\$0.00	\$0.68	\$0.00	\$0.00	\$28.84	\$41.48
Painter Sign Journeyman Tech/Team Leader Class D	\$25.28	\$1.70	\$0.21	\$0.00	\$1.46	\$0.00	\$0.68	\$0.00	\$0.00	\$29.33	\$41.97
Sign Journeyman Class A	\$25.00	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.67	\$0.00	\$0.00	\$27.58	\$40.08
Sign Journeyman Class B	\$25.00	\$1.70	\$0.21	\$0.00	\$0.48	\$0.00	\$0.67	\$0.00	\$0.00	\$28.06	\$40.56
Sign Journeyman Class C	\$25.00	\$1.70	\$0.21	\$0.00	\$0.96	\$0.00	\$0.67	\$0.00	\$0.00	\$28.54	\$41.04

Sign Journeyman Class D	\$25.00	\$1.70	\$0.21	\$0.00	\$1.44	\$0.00	\$0.67	\$0.00	\$0.00	\$29.02	\$41.52
Tech Sign Fabrication/ Erector Class A	\$19.67	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$22.11	\$31.95
Tech Sign Fabrication/ Erector Class B	\$19.67	\$1.70	\$0.21	\$0.00	\$0.38	\$0.00	\$0.53	\$0.00	\$0.00	\$22.49	\$32.33
Tech Sign Fabrication/ Erector Class C	\$19.67	\$1.70	\$0.21	\$0.00	\$0.76	\$0.00	\$0.53	\$0.00	\$0.00	\$22.87	\$32.71
Tech Sign Fabrication/ Erector Class D	\$19.67	\$1.70	\$0.21	\$0.00	\$1.13	\$0.00	\$0.53	\$0.00	\$0.00	\$23.24	\$33.08

Special Calculation Note : Other is for paid holidays.

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, AUGLAIZE, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GREENE, HAMILTON, HANCOCK, HARDIN, HENRY, HIGHLAND, HOLMES, HURON, JACKSON, KNOX, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MERCER, MIAMI, MONTGOMERY, MORROW, MUSKINGUM, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, WARREN, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Class A: less than 1 year.

Class B: 1-3 years.

Class C; 3-10 years.

Class D: More than 10 years.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Painter Local 639

Change # : LCNO1-2015fbLoc639

Craft : Painter Effective Date : 06/10/2015 Last Posted : 06/10/2015

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Metal Finisher/Helpers											
Top Helper Class A	\$19.09	\$3.65	\$0.00	\$0.00	\$0.66	\$0.00	\$0.00	\$0.00	\$0.00	\$23.40	\$32.94
Top Helper Class B	\$19.09	\$3.65	\$0.65	\$0.00	\$1.03	\$0.00	\$0.37	\$0.00	\$0.00	\$24.79	\$34.33
Top Helper Class C	\$19.09	\$3.65	\$1.00	\$0.00	\$1.76	\$0.00	\$0.37	\$0.00	\$0.00	\$25.87	\$35.41
Helper Class A	\$14.69	\$3.65	\$0.00	\$0.00	\$0.51	\$0.00	\$0.00	\$0.00	\$0.00	\$18.85	\$26.19
Helper Class B	\$14.69	\$3.65	\$0.65	\$0.00	\$0.79	\$0.00	\$0.28	\$0.00	\$0.00	\$20.06	\$27.40
Helper Class C	\$14.69	\$3.65	\$1.00	\$0.00	\$1.64	\$0.00	\$0.28	\$0.00	\$0.00	\$21.26	\$28.60
New Hire 90 Days	\$11.00	\$3.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.65	\$20.15

Special Calculation Note : Other is Sick and Personal Time

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND,
 ASHTABULA, ATHENS, AUGLAIZE,
 BELMONT, BROWN, BUTLER,
 CARROLL, CHAMPAIGN, CLARK,
 CLERMONT, CLINTON, COLUMBIANA,
 COSHOCTON, CRAWFORD,
 CUYAHOGA, DARKE, DEFIANCE,
 DELAWARE, ERIE, FAIRFIELD,
 FAYETTE, FRANKLIN, FULTON,
 GALLIA, GEAUGA, GREENE,
 GUERNSEY, HAMILTON, HANCOCK,

HARDIN, HARRISON, HENRY,
HIGHLAND, HOCKING, HOLMES,
HURON, JACKSON, JEFFERSON, KNOX,
LAKE, LAWRENCE, LICKING, LOGAN,
LORAIN, LUCAS, MADISON,
MAHONING, MARION, MEDINA,
MEIGS, MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM,
RICHLAND, ROSS, SANDUSKY,
SCIOTO, SENECA, SHELBY, STARK,
SUMMIT, TRUMBULL, TUSCARAWAS,
UNION, VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE, WILLIAMS,
WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Top Helper: Shall perform the responsibilities of a Helper and be responsible for the setup, break down, safety and quality of the company's product.

Helper : Shall be responsible for performing tasks in refinishing, compliance with safety procedures, setting up and breaking down job sites, scaffolding and swing stages and preparing surfaces for refinishing including but not limited to, masking and stripping and cleaning, oxidizing, polishing and scratch removal on various surfaces

Class A Workers: Less than 1 Year of Service.

Class B Workers: More than 1 and less than 8 Years of Service.

Class C Workers: More than 8 Years of Service.

Metal Polisher Scope of Work: Polishing, buffing, stripping, coloring, lacquering, spraying, cleaning and maintenance of ornamental and architectural metals, iron, bronze, nickel, aluminum and stainless steel and in metal specialty work, various stone finishes, stone specialty work and any other work pertaining to the finishing of metal, stones, woods, and any window washing/cleaning done in conjunction with this work, using chemicals, solvents, coatings and hand applied lacquer thinner, removing scratches from mirror finished metals, burnishing of bronze, statuary finishes on exterior and interior surfaces and the use of all tools required to perform such work, including but not limited to polishes, spray equipment and scaffolding.

Swing State Rate: All work on scaffold 4 sections or higher, including any boom lifts and swing stage scaffolds including the rigging and derigging of hanging/suspended swing stage systems and rappelling/bolson chair work, ADD \$1.50 per hour.

Prevailing Wage Rate Skilled Crafts

Name of Union: Plasterer Local 132 (Dayton)

Change # : LCN01-2023ibLoc132

Craft : Plaster Effective Date : 05/03/2023 Last Posted : 05/03/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Plasterer	\$27.39		\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.06	\$0.00	\$0.00	\$46.75	\$60.45
Apprentice	Percent											
1st 6 months	70.00	\$19.17	\$7.80	\$0.00	\$0.70	\$0.00	\$3.45	\$0.06	\$0.00	\$0.00	\$31.18	\$40.77
2nd 6 months	74.00	\$20.27	\$7.80	\$0.00	\$0.70	\$0.00	\$3.45	\$0.06	\$0.00	\$0.00	\$32.28	\$42.41
3rd 6 months	78.00	\$21.36	\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.00	\$0.00	\$0.00	\$40.66	\$51.35
4th 6 months	82.00	\$22.46	\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.00	\$0.00	\$0.00	\$41.76	\$52.99
5th 6 months	86.00	\$23.56	\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.00	\$0.00	\$0.00	\$42.86	\$54.63
6th 6 months	90.00	\$24.65	\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.00	\$0.00	\$0.00	\$43.95	\$56.28
7th 6 months	94.00	\$25.75	\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.00	\$0.00	\$0.00	\$45.05	\$57.92
8th 6 months	98.00	\$26.84	\$7.80	\$7.35	\$0.70	\$0.00	\$3.45	\$0.00	\$0.00	\$0.00	\$46.14	\$59.56

Special Calculation Note : *Other is International Training.

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, CLINTON,
DARKE, GREENE, MIAMI,
MONTGOMERY, PREBLE, SHELBY

Special Jurisdictional Note :

Details :

OTHER IS:Industry Fund

Prevailing Wage Rate Skilled Crafts

Name of Union: **Plumber Pipefitter Local 162**

Change # : LCN01-2023ibLoc162

Craft : Plumber/Pipefitter Effective Date : 08/30/2023 Last Posted : 08/30/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Plumber Pipefitter	\$40.00		\$11.75	\$10.87	\$0.90	\$0.00	\$3.35	\$0.00	\$0.00	\$0.00	\$66.87	\$86.87
Apprentice Indentured AFTER 6/1/2002												
	Percent											
1st Year	51.00	\$20.40	\$11.75	\$3.26	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.91	\$46.11
2nd Year	55.90	\$22.36	\$11.75	\$5.69	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.34	\$51.52
3rd Year	60.80	\$24.32	\$11.75	\$8.53	\$0.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.18	\$57.34
4th Year	72.45	\$28.98	\$11.75	\$10.63	\$0.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$52.02	\$66.51
5th Year	80.40	\$32.16	\$11.75	\$10.87	\$0.74	\$0.00	\$3.35	\$0.00	\$0.00	\$0.00	\$58.87	\$74.95

Special Calculation Note :

Ratio :

- 1 Journeyman to 1 Apprentice
- 2 - 4 Journeymen to 2 Apprentices
- 5 - 7 Journeymen to 3 Apprentices
- 8 - 10 Journeymen to 4 Apprentices

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, CLARK, CLINTON,
DARKE, FAYETTE, GREENE, MIAMI,
MONTGOMERY, PREBLE

Special Jurisdictional Note :

Details :

Wage rate covers: all plumbing, pipefitting, heating, refrigeration and air conditioning work.

Prevailing Wage Rate Skilled Crafts

Name of Union: Roofer Local 75

Change # : LCN01-2022sksLoc75

Craft : Roofer Effective Date : 08/26/2022 Last Posted : 08/26/2022

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate	
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)			
Classification												
Roofer	\$25.63	\$8.73	\$8.78	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$45.70	\$58.51	
Slate and Tile	\$25.85	\$8.73	\$8.78	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$45.92	\$58.85	
Apprentice	Percent											
1st term 1000 hrs	66.32	\$17.00	\$2.50	\$0.50	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$22.56	\$31.06
2nd term 1000 hrs	70.22	\$18.00	\$8.58	\$1.32	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$30.46	\$39.46
3rd term 1000 hrs	74.12	\$19.00	\$8.58	\$2.20	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$32.34	\$41.84
4th term 1000 hrs	78.02	\$20.00	\$8.58	\$3.07	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$34.21	\$44.20
5th term 1000 hrs	81.95	\$21.00	\$8.58	\$3.95	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$36.09	\$46.60
Tradesman	79.00	\$20.25	\$5.00	\$1.58	\$0.76	\$0.00	\$0.00	\$1.80	\$0.00	\$0.00	\$29.39	\$39.51

Special Calculation Note : Other is for National Roofing Industry Pension Plan.

Ratio :

3 Journeymen to 2 Apprentices

Jurisdiction (* denotes special jurisdictional note) :

ALLEN, AUGLAIZE, CLARK, CLINTON, DARKE, GREENE, MERCER, MIAMI, MONTGOMERY, PREBLE, SHELBY, VAN WERT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Sheet Metal Local 24 (Dayton)

Change # : LCN01-2023ibLoc24(Day)

Craft : Sheet Metal Worker Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Sheet Metal Worker	\$31.23		\$9.64	\$15.10	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$57.02	\$72.63
Apprentice	Percent											
Apprentice												
5th Year B	85.00	\$26.55	\$9.40	\$11.47	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.47	\$61.74
5th Year A	80.00	\$24.98	\$9.31	\$10.28	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.62	\$58.12
4th Year B	75.00	\$23.42	\$9.23	\$9.07	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.77	\$54.48
4th Year A	70.00	\$21.86	\$9.15	\$7.85	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.91	\$50.84
3rd year B	65.00	\$20.30	\$9.06	\$6.65	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.06	\$47.21
3rd Year A	60.00	\$18.74	\$8.98	\$5.44	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.21	\$43.58
2 Year B	57.52	\$17.96	\$8.94	\$4.84	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.79	\$41.78
2 Year A	55.00	\$17.18	\$8.90	\$4.23	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.36	\$39.94
Probationary 1 Year	52.50	\$16.40	\$8.86	\$3.63	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.94	\$38.13

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

1 Journeyman to 1 Apprentice then,
1 Apprentice for every 2 Journeymen thereafter

Jurisdiction (* denotes special jurisdictional note) :

ALLEN, AUGLAIZE, BUTLER,
CHAMPAIGN, CLARK, CLINTON,
DARKE, GREENE, HARDIN, LOGAN,
MERCER, MIAMI, MONTGOMERY,
PREBLE, SHELBY, VAN WERT, WARREN,
WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Sprinkler Fitter Local 669

Change # : LCN01-2022sksLoc669

Craft : Sprinkler Fitter Effective Date : 04/06/2022 Last Posted : 04/06/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Sprinkler Fitter	\$43.75		\$10.99	\$7.10	\$0.52	\$0.00	\$5.12	\$0.00	\$0.00	\$0.00	\$67.48	\$89.35
Apprentice Indentured after April 1, 2013	Percent											
CLASS 1	45.00	\$19.69	\$7.85	\$0.00	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.06	\$37.90
CLASS 2	50.02	\$21.88	\$7.85	\$0.00	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.25	\$41.20
CLASS 3	54.43	\$23.81	\$10.99	\$7.10	\$0.52	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$43.57	\$55.48
CLASS 4	59.43	\$26.00	\$10.99	\$7.10	\$0.52	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$45.76	\$58.76
CLASS 5	64.43	\$28.19	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$48.20	\$62.29
CLASS 6	69.43	\$30.38	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$50.39	\$65.57
CLASS 7	74.43	\$32.56	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$52.57	\$68.85
CLASS 8	79.42	\$34.75	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$54.76	\$72.13
CLASS 9	84.43	\$36.94	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$56.95	\$75.42
CLASS 10	89.44	\$39.13	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$59.14	\$78.70

Special Calculation Note :

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND,
ASHTABULA, ATHENS, AUGLAIZE,
BELMONT, BROWN, BUTLER,
CARROLL, CHAMPAIGN, CLARK,
CLERMONT, CLINTON, COLUMBIANA,
COSHOCOTON, CRAWFORD, DARKE,
DEFIANCE, DELAWARE, ERIE,
FAIRFIELD, FAYETTE, FRANKLIN,

FULTON, GALLIA, GREENE, GUERNSEY,
HAMILTON, HANCOCK, HARDIN,
HARRISON, HENRY, HIGHLAND,
HOCKING, HOLMES, HURON, JACKSON,
JEFFERSON, KNOX, LAWRENCE,
LICKING, LOGAN, LUCAS, MADISON,
MAHONING, MARION, MEDINA, MEIGS,
MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM,
RICHLAND, ROSS, SANDUSKY, SCIOTO,
SENECA, SHELBY, STARK, SUMMIT,
TRUMBULL, TUSCARAWAS, UNION,
VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE, WILLIAMS,
WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Sprinkler Fitter work shall consist of the installation, dismantling, maintenance, repairs, adjustments, and corrections of all fire protection and fire control systems including the unloading, handling by hand, power equipment and installation of all piping or tubing, appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes and hose connections to sprinkler systems used in connection with sprinkler and alarm systems. Also all tanks and pumps connected thereto, also included shall be CO-2 and Cardox Systems, Dry Chemical Systems, Foam Systems and all other fire protection systems.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 1
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Truck Driver CLASS 1 4 wheel service, dump, and batch trucks; drivers on tandems; truck sweepers (not to include power sweepers & scrubbers)	\$31.24		\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.39	\$64.01
Apprentice	Percent											
First 6 months	80.00	\$24.99	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.14	\$54.64
7-12 months	85.00	\$26.55	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.70	\$56.98
13-18 months	90.00	\$28.12	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.27	\$59.32
19-24 months	95.00	\$29.68	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.83	\$61.67
25-30 months	100.00	\$31.24	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.39	\$64.01

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND,
ASHTABULA, ATHENS, AUGLAIZE,
BELMONT, BROWN, BUTLER,
CARROLL, CHAMPAIGN, CLARK,
CLERMONT, CLINTON, COLUMBIANA,
COSHOCOTON, CRAWFORD, DARKE,
DEFIANCE, DELAWARE, ERIE,
FAIRFIELD, FAYETTE, FRANKLIN,
FULTON, GALLIA, GREENE, GUERNSEY,
HAMILTON, HANCOCK, HARDIN,
HARRISON, HENRY, HIGHLAND,
HOCKING, HOLMES, HURON, JACKSON,
JEFFERSON, KNOX, LAWRENCE,
LICKING, LOGAN, LORAIN, LUCAS,
MADISON, MAHONING, MARION,
MEDINA, MEIGS, MERCER, MIAMI,
MONROE, MONTGOMERY, MORGAN,
MORROW, MUSKINGUM, NOBLE,
OTTAWA, PAULDING, PERRY,
PICKAWAY, PIKE, PORTAGE, PREBLE,
PUTNAM, RICHLAND, ROSS,
SANDUSKY, SCIOTO, SENECA, SHELBY,
STARK, SUMMIT, TRUMBULL,
TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON,
WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

**Name of Union: Truck Driver Bldg & HevHwy Class 2
Locals 20,40,92,92b,100,175,284,438,377,637,908,957**

Change # : LCN01-2023ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Truck Driver CLASS 2 Tractor Trailer-Semi Tractor Trucks; Pole Trailers; Ready Mix Trucks; Fuel Trucks; 5 Axle & Over; Belly Dumps; Low boys - Heavy duty Equipment(irrespective of load carried) when used exclusively for transportation; Truck Mechanics (when needed)	\$31.66		\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.81	\$64.64
Apprentice	Percent											
First 6 months	80.00	\$25.33	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.48	\$55.14
7-12 months	85.00	\$26.91	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.06	\$57.52
13-18 months	90.00	\$28.49	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.64	\$59.89
19-24 months	95.00	\$30.08	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.23	\$62.27
25-30 months	100.00	\$31.66	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.81	\$64.64

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY,

HIGHLAND, HOCKING, HOLMES, HURON,
JACKSON, JEFFERSON, KNOX, LAWRENCE,
LICKING, LOGAN, LORAIN, LUCAS,
MADISON, MAHONING, MARION, MEDINA,
MEIGS, MERCER, MIAMI, MONROE,
MONTGOMERY, MORGAN, MORROW,
MUSKINGUM, NOBLE, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE,
PORTAGE, PREBLE, PUTNAM, RICHLAND,
ROSS, SANDUSKY, SCIOTO, SENECA,
SHELBY, STARK, SUMMIT, TRUMBULL,
TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON, WAYNE,
WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate

Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 3
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy3

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Truck Driver CLASS 3 Articulated Dump Trucks; Ridge-Frame Rock Trucks; Distributor Trucks)	\$32.66		\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.81	\$66.14
Apprentice	Percent											
First 6 months	80.00	\$26.13	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.28	\$56.34
7-12 months	85.00	\$27.76	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.91	\$58.79
13-18 months	90.00	\$29.39	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.54	\$61.24
19-24 months	95.00	\$31.03	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.18	\$63.69
25-30 months	100.00	\$32.66	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.81	\$66.14

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND,

ASHTABULA, ATHENS, AUGLAIZE,
BELMONT, BROWN, BUTLER,
CARROLL, CHAMPAIGN, CLARK,
CLERMONT, CLINTON, COLUMBIANA,
COSHOCTON, CRAWFORD, DARKE,
DEFIANCE, DELAWARE, ERIE,
FAIRFIELD, FAYETTE, FRANKLIN,
FULTON, GALLIA, GREENE, GUERNSEY,
HAMILTON, HANCOCK, HARDIN,
HARRISON, HENRY, HIGHLAND,
HOCKING, HOLMES, HURON, JACKSON,
JEFFERSON, KNOX, LAWRENCE,
LICKING, LOGAN, LORAIN, LUCAS,
MADISON, MAHONING, MARION,
MEDINA, MEIGS, MERCER, MIAMI,
MONROE, MONTGOMERY, MORGAN,
MORROW, MUSKINGUM, NOBLE,
OTTAWA, PAULDING, PERRY,
PICKAWAY, PIKE, PORTAGE, PREBLE,
PUTNAM, RICHLAND, ROSS,
SANDUSKY, SCIOTO, SENECA, SHELBY,
STARK, SUMMIT, TRUMBULL,
TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON,
WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

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CONTRACT

FORM OF CONTRACT

THIS AGREEMENT, entered into this ____ day of _____, 2024, by
and between the *City of Moraine, Ohio*, hereinafter called the "Owner" and
_____ hereinafter called the "Contractor."

WITNESSETH: That the said Contractor has agreed and by these presents does agree with the said Owner for the consideration hereinafter named, to furnish all the materials and do all of the work of whatever kind necessary to complete, in a good, substantial, and workmanlike manner, ready for use, and in strict accordance with the specifications on file in the office of the Maintenance Superintendent, and subject to all the terms and conditions of said specifications, and to the approval of said Superintendent, for the provision of services for the

ROOF REPLACEMENTS 2024 – CITY OF MORAINE CONTRACT FOR CITY OF MORAINE

in accordance with the Contract Documents dated April 2024, and Addenda thereto numbered and dated _____, for

The sum of _____ **thousand Dollars, (\$.000.00)** for Roofing Project.

The Owner agrees to pay, and the Contractor agrees to accept as full compensation, satisfaction, and discharge for all work done and material furnished, and also for all costs and expenses incurred and losses or damages sustained by reason of the action of the elements or because of the nature of the work or because of any unforeseen obstruction or difficulty encountered in the prosecution of the work, herein as specified and also for well and faithful completion of the work, and the whole thereof, in accordance with the terms, conditions and provisions of this contract and the instructions, orders, and directions of the Superintendent hereunder, and also for maintaining the work in good condition, except extra work which shall be paid for as provided in the General Conditions and except as in this Contract otherwise specifically provided, a sum of money equal to the amount of the actual work furnished, as determined by the Superintendent, as set forth in the Proposal attached hereto.

WITNESSETH, that in consideration of the sums of money herein specified to be paid by the

CONTRACTOR:

OWNER:

(name of company)

City of Moraine _____

By: _____

By: _____

(title)

(title)

Contract approved as to form _____

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TECHNICAL SPECIFICATIONS

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SECTION 01 00 00 - GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF THE PROJECT DOCUMENTS

- A. The work covered by these specifications consists of furnishing all labor, equipment and materials necessary in connection with a Roof Replacement Project at Payne Recreation Center, Gerhardt Civic Center, and the Maintenance Shop for the City of Moraine. Work includes items as shown, subject to the terms and condition of the contract, specifications and the drawings as listed.

1.2 CONTRACT DESCRIPTION

- A. Project Identification: ROOF REPLACEMENTS 2024
- B. Project Location: Payne Recreation Center
3800 Main Street
Moraine, OH 45439

Gerhardt Civic Center
3050 Kreitzer Road
Moraine, OH 45439

Maintenance Shop
3401 E. Venetian Way
Moraine, OH 45439
- C. Owner: City of Moraine
4200 Dryden Road
Moraine, OH 45439
- D. Architect: RDA Group Architects, LLC
7662 Paragon Road
Dayton, OH 45459
937.610.3440 phone
- E. Perform Work of Contract under a stipulated sum contract with Owner in accordance with Conditions of Contract.

1.3 CONTRACTOR'S USE OF PREMISES

- A. Each Building / Facility will remain in operation throughout the duration of the construction project.
- B. Coordinate work to allow continued Owner Occupancy of the building. Coordinate any requirements that would prevent the building from use.
- C. Coordinate all applicable life safety aspects of the project to ensure the existing building is safe for continued use.
- D. **Work Schedules:**
1. *Work Hours are 7:00 AM to 6:00 PM. Saturday and Sunday work is permitted if approved by Owner.*
- E. Weekend and overtime work may be required by the Owner at no additional cost if the Contractor fails to meet milestone dates as prescribed in the contract. Liquidated damages will be assessed if the Contractor does not meet project completion date. Contractor must notify Owner in advance if weekend work will be accomplished.

- F. Coordinate schedule / activities so as not to inconvenience the Owner unnecessarily. Coordinate deliveries around building events and schedules to allow safe ingress and egress of pedestrian and vehicular traffic around the building.
- G. Daily work wrap up: Plan the work and provide sufficient manpower to ensure that at the end of each work day that the roof system is left in a watertight condition. Provide all necessary night seals, tie-ins, supplemental efforts, etc. as required to maintain the building watertight.
- H. Construct temporary fencing around the project staging area. Coordinate with Owner on location and size of staging areas.

1.4 CONTRACT PERIOD

- A. Date of Commencement: approximately July 1, 2024.
 - 1. A Notice to Proceed will be issued establishing the agreed upon construction start date.
- B. Date of Substantial Completion: 120 calendar days from the Date of Commencement
- C. A contract will be issued in early June 2024 after approval by City Council.
 - 1. The Contractor will be responsible to execute the project to allow shop drawings and product submittals to be prepared as quickly as possible such that the materials can be ordered with sufficient lead time to permit the work to be executed as scheduled prior to the date of substantial completion.
- D. Coordinate schedule / activities so as not to inconvenience the Owner unnecessarily.

1.5 PROJECT ALLOWANCES *[included in the contract - see unit costs for associated and other work items]*

- A. Payne Recreation Center:
 - 1. Contingency Allowance: Include a \$10,000 [ten thousand dollars] cash allowance in the bid amount for use in addressing field discoveries.
 - 2. Remove Wet, Damaged or Deteriorated Insulation to the Deck: Replace with new insulation to match original being removed. 2,000 Square Feet [square footage shall be anticipated and bid as multiple, sectional replacement areas]
 - 3. Rust Inhibitive Paint: Prep existing metal deck and apply rust inhibitive primer to the metal deck prior to the installation of new insulation [at areas of total system removal] 500 Square Feet [square footage shall be anticipated and bid as multiple, sectional replacement areas]
- B. Gerhardt Civic Center:
 - 1. Contingency Allowance: Include a \$10,000 [ten thousand dollars] cash allowance in the bid amount for use in addressing field discoveries.
 - 2. Remove Wet, Damaged or Deteriorated Lightweight Fill to the original built up roof system: Replace with new lightweight fill or tapered polyiso insulation to match original roof thickness being removed. 500 Square Feet [square footage shall be anticipated and bid as multiple, sectional replacement areas]
- C. Maintenance Shop:
 - 1. Contingency Allowance: Include a \$5,000 [five thousand dollars] cash allowance in the bid amount for use in addressing field discoveries.
 - 2. Remove damaged or deteriorated / rusted metal deck: Remove existing, install new 1 1/2" metal deck to match existing, overlay if possible by field conditions. Secure to structure / adjacent decking to remain. 400 Square Feet [square footage shall be anticipated and bid as multiple, sectional replacement areas]
 - 3. Remove damaged or deteriorated / rotted wood plank deck: Remove existing, install new tongue and groove wood plank deck in like kind. 100 Square Feet [square footage shall be anticipated and bid as multiple, sectional replacement areas]

1.6 INSTRUCTIONS/RESPONSIBILITIES OF THE CONTRACTOR

- A. Protect all finishes and equipment scheduled to remain.
- B. Commence and complete work as noted in the contract.
- C. Furnish labor, materials, equipment, and management required to complete the project.
- D. Furnish all required logistics required to accomplish the work – including lifts, scaffolding, ladders, trash chutes, safety equipment, etc.
 - 1. Coordinate location of all Contractor staging areas and layout areas, etc. with the Owner prior to the start of the project. Receive approval from Owner prior to setting up staging.
 - 2. Protect all existing pavement, turf, etc. from lifts, lulls, etc. which may be utilized on the project.
- E. Visit the site to become thoroughly familiar with all working conditions, check and verify all dimensions, and site conditions. Any dimensions given or referred to in the specification or drawing are to be used purely as approximate and not as a basis for exact amounts for bidding. Promptly advise RDA of any discrepancies, errors with the specifications and drawings before bidding the work.
- F. Provide a valid Certificate of Insurance, follow all Workman's Compensation requirements and regulations, and conduct all work according to OSHA recognized safe work practices.
- G. Provide all bonds, payment schedule, insurance as noted in the contract documents.
- H. The plans and specifications are intended to depict the general scope, layout and quality of workmanship required, they are not intended to show or describe in detail every item necessary for the proper installation of the work.
- I. Take special care not to allow dust and debris to fall onto any equipment, material, personnel, or any room / space below the deck.
- J. Provide Safety Data Sheets [SDS] on all products used.
 - 1. Submit directly to Owner. RDA does not review nor approve SDS.
- K. The term 'Architect' as referenced in these contract documents is RDA Group Architects.
- L. The term 'Owner' as referenced in this specification is City of Moraine.

1.7 WORK BY THE OWNER

- A. N/A

1.8 APPLICABLE REFERENCES, CODES, AND PERMITS

- A. References will be found in each section that applies to that section. Comply with Ohio Building Code requirements as they relate to the work.
- B. Procure at his own expense all necessary permits from municipal or other agencies and give all notices required. Fines levied due to non-compliance shall be paid by the Contractor.

1.9 WAGES

- A. This project is subject to prevailing wage and/or reporting requirements.
- B. Refer to the Prevailing Wage Rates included with the Bid documents. Certified Payroll Reports will be required.
- C. Employee interviews to confirm compliance with the prevailing wage requirements may be accomplished at any time by the Owner. Contractor shall not obstruct or otherwise prevent employee interviews.

1.10 TAXES

- A. Any taxes paid by the Contractor will be considered their expense for which no additional compensation will be made by the Owner. [TAX EXEMPT PROJECT]. Tax Exempt forms can be provided upon request.

1.11 SMOKING

- A. Smoking is not permitted on the property – inside or outside of any facility.
- B. Contractor or crewmembers found to be smoking will be subject to a \$500 fine per occurrence. Any habitual offenders will be dismissed from the project site.

1.12 CONTRACTOR / GENERAL REQUIREMENTS

- A. Visit the project sites to verify general and pertinent conditions and take measurements necessary for bidding purposes.
- B. Failure to show or mention petty details shall not be warranted for the omission of anything necessary for the proper completion of the work.
- C. Do not take advantage of any clerical errors, omissions, contradictions, or conflicts that may develop in plans, specifications, or details. Report such errors, ambiguities and discrepancies to RDA immediately for clarification, revision, or correction prior to the submission of bids. If no notification is given, it shall be assumed that all specifications and conditions will be met.
- D. Remain in compliance with all OSHA STANDARD 1926 – REGULATIONS FOR CONSTRUCTION at all times during project. Comply with all applicable Safe Work Practices.
- E. Contract Period
 - 1. If an extension of time is necessary, a request in writing must be submitted to the Owner at least [14] days prior to the contract completion date.
 - 2. Notify the Architect, in writing, upon determination of any delay in material delivery.
- F. Security: Contractor's Liability for Vandalism
 - 1. Contractor shall be responsible at the Contractor's cost and expense, for the securing and protection of the project which is under the control of the Contractor, and for the repair and replacement of the work until that portion of the work is accepted as completed by the Owner. The Contractor shall take the measures necessary to provide such security.
- G. Qualifying Contractors and Sub-Contractors: The Owner may require the Contractor / Sub-Contractor to provide references of similar projects, past performance, financial disclosures, etc. in the interest of selection of the lowest and best bidder for the project.
 - 1. The Contractor is responsible for all work performed by Sub-Contractors.
 - 2. The Owner has the final authority to request a particular sub-contract not be engaged in the project. If this occurs, The Owner and Contractor shall determine if there is an impact to the Contract amount, and negotiate, if necessary, to an adjustment in the Contract amount.
 - a. No change to the Contract amount will be permitted if there is a change to the sub-contractor due to them utilizing alternate manufacturers or products that were not approved substitution requests.

1.13 SPECIFICATION CONVENTIONS

- A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

1.14 CHANGE PROCEDURES

- A. Stipulated Sum / Price Change Order: Based on Proposal Request and Contractor's fixed price quotation.

- B. Unit Price Change Order: For pre-determined unit prices and quantities, Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under Construction Change Directive. Changes in Contract Sum / Price or Contract Time will be computed as specified for Time and Material Change Order.
- C. RDA and/or Owner may issue a Proposal Request including a detailed description of proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit estimate within 7 days.
- D. Change Order Forms: AIA G701.
- E. Correlation Of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.
- F. RDA will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on Architect's approved forms.
- G. Important: All change orders must be fully executed prior to beginning any work. Failure to comply will result in contractor request being denied and completed at no cost to the Owner.
- H. **Maximum mark up for overhead and profit on change orders shall be 15%.**

1.15 APPLICATIONS FOR PAYMENT

- A. Refer to Section 01 29 00.

1.16 UNIT PRICES *[some unit price items below may not be required unless change in scope occurs]*

- A. Contractor is responsible to document unit price quantities. RDA and/or Owner will confirm quantities as required. Provide and assist in taking of measurements. Contractor may not be paid for unit cost work without documentation of the work accomplished.
- B. Unit Price Schedule:
 - 1. UP-1: Remove / Replace wet / damaged insulation - +/- 2 3/4" thickness. [per SF]
 - 2. UP-2: Apply rust inhibitive primer to existing metal deck [per SF]
 - 3. UP-3: Remove deteriorated / wet lightweight fill with new lightweight fill or tapered insulation of matching thickness [per SF]
 - 4. UP-4: Remove / Replace / Overlay 1 1/2" metal deck [per SF]
 - 5. UP-5: Remove / Replace wood plank deck [per SF]
 - 6. UP-6: Install roof drain insert.
 - 7. UP-7: Remove / Replace 2x6 wood nailers [per LF]
 - 8. UP-8: Remove / Replace 2x8 wood nailers [per LF]
- C. Unit Price includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services, and incidentals; erection, application or installation of item of the Work; overhead and profit.
- D. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Architect multiplied by unit price for Work incorporated in or made necessary by the Work.

1.17 ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option.
- B. Coordinate related Work and modify surrounding Work as required.

- C. Schedule of Alternates:
 - 1. Add Alternate #1: Remove existing, install new skylight system at Gebhardt Civic Center.
 - 2. Add Alternate #2: Install new soffit system at Gebhardt Civic Center.

1.18 COORDINATION

- A. Coordinate scheduling, submittals, and Work of various sections of specifications to ensure efficient and orderly sequence of installation of interdependent construction elements.

1.19 QUALITY CONTROL

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

1.20 TOLERANCES

- A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply fully with manufacturer's tolerances.

1.21 REFERENCES

- A. Conform to reference standards by date of issue current as of date of Contract Documents.
- B. When specified reference standard conflicts with Contract Documents, request clarification from Architect before proceeding.

1.22 LABELING

- A. Attach label from agency approved by authority having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
- B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label.
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.

1.23 PRECONSTRUCTION MEETING

- A. Owner/Architect will schedule preconstruction meeting after Notice of Award for affected parties.
- B. Owner, Architect, Contractor Project Manager, and Foreman shall be in attendance.
- C. Agenda:
 - 1. Scheduling of construction events, set-up, storage and etc.

2. Project personnel with contact information.
3. Sequence of construction, starting points, events and required resources.
4. Subcontractors list with contact information.
5. Temporary utilities.
6. Inspection and acceptance of existing conditions – roof drains, units, etc.
7. Project Safety
8. Owner's requirements.

1.24 PROGRESS MEETINGS

- A. RDA will be providing periodic observation of the work. RDA will issue field reports at each site visit. RDA will be observing the work for compliance with the specifications and will not be responsible for the ways, means and methods of constructing the project or managing the day to day operations.
- B. Schedule and administer meetings throughout progress of the Work as applicable to the work at maximum bi-weekly intervals.
- C. Agenda:
 1. Review of work progress and Owner's Requirements.
 2. Field Observations of the completed work.
 3. Identification of any problems and associated solutions.
 4. Proposed changes.
 5. Administrative issues – payment applications, change orders, etc.

1.25 CONTRACT ADMINISTRATION

- A. RDA is providing contract administration services for this project to the Owner. Contractor and Owner are responsible to coordinate the proposed work, schedules, installations, permits, inspections, etc. as RDA is not on-site every day.
- B. Contact RDA for clarification should there be questions regarding the interpretation or intent of the documents, field discovery, etc. that would impact or affect the work as proposed. RDA is not be liable for deviations, field changes, and Client / Owner changes during construction.
- C. Field confirm all existing conditions, proposed installations and how they interface to ensure the systems can be installed per the intent of the documents and to meet applicable building and zoning codes, local requirements, Client / Owner requirements, provide a watertight detail, meet aesthetic requirements, etc.
- D. Meet all applicable building and zoning codes requirements whether specifically noted herein or not. Building codes represent the minimum acceptable standard.
- E. Install all products, materials, installations, and the like in accordance with applicable industry standards, applicable manufacturer's details and instructions, in accordance with best practices, and building code provisions. The manufacturer details / requirements are the minimum acceptable standard, RDA drawings may require additional work.

1.26 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching new Work; restore Work with new Products.
- B. Execute cutting, fitting, and patching [including excavation/removal and fill,] to complete Work, and to:
 1. Fit several parts together, to integrate with other Work.
 2. Uncover Work to install or correct ill-timed Work.
 3. Remove and replace defective and non-conforming Work.
 4. Remove samples of installed Work for testing.
 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

- C. Cut masonry and concrete materials using masonry saw or core drill. Restore Work with new Products in accordance with requirements of Contract Documents.
- D. Fit Work tight to adjacent elements. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- E. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. Refinish surfaces to match adjacent finishes.

1.27 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 5 days after date of Owner-Contractor Agreement for Architect review.
- B. Submit revised schedules as appropriate throughout the duration of the project.
- C. Submit implementation plan indicating planned process, sequencing, and order of operations.

1.28 SUBMITTAL REQUIREMENTS

- A. Refer to Section 01 33 00.

1.29 MOCK-UPS

- A. Accomplish mockups as directed by the Owner / RDA.
- B. Accepted mock-ups are representative of quality required for the Work.
- C. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so.

1.30 TEMPORARY UTILITIES

- A. Provide temporary power as needed to facilitate work.
- B. Provide temporary lighting for construction operations as required by conditions.
- C. Provide temporary emergency egress and exit signage as required by conditions and where existing has been temporarily removed to facilitate work.
- D. Coordinate with Owner if work requires temporary disconnect or disabling of building life safety systems.

1.31 TEMPORARY SANITARY FACILITIES

- A. Provide any and all necessary portable toilet facilities at the project site as applicable to the work. Do not use building facilities unless explicitly approved by the Owner.
 - 1. If located on the ground, provide all required protection from vandalism.

1.32 TEMPORARY BARRICADES

- A. Erect temporary barricades as applicable to the work to maintain security at project staging areas.
- B. Provide all applicable signage to limit non-construction personnel from entering the construction area.

1.33 STAGING AREA / MATERIAL STORAGE

- A. Coordinate with Owner on acceptable location of project staging and material storage area.
- B. Owner will make reasonable effort to provide suitable space on the site for the Contractor to set up operations. Moving from this space may be necessary when instructed by the Owner and shall be accomplished without charge to the Owner. Cooperate with Owner to minimize conflict from Owner's operations.

- C. Exterior project staging area if provided shall be enclosed with a minimum of a 6' high chain link fence to the satisfaction of the Owner.

1.34 PARKING

- A. Park Contractor vehicles in areas designated by the Owner.

1.35 PROGRESS CLEANING AND WASTE REMOVAL

- A. Collect and maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition to the satisfaction of the Owner. Clean up shall occur on a daily basis.
- B. Provide dumpsters or trash containers needed for the proper removal of project materials, trash, or debris related to the Work. Keep all work areas and project sites neat and free of trash and clutter at all times. Take all considerations for safety.

1.36 FIRE PREVENTION FACILITIES

- A. Establish fire watch for cutting and welding and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- B. Portable Fire Extinguishers: NFPA 10; 10-pound capacity, 4A-60B: C UL rating.
 - 1. Provide one fire extinguisher at each project site during work operations.
 - 2. Supplement as necessary per the local fire department requirements for construction operations.

1.37 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Protect finished pavement, concrete, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- D. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer and provide all required protection as determined necessary. Any damage caused shall be repaired to like new condition.
- E. Prohibit traffic from landscaped areas.

1.38 POLLUTION AND ENVIRONMENTAL CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- B. Provide dust control, erosion and sediment control, etc. to allow for proper execution of the Work.
- C. Provide protective coverings, etc. as necessary to protect work.

1.39 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove existing utilities, connections, finishes, etc. as applicable to the work. Remove back to the nearest termination, junction box, etc. as applicable to the work. Coordinate with requirements on the drawings.
- B. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion review.
- C. Clean and repair damage caused by installation or use of temporary work.

- D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.40 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of Contract Documents to be utilized for record documents.
- B. Record actual revisions to the Work. Record information concurrent with construction progress.
- C. Specifications: Legibly mark and record at each Product section description of actual Products installed.
- D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.
- E. Submit documents to Owner.

1.41 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean all surfaces exposed to view as impacted from the work.
- C. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.42 CLOSE OUT PROCEDURES

- A. Refer to Section 01 77 00.

1.43 PROJECT RECORD DOCUMENTS

- A. Refer to Section 01 77 00.

1.44 OPERATION AND MAINTENANCE DATA

- A. Refer to Section 01 77 00.

1.45 WARRANTIES

- A. Refer to Section 01 77 00.
- B. Provide manufacturer warranties as outlined in the Contract Documents
- C. Provide notarized copies of warranty documents to the Owner.
 - 1. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.
- D. Submit prior to final Application for Payment.

PART 2 PRODUCTS

2.1 MANUFACTURED PRODUCTS

- A. Where a particular system, product, or material is specified by name it shall be considered a standard and most satisfactory for its particular purpose. Any other product or material considered equal or better in all respects must be approved by the Architect prior to bidding.
- B. All products used on this project shall be new, unless otherwise noted on the drawings or as specified herein.

2.2 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components specifically identified for reuse.

- B. Do not use materials and equipment removed from existing premises, except as specifically identified or allowed by the Contract Documents.
- C. Provide interchangeable components of same manufacturer for components being replaced.

2.3 DELIVERY, HANDLING, STORAGE, AND PROTECTION

- A. Deliver, handle, store, and protect Products in accordance with manufacturer's instructions.
- B. Manage and be responsible for storage and safekeeping of all materials, including company's personal property. All damaged materials shall be removed from the site.
- C. Remove all damaged materials from the site.
- D. Coordinate material delivery to avoid Owner involvement.
- E. Locations of ground level storage and waste dumpster must be approved by the Owner.
- F. Secure all materials [and any rooftop debris / removals] to prevent blow off during weather, wind events, etc.

2.4 PRODUCT OPTIONS

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

2.5 SUBSTITUTIONS

- A. Refer to Section 01 25 00.

2.6 EXTRA MATERIALS

- A. Not Applicable.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. **Beginning new Work means acceptance of existing/job-site conditions.**
- B. Verify utility services are available, of correct characteristics, and in correct location.
- C. Contact utility protection a minimum of 48 hours prior to beginning work to verify location of existing utilities, coordinate requirements as applicable.
 - 1. Contact private utility locating services as required by the conditions. It is the Contractor's responsibility to locate all public and private utilities that may be impacted by the work.

3.2 FIELD VERIFICATION

- A. Prior to ordering materials, Verify the actual dimensions of existing conditions and assume responsibility for workable solutions for all new work. Verification that the new work and items are workable for existing conditions while providing adequate clearances is the responsibility of the Contractor.

3.3 PROTECTION

- A. Accomplish all work in accordance with the provision of Federal, State American Standard Safety Code for Building Construction and OSHA safety requirements.

1. Provide all aspects of project safety, including protective railings and guards, tie-offs, fall protection, and other safety measures as required by OSHA, even if not specified. Fall protection is required.
 2. RDA is not a safety consultant and as such does not direct the means and methods of compliance with safety regulations.
- B. Protect and maintain all building entrances, interior contents, building exterior and grounds.
1. Return all surfaces to their original condition after all work is complete.
- C. In the event of damages of any kind caused by improper protection, replace / repair the damages [including interior or exterior equipment] at no expense to the Owner.
- D. Comply with all regulations of the Local Fire Department and the Owner's requirement regarding storage and handling of flammable materials, etc. Comply with safety provisions of National Fire Code and Fire Department pertaining to all work. Contractor is responsible for damage or fines resulting from failure to comply.

3.4 PREPARATION

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

3.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to the specified requirements.
- B. If, in the opinion of RDA / Owner, it is not practical to remove and replace the Work, RDA / Owner will direct appropriate remedy.
- C. Authority of RDA / Owner to assess defects and identify payment adjustments is final.
- D. Non-Payment for Rejected Products: Payment will not be made for rejected products.

3.6 JOB SUPERINTENDENT/EMPLOYEES

- A. Provide and maintain a qualified foreman on the project at all times when work is being accomplished.
- B. Refrain from fraternization with building occupants.
- C. Furnish the Owner with a list of personnel with phone numbers that will be working on the project and emergency contacts names and numbers that has the authority to handle emergencies on 24 hour/seven days a week.

3.7 ROOF/PROJECT ACCESS

- A. Provide and Maintain access to the roof areas via exterior portable ladder, ladder on man lift, scaffold stair, etc. for the duration of the work. Take all provisions for safety and limiting access for non-construction personnel.
- B. Workers are not to enter into any facility interior spaces unless approved by the Owner.

3.8 SAFETY PROGRAM

- A. Maintain a written safety program for all operations/ work performed on this project. The documents must be at the job site and be made available to the Owner or RDA when requested.
- B. Assume all responsibility for project safety, ways, and means and methods of constructing the project.
- C. The Owner may require special safety requirements to be performed by the Contractor, these requirements will be provided prior to commencement of work.

3.9 REMOVALS AND CLEANUP

- A. Remove and dismantle all items that are required for proper completion of the work as applicable in each section. All debris resulting from the work not designated for reuse becomes the property of the Contractor unless stated otherwise.
- B. Maintain the work area clean of all debris to the satisfaction of the Owner at the completion of each day. This includes all sub-contractor work areas / debris.
- C. Provide dumpsters or trash containers needed for the proper removal of project materials, trash, or debris related to the work. Keep all work areas and project sites neat and free of trash and clutter at all times.
 - 1. No Debris, materials, etc. may be left unprotected on the grounds.
 - 2. All exterior staging / dumpster areas shall be fenced / protected.

3.10 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to permit installation of new work and finishes.
- G. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original or specified condition.
- H. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with neat transition to adjacent finishes.
- I. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- J. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect for review.
- K. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- L. Finish surfaces as specified in individual product sections.

3.11 GENERAL PROJECT REQUIREMENTS

- A. Coordinate equipment delivery and equipment staging with Owner prior to start of project.
- B. Safety is paramount and all personnel on site must wear appropriate personal protection equipment [PPE]. The Contractor is responsible for means and methods to ensure that proper PPE is provided. Failure to comply may result in dismissal from site.
- C. Barricade work area with appropriate construction grade barriers to establish boundaries of work area and assure safety for all workers and general public. All work areas must be properly barricaded from the general public prior to starting any work.
- D. Maintain job sites in an orderly and neat fashion at all times.

- E. Pre-determine work phases with Owner to minimize disruption of business operations.
- F. **IMPORTANT: Failure to show or mention petty details shall not be warranted for the omission of anything necessary for the proper completion of the work.**
- G. **The plans and specifications are intended to depict the general scope, layout and quality of workmanship required. The documents are not an “instruction manual” to execute the work nor are they intended to show or describe in detail every item necessary for the proper installation of the work. The means and methods required to execute the work described is the sole responsibility of the Contractor. The Contractor shall include the ancillary work required, whether explicitly stated or not, for the proper completion of the work as intended. The Contractor is required to meet or exceed building code requirements, applicable industry standards, ASTM standards, and/or manufacturer installation requirements as they relate to the work.**
- H. **The plans and specifications represent a single complete design package indicating the intended scope of the project in its entirety. As such, the project is structured to be awarded to a single Prime Contractor. The documents do not delineate bid packages or assign responsibilities to any subsequent subcontractors, dictate construction sequencing, nor provide coordination between any “trades”. Such activities are the responsibility of the holder of the construction contract. In the event of a discrepancy within the drawings or between the drawings and the specifications, the more stringent requirement represented in the documents shall prevail.**
- I. Contractor shall not take advantage of any clerical errors, omissions, contradictions, or conflicts that may develop in plans, specifications, or details. Such errors, ambiguities and discrepancies shall be reported to the Architect immediately for clarification, revision, or correction prior to the submission of bids. If no notification is given, it shall be assumed that all specifications and conditions will be met.

END OF SECTION

SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 WORK INCLUDES

- A. Includes administration and procedural requirement for Substitutions.
 - 1. Substitutions' for Cause: Changes due to project conditions, such as unavailable of product.
 - 2. Substitutions' for Convenience: Change that may offer advantages to the Owner.

1.2 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for manufacturers not named.
 - 1. RDA / Owner is the decision maker if the proposed "approved equal" is in fact equal and approved. Any decision rendered is final.
 - 2. Any Contractor, Sub-Contractors, or Supplier who makes their own judgement as to "approved equal" and includes within their bid without a formal approval is doing so at their own risk.

1.3 SUBSTITUTIONS PROCEDURES

- A. RDA / Owner will consider requests for Substitutions by the Bidder only [not materials suppliers, etc].
- B. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- C. A request constitutes a representation that the Bidder:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 - 2. Will provide same warranty for Substitution as for specified product.
 - 3. Will coordinate installation and make changes to other Work which may be require for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- D. Substitution Procedure
 - 1. Submit copy of request for Substitution for consideration to Owner no later than 7 days before bid opening date.
 - 2. Submit shop drawings, product data, and applicable certified test results attesting to proposed product equivalence. Burden on proof is on proposer.
 - 3. Owner will notify Contractor in writing of decision to accept or reject request with 5 days of receipt of request or request additional information or documentation for evaluation.
 - 4. Substitution requests shall only be submitted by registered bidder for the project.
- E. Substitutions will not be considered when they are indicated or implied on Submittals, without written request or when acceptance will require revision to the Contract Documents.
- F. If the Substitution will require modifications to the Contract / Bidding Documents, the cost for updating the documents shall be paid by the Contractor making the request.
- G. Substitutions will not be considered after award of the project without justification.

- H. Approved substitutions will be identified by Addenda.
 - 1. Bidders shall not rely upon approvals made in any other manner.

END OF SECTION

SECTION 01 29 00 – PAYMENT PROCEDURES

PART 1 GENERAL

1.1 WORK INCLUDES

- A. Includes administration and procedural requirement for necessary to prepare and process Application for Payment.

1.2 SCHEDULE OF VALUES

- A. Submit the schedule of values at the earliest possible date.
- B. Submit on AIA Form G703 or a form the Owner has requested.
 - 1. Schedule of Values shall be categorized into the major components of the work to allow review of progress by the Owner and RDA.
 - 2. If multiple buildings / major roof areas are included in the project, sub-divide the schedule of values to illustrate costs per roof area.
 - 3. Include individual line items for general conditions, all identified allowances, closeout, warranty.
- C. Submit in duplicate within 5 days after date of Owner-Contractor Agreement.

1.3 APPLICATIONS FOR PAYMENT

General: Each application for payment following the initial Application for Payments shall be consistent for payment with previous applications. Use AIA form G702 and G703 for Application for payment on a form the owner has requested. Refer to Supplemental conditions of the contract.

- A. Use AIA Form G702 and G703 for Application for payment [or as required by Owner]
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Complete every entry, notarize and execute by a person authorized to sign document on behalf of the Contractor. Include amounts for work completed following previous Application for Payment whether or not payment has been received, include amounts of Change Orders issued before last day of construction period covered by application.
 - 1. Stored materials included in application must have supporting documentation that verifies amount required, do not include overhead and profit on stored material.
 - 2. Submit to the Owner's representative/RDA for review and processing. RDA will forward to Owner for payment.
 - a. E-mail submittal is acceptable unless otherwise directed by the Owner. Verify hard copies with Owner if required.
- D. Each Application for Payment following the initial Application for Payment shall be consistent for payment with previous applications.
- E. Payment Period: Monthly. First Pay Application at 30 days into contract period.
- F. Submit updated construction schedule with each Application for Payment as applicable to the Work. Failure to submit the updated construction schedule can delay processing of the Application for Payment.

1.4 RETAINAGE

- A. Refer to Owner Requirements – 8% on first 50% of the contract value unless otherwise noted.

1.5 PREVAILING WAGE / PAYROLL REPORTS

- A. The work of this project is subject to Prevailing Wages, refer to prevailing wage rates included in the bid documents.

- B. Include in the bid amount all applicable prevailing wages.
- C. Provide payroll reports indicating compliance to the Owner on a monthly basis.
 - 1. Application for Payment will not be processed without approved payroll reports submitted to the Owner.

1.6 TAXES

- A. City of Moraine is tax exempt. Tax Exempt Certificates will be provided upon request.
- B. City of Moraine will not compensate the Contractor for any taxes paid on the project.

1.7 SUBMITTAL PROCEDURES

- A. Submit [1] copy of each Application for Payment on AIA Form G702 and G703, in PDF format
 - 1. Pencil copy to RDA for review/acceptance. RDA will review and provide any comments or questions.
 - 2. Submit final payment application in PDF format to RDA for processing.
 - 3. RDA will certify and process the Application for Payment and will forward to Owner for payment.
- B. Submit all required waivers of lien / partial release of lien [including vendors and subcontractors as requested by Owner], payroll reports, etc. as required by the Owner. Failure to submit required paperwork can delay processing of Application for Payment.

1.8 FINAL APPLICATION FOR PAYMENT

- A. Refer to provisions in Section 01 77 00 for Application for Payment at Substantial Completion.

END OF SECTION

SECTION 01 33 00 – SUBMITTALS

PART 1 GENERAL

1.1 WORK INCLUDES

- A. Review of shop drawings and product data by Owner/RDA.

1.2 SUBMITTAL PROCEDURES

- A. Submit product data and shop drawings for all applicable components of the project. Refer to individual sections for additional requirements.
 - 1. Provide a submittal log at the beginning of the project for review by RDA / Owner. Identify proposed submittals by Specification Section.
 - 2. Owner / RDA review of the submittals will be general in nature and does not relieve the Contractor in any way of the responsibility in compliance with the contract requirements, manufacturer requirements, and/or applicable codes.
- B. Accomplish submittals in a digital [PDF format]. Any hard copies received will be scanned and returned electronically. Provide those submittals required to maintain orderly progress of the work and those required for early lead time for manufacturer fabrication.
 - 1. Any hard copies received will be scanned and returned electronically.
 - 2. Provide those submittals required to maintain orderly progress of the work and those required for early lead time for manufacturer fabrication.
 - 3. Mark each component to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this project. Non-identified submittals will be rejected.
- C. Provide Submittal form / cover sheet to identify Project, Contractor, subcontractor or supplier; and pertinent Contract Document references.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
- E. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of completed Work.
- F. Revise and resubmit submittals as required; identify changes made since previous submittal.
- G. Accomplish submittals at the beginning of the project to allow the proper ordering of materials for the project.
 - 1. Failure by the Contractor to provide submittals in a timely fashion does not change the project start date nor contract period.
- H. Any materials on the job site that have not been reviewed as part of the submittal process are subject to rejection / removal from the job-site. Any work undertaken without review of the submittal data is at the Contractor's risk and subject to rejection or replacement at no cost to the Owner if submittals are not in conformance with the project documents.
- I. Allow 7 days for review of submittal items.
- J. Allow space on submittals for Contractor and Architect review stamps.
- K. When revised for resubmission, identify changes made since previous submission.
- L. Distribute copies of reviewed submittals as appropriate (electronically as appropriate). Instruct parties to promptly report inability to comply with requirements.
- M. All submittals shall be completed within the first 30 days of the project.

1.3 SUBMITTALS/PRODUCT DATA / SHOP DRAWINGS

General: Submitted to Owner/RDA for review for limited purpose of checking for conformance with information given information expressed in the Contract Documents.

- A. Product Data/Shop Drawings [roof related]:
 - 1. Roof Products: Data Sheets - Membrane, flashing components, insulation, cover board, fasteners and other related components accessories.
 - 2. Layout: Insulation/cover board fastening patterns and frequency, tapered, tapered saddle layout.
 - 3. Sheet Metal Items: Specialty items [coping, gutters and downspouts].
 - 4. Any Additional Details to comply with manufacturer's details or changes to the details as shown on the drawings.
- B. Product Data/Shop Drawings [skylight]:
 - 1. Product Data, energy performance of skylight system.
 - 2. Shop Drawings indicating layout and tolerances, interface with existing conditions.
- C. Samples for Review [metal]:
 - 1. Submitted to Owner/RDA for review and selection for aesthetic, color, or finish. Color chart for all metal items.
 - 2. Submit samples of finishes from full range of manufacturer's standard colors, textures, and patterns for Owners selection.
- D. Eligible Applicator
 - 1. Submit a letter from the roofing material manufacturer with the following items addressed.
 - 2. The applicator is approved to use the products as specified and the manufacturer accepts the roofing system requirements and details as shown or with changes as provided.
 - 3. The applicator has been manufacturer approved for over 5 years and is capable of obtaining the warranty as outlined in the specifications.
- E. Personnel/Other Contractors
 - 1. Submit a list of all subcontractors and on-site personnel with the list of lead contact and associated phone numbers.
 - 2. Submit emergency contact sheet with contacts for an emergency – 24/7 call list.
- F. Contract Items:
 - 1. Submit Certificate of Insurance, Worker's Comp Certificates as required by Owner.
 - 2. Submit bonds if applicable to the contract.
 - 3. Submit a written Construction Schedule / Implementation and Sequencing Plan outlining starting points and length of time to complete work in each section.
- G. Safety Data Sheets: Submit Safety Data Sheets [SDS] on all products to the Owner.
 - 1. Owner shall be responsible to provide to employees as applicable.
 - 2. Owner's representative /RDA does not review / approve any SDS sheets.
- H. Site Specific Safety Plan
 - 1. Provide to Owner for their Review. No review / approval by RDA.
- I. Site Logistics Plan
 - 1. Provide to Owner for their Review. No review / approval by RDA.

1.4 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit manufacturer printed instructions for delivery, storage, assembly, installation, [start-up,] adjusting, and finishing, in quantities specified for Product Data.

1.5 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit certifications by manufacturer to Owner, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.6 CONSTRUCTION PHOTOGRAPHS

- A. Provide digital photographs of construction throughout progress of Work as taken by project superintendent as applicable to document the existing conditions, work in progress, completed work, project wrap up, etc. It is in the best interest of the contractor to document the conditions as this is an occupied unit project.
- B. Deliver photographs to Architect/Owner upon request on flash drive. Catalog and index in chronological sequence with date indexed.

END OF SECTION

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SECTION 01 77 00 - CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 WORK INCLUDES

- A. Close-out of the actual work, including warranties, maintenance manuals and final cleaning. Close-out of all contract obligations.

1.2 CLOSE-OUT PROCEDURES

- A. Notify Owner five [5] days prior to the work being complete to establish the desired inspection date. Owner / RDA will either proceed with the inspection or notify Contractor of unfulfilled requirements.
 - 1. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for punch list inspection.
- B. Owner / RDA shall inspect the completed project and notify the contractor of any deficiencies. Deficiencies will form 'punch list' for final acceptance.
- C. Provide submittals to Owner required by authorities having jurisdiction.
- D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.3 PUNCHLIST REQUIREMENTS

- A. Review and inspect all work prior to notifying the Owner for a Punchlist inspection of the work. Provide written documentation certifying review along with documentation of Contractor generated Punchlist.
- B. If work is clearly not complete, the Punchlist will be suspended until such time that it is evident that the Contractor has completed and reviewed/inspected their own work.**
 - 1. RDA anticipates [1] punchlist inspection and [1] back-punch / final inspection as part of our services to the Owner.
 - 2. Failures by the Contractor to complete the work, complete punchlists, etc. may result in a backcharge to the Contractor for the additional time to closeout the project.
- C. Review and provide the noted repairs and corrective work necessary at each of the Punchlist inspections to allow project close out.
 - 1. Back-punch walk through may result in additional punchlist items which need to be addressed by the Contractor.
- D. Provide adequate time in the construction schedule to accomplish punchout work within the overall contract period indicated within the bid documents.
- E. The failure to identify any punchlist item during a walk through / inspection does not release the Contractor from contractual responsibility to address any item during the warranty period.

1.4 SUBSTANTIAL COMPLETION

- A. Certificate of Substantial Completion will be issued upon completion of all the work.

1.5 PREREQUISITES TO FINAL ACCEPTANCE AND PAYMENT

- A. Prior to acceptance and final payment, all claims or disputes must have been resolved and the Contractor must have provided the following items to the Owner:
 - 1. Notarized affidavit of waiver of liens [contractor of record], sub-contractors and material suppliers
 - 2. Certificates of release from authorities having jurisdiction over permitting.
 - 3. Final statement of charges [100% application for payment].

- a. Submit a final Application for Payment according to Section 01 29 00, Payment Procedures.
4. Documented evidence of completing 'punch list' as applicable.
5. Manufacturer's original roof warranties [copy to RDA], including Contractor maintenance agreements and warranties.
6. Evidence that claims have been settled.
7. O+M Manuals including Manufacturer's roof maintenance and repair instructions.
8. Manufacturer's maintenance and repair instructions.
9. Record Drawings.
10. Final cleaning of all work areas: clean roof of debris [power blowing], roof drains [remove obstructions], excess glue, staining, etc. from membrane surface, soil from building surfaces, etc
11. Restore all work staging and lay-out areas to pre-construction conditions, including but not limited to, removal of debris, temporary facilities, grading and grass seeding and cleaning or repair of impacted structures.

1.6 PHOTOGRAPHIC DOCUMENTATION

- A. When requested by the Owner, photos of the completed punch list along with any supporting documentation can be submitted, in lieu of a final walkthrough.

1.7 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 1. Drawings.
 2. Specifications.
 3. Addenda.
 4. Change Directives/Orders and other modifications to the Contract.
 5. Reviewed Shop Drawings, Product Data, and Samples.
 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
- F. Submit documents to Architect.

1.8 PROJECT WARRANTIES

- A. General: Original warranties are required to be provided to the Owner prior to final payment.
- B. Submit two sets prior to final inspection or when available, bound in 8-1/2 x 11-inch text pages, binder covers.
- C. Prepare binder cover with printed title "WARRANTIES" and title of project.
- D. Bind warranties in a heavy duty three ring loose leaf binder. Provide a typed description of the product under warranty and phone number of the installer.
- E. General: The warranty and guarantee provisions of the General Conditions apply to all work of the contract, including but not limited to the following specific categories related to individual units of work specified in various sections of these specifications:

1. Special Project Warranty (Guarantee): A warranty specifically written and signed by the Contractor for a defined portion of the work, and, where required, countersigned by subcontractor, installer, manufacturer, or other entity engaged by the Contractor.
 2. Specified Product Warranty: A warranty which is required by the contract documents, to be provided for a manufactured product incorporated in the Work, regardless of whether manufacturer has published a similar warranty without regard for specific incorporation into the work, or has written and executed a special project warranty as a direct result of contract document requirements.
 3. Coincidental Product Warranty: A warranty which is not specifically required by the Contract Documents (other than as specified in this Section); but which is available on a product incorporated into the work, by virtue of the fact that the manufacturer of the product has published a warranty in connection with purchases and users of the product without regard for specific applications except as otherwise limited by terms of the warranty.
- F. All work undertaken as part of the project shall be warranted for a period of not less than [2] years [Contractor workmanship]. Individual sections / products may have specific additional warranty requirements.
1. Roof Warranties as outlined in technical specifications.
- G. Provide notarized copies of warranty documents to the Owner.
1. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.
- H. Original warranties are required to be provided to the Owner prior to final payment.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit two sets prior to or at the final inspection, bound in 8-1/2 x 11-inch text pages, binder covers.
- B. Prepare binder cover with printed title "MAINTENANCE INSTRUCTIONS" and title of project.
- C. Internally subdivide binder contents with permanent page dividers, logically organized, with tab titles legibly printed under reinforced laminated plastic tabs.
- D. Contents:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Contractor, subcontractors, and major equipment suppliers.
 2. Part 2: Maintenance instructions, arranged by system.
 3. Part 3: Project documents and certificates.

1.10 FINAL CLEANING AND SITE REPAIR

- A. Final cleaning of all work areas: clean roof of debris [power blowing], roof drains [remove obstructions], soil and stains from building surfaces, roads, sidewalks.
- B. Restore all work staging and lay-out areas to pre-construction conditions, including but not limited to, removal of debris, temporary facilities, grading and grass seeding and cleaning or repair of impacted structures.

END OF SECTION

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SECTION 05 12 00 - STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Structural shapes; Channels and angles; plates; bolts, connectors, and anchors.

1.2 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
 - 1. Structural Steel: AISC 303.
 - 2. High Strength Bolted Connections: RCSC Specification for Structural Joints Using ASTM A 325 or A 490 Bolts.

PART 2 PRODUCTS

2.1 STRUCTURAL STEEL

- A. Channels and Angles: ASTM A36/A36M; ASTM A572, Grade 60
- B. Square and Rectangular Structural Sections: ASTM A500/A500M, Grade B
- C. Structural Plates and Bars: ASTM A36/A36M; ASTM A572, Grade 60

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. Bolts: Heavy hex, structural type.
 - 1. ASTM A325; Type 1, hot dipped galvanized, or Type 3, plain.
- B. Nuts: ASTM A563 heavy hex type.
 - 1. Finish: Hot dipped galvanized.
- C. Washers: ASTM F436; Type 1, circular. Furnish clipped washers where space limitations require.
 - 1. Finish: Hot dipped galvanized.

2.3 WELDING MATERIALS

- A. Welding Materials: AWS D1.1; type required for materials being welded.

2.4 FABRICATION

- A. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
- B. Fabricate connections for bolt, nut, and washer connectors.

2.5 FINISHES

- A. Prepare structural component surfaces in accordance with SSPC SP 3 or as required by conditions.
- B. Shop prime structural steel members.

2.6 ACCESSORIES

- A. Shop Primer: SSPC Paint 15, Type 1, red oxide.
- B. Touch-Up Primer: Match shop primer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify bearing surfaces are at correct elevation.

3.2 ERECTION

- A. Allow for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in alignment until completion of erection and installation of permanent bracing.
- B. Field weld components indicated.
- C. Do not field cut or alter structural members without approval of Architect/Engineer.
- D. After erection, touch up welds and abrasions to match shop finishes.

END OF SECTION

SECTION 05 31 23 – STEEL ROOF DECK REPAIR AND REPLACEMENT

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the contract and Division 1 Specification Sections apply to this section.

1.2 RELATED SECTIONS

- A. Section 07 01 50 – Preparation for Roofing

1.3 WORK INCLUDES, BUT IS NOT LIMITED TO:

- A. Removal, replacement, or overlay [retrofit] of deteriorated metal decking.
- B. Fastening of existing metal deck to the existing joists / structure in the perimeters and corners and other locations where found to be loose.
- C. Application of rust inhibitor to rusted metal roof decking.

1.4 REFERENCES

- A. Steel Deck Institute [SDI]

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect adjacent materials and surfaces against damage from roofing work. Do not store materials on previously completed roofing.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not perform steel deck repair/replacement work during inclement weather. Refer to product manufacturer for outdoor temperature requirements for installation of materials.

PART 2 PRODUCTS

2.1 RUST INHIBITIVE COATING

- A. For use at Steel Deck Brushing and Priming, as described in Paragraph 3.2:
 - 1. Rust-Oleum Industrial Enamel Quick Dry Primer.
 - 2. Carboline Carbocoat 150 Universal Primer.
 - 3. Or approved equal.

2.2 STEEL DECK REPAIR/REPLACEMENT MATERIALS

- A. Steel Deck Repair: as described in Paragraph 3.3:
 - 1. Steel plate: 16-gauge galvanized with pre-drilled holes for fasteners.
 - 2. For securing steel plate to steel deck: Teks 1 or No. 10 fluorocarbon-coated screws; length as necessary to penetrate minimum 1-inch depth through the deck.
 - 3. For securing steel plate to underlying structural steel [1/4-inch-thick max.]: 12-24 x 1-1/4-inch Hex Washer Head, Teks 5, or approved equal.
- B. Steel Deck Replacement: as described in Paragraph 3.4:
 - 1. Full sections to match existing in gauge, profile / rib depth, rib configuration, and finish as necessary to comply with requirements of applicable insurance agencies and local codes.
 - a. ASTM A 653, Grade 33, with G90 galvanized coating
 - b. 20 gauge steel decking, unless existing conditions vary.
 - 2. Refer to Paragraph 2.1.B for fastener requirements.

PART 3 EXECUTION

3.1 STEEL DECK INSPECTION

- A. Inspect exposed steel decks for surface corrosion, severe corrosion, openings, and other defects. Refer to Sections 01 45 23 and 07 01 50.
- B. Surface-only rusted metal shall be sanded and treated with rust inhibiting paint. Sections that have rusted deeper than the surface or are not structurally sound shall be removed and replaced as outlined herein.

3.2 APPLICATION OF RUST INHIBITIVE COATING

- A. Steel Deck Brushing and Priming: For use at areas of light corrosion.
 - 1. Wire-brush or scrape the surface rust. Comply with Steel Structure Paint Council (SSPC) preparation standards based on type of paint utilized, but not less than SSPC-SP2.
 - 2. Remove debris by power vacuum.
 - 3. Apply primer to the repair area in accordance with paint manufacturer's prep and installation instructions.
 - 4. Allow primer time to dry prior to application of new roofing materials.

3.3 STEEL DECK REPAIR

- A. Steel Deck Repair: For use to repair at openings caused by obsolete roof penetration removal or other defects less than 12 inch by 12 inch in size.
 - 1. At locations encountered, cover the existing opening with 16-gauge steel plate stock. Lap the plate a minimum of 8-inches beyond the opening on all sides. Fasten the steel plate with specified fasteners and plates 6-inches on center. Secure the plate a minimum of 2-inches in from the outside edge of the repair plate.
- B. Deck Reinforcement: Install sheet steel reinforcement profiled to existing decking configuration over all rusted opening 16 sq.in. or less. If two (2) or more rusted openings exist in same deck section, replace section.
- C. Deck Reattachment:
 - 1. Mechanically reattach loose sections of deck to steel support members 12 inches o.c.
 - 2. Nestable Side Lap: Mechanically fasten 18 inches o.c.
 - 3. Interlocking Side Lap: Button punch 18 inches o.c.

3.4 STEEL DECK REPLACEMENT

- A. Prior to the start of work, inspect the interior area below the area of damaged steel roof deck. Remove items from the replacement area that may be damaged during work activities. Provide adequate interior protection to protect interior surfaces and finishes from damage prior to the start of work. The Contractor shall provide a crew member in the interior of the building during replacement work.
- B. At deck replacement locations: Remove defective steel deck panels and install full decking sections to match existing. It is possible that in some areas a panel can be overlaid [retrofitted]. Install new decking in accordance with the requirements of the Steel Deck Institute, and applicable local codes. Decking tie-in shall be covered with a 16-gauge sheet metal strip fastened in place to the new and existing decking 12 inches on center on each side of the 8-inch-wide strip. Overlaid decking must overlap good, secured panels 12 inches on center in all directions [end and side laps] and be fastened 6 inches on center.
- C. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on the supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.
- D. Place deck panels flat and square and fasten to supporting frame without warp or deflection.

- E. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to decking.
- F. Provide additional reinforcement and closure pieces at the openings as required for strength, continuity of decking and support of other work.

END OF SECTION

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SECTION 06 10 53 - MISCELLANEOUS ROUGH CARPENTRY FOR ROOFING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the contract and Division 1 Specification Sections apply to this section.

1.2 WORK INCLUDES, BUT NOT LIMITED TO:

- A. Miscellaneous sized new wood nailers/blocking, curbs, fascia/trim boards, plywood and associated fasteners, bolts, adhesives as required for installation of the roofing system and sheet metal. *Some items below may not be required for this project, but are outlined herein if required during course of work due to changing conditions or changes in scope.*
- B. Well secured wood members that meet the requirements of Section 07 01 50 can remain in place as per conditions/guidelines and attachment as specified herein. RDA must approve all nailers that will remain in place. Any new replacement nailers must be minimum of 1 1/2-inch x 5 1/2 inch [nominal 2-inch x 6 inch] unless otherwise noted or conditions dictate otherwise. New edge nailers shall be raised / blocked up to match elevation of new insulation [and to create constant edge height where necessary], as applicable.

1.3 APPLICABLE REFERENCES

- A. The following references form a part of this specification.
 - 1. NFPA - National Forest Products design specifications.
 - 2. Factory Mutual Research Corporation, Loss Prevention Data Sheet 1-49, Perimeter Flashings
 - 3. APA - American Plywood Association.
 - 4. Lumber Grading Agency.
 - 5. American Wood Preservers Association
 - 6. State Building Code
 - 7. ANSI/SPRI/FM 4435 ES-1 Edge Systems.
 - 8. WWPA - Western Wood Products Association
 - 9. SPIB - Southern Pine Inspection Bureau
- B. Perform work in accordance with Ohio Building Code.

PART 2 PRODUCTS

2.1 DIMENSIONAL LUMBER

- A. Board Stock: graded in accordance with NFPA and Lumber Grading Agency, board class number 2, structural grade, kiln-dried Douglas fir or Southern yellow pine. FSC [certified] lumber may be required upon Owner's request. Moisture content for all lumber shall not exceed 19% by weight at time of installation, including any lumber that can remain in place. Lumber will be removed if moisture exceeds 19%. Provide fire retardant treated blocking in combustible buildings according to ASTM E84. Sizes as shown are standard nominal sizes. Provide dressed lumber, S4S, unless otherwise noted.
 - 1. Any lumber intended to be left exposed shall be appearance grade, suitable for a painted finish or finish as specified.
 - 2. Where fire retardant treated lumber/materials are indicated use product with flame spread index of 25 or less in accordance with ASTM E 84.
- B. Preservative treated: AWP, asphaltic, creosote or copper additive [CA, or ACQ] type treated lumber is not acceptable for use on this project. Use MCQ or CCA [wolmanized] water borne treated lumber complying with C2 and P5 standards for used as nailers on top of concrete or masonry wall surface and all other above grade applications. Ensure treatment that does not promote corrosion of metal fasteners, use stainless fasteners to anchor treated lumber.

- C. Plywood: 48/24 APA rated sheathing, 3/4-inch thickness, fire retardant treated.

2.2 FASTENERS

- A. General: Contractor to determine the required length for each application in accordance with manufacturer data and Factory Mutual recommendations,
 - 1. Minimum embedment:
 - a. Steel-3/4 inch unless otherwise noted
 - b. Wood-1 1/4 inch unless otherwise noted
 - c. Concrete/concrete block [masonry] -1 1/4 inch unless otherwise noted.
 - 2. Comply with the fastening requirements of the International Building Code, Local Building Code and State requirements, whichever is more stringent.
 - 3. All fasteners to anchor wood members shall be corrosion-resistant steel unless exposed to weather, pressure preservatives or in high humidity areas, provide fasteners of Type 304 Stainless steel, compatible for the conditions or other requirements stated herein [as noted].
 - 4. See roofing section for additional fastener data.
 - 5. Notify the Owner if deteriorated substrate conditions exists.
- B. Lag Bolts: ANSI/ASME B18.2.1
- C. Steel Bolts: ASTM A 307, Grade A
- D. Nails: ASTM F 1667 [2015], 8d, 11-12-gauge, .113-inch diameter, ring-shank, corrosion resistance by coating or galvanization
- E. Wood Screws: ANSI/ASME B 18.6.1 [2016], corrosion resistance by coating, galvanization or stainless steel.
- F. Expansion Anchors: Steel, corrosion resistance, 3/8-inch diameter.

2.3 ADHESIVES

- A. Standard wood adhesive, caulk grade.
- B. ITW Red Head, A7 acrylic adhesive.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Inspect fastening of existing wood members left in place for conformance to requirements specified herein, upgrade as necessary to meet performance criteria outlined.
- B. Examine surfaces for satisfactory conditions and do not use materials that are warped, bowed, twisted or unsound.

3.2 INSTALLATION

General: Installation shall be in accordance with current Factory Mutual Loss Prevention Data Sheet 1-49 perimeter flashing recommendations and details, Ohio Building Code, ANSI/SPRI/FM 4435 ES-1, other standard industry framing methods and as shown. Attachment withdraw resistance criteria for nailers/wood blocking is 200 P/F for perimeter, 300 P/F for corners *onto substrate with margins of safety applied from printed values, as follows: Steel, Wood, Structural Steel 2:1, Concrete, 4:1, Gypsum 3:1. No power actuated fasteners or pin drive fasteners allowed. Fastener spacing as outlined below is the maximum allowable, unless otherwise shown on the plans.*

- A. Install members true, plumb and level, secure in place. Provide all required shoring and temporary bracing required.
 - 1. Use members of continuous possible lengths. Do not use materials with defects or pieces that are too small [optimum joint arrangement].

2. #8 Screws or 10d Nails used to secure fascia and top nailers [stacked] to other wood members shall penetrate 1-1/2 inch, apply in two rows at 12 inches on center at perimeters and 6 inches in corners, staggered if feasible.
 3. Wood nailers/blocking shall have a ¼ inch space between boards.
- B. Metal/ Metal Deck: Wood nailers at perimeter/corners shall be fastened to the deck with two rows of # 14 steel, wood to metal deck tek fasteners [wafer head] or #14 HD steel roofing fastener at 24 inches on center staggered in perimeters and 12 inches staggered in corners. Start fasteners 3 inches from each end of the board, staggered fasteners 2 inches from edge if nailer is wider than 5 1/2 inches [if existing or stacked wood nailers exceed 6 inches in thickness height consult RDA for fastener selection]. An alternate method, when nailers/blocking are parallel to deck ribs, the nailers can be attached to the structural members [joists] with 3/8-inch steel bolts/nuts or tek/5 fasteners, 7 feet on center max. spacing. All fasteners must penetrate the top flange of the deck and be driven flush or countersunk, if necessary.
- C. Steel Members: Wood nailers at perimeter/corners shall be fastened to a steel member with one row of #14 or 1/4-inch steel, wood to metal deck tek/5 fasteners at 18 inches on center, centered, staggered fasteners 2 inches from edge if nailer is wider than 6 inches, pre-drill holes and countersink, if necessary. Fasteners shall start 3 inches from each end of the boards and shall be spaced 16 inches on center each way from the corner.
- D. Concrete Block/Concrete, Stone and Concrete Decking: Wood nailers at perimeter/ corners or on top of parapet wall shall be fastened with one row [two rows if nailer is over 5 1/2 inches wide] of 1/4-inch self-tapping fasteners at 24 inches on center [offset or staggered] in perimeters and 16 inches [offset or staggered] in corners-each way. Fasteners shall be spaced 2 inches from edge if nailer is wider than 5 1/2 inches, pre-drill holes and countersink, if necessary. Fasteners shall start 3 inches from each end of the boards [if existing or stacked wood nailers exceed 6 inches in thickness height consult RDA for fastener selection] or use a 3/8-inch diameter treaded rod placed into a pre-drilled hole with adhesive injected for a solid substrate, bolt boards to rod. Rods placed at 4 feet on center in the perimeter and 2 feet on center in corners-each way. Cores of hollow block must be filled with grout where rods are located. Embed rods 5 inches minimum into filled block cores or solid block/concrete.
- E. Gypsum/Tectum Deck: Wood nailers at roof perimeters/corners on decking shall be fastened to the deck with 3/8-inch corrosion resistant thru bolts with nut and bolts attached at 18 inches on center in perimeters and 18 inches on center in corners, bolts shall have a 5/8-inch diameter outside diameter washer and be countersunk flush with top of nailer. Provide a lock washer/nut to secure bolts. An alternate method, the nailers can be attached to the structural members [joists/structural members] with 3/8-inch steel bolts/nuts or tek/5 fasteners, 7 feet on center max. spacing.

3.3 SURFACE TREATMENT

- A. All exposed to view newly installed wood members shall be primed and painted to match surrounding surfaces colors unless otherwise noted.

END OF SECTION

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SECTION 07 01 50 – PREPARATION FOR REROOFING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the contract and Division 1 Specification Sections apply to this section.

1.2 WORK INCLUDES, BUT IS NOT LIMITED TO:

- A. Roof Membrane Removals and Other Removal Summary:
 - 1. **Payne Recreation Center: Roof Area A:** Remove mechanically fastened EPDM complete. Remove and replace all wet/damaged or deteriorated underlying insulation found, match thickness of removed material. [see allowances]
 - 2. **Gerhardt Civic Center: Roof Area B-1 and B-2:** Remove existing two ply modified roof system / base sheet to expose existing sloped lightweight fill. Remove and replace all deteriorated / damaged lightweight fill, match existing thickness / slopes.
 - 3. **Maintenance Shop: Roof Area C-1:** Remove existing modified roof system, lightweight fill, built up roof system, and all underlying insulation complete to the metal deck.
 - 4. **Maintenance Shop: Roof Area C-2:** Remove existing modified roof system, lightweight fill, built up roof system, and all underlying insulation complete to the wood plank deck.
- B. Clean roof / deck surface of all debris detrimental to installation of new roof system, including cleaning / sealing of applicable building joints / openings necessary for the proper installation of the roof system.
- C. Removal of existing perimeter base flashing material [metal, built up roof system, modified, composite, and / or single ply as applicable] and from associated equipment supports, curbs, penetrations, and related items.
- D. Removal of wood nailers and blocking. Wood members that are securely bolted or adequately fastened or can be adequately fastened to the structure per specs and are in a dry good condition can remain in place. Remove deteriorated and damaged wood members. [See section 06 10 53 for anchoring requirements].
- E. Removal and reinstallation of existing electrical conduits, cabling, and associated wall or roof attachments as applicable to accomplish the new work.
- F. Removal of sheet metal items such as copings, edges, bib / skirt flashings, counter flashing, pipe flashing, gutters, downspouts, expansions joints and counter-flashings as noted.
- G. Removal of existing unused curbs, abandoned equipment as noted on the drawings, cover opening as indicated.
- H. Removal and reinstallation of existing RTU's from associated curbs as required to install new flashings as noted on the drawings.
- I. Removal and reinstallation of existing HVAC ductwork and associated supports as required to accomplish the new work.
- J. Removal and reinstallation of existing air conditioning / condenser units set on the roof as required to accomplish the new work.
- K. Removal / modification to existing gas piping to raise piping above new roof system.
- L. Removal of all existing breather / one-way vents.
- M. Other removals necessary to accomplish the new work.

1.3 QUALITY ASSURANCE

- A. Perform Work in strict accordance with the terms and conditions of all municipal and state regulation and local codes.
- B. Demolition shall comply with the requirements of ANSI - American National Standard Safety Requirements for Demolition.
- C. Conduct demolition work in a manner that will minimize disruption of Owner's normal operations. Coordinate work activities daily with Owner.
- D. Properly protect all facility surfaces and associated landscaping from damage due to normal demolition operation. Return all areas to their original condition at no charge to the Owner.
- E. Drainage Testing: Test each roof drain and/or downspout/scupper for proper water flow. Notify Owner of any clogged drainage and drains that cannot have the roof membrane secured with the existing clamping ring [broken, bolts, etc] before commencement of work. Commencement of work shall constitute acceptance of drainage device and any costs to unplug or repair these items shall be borne by the Contractor.
- F. Do not remove existing roofing membrane or components when weather conditions threaten integrity of building contents.
- G. Provide deck / substrate adhesion testing as required by the roof system manufacturer prior to the commencement of work. Accomplish in accordance with manufacturer's requirements.
 - 1. Provide all reports / findings if conditions are different than manufacturer's assembly test criteria for their approval to meet the design pressures, manufacturer's requirements, or requirement of the applicable building code. RDA will coordinate applicable results with manufacturer and will provide direction.

1.4 OCCUPATIONAL SAFETY and HEALTH ADMINISTRATION [OSHA]:

- A. Walking working surfaces and fall protection standards, 29 CFR 1926.501 [b][1].

1.5 COORDINATION

- A. All utilities and mechanical rooftop equipment will remain active during normal work hours, unless approved otherwise by the Owner.
- B. Legally dispose of all removals, except those indicated to be reinstalled, salvaged or to remain Owner's property. Comply with hauling and disposal regulations of authorities having jurisdiction and EPA notification regulations.

1.6 FIELD CONDITIONS

- A. Do not overload structure with storage of materials, verify roof deck weight capacity and location of structural supports, only items needed that day shall be stored on the roof. Limit loads on roof to 25 pounds per square foot for uniformly distributed loads for metal/gypsum decks, 75 pounds per square for concrete decks. **Provide temporary securement of existing membrane to prevent membrane blow off while installing new roof system, if applicable.**
- B. Do not apply roofing system during inclement weather or when the chance is 40% or greater, percentage as listed on www.weather.com for the local area, percentage as listed when read at time of commencement. Proceed with roofing and associated work when weather conditions will permit unrestricted use of materials and quality control of the work being installed.
- C. Building space underneath roof work is utilized by on-going operations. Coordinate all work with Owner including, material storage and contractor parking. Owner's approval required before proceeding with the work. **Contractor must provide overhead protection for**

Owner's workers, public, visitors, etc from falling materials/debris at building entry points.

1.7 ALLOWANCE

General: Refer to General Requirements, Section 01 00 00, Unit Prices, Allowances, Drawings and bid form for associated allowances / other costs.

PART 2 PRODUCTS

2.1 EXISTING ROOF CONDITIONS

- A. Deck Conditions
 - 1. Check deck for damage as work progresses. Workers may have inadvertently damaged the deck using axes or power cutting tools during roof removal or repair.
 - 2. When roofing is removed, loosely attached decking may be observed. All loose decking must be properly attached using techniques appropriate to construction.
 - 3. The installation of roof mounted equipment or items that project through the roof often requires cutting the deck. These areas, and any area in which the deck has been cut, should be thoroughly examined and properly reinforced as is necessary.
 - 4. Areas of damaged deck should be properly repaired. Deteriorated deck should be removed, as necessary to eliminate the spread of deterioration. Appropriate treatments such as corrosion inhibitors should be applied.
 - 5. All deck replacement should be compatible with the original construction and should include an area sufficient to assure the structural integrity of the deck. The deck replacement should be fastened using techniques appropriate to the construction.
- B. Drainage: All roofs should provide positive drainage.
 - 1. Verify heights of existing drains and how drains interface with new roof insulation, drain sumps, and overall structural slopes to ensure positive drainage to the roof drains.
 - 2. Ensure drains are properly attached or anchored to the deck.
 - 3. Ensure that the drain components are not broken and are properly installed and tightened.
- C. Flashings: Ensure that a minimum of 8 inches in flashing height is provided above the finish roof membrane; otherwise obtain acceptance from the roof membrane manufacturer for a low flashing detail which is approved and included in the warranty.
 - 1. Where required or indicated on Drawings. Existing curbs, utility lines, and through-wall flashings need to be raised.
 - 2. Do not extend roof flashing above through-wall counterflashing.
 - 3. Do not block weep holes in walls.

2.2 TEMPORARY PROTECTION MATERIALS

- A. Air Filters: Filter medium with activated charcoal or comparable to mitigate fumes or odors from entering the building through air intakes, etc.

2.3 INFILL MATERIALS

- A. Flat/Tapered Board Stock [includes replacement for damaged LWIC, tapered saddles and/or leveling insulation]: ASTM C1289, closed cell polyisocyanurate, square-tapered edge/rigid board, type II, class 1, grade 2, inorganic glass fiber reinforced mat facers on both sides, square edges, minimum 20 psi compressive strength, size boards as approved for application and by the roof membrane manufacturer. Insulation thickness/slope to match surrounding existing materials.
- B. Light Weight Concrete, Elastizell, minimum compressive strength 34-42 PSF, ASTM C869.
 - 1. Small areas or surfaces repairs/leveling of LWIC damage can be repaired by a product approved by the roof manufacturer, such as Zono-Patch or Elastizell's Cell Patch.

- C. Manufacturers recommended fasteners or low-rise foam adhesive to secure insulation to metal decks. Insulation fastening pattern at one fastener spaced every two square foot [field-zones 1' and 1] and one fastener spaced every one square foot [perimeter /corners-zones 2 &3] and insulation adhesive at 4-inch spaced beads.
- D. Manufacturers recommended fasteners.

PART 3 EXECUTION

3.1 ROOF RECOVER PREPARATION

- A. Remove any material that inhibits new roofing materials from conforming to substrate.
- B. Perform a visual moisture survey as part of the demolition / removal activities. Accomplish repairs or additional removals as required.
- C. Obtain approval from roof membrane manufacturer for the application of the new roof recover over the existing prepared substrate / surface. Provide any additional testing or field verifications necessary to confirm uplift resistance and/or securement requirements.

3.2 ROOF REPLACEMENT PREPARATION

- A. All Roof Areas: Removal of all moisture, and other materials from existing roofing that inhibit new roofing materials from conforming to substrate, including power blowing of deck surfaces.
- B. Verify that surfaces and site conditions are ready to receive work. Verify that deck is clean and smooth, free of depressions, irregularities, or projections and properly leveled, start of work constitutes acceptance of conditions.
- C. Verify that all wood blocking, nailers, decking are securely anchored in place.

3.3 DECK PREPARATION/OTHER REPAIRS

- A. Metal Deck: [Where removal of total roof system has removed down to the structural metal deck].
 - 1. Surface Rusted Metal Deck: Remove rust and coat rusted deck sections with a water-based rust inhibiting coating where panels have over 35% of the surface area rusted, prior to installation of roof system.
- B. Lightweight Insulating Concrete [LWF]: Remove all damaged, wet [saturated] sections or damp/deteriorated surface of LWF. Patch areas with new patching material or LWF or replace LWF with new polyisocyanurate [Polyiso] insulation fastened [first layer] to the deck with multi layers set in adhesive. Match surrounding thickness and slope. Large, removed sections of LWF may require a waterproof tarp installed to prevent water from penetrating into the deck from a rain event if the section cannot be made watertight during operation.

3.4 DUST / FUME CONTROL

- A. Take measures to avoid dust, dirt and debris from entering the building.
- B. Throwing material off the roof is prohibited; provide an enclosed chute, crane or raised dump truck to remove roofing materials. Provide tarps or other protection of walls where material is being removed.
- C. Take special precautions around deck penetrations, including but not limited to installation and removal of reinforced visqueen below the roof deck to protect property below.
 - 1. Interior protection must be accomplished by Owner during removal of the any large penetrations. Coordinate as required to accomplish this work.
- D. Special precautions shall be taken to avoid fumes from entering the facilities through air intakes. Provide charcoal filters or other filtration media as necessary to cover intakes, coordinate with Owner.

3.5 TRAFFIC

- A. Conduct demolition operations and the removals of debris to ensure minimum interference with streets, walks and other adjacent facilities. Do not close or obstruct streets or walks, without permission from Owner and authorities having jurisdiction.

3.6 DISPOSAL OF MATERIALS

- A. Remove from the site, all debris, rubbish and other materials resulting from the demolition operations, are not being reused as soon as possible. The landfill used for disposal shall be approved for type of materials being disposed. Comply with local laws, EPA regulations when transporting materials from the site.
- B. All materials that are to be reused in the new work shall be removed, cleaned and stored in a safe place until reinstallation, as applicable.

3.7 ASBESTOS REMOVAL / NOTIFICATION

- A. If asbestos is found during course of work, all removals shall be in accordance with written guidelines provided by OSHA Asbestos Construction Standard [29 CFR 1926.1101], and State, County and EPA guidelines as applicable. Contractor must be OSHA trained meeting the requirements of 29 CFR 1926.1101 for the removal, handling and monitoring of removed material.
- B. Indicate receipt and acceptance of hazardous wastes, such as asbestos containing materials, by a landfill licensed to accept such materials. Notify and provide all documentation to the Owner for disposal of asbestos. All costs for asbestos removal, permitting and handling will be included in the bid if noted herein. No suspect ASBESTOS containing materials have been found.
- C. All asbestos removals shall be in a manner not to cause the roofing fibers to become crumbed, pulverized or airborne, these materials shall be handled as Category I and II non-friable asbestos. Should asbestos be encountered noted or not, that has become friable due to the actions of the Contractor or the condition of the material, the Contractor shall secure the services of an abatement contractor to remove the material and an independent firm to monitor removal activities and procedures [removal plan required]. Contractor shall pay for this abatement contractor if asbestos became friable due to their removal procedures. Notify Owner / RDA if asbestos has been encountered that was not noted, prior to removal.

3.8 UTILITIES / EQUIPMENT

- A. Where electrical lines, refrigerant line sets, equipment, controls, etc. interface with the performance of the work, they shall be temporarily removed, replaced and made fully operational as soon as possible, a 48-hour notice and approval from Owner is required before any removals can take place. The Contractor has the responsibility to verify the operational status of all equipment before removals take place.
- B. Notify the Owner of any non-operational items prior to removal, commencement of work constitutes acceptance of equipment and any costs to make operational shall be borne by the Contractor.

END OF SECTION

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SECTION 07 41 13 – METAL SOFFITS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the contract and Division 1 Specification Sections apply to this section.

1.2 WORK INCLUDES, BUT IS NOT LIMITED TO:

- A. Metal Soffits: Installation of factory formed and field assembled metal soffit panels and related accessories over an open steel frame structure.

1.3 APPLICABLE REFERENCES

- A. AISC: "Steel Construction Manual," American Institute of Steel Construction.
- B. AISI: "Cold Form Steel Design Manual," American Iron and Steel Institute.
- C. ASTM A792: Specifications for steel sheet, aluminum-zinc alloy coated (galvanized) by hot dip process, general requirements (galvalume).
- D. ASTM E 1646: "Water Penetration Test."
- E. ASTM A-525: Specifications for steel sheet, hot-dipped-galvanized steel, coated aluminum-zinc alloy, coated steel-hot dipped aluminum zinc alloy or painted galvanized with exterior color specified by manufacturer.
- F. Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors National Association, Inc.

1.4 SUBSTITUTIONS / EQUALS

- A. When a particular make or trade name is specified, it shall indicate the standard quality required. Bidders proposing substitutions shall submit the following ten [10] days prior to bid date. Refer to Contract Documents.
 - 1. Refer to Section 01 25 00 – Substitution Requests.

1.5 SUBMITTALS

- A. Product Data: Manufacturer's product specifications, standard details, and installation recommendations as applicable to the materials and finishes for each component and assembly.
- B. Shop Drawings: Show profile and gauge of components, locations and types of fasteners; location, gauge, and method of attachment of trim and accessory components.
 - 1. RDA drawings cannot be utilized as the shop drawings.
 - 2. Manufacturer shall prepare shop drawings.
- C. Samples: Provide samples for metal finishes for Owner selection. Selection shall be from full range of available finishes.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing metal roof and soffit panels specified in this section, with minimum 10 years' experience.
 - 1. All materials supplied must be manufactured or manufacturer approved by the company furnishing the warranty including the accessories - single source responsibility.
 - 2. The material manufacturer [manufacturer of record] must submit a letter stating that the applicator is approved to use the products as furnished, is licensed to install their material in the state in which the project is located, that the applicator can obtain the warranties as outlined in the specifications in accordance with the roof system requirements and details

as drawn and the products are acceptable for use on the surfaces to which they are being applied.

- B. Applicator: Company specializing with the installation of metal roof and soffit systems with minimum 5 years documented experience, never been terminated by a manufacturer for workmanship problems, be approved for minimum 5 years by the manufacturer for use of their materials and can provide the warranties as specified. No deviations from the products specified herein unless approved by the Owner.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver panels to Project site properly packaged to provide against transportation damage.
- B. Unload, store, and erect metal roof panels in a manner to prevent bending, warping, twisting and surface damage.
 - 1. Examine materials upon delivery to jobsite. Reject and remove physically damaged, stained or marred material from Project site.
- C. Storage: Store materials and accessories above ground on well-skidded platforms. Store under waterproof covering. Provide proper ventilation to panels to prevent condensation buildup between panels. Do not store metal roof panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Handling: Exercise extreme care in unloading, storing, and erecting panels to prevent banding, warping, twisting, and surface damage.
- E. Protect strippable protective covering as applicable to the installation and per manufacturer recommendations.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel assemblies that fail in materials within specified warranty period.
 - 1. Failures include, but are not limited to, following:
 - a. Structural failures, including rupturing, cracking, or penetrating.
 - b. Deterioration of metals and other materials beyond normal weathering.
 - 2. Warranty Period: 20 years from date of Contract Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory applied finishes within specified warranty period.
 - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Contract Completion.

PART 2 PRODUCTS

2.1 METAL SOFFITS

- A. Manufacturer:
 - 1. Dimensional Metals, Flush Panel FP10 [basis of design]
- B. Metal Soffit Panels:

General: Provide factory-formed metal soffit panels designed to be field-assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.

1. Finish: Match finishes and colors of metal roof panels, unless otherwise indicated.
2. Aluminum Sheet: Coil-coated sheet, ASTM B 209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
 - a. Provide aluminum sheet, 0.032 inch thick for perforated soffit panels.
3. Flush Profile Metal Soffit Panels: Solid panels, unless otherwise indicated, formed with vertical panel edges and intermediate-stiffening ribs symmetrically spaced between panel edges; with flush joint between panels.
 - a. Material: .032 Aluminum Panel [perforated]
 - b. Finish: As selected from the full range of available colors.
 - c. Panel Width: 12 inches.
 - d. Panel Height: 1 inch.

2.2 MISCELLANEOUS METAL FRAMING

- A. Miscellaneous Metal Subframing and Furring: ASTM C645; cold-formed, metallic-coated steel sheet, ASTM A653, G90 coating designations or ASTM A792, Class AZ50 coating designation. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Hat-Shaped, Rigid Furring Channels: ASTM C 645.
 1. Minimum Base Metal Thickness: 0.0312 inch.
 2. Minimum Depth: 1-1/2 inches.
- C. Cold-Rolled Furring Channels: 0.0538-inch bare steel thickness, with minimum 1/2-inch wide flange.
 1. Minimum Depth: 3/4 inch.
 2. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum bare steel thickness of 0.0312 inch.
 3. Tie Wire: ASTM A 641, Class 1 zinc coating, soft temper, 0.0625-inch diameter wire, or double strand of 0.0475 inch diameter wire.
- D. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

2.3 FASTENERS

- A. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating.
 1. Fasteners for Metal Panels: Self-drilling or self-tapping, zinc-plated, hex-head carbonsteel screws, with a stainless-steel cap or zinc-aluminum-alloy head and EPDM or neoprene sealing washer.
 2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
 3. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
 4. Where fasteners will be in contact with wood treated with preservative chemicals, provide fasteners and anchorage with hot dip zinc coating of G90 complying with ASTM A153 or of Type 304 or 316 stainless steel.
 5. Paint exposed fasteners to match the metal panel in color.

2.4 FABRICATION

- A. Fabricate and finish metal roof panels and accessories at factory to greatest extent possible, by manufacturer's standard procedures and processes and as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

- C. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" and National Roofing Contractors Associations Roofing and Waterproofing Manual that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. End Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder or seal as recommended by manufacturer.
 - 3. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
 - 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
 - 5. Fabricate cleats and attachment devices of size and metal thickness recommended by SMACNA's "Architectural Sheet Metal Manual" or by metal roof panel manufacturer for application, but not less than thickness of metal being secured.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal roof panel supports, and other conditions affecting performance of Work.

3.2 PREPARATION

- A. Clean substrates of substances harmful to insulation, including removing projections capable of interfering with insulation attachment.
- B. Miscellaneous Framing: Install subpurlins, eave angles, furring, and other miscellaneous roof panel support members and anchorage according to metal roof panel manufacturer's written instructions.
- C. Soffit Framing: Wire tie furring channels to supports, as required to comply with requirements for assemblies indicated.

3.3 METAL SOFFIT PANEL INSTALLATION

- A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Provide metal roof panels of full length from eave to ridge, unless otherwise indicated or restricted by shipping limitations. Anchor metal roof panels and other components of work securely in place, with provisions for thermal and structural movement.
 - 1. Field cutting of metal panels by torch is not permitted.
 - 2. Flash and seal metal panels with weather closures at eaves, rakes, and at perimeter of all openings. Fasten with self-tapping screws.
 - 3. Install screw fasteners in predrilled holes.
 - 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 - 5. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a 4-panel lap splice condition.
 - 6. Provide weathertight escutcheons for pipe and conduit penetrating panels.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal panel manufacturer.
 - 1. Coat back side of roof panels with bituminous coating where roof panels will contact wood, ferrous metal, or cementitious construction.

- C. Metal Soffit Panels: Provide metal soffit panels full width of soffits. Install panels perpendicular to support framing.
 - 1. Flash and seal panels with weather closures where metal soffit panels meet walls and at perimeter of all openings.
- D. Metal Fascia Panels: Align bottom of panels and fasten with blind rivets, bolts, or self-tapping screws. Flash and seal panels with weather closures where fasciae meet soffits, along lower panel edges, and at perimeter of all openings.

3.4 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION

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SECTIONS 07 52 00 / 07 72 00 – MODIFIED [SBS] ROOFING AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the contract and Division 1 Specification Sections apply to this section.

1.2 RELATED SECTIONS

- A. Section 06 10 53 – Miscellaneous Rough Carpentry for Roofing
- B. Section 07 01 50 – Preparation for Reroofing
- C. Section 07 62 00 – Sheet Metal, Flashing, Trim and Specialties Items

1.3 WORK INCLUDES, BUT NOT LIMITED TO:

General: Intent of project is to provide a functional 20-year new watertight roof system, resisting wind uplift pressures, thermally induced movement and exposure to weather without failure. Roof system must have been tested by an approved testing agency and have field experience by the manufacturer. Provide and install all roof components and accessories for a complete watertight roof system.

- A. Clean and dry deck surface.
- B. Repair existing lightweight fill [LWF] as required to accept new roofing system. Refer to allowances.
- C. Installation of a vapor barrier / base sheet.
- D. Installation of new cover board.
- E. Installation of a new modified roofing system [heat welded], with a granular cap [see roof schedule].
- F. Installation of new membrane flashings and roof accessories.
- G. Raising existing curbs on mechanical units, vents, etc and rework, disconnect/ extend ducting/ electrical /gas lines to accommodate new insulation heights, flashings, penetration covers, and sheet metal as required. Electrical connections/utility hookups removed and reinstalled by Electrical contractor. Purge and recharge all removed HVAC units by HVAC contractor.
 - 1. All work required for plumbing, mechanical, and electrical disconnect and reconnect, rework, etc. as necessary for the proper execution of the work shall be included within the Contractor's scope – this will NOT be accomplished by the Owner, unless specifically noted.
 - 2. Sub / Trade Contractors must be approved by Owner. In some cases, there may be maintenance contracts, preferred vendors who work on the building and understand the intricacies of the existing building systems that must be utilized.
- H. Installation of new A/C condenser curbs.
- I. Installation of condensate piping and associated supports.
- J. Installation of liquid flashing system around vents, pipes and at low flashing heights [under 8 inches].

1.4 APPLICABLE REFERENCES

- A. The following references form a part of this specification.
 - 1. ASTM C 1289-13 Polyiso Insulation Board, Type II, Class 1, Grade 2
 - 2. ASTM E108 Fire Test of Roof Coverings.

3. [FMG] Factory Mutual Global - Current Approval System [NAV assembly numbers], Loss Prevention Data Sheets for Roof Deck Securement for above Deck Roof Components, Perimeter Flashings, Wind Design-ANSI/FM 4474, Approval Standard FM 4470 and Roof Loads for Construction
4. [UL] Underwriters Laboratories - Roofing Materials and Systems Directory, Fire Resistance Directory, Current Edition.
5. [NRCA] National Roofing Contractors Association - Current Roofing and Waterproofing Manual.
6. [AISC] Manual of Steel Construction
7. [OSHA] Occupational Safety and Health Administration, Guidelines
8. [ASCE/SEI] 7-10 Minimum Design Loads for Buildings
9. [ANSI/SPRI/FM] 4435 ES-1 Wind Design for Edge Systems
10. [NFPA] National Fire Protection Association, 58 Liquefied Petroleum Gas Code
11. [ANSI/SPRI] WD-1 Wind Design Standards
12. ASTM D6164 General Standards for SBS Modified Membrane, Type 1, Grade S and G.
13. ASTM C1278, Gypsum Fiber Board.
14. ASTM D3273, Multi-ply Asphaltic Board

1.5 SUBSTITUTIONS / EQUALS

- A. When a particular make or trade name is specified, it shall indicate the standard quality required. Bidders proposing substitutions shall submit the following ten [10] days prior to bid date. Refer to Contract Documents.
 1. Refer to Section 01 25 00 – Substitution Requests.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing SBS/APP ply roofing membranes specified in this section, with minimum 10 years' experience.
 1. All roofing materials supplied must be manufactured or manufacturer approved by the company furnishing the warranty including the metal roof edge and coping [if integrated in the roof membrane] - single source responsibility. The manufacturer must manufacture the membrane material furnished as a minimum.
 2. The roofing material manufacturer [manufacturer of record] must submit a letter stating that the applicator is approved to use the products as furnished, is licensed to install their material in the state in which the project is located, that the applicator can obtain the warranties as outlined in the specifications in accordance with the roof system requirements and details as drawn and the products are acceptable for use on the surfaces to which they are being applied. In addition, an outline of the roofing system components product name and their securement requirements shall be included with the letter.
- B. Applicator: Company specializing in applying modified membranes with minimum 5 years documented experience, never been terminated by a manufacturer for workmanship problems, be approved for minimum 5 years by the manufacturer for use of their materials and can provide the warranties as specified. No deviations from the roof membrane products specified herein unless approved by the Owner.
- C. Inspection: the roof membrane manufacturer shall provide inspections of the roof system application prior to, during mid-point of installation, and at completion to assure that the roofing system is/has been installed in accordance with their requirements and recommendations.
 1. An inspection status report at mid-point of construction shall be prepared by the manufacturer's rep, no later than 3 days after the inspection.
- D. Training: The roof foremen or at least 1 assistant working on this project must either be a 'Journeyman Roofer' or have attended and completed the roof material membrane

manufacturer's approved installation course herein within the last two years of the bid date with the membrane/s specified herein. **[Certificate of proof required or letter from manufacturer as part of the submittal]**. Roof foremen must have a minimum of 5 years' experience with application of Modified/APP roof systems and be able to interpret specifications and drawings [Contract documents must be always on-site].

- E. Drainage Testing: The Contractor shall test each roof drain and/or downspouts/scuppers for proper water flow and notify the Owner of any clogged drainage and drains that cannot have the roof membrane secured with the existing clamping ring [broken, bolts, etc] before commencement of work. Commencement of work shall constitute acceptance of drainage device and any costs to unclog or repair these items shall be borne by the Contractor.
- F. Provide large waterproof tarps on site for sudden inclement weather.
- G. Provide any power necessary to accomplish the work, Owner may or not provide power.
- H. Repair existing membrane penetrations or leak sources within work area watertight before commencement of new work.

1.7 REGULATORY PERFORMANCE REQUIREMENTS

- A. Fire Hazard Classification: Underwriters Laboratories [UL], Use only Class A fire-rated materials as tested in accordance with ASTM E 108 or UL 790 for exterior fire.
- B. American Society of Civil Engineers [ASCE], Factory Mutual Global Corporation [FMG]/Roof Material Manufacturer/NRCA: Roof materials supplied must be FMG approved meeting FM 4470 test standards, meeting the intent of the test criteria set forth in FMG/ANSI standard 4474 and ANSI/SPRI WD-1 to resistance the uplift wind design pressures as noted on the drawings and to support corrosion resistance fasteners/anchors and impact resistance for severe hail [SH] rating. The roof membrane manufacturer in compliance with the building code must provide the roof assembly securement requirements to resist the wind pressures as noted along with meeting the roof warranty wind requirements and other requirements as shown and outlined in the specifications. The manufacturer's roof assembly securement must not be less stringent than the ASCE/SEI 7-16 calculations or FMG [if insured] and must be successfully tested to resist wind uplift pressure according with ANSI/SPRI WD-1 standard. A field pull [ANSI/SPRI FX-1] or adhesion test [ANSI/SPRI 1A-1] as applicable, may be necessary prior to commencing work by the manufacturer of record as required to meet wind resistance warranties, state codes and other manufacturer requirements. *RDA requested tests performed by fastener or adhesion products manufacturers for uplift resistance or other requirements are for RDA design criteria for design development only, which may/or may not meet the standards/requirements set forth above.* These resistance tests result which have been accomplished on several buildings, are provided herein.
- C. Impact Resistance
 - 1. Performance testing for impact resistance shall be in accordance with FM 4450, FM 4470, ASTM D3746 to meet the requirements for FM-SH (Severe Hail).
- D. Occupational Safety and Health Administration [OSHA]:
 - 1. Asbestos roof materials training for the removal, handling, and monitoring.
 - 2. Roofing safety requirements for torch application.
 - 3. Walking working surfaces and fall protection standards.

1.8 STATE/FACTORY MUTUAL [FM] APPROVALS AND STANDARDS [these approvals/standards reference the design products contained herein. Equal products must provide applicable product approvals].

- A. AMERICAN SOCIETY OF CIVIL ENGINEERS - Minimum Design Loads for Buildings and Other Structures.
 - 1. ASCE/SEI Revision 7-16 - refer to wind pressure zones on the drawings.

1.9 MEETINGS/COORDINATION

- A. A pre-installation conference one week prior to commencing work of this section will be mandatory. All parties responsible for work in this section are required to attend.
- B. Progress meetings will be held during construction. Memos resulting from these meetings will be provided to the Owner and Contractor by owner's rep.
- C. Daily reporting by the Contractor is required.
 - 1. Contractor to email project team daily with outline summary of work accomplished, any problems encountered such as bad deck, etc.
 - 2. Contractor to email project team on days when weather prohibits work to indicate a 'weather day.'

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Do not overload structure with storage of materials, verify roof deck weight capacity and location of structural supports, only items needed that day shall be stored on the roof. Limit loads on roof to 25 pounds per square foot for uniformly distributed loads for metal/gypsum decks, 75 pounds per square for concrete decks. Provide temporary securement of existing membrane where applicable to prevent membrane blow off while installing new roof system.
- B. Store and protect products in accordance with manufacturer's instructions.
- C. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact. All materials must be UL or FM labeled.
- D. Store products in weather-protected environment [manufacturer's plastic wrap is accepted for proper protection, unless wrap is broken, torn, removed], clear of ground 4 inches min. and moisture. Use breathable tarps for moisture protection as needed. Protect unwrapped foam insulation and liquids from direct sunlight exposure. Water damaged materials will be marked 'rejected' by the Contractor/Owner or RDA and removed from the site.
- E. Storage of flammable liquids in buildings is prohibited. All combustible debris shall be removed from the site daily.
- F. Storage shall be in areas designated by Owner.

1.11 WEATHER CONDITIONS

- A. Do not apply roofing system during inclement weather or when the chance is 40% or greater, percentage as listed on www.weather.com for the local area, percentage as listed when read at 7 AM local time or at time of work commencement. Proceed with roofing and associated work when weather conditions will permit unrestricted use of materials and quality control of the work being installed.
- B. Do not apply roofing system to damp or frozen deck surface.
- C. Adverse weather conditions e.g. extreme temperature, high winds, high humidity, and moisture could have a detrimental effect on adhesives, contact manufacturer for acceptable tolerances. See additional restrictions specified herein.
- D. Cold adhesive application: Primer, where used, shall be fully dry before proceeding. During cold weather, store the specified membrane adhesives, flashing cements and mastics in heated storage areas. Take all necessary measures and monitor application conditions, to ensure the adhesive and cement materials are no less than 70°F at the point of contact with the membrane.
- E. Self-adhesive membrane application: During cold weather, store the specified self-adhesive membrane and primer materials in heated storage areas to ensure materials remain no less than 70°F during application. Ensure conditions allow primer to remain tacky, but not wet so that primer will not transfer to finger when touched. Self-adhesive primer shall not fully dry

and lose tack before applying the self-adhesive membrane. Ensure conditions remain satisfactory to achieve membrane adhesion as specified.

- F. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to use roof torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated. Flammable primers and cleaners shall be fully dry before proceeding with heat-welding operations. Prevent or protect wood, paper, plastics and other such combustible materials from direct exposure to open flames from roof torches. Refer to NRCA CERTA recommendations.

1.12 SEQUENCING AND SCHEDULING

- A. Building space underneath roof work is utilized by on-going operations. Coordinate all work with Owner including material storage and contractor parking. Owner's approval required before proceeding with the work. Contractor must provide overhead protection for Owner's workers, public, visitors, etc from falling materials/debris at building entry points.
 - 1. Field Coordination locations, extent required with Owner prior to start of project.
- B. Coordinate the work of installing all associated items in such sequence that will not necessitate movement of workers and equipment over completed roof areas.
- C. Sequence daily work of new roofing to be limited only that can be covered and made 100% watertight at the end of each day, including full adhesion of the membrane, flashings and night seals. No temporary roofing shall be allowed unless approved by Owner.

1.13 MANUFACTURER'S WARRANTIES

- A. Provide a manufacturer's warranty for both repairs/replacements due to any faults in the material and workmanship [Total System Responsibility]. Any leak repairs/replacement due to normal wear and tear, membrane defects, workmanship defects, damage due to wind speeds up to 72 mph [10 meters above ground], shall be performed at no charge to the Owner through the period of the warranty. Roof warranty shall be a no dollar limit type [NDL] with no penal sum, covering all insulation, fasteners, membrane, flashings, liquid flashing, metal coping/edging, regardless of the manufacturer. Warranty must be transferable and must be signed by the Manufacturer of record and the Owner, if required. When a Contractor warranty is provided or implied, this warranty must bind the Manufacturer and Contractor, for the terms of their agreement, to perform any necessary repairs/replacements for the term of the warranty [in most cases two years].
 - 1. SBS Modified Roof System shall be warranted for [20] thirty years.
- B. In the event of a default by the Contractor, the Manufacturer will provide a new Contractor to fulfill the warranty obligation.

1.14 PORTABLE FIRE EXTINGUISHERS

- A. Two standard listed multipurpose dry chemical fire extinguishers, NFPA 10, with 10-pound capacity and an ABC UL rating shall be provided and located 20 horizontal feet from the work area. Additional fire extinguishers shall be provided for different roof levels/work sites.
 - 1. Contractor to ensure all personnel are trained to use fire extinguishers.

PART 2 PRODUCTS

General: All products shall be manufactured approved, and Building Code approved as applicable, meeting all manufacturers full system roof warranty requirements. *Some items below may not be required for this project but are outlined herein if required during course of work due to changing conditions or changes in scope, including installation of these items.*

2.1 MANUFACTURERS

- A. SBS Modified Roof System Manufacturers:
1. Soprema
 2. Elevate
 3. Johns Manville

2.2 ROOFING SYSTEM DESCRIPTIONS/PRODUCTS

General: The Contractor's quote must match the roof system including all components and application procedures [cover board, fasteners, membrane and etc.] The roofing schedules set the parameters for the roof system assembly and its application procedures.

- A. SBS Manufacturers and Membrane Products and Membrane Designation: Styrene Butadiene Styrene [SBS]: Two ply membrane with a fire resistance cap, color white. System Assembly Applications/Scopes:

ROOFING SYSTEM SCHEDULES

ROOF SYSTEM – Replacement

ROOF AREAS [B-1 and B-2]: Metal Deck with sloped LWF

Preparation:	See Preparation for Reroofing and the Proposed Roof Matrix
Vapor Retarder:	One layer, self-adhered SBS modified vapor retarder, adhered to LWF.
Insulation System:	None.
Cover Board:	One layer, gypsum fiber or asphaltic board adhered in low rise foam to the vapor retarder.
Base Ply:	One ply, smooth surfaced, SBS modified, set in cold adhesive over the cover board.
Cap Ply:	One ply mineral surfaced SBS modified fire rated sheet, set in cold adhesive over the base ply, with heat welded laps.
<u>Roof Area B-1 / B-2:</u>	Roof Replacement
Preparation:	See Preparation for Reroofing and the Proposed Roof Matrix. Remove existing modified roof system to expose LWF. Prep LWF as required for the application of new roof materials.
Vapor Retarder:	One layer, self-adhered SBS modified vapor retarder, adhered to LWF.
Insulation System:	None.
Cover Board:	One layer, gypsum fiber or asphaltic board adhered in low rise foam to the vapor retarder.
Base Ply:	One ply, smooth surfaced, SBS modified, set in cold adhesive over the cover board.
Cap Ply:	One ply mineral surfaced SBS modified fire rated sheet, set in cold adhesive over the base ply, with heat welded laps.

2.3 SHEET MATERIALS / COMPONENTS [MODIFIED]

- A. Vapor Retarder / Base Sheet: ASTM D5147, self-adhering, SBS modified bitumen vapor retarder and/or base sheet
- B. SBS Base Sheet: ASTM D 6164, Type I, Grade S, non-woven polyester reinforced 180-gram mat which may be enhanced with fiberglass strands/scrim, coated with SBS polymer modified asphalt, +/- 138 mils thick, fine mineral aggregate surface at bottom and top surface, optimized for cold adhesive application.
- C. SBS Cap Sheet: ASTM D 6164, Type I, Grade G, non-woven polyester reinforced 180-gram mat which may be enhanced with fiberglass strands/scrim, coated only with SBS polymer modified asphalt and fire-retardant additives, +/- 157 mils thick, granular surfaced. Sanded bottom surface optimized for cold adhesive application and a mineral granule top surface [white ceramic granules]. Heat Weld all seams.
- D. SBS Flashing Sheets, [two ply system]: ASTM D 6164, same as roof system unless manufacturer requires a different product for their warranty or as noted herein. Use manufacturer approved liquid flashing system product for flashing conditions where flashing height is less than 6 inches and unusual shaped metal supports and other areas as required by the manufacturer where noted or as required by field conditions. Use manufacturer approved products where liquid flashing system will not provide a watertight condition. All flashing detailing as approved for 20-year roof system warranty, including all enhancements to required flashing components.
 - 1. Base Ply: a layer of non-woven polyester, smooth surfaced mat coated with SBS polymer modified asphalt. One side surfaced with a sanded surface optimized for cold adhesive application.
 - 2. Top ply: a layer of non-woven polyester granular surfaced mat which may be enhanced with fiberglass coating on both sides by SBS polymer modified asphalt. One side surfaced with a sanded surface for cold adhesive application and a mineral granule top surface [white ceramic granules]. Heat weld all seams.
- E. Liquid Flashing: roof membrane manufacturer approved liquid flashing system for irregular flashing conditions.
 - 1. Catalyzed polymethyl methacrylate [PMMA] liquid resin with polyester reinforcing fleece fabric embedded into the resin to form fully reinforced waterproofing membrane flashings. Color to match cap sheet color. Broadcast granules as appropriate.
- F. Cold Adhesive: ASTM D3019; roof membrane manufacturer approved cold adhesive system: single component, asphalt cutback adhesive specifically for the application of SBS modified bitumen roof systems; Type III, trowel or squeegee applied.

2.4 INSULATION AND COVER BOARD

General: All insulation and/or cover board materials shall be from the same manufacturer. Board configuration: 48-inch x 96-inch thickness [mechanically fastened] or 48-inch x 48-inch thickness [adhered/ adhesive applied], unless otherwise approved by manufacturer. Mixing of insulation panels from different manufacturers is not acceptable. All insulation and cover board shall be supplied and approved by the membrane manufacturer and must meet FMG 4450 or UL 1256 as a tested assembly.

- A. Flat Board Stock Insulation: ASTM C1289, closed cell polyisocyanurate, square edge/rigid board, type II, class 1, grade 2, inorganic glass fiber reinforced mat facers on both sides, square edges, minimum 20 psi compressive strength, size boards as approved for application and by the roof membrane manufacturer.
 - 1. Includes in-fill for tapered insulation/saddles, replacement for wet insulation, and/or leveling insulation. Thickness as outlined in roof schedules or to match existing.

- B. Tapered Insulation: ASTM C1289, closed cell polyisocyanurate rigid board; type II, class 1, grade 2, inorganic glass fiber reinforced mat facers on both sides, factory tapered, minimum 20 psi compressive strength, size boards as approved for application and as supplied by the roof membrane manufacturer. The roofing contractor and the tapered insulation manufacturer designer must assume design/application responsibility for the performance of the submitted tapered insulation saddle layout.
 - 1. Tapered Insulation starts and slope as outlined in the roofing schedules [and/or drawings]. Contractor shall coordinate starting thickness and slope as indicated to ensure proper roof system thickness, flashing height, etc. per design intent details.
 - 2. Saddles shall be sloped by providing a saddle half diamond shaped behind RTU's and a diamond shaped between drains, *Tapered saddles 1/2 inch per foot, start at 1/4 inch thick or otherwise as shown*. Each side of the saddle width shall be minimum 1/4 [25%] of the drain-to-drain length as applicable for conditions.
 - 3. Drains: Tapered min. 1/4 inch per foot slope drain sumps or omit the cover board to provide slope.
- C. Gypsum Fiber Cover Board: ASTM C1278; minimum 1/4 inch thick board [board thickness must be coordinated and approved by roof membrane manufacturer for tested roof assembly], impact resistant, non-structural, fiber-reinforced gypsum panels, mold and moisture resistant throughout the panel core and surface; glass mat faced, primed surface, 48 inch x 48 inch size sheets with square edges; gypsum fiber core, as noted and approved for the application and as supplied by the roof membrane manufacturer.
- D. Asphaltic Cover Board: ASTM 3273; minimum 1/4-inch thick [board thickness must be coordinated and approved by roof membrane manufacturer for tested roof assembly], multi-ply asphaltic core between fiberglass reinforcing plies, color black; as noted and approved for the application and as supplied by the roof membrane manufacturer.

2.5 CANTS / EDGE

- A. Cant Strips and Tapered Edge Strips: Perlite, fire resistant, performed to 45 degree angle and 18 inch long tapered edge strip, tapered front to back as required by the Manufacturer.

2.6 BOARD FOAM ADHESIVE

- A. Manufacturer Standard Adhesive for the application of adhering insulation and cover board in place: Low rise, Low-pressure, two-component spray polyurethane foam adhesive as approved and supplied by the manufacturer of the membrane
 - 1. Adhesive patterns must be in conformance with manufacturer requirements, including enhancements at perimeters and corners.

2.7 CANTS / EDGE

- A. Cant Strips and Tapered Edge Strips: Perlite, fire resistant, performed to 45 degree angle and 18 inch long tapered edge strip, tapered front to back as required by the Manufacturer.

2.8 ROOF FASTENERS and ACCESSORIES [some items may not be required for this project]

General: Fasteners/Anchors: strength, type and configuration must meet the required pull test resistance for each attachment application. Fastener's rate and pattern must meet FMG, or local code approved to meet the intent of the wind uplift rating specified. The Contractor shall determine fastener lengths, minimum embedment: steel 3/4-inch, concrete/concrete block-1 ¼ inch, gypsum 2- inch, tectum 2-inch and wood-1 1/4 inch. Fastener manufacturers listed are ITW Buildex, IWT Red Head, SFS and Tru-Fast or equal. All fasteners shall be corrosion resistant steel in accordance with meeting ASTM F1667 or type 304 stainless steel.

- A. Roofing and Other Nails: square or round head, ring shanked galvanized or non-ferrous type, length and diameter as required to suit application.

- B. Metal Counterflashing and other LG metal sheets to Wood: ITW Buildex, 'TruGrip, #9, self-piercing, corrosion resistance steel shank with EPDM washer.
- C. Metal Counterflashing and Other LG Sheet Metal [exposed] to Masonry: ITW Buildex, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, ATF treads, corrosion resistant steel shank, with EPDM washer.
- D. Termination Bars [exposed] to Masonry: ITW Buildex, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, ATF treads, corrosion resistant steel shank, with EPDM washer.
- E. General Purpose Stainless Steel: Series 304 fasteners, with or w/out EPDM washers.

2.9 ROOF ACCESSORIES

- A. Walkway Pads: Modified with slip resistant surface, heat welded in place.
- B. Pourable Sealer: Polyurethane, Manufacturer's standard.
- C. Pourable Sealer: Polyurethane, Manufacturer's standard.
- D. Termination Bars: Aluminum 1.3-inch-wide, 10 feet long, 1.08 inch [min.] thick bars with flat or with [integral caulk edge], as applicable per manufacturer.
- E. Pipe Supports/Hangers:
 - 1. Manufactured by Portable Pipe Hangers, Adjustable, stainless metal components, polypropylene base, 'type SS8 – C or R [up to 2 ½ inch pipes] or PP10' [up to 3 ½ inch pipes], as required for conditions.
 - 2. Manufactured by OMG, Pipe-Guard, non-adjustable, PGM-BK, PGS-BK, PGTS-BK pipes up to 2 inches, as required for conditions.
 - 3. Manufactured by Advanced Supports Products, EcoCurb or equal. Pipe supports for Condensate Lines/Piping.
- F. Rail Curbs: Manufactured by Pate, type es-1, es-2 or es-5, as required for condition, size as required by unit base size including unit tie downs or as shown.
- G. Vent Pipe Extenders: Manufactured by Tubos, Clearwater, FL, PVC pipe extenders.
- H. A/C condenser and other roof top unit per manufactured stands: Manufactured by Precision Aluminum Products with substrate anchoring requirements.
- I. Bib Metal: 24-gauge stainless steel or pre-finished [match housing color] steel, minimum 4 inch wide.
- J. Equipment enclosure: 24-gauge stainless steel, shop or pre-manufactured with top fabricated [angled] to allow no moisture from entering the pipe areas, access to pipes required. Install mortar in the bottom of base with polyurethane pourable sealer poured around pipes [2-inch depth minimum]. Seal pipes that exit enclosure with sealant/foam.
- K. Roof Drain Accessories: bolts, clamping ring, strainers, size and type as required to accommodate existing drains.
- L. Roof Drain Inserts: Manufactured or approved by the membrane manufacturer, extruded aluminum body, cast dome with stainless steel clamping ring and a watertight rubber seal, size as required.
- M. Roof Drains: Match existing size or as size shown, cast iron bowl/clamping ring with no hub, overflow drains shall have a 2-inch-high metal flow restrictor adapter. Replacement drains manufactured by Zurn. Zurn [8 inch - Z125] can be used if existing pipe size can accommodate drain, when no replacement type/style is available, as approved by the membrane manufacturer.
- N. Expansion Joints: 60 mil PVC sheet attached to aluminum flanges with bifurcated crimp, with a closed cell polyethylene foam backer; Continuous or longest pieces possible [if available],

Johns- Manville 'Expand-O-Flash', curb to curb and curb to wall type with bellow size to match existing with shop fabricated termination.

- O. Roof Hatch: Thermally broken Steel roof-hatch with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, straight sides, and integrally formed deck-mounting flange at perimeter bottom. Type and Size: Single-leaf lid, 30 by 36 inches [unless otherwise required to fit existing roof opening]; 12 inch high insulated curb with integral cap flashing, secured to roof deck. Steel cover and frame: 14 gauge; mill finish; Type 316 stainless steel hinges, zinc plated hardware; extruded EPDM rubber gasket adhered to the cover. Compression spring operators with automatic hold-open arm with grip handle release providing smooth, easy and controlled operation throughout operation. BILCO Company, Type S-20TB or Equal.

2.10 SEALANTS/TAPES

- A. General Use: ASTM C920, Type S, Grade NS, Class 25 as required for each joint condition, single component, elastomeric silicone polymer, non-staining, non-shrinking, non-sagging, and ultra-violet resistance, clear or to match surrounding existing color.
 - 1. Tremco's 'Dymonic' [basis of design for sealant]. Provide where sealant is exposed to weather or movement exceeds butyl sealant capability.
- B. Butyl Sealant: ASTM C1311, single component, solvent released butyl rubber sealant, polyisobutylene plasticized.
- C. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release paper.

PART 3 EXECUTION

3.1 EXAMINATION / LEVEL SURFACE CONDITIONS

- A. Verify that surfaces and site conditions are ready to receive work. Verify that deck is clean and smooth, free of depressions, irregularities, or projections, properly leveled, start of work constitutes acceptance of conditions.
 - 1. Verify that all wood blocking, nailers are securely anchored in place.
- B. Areas of substrate where ponding water [1/4 inch] still occurs 48 hours after rainfall shall be built-up in accordance with the leveling fill manufacturer's recommendations prior to the installation of the final ply sheet. Failure to perform this action could result in total roof removal, string leveling prior to final ply recommended.

3.2 PROTECTION

- A. Protect building surfaces/interior spaces against damage from roofing work. It is the Contractor's responsibility to take any necessary actions to prevent construction-related leaks, to include but not limited to repairing watertight existing surrounding roofing scheduled to be replaced or overlaid. Surrounding roof areas include roof top material storage areas, workers roof top access to from roofing work site areas and any drainage system [roof drain-scutters] leak issues located in work area.
 - 1. Contractor must include the cost to deal with these existing leak sources into the overall project unless the Owner/Owners rep is made aware of these leak sources prior to commencement of the project.
- B. Provide, erect barricades, guardrails as required by applicable regulatory advisory to protect occupants of building and workers.
- C. Cover all drains and other openings intended for drainage during construction to prevent clogging of system, remove at the end of each day to allow for drainage.

- D. Special precautions shall be taken to avoid fumes from entering the facilities through air intakes, coordinate with owner to deal with active A/C units.

3.3 VAPOR RETARDER / BASE SHEET

- A. Install self-adhering vapor retarder / base sheet to the existing prepped LWF in accordance with roof membrane manufacturer specifications.

3.4 INSULATION AND COVERBOARD APPLICATION

General: Secure cover board to vapor retarder / base sheet to the requirements of FMG loss Prevention Data Sheet 1-28 and 1-29 to include additional securement at the corners and perimeters. Install insulation including saddles as shown on the contractor/manufacturer-approved layout. This layout must be capable of draining the roof completely into drainage elements after 48 hours following a rainfall with an outside average temperature of 65 degrees F or higher [partly sunny or sunny conditions]. All ponding must be corrected to achieve the condition. The insulation [tapered saddles] layout pattern must not block the flow of rainwater.

- A. LWF / Concrete Deck Surface: Adhere the new cover board in adhesive to the vapor retarder / base sheet. All boards shall be adhered at the rate/pattern as tested/approved and as shown in accordance with the Manufacturer's / Contractors approved layout, including adhering the new tapered insulation saddles onto the insulation, where applicable. Insulation, saddle boards and coverboard shall be walked-in before skin coat develops and boards shall have continuous pressure until the adhesive sets [confirm exact requirements with manufacturer, including specific requirements for application temperature and humidity / environmental conditions] to ensure not less than 80% of any board be in contact with the substrate. Any portion of an insulation / cover board that falls within the calculated perimeter or corner area shall have the increased securement applied over the entire board. Offset joints of top coverboard layers from bottom insulation layers [as applicable] no less than 6 inches with long joints continuous and short joints staggered, as applicable.
- B. Correct any ponding as necessary prior to starting work.
- C. Apply no more insulation / cover board than can be sealed watertight with roofing membrane in the same day. Cut insulation to fit neatly to perimeter blocking and around penetrations through the roof, maximum joint width 3/8 inch.
 - 1. Seal openings / gaps between insulation / cover boards, around penetrations, etc. with low rise foam adhesive.
- D. All ventilators, A/C unit curbs, supports etc. [square or rectangle] will have a tapered edge strip [formed as a saddle] placed around the high side of unit to slope water from unit. Ventilators, A/C unit, supports etc. curbs over 2 feet wide will require insulation saddles sloped 1/2 inch per foot.
- E. Provide adequate separation of insulation between hot exhaust stacks.

3.5 ASPHALT PRIMER APPLICATION

- A. Examine all substrates, and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.
- B. Prime all dissimilar surfaces [metal, concrete, etc] which asphalt, or membrane that will come in contract, in accordance with manufacturer requirements. Apply at rate of 150-200 square foot per gallon, unless directed otherwise by manufacturer. Ensure that the primer is completely dry before any insulation or membrane can be installed.
- C. Project conditions vary throughout the day. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

3.6 MEMBRANE APPLICATION

General: Install roofing sheets as per manufacturer's recommendations and the following summary of requirements. Complete all necessary terminations and daily night seals each workday to ensure a watertight condition.

- A. Apply the SBS modified base ply membrane over the cover board, set in cold adhesive using notched trowel or squeegee application in accordance with manufacturer requirements. Install rolls in shingle fashion to prevent back-water laps, starting the plies at the low edge of the roof or at roof drains, apply one full width sheet of the modified membrane being sure to maintain 4-inch side laps and 6-inch end laps over preceding sheets, stagger end laps 12 inches. Align sheets [chalk lines] to maintain uniform laps. The sheet must be firmly and uniformly adhered to meet manufacturer requirements.
 - 1. Unroll membrane onto the substrate and allow adequate time to relax prior to application.
 - 2. Avoid walking over the membrane during and directly following the application.
- B. Apply the SBS modified cap sheet using one full width sheet to maintain 4-inch side and 6-inch end laps over preceding sheets with staggered laps 12 inch, install in shingle fashion to prevent back-water laps. The sheet must be firmly and uniformly adhered in cold adhesive to meet manufacturer requirements to the base ply. All seams shall be heat welded. Ensure that side laps that are perpendicular to a fastened thru roof metal edge be held back 2 feet 6 inch from metal edging and a full cap sheet is installed parallel [picture framing] under the fastened metal edge flange, prior to flange installation. Apply sheets smooth without voids, free from air pockets, wrinkles, fishmouths, or tears, and avoid seams intersecting into drains.
 - 1. Unroll membrane onto the substrate and allow adequate time to relax prior to application.
 - 2. Avoid walking over the membrane during and directly following the application.
- C. Extend roofing plies over and terminate above cants strips [as applicable].
- D. Special application shall be exercised at all T-joints [3 or more membranes], follow manufacturers printed instructions.

3.7 FLASHING APPLICATION – Vertical Surfaces, Edges, Pipes and Drains

General: Install flashing sheets over cants strips and other vertical surfaces, at edges and penetrations through roof as per manufacture's recommendations, requirements of FMG loss Prevention Data Sheet 1-49 including details and the following requirements. No roof system is complete until all flashed items are terminated to prevent water from infiltrating into the roofed structure. *Enhance all base flashing detailing as required to meet 30-year warranty specifications, confirm requirements with manufacturer.*

- A. Remove loose or unsecured flashings, mineral surfaced or coated flashings and excessive asphalt from walls, curbs etc. to provide a smooth, sound surface for new flashings.
- B. Vertical Surface
 - 1. Adhere each layer of roofing ply flashing [base layer of smooth surfaced and exposed to view layer of a granular surfaced ply sheet] in strips four to six feet long [max] on the primed vertical surfaces extending onto the flat field surface of the roof minimum four inches [six inches for the cap sheet], set in cold adhesive, heat weld seams on cap sheet. Firmly press flashing into position extending up walls or parapets minimum of 8 inches, [max. 25 inches - intermediate fastening may be required above 25 inches] above roof surface and install a termination bar at the top [as applicable]. Side laps shall be three inches and shall be staggered a minimum of twelve inches from the proceeding ply below. Flashing shall never be installed above any thru-wall metal flashing unless authorized by RDA. Seam all corners and seams as per manufacturer recommendations.
- C. Flanges [curbs, flues, etc]
 - 1. Primed all metal flanges and set primed metal flanges on top of smooth surfaced SBS sheet or on top of the modified cap, strip-in flange with 12-inch-wide smooth or cap sheet,

as applicable, anchor in place as per manufacturer's guidelines. Manufactured supplied edges shall be installed in accordance with written instructions.

- D. Pipes
 - 1. All plumbing vents stack shall be flashed with a one-piece lead flange and sleeve installed over existing pipe, striped-in lead roof flanges with the modified membrane as per manufacturer recommendations. Extend short pipes to minimum 8 inches above finished roof surface. All other pipes that cannot be fitted with a lead flashing shall be flashed using liquid material/system as per manufacturer guidelines and as specified herein. *Liquid flashing can be used on **all** vent stacks as an option in lieu of lead flashing.*
- E. Drains
 - 1. Provide primed new 3 foot x 3 foot lead targets set onto the base ply in water cut-off mastic, then strip-in 6 inches beyond lead edges. Anchor clamping rings over the lead flashing/cap ply with the lead minimum 1 inch turned down into the drain bowl. Install modified cap ply with several cuts, adhered in place to conform to the drain bowl diameter. Provide modified membrane cap ply target over drain if a field ply seam intersects the drain.
- F. Penetrations
 - 1. Liquid flashing [LF] system shall be installed on a clean surface with a reinforced polyester fleece fabric in a multi-layer [resin/fleece/resin] configuration with PMA resin applied [fully saturating fabric] at 2 gallons per square feet with resin topcoat [granulated surface], Extending vertically and 8 beyond the base of penetration, fully encapsulating the penetration. LF shall be installed where noted or as required by condition per the manufacturer. Install in accordance with manufacturer's printed detail or as shown.
 - 2. Supplement other flashing details with LF as requirement to obtain 30-year warranty detailing. Confirm with manufacturer.

3.8 INSTALLATION OF ROOF ACCESSORIES

- A. Walkway pads and other accessories shall be installed in accordance with the manufacturer's recommendations or as shown on the drawings. Space pads 3 inches apart.
- B. Expansion joint, and other accessories not noted herein shall be installed in accordance with the manufacturer's recommendations and as shown on the drawings.
- C. Rail curbs, equipment stands, and pipe supports shall be installed in accordance with the manufacturer's instructions. Anchoring to substrate and tie downs as shown. Place curbs on deck and position curbs ends to allow water to flow toward drains or gutters.
- D. Equipment enclosure shall be 24-gauge stainless steel, shop or pre-manufactured with top fabricated [angled] to allow no moisture from entering the pipe areas. Install mortar in the bottom of base with polyurethane pourable sealer poured around pipes [2-inch depth minimum]. Seal pipes that exit enclosure with sealant/foam.
- E. Penetration pans shall have mortar installed in the bottom of penetration pans with polyurethane pourable sealer [2-inch min] filled to the top of the pan, then slope.
- F. Roof drain clamp rings/bolts where distorted, corroded or too short, shall be replaced. Clamping rings shall be clean of all asphalt and other deposits. Provide new drain strainers where missing. Install drain inserts if clamping rings cannot be compressed on the new roof membrane due to broken bolts, etc.
- G. A/C condenser and other roof top unit stands shall be installed in accordance with engineered requirements furnished by the manufacturer.
- H. Install other accessories as outlined in the product manufacturer's installation guide.

3.9 FIRE SAFETY

- A. Measures to be implemented by the Contractor to minimize the possibility of fire and to provide a safe work environment. It is the responsibility of the Contractor performing any work to comply with the safety provisions of the National Fire Codes pertaining to such work along with other requirements specified herein. In the event of a fire of any size, Contractor shall notify the Local Fire Department.
- B. All torched-applied material shall be in accordance with FM 1-33 and NRCA requirements. Never torch apply membrane to any flammable substrate. Crew members handling torches shall be trained by an authorized certified torch applicator [CERTA] trainer. One crewmember shall watch for fires or smoldering materials on all areas of the roof during torching application, **an infrared device that measures the material temperature shall be used for this watch. The watch shall continue one hour [unless otherwise requirement by the local fire department] after roofing material application has been completed for the day checking all materials with the infrared device.**

3.10 WATER CUT-OFF

- A. At the end of the day's work or when precipitation is imminent, a water cut-off or other waterproof protection shall be provided to ensure a watertight condition is obtained, between the new and existing conditions, remove cut-off prior to resuming the installation of the roofing system. Ensure that material is compatible with both membranes [new and existing] ensuring a watertight result.

3.11 CLEANING

- A. In areas where finished surfaces are soiled by any other source of soiling caused by work of this section, consult manufacturer for cleaning advice.

END OF SECTION

SECTIONS 07 53 00 / 07 72 00 – SELF- ADHERED [EPDM] ROOFING AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provisions of the contract and Division 1 Specification Sections apply to this section.

1.2 RELATED SECTIONS

- A. Section 06 10 53 – Miscellaneous Rough Carpentry for Roofing
- B. Section 07 01 50 – Preparation for Reroofing
- C. Section 07 62 00 – Sheet Metal, Flashing, Trim and Specialties Items

1.3 WORK INCLUDES, BUT NOT LIMITED TO:

General: Intent of project is to provide a functional 20-year new watertight roof system, resisting wind uplift pressures, thermally induced movement and exposure to weather without failure. Roof system must have been tested by an approved testing agency and have field experience by the manufacturer. Provide and install all roof components and accessories for a complete watertight roof system.

- A. Remove existing roof systems as noted.
- B. Installation of a new EPDM roofing system, self-adhered system [see roof schedules].
- C. Installation of new flat stock and tapered insulation and insulation saddles.
- D. Installation of new cover board.
- E. Installation of new membrane flashings and roof accessories.
- F. Raising existing curbs on mechanical units, vents, etc and rework, disconnect/ extend ducting/ electrical /gas lines to accommodate new insulation heights, flashings, penetration covers and sheet metal as required. Electrical connections/utility hookups removed and reinstalled by Electrical contractor. Purge and recharge all removed HVAC units by HVAC contractor.
 - 1. All work required for plumbing, mechanical, and electrical disconnect and reconnect, rework, etc. as necessary for the proper execution of the work shall be included within the Contractor's scope – this will NOT be accomplished by the Owner, unless specifically noted.
 - 2. Sub / Trade Contractors must be approved by Owner. In some cases, there may be maintenance contracts, preferred vendors who work on the building and understand the intricacies of the existing building systems that must be utilized.
- G. Installation of new A/C condenser unit stands, curbs and other roof top units stands, curbs etc. includes approved tie down/stands, as shown, as applicable.
- H. Installation of gas piping supports.
- I. Installation of walk way pads

1.4 APPLICABLE REFERENCES

- A. The following references form a part of this specification.
 - 1. ASTM C 1289-13 Polyiso Insulation Board, Type II, Class 2, Grade 2 and HD Cover Board, Type II, Class 4, Grade 1
 - 2. ASTM E108 Fire Test of Roof Coverings.
 - 3. [FMG] Factory Mutual Global - Current Approval System [NAV assembly numbers], Loss Prevention Data Sheets for Roof Deck Securement for Above Deck Roof Components,

- Perimeter Flashings, Wind Design-ANSI/FM 4474, Approval Standard FM 4470 and Roof Loads for Construction
4. [UL] Underwriters Laboratories - Roofing Materials and Systems Directory, Fire Resistance Directory, Current Edition.
 5. [NRCA] National Roofing Contractors Association - Current Roofing and Waterproofing Manual.
 6. [AISC] Manual of Steel Construction
 7. [OSHA] Occupational Safety and Health Administration, Guidelines
 8. [ASCE] 7-10 Minimum Design Loads for Buildings
 9. [ANSI/SPRI/FM] 4435 ES-1 Wind Design for Edge Systems
 10. [NFPA] National Fire Protection Association, 58 Liquefied Petroleum Gas Code
 11. [ANSI/SPRI] WD-1 Wind Design Standards
 12. ASTM D4637 Ethylene Propylene Diene Monomer [EPDM].

1.5 SUBSTITUTIONS / EQUALS

- A. When a particular make or trade name is specified, it shall indicate the standard quality required. Bidders proposing substitutions shall submit the following ten [10] days prior to bid date. Refer to Contract Documents.
 1. Refer to Section 01 25 00 – Substitution Requests.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing EPDM roofing membranes specified in this section, with minimum 10 years' experience.
 1. All roofing materials supplied must be manufactured or manufacturer approved by the company furnishing the warranty including the metal roof edge and coping [if integrated in the roof membrane] - single source responsibility. The manufacturer must manufacture the membrane material furnished as a minimum.
 2. The roofing material manufacturer [manufacturer of record] must submit a letter stating that the applicator is approved to use the products as furnished, is licensed to install their material in the state in which the project is located, that the applicator can obtain the warranties as outlined in the specifications in accordance with the roof system requirements and details as drawn and the products are acceptable for use on the surfaces to which they are being applied. In addition, an outline of the roofing system components product name and their securement requirements shall be included with the letter.
- B. Applicator: Company specializing in applying single ply with minimum 5 years documented experience, never been terminated by a manufacturer for workmanship problems, be approved for minimum 5 years by the manufacturer for use of their materials and can provide the warranties as specified. No deviations from the roof membrane products specified herein unless approved by the Owner.
- C. Inspection: Prior to, during mid-point installation and at completion, an inspection shall be made by the manufacturer's representative to assure that the roofing system is/has been installed in accordance with their requirements and recommendations.
 1. An inspection status report at mid-point of construction shall be prepared by the manufacturer's rep, no later than 3 days after the inspection.
- D. Training: The roof foremen or at least 1 assistant working on this project must either be a 'Journeyman Roofer' or have attended and completed the roof material membrane manufacturer's approved installation course herein within the last two years of the bid date with the membrane/s specified herein. [**Certificate of proof required or letter from manufacturer as part of the submittal**]. Roof foremen must have a minimum of 5 years' experience with application of EPDM roof systems and be able to interpret specifications and drawings [Contract documents must be always on-site].

- E. Drainage Testing: The Contractor shall test each roof drain and/or downspouts/scuppers for proper water flow and notify the Owner of any clogged drainage and drains that cannot have the roof membrane secured with the existing clamping ring [broken, bolts, etc] before commencement of work. Commencement of work shall constitute acceptance of drainage device and any costs to unclog or repair these items shall be borne by the Contractor.
- F. Provide large waterproof tarps on site for sudden inclement weather.
- G. Provide any power necessary to accomplish the work, Owner may or not provide power.
- H. Repair existing membrane penetrations or leak sources within work area watertight before commencement of new work.

1.7 REGULATORY PERFORMANCE REQUIREMENTS

- A. Fire Hazard Classification: Underwriters Laboratories [UL], Use only Class A fire-rated materials as tested in accordance with ASTM E 108 or UL 790 for exterior fire.
- B. American Society of Civil Engineers [ASCE], Factory Mutual Global Corporation [FMG]/Roof Material Manufacturer/NRCA: Roof materials supplied must be FMG approved meeting FM 4470 test standards, meeting the intent of the test criteria set forth in FMG/ANSI standard 4474 and ANSI/SPRI WD-1 to resistance the uplift wind design pressures as noted on the drawings and for FMG windstorm resistance classifications, to support internal/external fire, [metal decks], to support corrosion resistance fasteners/anchors and impact resistance for severe hail [SH] rating. The roof membrane manufacturer in compliance with the building code must provide the roof assembly securement requirements to resist the wind pressures as noted along with meeting the roof warranty wind requirements and other requirements as shown and outlined in the specifications. The manufacturer's roof assembly securement must not be less stringent than the ASCE 7-16 calculations or FMG [if insured] and must be successfully tested to resist wind uplift pressure according with ANSI/SPRI WD-1 standard. A field pull [ANSI/SPRI FX-1] or adhesion test [ANSI/SPRI 1A-1] will be necessary prior to commencing work when conditions are different than manufacturer's assembly test criteria for their approval to meet the design pressures or required by the state building codes or be conducted per RDA request. If a test has been accomplished the results will be provided herein.
- C. Impact Resistance
 - 1. Performance testing for impact resistance shall be in accordance with FM 4450, FM 4470, ASTM D3746 to meet the requirements for FM-SH (Severe Hail).
- D. Occupational Safety and Health Administration [OSHA]:
 - 1. Asbestos roof materials training for the removal, handling and monitoring.
 - 2. Roofing safety requirements for torch application.
 - 3. Walking working surfaces and fall protection standards.

1.8 STATE/FACTORY MUTUAL [FM] APPROVALS AND STANDARDS [these approvals/standards reference the design products contained herein. Equal products must provide applicable product approvals].

- A. AMERICAN SOCIETY OF CIVIL ENGINEERS - Minimum Design Loads for Buildings and Other Structures.
 - 1. ANSI/ASCE Revision 7-16 - refer to wind pressure zones on the drawings.

1.9 MEETINGS/COORDINATION

- A. A pre-installation conference one week prior to commencing work of this section will be mandatory. All parties responsible for work in this section are required to attend.
- B. Progress meetings will be held during construction. Memos resulting from these meetings will be provided to the Owner and Contractor by RDA.

- C. Daily reporting by the Contractor is required.
 - 1. Contractor to email project team daily with outline summary of work accomplished, any problems encountered such as bad deck, etc.
 - 2. Contractor to email project team on days when weather prohibits work to indicate a 'weather day.'

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Do not overload structure with storage of materials, verify roof deck weight capacity and location of structural supports, only items needed that day shall be stored on the roof. Limit loads on roof to 25 pounds per square foot for uniformly distributed loads for metal/gypsum decks, 75 pounds per square for concrete decks. Provide temporary securement of existing membrane to prevent membrane blow off while installing new roof system.
- B. Store and protect products in accordance with manufacturer's instructions.
- C. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact. All materials must be UL or FM labeled.
- D. Store products in weather-protected environment [manufacturer's plastic wrap is accepted for proper protection if approved by the manufacturer, unless wrap is broken, torn, removed], clear of ground 4 inches min. and moisture. Use breathable tarps for moisture protection as needed. Protect unwrapped foam insulation and liquids from direct sunlight exposure. Water damaged materials will be marked 'rejected' by the Contractor/Owner or RDA and removed from the site.
- E. Storage of flammable liquids in buildings is prohibited. All combustible debris shall be removed from the site daily.
- F. Storage shall be in areas designated by Owner.

1.11 WEATHER CONDITIONS

- A. Do not apply roofing system during inclement weather or when the chance is 40% or greater, percentage as listed on www.weather.com for the local area, percentage as listed when read at 7 AM local time or at time of work commencement. Proceed with roofing and associated work when weather conditions will permit unrestricted use of materials and quality control of the work being installed.
- B. Do not apply roofing system to damp or frozen deck surface.
- C. Adverse weather conditions e.g. extreme temperature, high winds, high humidity, and moisture could have a detrimental effect on adhesives, contact manufacturer for acceptable tolerances. See additional restrictions specified herein.

1.12 SEQUENCING AND SCHEDULING

- A. Building space underneath roof work is utilized by on-going operations. Coordinate all work with Owner including material storage and contractor parking. Owner's approval required before proceeding with the work. Contractor must provide overhead protection for Owner's workers, public, visitors, etc from falling materials/debris at building entry points.
 - 1. Field Coordination locations, extent required with Owner prior to start of project.
- B. Coordinate the work of installing all associated items in such sequence that will not necessitate movement of workers and equipment over completed roof areas.
- C. Sequence daily work of new roofing to be limited only that can be covered and made 100% watertight at the end of each day, including full adhesion of the membrane, flashings and night seals. No temporary roofing shall be allowed unless approved by Owner.

1.13 MANUFACTURER'S WARRANTIES

- A. Provide a manufacturer's warranty for both repairs/replacements due to any faults in the material and workmanship [Total System Responsibility]. Any leak repairs/replacement due to normal wear and tear, membrane defects, workmanship defects, damage due to wind speeds up to 72 mph [10 meters above ground], shall be performed at no charge to the Owner through the period of the warranty. Roof warranty shall be a no dollar limit type [NDL] with no penal sum, covering all insulation, fasteners, membrane, flashings, liquid flashing, metal coping/edging, regardless of the manufacturer. Warranty must be transferable and must be signed by the Manufacturer of record and the Owner, if required. When a Contractor warranty is provided or implied, this warranty must bind the Manufacturer and Contractor, for the terms of their agreement, to perform any necessary repairs/replacements for the term of the warranty [in most cases two years].
 - 1. .060-inch-thick EPDM Roof Membrane shall be warranted for [20] twenty years.
- B. In the event of a default by the Contractor, the Manufacturer will provide a new Contractor to fulfill the warranty obligation.

1.14 PORTABLE FIRE EXTINGUISHERS

- A. Two standard listed multipurpose dry chemical fire extinguishers, NFPA 10, with 10-pound capacity and an ABC UL rating shall be provided and located 20 horizontal feet from the work area. Additional fire extinguishers shall be provided for different roof levels/work sites.
 - 1. Contractor to ensure all personnel are trained to use fire extinguishers.

PART 2 PRODUCTS

General: All products shall be state approved, and Building Code approved as applicable, meeting all manufacturers full system roof warranty requirements. *Some items below may not be required for this project but are outlined herein if required during course of work due to changing conditions or changes in scope.*

2.1 ROOFING SYSTEM DESCRIPTIONS

General: System Assembly Applications/Scopes, Roof Removal and Replacement.

- A. Manufacturers and Membrane Products and Membrane Designation: [Single Ply]: Ethylene Diene Monomer [EPDM] .060 inches thick, non-reinforced, self-adhered, color black.
 - 1. Elevate, Rubberguard EPDM SA
 - 2. Carlisle SynTec., Sure-Seal FR EPDM SAT.
- B. Insulation [polyisocyanurate] Manufacturers:
 - 1. Firestone Building Products
 - 2. Carlisle SynTec
- C. Cover Board [CB]:
 - 1. DensDeck Prime
- D. Base Flashing Designations: same as roof system unless manufacturer requires a different product for their warranty or as noted herein. Use manufacturer approved liquid membrane system product for flashing conditions where flashing height is less than 6 inches and unusual shaped metal supports and other areas as required by the manufacturer where noted or as required by condition. Use manufacturer approved molded products where liquid flashing system will not provide a watertight condition.
 - 1. Other Flashing Designation- Manufacturer's approved details for 20-year warranty.

The Contractor's quote must match the roof system including all components and application procedures [cover board, fasteners, membrane and etc.] The roofing schedules set the parameters for the roof system assembly and its application procedures.

ROOFING SYSTEM SCHEDULES

Roof Area A:

Preparation:

Roof Replacement

See Preparation for Reroofing and the Proposed Roof Matrix. Remove existing EPDM to expose existing insulation. Prep as required for the application of new roof materials.

Existing Insulation:

One-layer, flat stock, 2-3/4 inches thick

New Insulation:

One-layer, flat stock, 2-1/2 inches thick, mechanically fastened thru all layers of insulation into the metal deck. New tapered insulation saddles as shown

New Cover Board:

One-layer, flat stock, gypsum, 1/4 inches thick, adhered in place with adhesive to the top of the insulation.

New Membrane:

One ply EPDM membrane, self-adhered to the new cover board.

Roof Area C-1 / C-2:

Preparation:

Roof Replacement

See Preparation for Reroofing and the Proposed Roof Matrix. Total Removal to the metal / wood deck. Prep as required for the application of new roof materials.

New Insulation:

Tapered insulation system: 4 inch base layer of flat stock insulation, 1/2-inch start to tapered insulation over base layer, tapered at 1/8-inch per foot, mechanically fastened through all layers into the metal deck. New tapered insulation saddles as shown

New Cover Board:

One-layer, flat stock, gypsum, 1/4 inches thick, adhered in place with adhesive to the top of the insulation.

New Membrane:

One ply EPDM membrane, self-adhered to the new cover board.

2.2 SHEET MATERIALS/COMPONENTS

General: all membrane component flashings, etc shall match the same color as the membrane.

- A. Elastomeric Sheet: ASTM D4637, type I, class A material, cured, synthetic, non-reinforced, self-adhered, single ply membrane composed of Ethylene Propylene Diene Monomer [EPDM], BLACK, .060 inches thick.
- B. Membrane Flashing: ASTM D4811, Type II, .055 -.060 inches thick, black, non-reinforced, semi-cured, synthetic, single ply EPDM.
- C. Self-Adhesive Flashing: un-cured .045 inches thick, EPDM membrane laminated to 35 mil EPDM tape adhesive.
- D. Lap Splice Tape: .035 inches thick, EPDM-based, formulated for compatibility w/EPDM membrane, self-adhering, cured, width as required.
- E. Adhesive Primer: Solvent based synthetic rubber based formulated for compatibility w/EPDM membrane.
- F. Splice Adhesive: Synthetic polymer-based, if required.
- G. Bonding Adhesive: N/A.
- H. Water Block Seal: Butyl rubber sealant.
- I. Splice Cleaner: Organic solvent mixture.

2.3 INSULATION / COVER BOARD ADHESIVE

- A. Manufacturer Standard Adhesive for the application of adhering insulation and cover board in place: Low rise, Low-pressure, two-component spray polyurethane foam adhesive as approved and supplied by the manufacturer of the membrane
 - 1. Adhesive patterns must be in conformance with manufacturer requirements, including enhancements at perimeters and corners.

2.4 INSULATION

General: All flat stock insulation or cover board shall be from the same manufacturer. Board configuration: 48-inch x 96-inch thickness [mechanically fastened] or 48-inch x 48-inch thickness for adhered [adhesive] applied. Mixing of insulation panels from different manufacturers is not acceptable. All insulation/cover board shall be supplied and approved by the membrane manufacturer and must meet FMG 4450 or UL 1256 as a tested assembly.

- A. Flat Board Stock: ASTM C1289, closed cell polyisocyanurate, square edge/rigid board, type II, class 2, grade 2, coated bonded inorganic glass fiber reinforced mat facers on both sides, square edges, minimum 20 psi compressive strength, size boards as approved for application and by the roof membrane manufacturer.
 - 1. Includes in-fill for tapered saddles and/or insulation. Thickness as outlined.
- B. Tapered: ASTM C1289, closed cell polyisocyanurate rigid board; type II, class 2, grade 2, coated bonded inorganic glass fiber reinforced mat facers on both sides, factory tapered, minimum 20 psi compressive strength, size boards as approved for application and as supplied by the roof membrane manufacturer. The Contractor and the tapered insulation manufacturer/designer must assume design/application responsibility for the performance of the submitted tapered insulation layout.
 - 1. Tapered insulation slope to be sloped at 1/8 inch per foot. Tapered insulation starts at 1/2 inch thick, or as required to match / align w/ adjacent insulation thicknesses.
 - 2. **Saddle insulation** shall be sloped at 1/2 inch per foot. *Tapered insulation saddles starts at 1/2 inch thick.*
 - 3. Saddles: Each side of the saddle width shall be a minimum of 25% of the drain to drain, if spanning between two or more drains as applicable for conditions.
 - 4. Drains Sumps: Tapered min. 1/4 inch per foot slope drain sumps are required at all drains, if conditions allow [size, 4-foot square].

2.5 COVER BOARD

- A. Gypsum Fiber Cover Board: ASTM C1278; minimum 1/4 inch thick board [board thickness must be coordinated and approved by roof membrane manufacturer for tested roof assembly], impact resistant, non-structural, fiber-reinforced gypsum panels, mold and moisture resistant throughout the panel core and surface; glass mat faced, primed surface, 48 inch x 48 inch size sheets with square edges; gypsum fiber core, as noted and approved for the application and as supplied by the roof membrane manufacturer.
 - 1. Georgia Pacific, Dens-Deck Prime Roof Board with EONIC Technology,
 - 2. Top layer over insulation.

2.6 CANTS / EDGE

- A. Cant Strips and Tapered Edge Strips: Perlite, fire resistant, performed to 45 degree angle and 18 inch long tapered edge strip, tapered front to back as required by the Manufacturer.

2.7 ROOF FASTENERS and ACCESSORIES *[some items may not be required for this project]*

General: Fasteners/Anchors: strength, type and configuration must meet the required pull test resistance for each attachment application. Fastener's rate and pattern must be FMG, or local code approved to meet the intent of the wind uplift rating specified. All fasteners shall be corrosion resistant steel in accordance with meeting ASTM F1667 or type 304 stainless steel.

- A. Fastener Manufacturers:
 - 1. ITW Buildex
 - 2. IWT Red Head
 - 3. OMG
 - 4. Tru-Fast
 - 5. Scots
 - 6. Equal, and as appropriate and approved by the roof membrane manufacturer
- B. Required embedment of fasteners: Field confirm fastener lengths required.
 - 1. Steel: 3/4-inch.
 - 2. Concrete/concrete block: 1 1/4-inch.
 - 3. Gypsum: 2-inch.
 - 4. Tectum: 2-inch.
 - 5. Wood: 1 1/4-inch.
- C. Summary of Fasteners:
 - 1. Roofing and Other Nails: square or round head, ring shanked galvanized or non-ferrous type, length and diameter as required to suit application.
 - 2. Metal Counterflashing and other LG metal sheets to Wood: ITW Buildex, 'TruGrip, #9, self-piercing, corrosion resistance steel shank with EPDM washer.
 - 3. Metal Counterflashing and Other LG Sheet Metal [exposed] to Masonry: ITW Buildex, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, ATF treads, corrosion resistant steel shank, with EPDM washer.
 - 4. Termination Bars [exposed] to Masonry: ITW Buildex, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, ATF treads, corrosion resistant steel shank, with EPDM washer.
 - 5. Metal Sheets or Metal Decking to Metal Decking: 1/4 inch, ITW Buildex, 'tek/ 3', hex washer head, ABOT self-tapping with corrosion resistant steel shank.
 - 6. Insulation Fasteners/Plate, Metal Deck: Steel, HD #14, red, phillips head, superior corrosion resistant with a 3-inch round metal cap, meeting FMG 4470 standard requirements and must be supplied or approved by the roofing manufacturer for their warranty.
 - 7. General Purpose Stainless Steel: Series 304 fasteners, with or w/out EPDM washers.
 - 8. Base Sheet, Cover Board, Membrane to Insulating Concrete, Gypsum or Wood Fiber Decking: Tru-Fast, Twin Loc-nail, Coated steel fastener assembled with a 2.7inch diameter coated plate with a stainless-steel locking staple.
 - 9. Edge Securement [EPDM]: Reinforced perimeter fastening strip RTS, 6 in. wide, .045 in. thick, polyester scrim reinforced, with factory laminated self-adhering tape, fastened in place to the wall or the deck at 12 inches on center with manufacturer approved fasteners and plates.

2.8 ROOF ACCESSORIES

- A. Pre-Molded Manufactured Accessories: Molded EDPM, color to match field, .050-.075 inch thick, pipe flashings, etc. Manufacturer warranted accessories.
- B. Edge Securement: Seam perimeter fasteners with 2-inch steel seam plates, anchoring an RPF strip, 6-inch-wide, .045-inch-thick, polyester scrim reinforced, with and without factory laminated self-adhering tape.
- C. Walkway Pads: Non-Reinforced EPDM, 0.130 inches thick, size: 30-inch-wide x 30-inch long with patterned slip resistant bearing surface, self-adhered or factory applied tape.
- D. Pourable Sealer: Polyurethane, Manufacturer's standard.
- E. Termination Bars: Aluminum 1.3-inch-wide, 10 feet long, 1.08 inch [min.] thick bars with flat or with [integral caulk edge], as applicable per manufacturer.
- F. Pipe Supports/Hangers:

1. Manufactured by Portable Pipe Hangers, Adjustable, stainless metal components, polypropylene base, 'type SS8 – C or R [up to 2 ½ inch pipes] or PP10' [up to 3 ½ inch pipes], as required for conditions.
 2. Manufactured by OMG, Pipe-Guard, non-adjustable, PGM-BK, PGS-BK, PGTS-BK pipes up to 2 inches, as required for conditions.
 3. Manufactured by Advanced Supports Products, EcoCurb or equal. Pipe supports for Condensate Lines/Piping.
- G. Rail Curbs: Manufactured by Pate, type es-1, es-2 or es-5, as required for condition, size as required by unit base size including unit tie downs or as shown.
- H. Vent Pipe Extenders: Manufactured by Tubos, Clearwater, FL, PVC pipe extenders.
- I. Roof Drain Accessories: bolts, clamping ring, strainers, size and type as required to accommodate existing drains.
- J. Roof Drain Inserts: Manufactured or approved by the membrane manufacturer, extruded aluminum body, cast dome with stainless steel clamping ring and a watertight rubber seal, size as required.
- K. Roof Drains: Match existing size, cast iron bowl/clamping ring with no hub. Manufactured by Zurn, as approved by the membrane manufacturer.
- L. Roof Drains: Match existing size or as size shown, cast iron bowl/clamping ring with no hub, overflow drains shall have a 2-inch-high metal flow restrictor adapter. Replacement drains manufactured by Zurn. Verify existing size and piping below deck, when no replacement type/style is available, as approved by the membrane manufacturer.
- M. A/C condenser and other roof top unit stands: Manufactured by Precision Aluminum Products, with height/load requirements provided including engineered tie downs and deck/substrate anchoring requirements.
- N. Bib Metal: 24-gauge stainless steel or pre-finished [match housing color] steel, minimum 4 inch wide.
- O. Equipment enclosure: 24-gauge stainless steel, shop or pre-manufactured with top fabricated [angled] to allow no moisture from entering the pipe areas, access to pipes required. Install mortar in the bottom of base with polyurethane pourable sealer poured around pipes [2-inch depth minimum]. Seal pipes that exit enclosure with sealant/foam.
- P. Roof Hatch: Thermally broken Steel roof-hatch with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, straight sides, and integrally formed deck-mounting flange at perimeter bottom. Type and Size: Single-leaf lid, 30 by 36 inches [unless otherwise required to fit existing roof opening]; 12 inch high insulated curb with integral cap flashing, secured to roof deck. Steel cover and frame: 14 gauge; mill finish; Type 316 stainless steel hinges, zinc plated hardware; extruded EPDM rubber gasket adhered to the cover. Compression spring operators with automatic hold-open arm with grip handle release providing smooth, easy and controlled operation throughout operation. BILCO Company, Type S-20TB or Equal.
- Q. Expansion Joints: 60 mil PVC sheet attached to aluminum flanges with bifurcated crimp, with a closed cell polyethylene foam backer; Continuous or longest pieces possible [if available], Johns- Manville 'Expand-O-Flash', curb to curb and curb to wall type with bellow size to match existing with shop fabricated termination.

2.9 SEALANTS/TAPES

- A. General Use: ASTM C920, Type S, Grade NS, Class 25 as required for each joint condition, single component, elastomeric silicone polymer, non-staining, non-shrinking, non-sagging, and ultra-violet resistance, clear or to match surrounding existing color.

1. Tremco's 'Dymonic' [basis for sealant]. Provide where sealant is exposed to weather or movement exceeds butyl sealant capability.
- B. Butyl Sealant: ASTM C1311, single component, solvent released butyl rubber sealant, polyisobutylene plasticized.
- C. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release paper.

PART 3 EXECUTION

3.1 EXAMINATION / LEVEL SURFACE CONDITIONS

- A. Verify that surfaces and site conditions are ready to receive work. Verify that deck [total removed roofing membrane sections] is clean and smooth, free of depressions, irregularities, or projections, properly leveled, start of work constitutes acceptance of conditions.
 1. Verify that all wood blocking, nailers are securely anchored in place.
- B. Areas of substrate where ponding water will occur [3/4" deep or greater] one hour after rainfall] shall be built-up in accordance with the leveling fill manufacturer's recommendations prior to the installation of the final mineral surfaced cap ply sheet. Failure to perform this action could result in total roof removal, string leveling prior to final ply recommended.

3.2 PROTECTION

- A. Protect building surfaces/interior spaces against damage from roofing work. It is the Contractor's responsibility to take any necessary actions to prevent construction-related leaks, to include but not limited to repairing watertight existing surrounding roofing scheduled to be replaced or overlaid. Surround roofing areas include roof top material storage areas, workers roof top access to from roofing work site areas and any drainage system [roof drain-scuppers] leak issues located in work area. Contractor must include the cost to deal with these existing leak sources into the overall project unless the Owner/RDA is made aware of these leak sources prior to commencement of the project.
- B. Provide, erect barricades, guardrails as required by applicable regulatory advisory to protect occupants of building and workers.
- C. Cover all drains and other openings intended for drainage during construction to prevent clogging of system, remove at the end of each day to allow for drainage.
- D. Special precautions shall be taken to avoid fumes from entering the facilities through air intakes, coordinate with owner to deal with active A/C units.

3.3 INSULATION / COVER BOARD APPLICATION

General: Secure insulation/cover board to roof deck to the requirements of FMG loss Prevention Data Sheet 1-28 and 1-29 to include additional securement at the corners and perimeters. Install insulation including saddles [if required] as shown on the contractor/manufacturer-approved layout. This layout must be capable of draining the roof completely into drainage elements after 48 hours following a rainfall with an outside average temperature of 65°F or higher [partly sunny or sunny conditions]. The layout pattern must not block the flow of rainwater into any roof top unit/ventilator.

- A. Metal Deck / Wood Deck [Roof system removed]: Loose laid/tack new replaced insulation board into the existing deck [or existing insulation where applicable]. Mechanically fasten one layer of insulation thru the new or existing dry/replaced insulation into the deck in accordance with manufacturers approved layout and as outlined in the product approvals. *Do not exceed 32 fasteners per 4-foot x 8-foot board in any zone.* Install the fastened insulation board perpendicular to roof slope with joints staggered [as applicable] no less than 24 inches in all directions from the existing insulation joints below. Two opposite edges on any panel shall be supported on the deck flutes [minimum 1 ½ inch]. Any portion of the insulation or cover board that falls within the calculated perimeter or corner area has the increased securement applied

over the entire board. Tapered insulation saddles where tapered boards are on top require no offset from adjacent rows or from underneath in-fill insulation, with long joints in straight line and end joints staggered, as applicable.

- B. Coverboard: Adhere the coverboard in a single-layer configuration over the mechanically fastened insulation in adhesive at the rate / pattern as tested / approved by the manufacturer. All insulation / coverboard shall be installed in accordance with the Manufacturer's / Contractors / RDA approved layout. Install insulation with long joints in a straight line with end joints staggered. Install the top cover board perpendicular to roof slope to the new insulation board with joints staggered [as applicable] no less than 24 inches in all directions from joints below in accordance with windstorm resistance classification securement pattern and insulation manufacturer's instructions. Adhered boards shall be walked-in before skin coat develops and boards shall have continuous pressure until the adhesive sets to ensure not less than 85% of any board be in contact with the substrate. Any portion of an insulation / coverboard that falls within the calculated perimeter or corner area has the increased securement applied over the entire board.
- C. Level all decks as necessary prior to starting work.
- D. Apply no more insulation than can be sealed watertight with roofing membrane in the same day. Cut insulation to fit neatly to perimeter blocking and around penetrations through the roof, maximum joint width 3/8 inch.
- E. All ventilators, A/C unit curbs, supports etc. [square or rectangle] will have a tapered edge strip [formed as a saddle] placed around the high side of unit to slope water from unit. Ventilators, A/C unit, supports etc. curbs over 2 feet wide will require insulation saddles sloped 1/2 inch per foot.
- F. Provide adequate separation of insulation between hot exhaust stacks.

3.4 MEMBRANE APPLICATION AND BONDING

General: Install roofing sheets as per manufacturer's recommendations and the following summary of requirements. Only install membrane when outside temperature of 40-degree F or higher. Additional enhancements to the membrane will be required if a 30-year warranted system is specified herein, consult the manufacturer for these requirements. These requirements are in addition to what is specified herein.

- A. Beginning at the low point of the roof, place the membrane without stretching over the acceptable substrate and allow membrane to relax a minimum of 30 minutes before attachment or splicing.
- B. After making sure the sheet is placed in its final position seams shed water or parallel to the water flow, adjoin sheets in a manner that all lap seams along the length of the membrane overlap 3 inches for application of seam tape. The membrane should be smooth, clean, and free of wrinkles and buckles.
- C. Starting from the center split of the exposed release liner, remove the liner on both sides at a 45-degree angle beyond the membrane edge. Remove approx. 5 feet of release liner from one end of the sheet and adhered it to the cover board. Do not fold the length of the roll in half. Keeping the membrane flat and secured and seams aligned continue removing the release liner. Removal of the liner should be accomplished by two people.
- D. Use a stiff bristled broom and apply pressure to initiate adhesion. Broom the installed membrane across the width working towards the roof edge. Do not use a weighted roller.

3.5 MEMBRANE SPLICING [Factory Applied Tape]

- A. Position the sheet at the splice area by overlapping membrane. Tack the sheet back with primer at 5' centers and at factory splices or as necessary to hold back the membrane at the splicing area. Remove excess amounts of dusting agent on the sheet and at factory splices

using a stiff push broom. Apply primer to both surfaces at the same time to allow the same flash off time. Additional scrubbing is required at areas that may have become contaminated or have excess amounts of dusting agent, and at all factory splices.

- B. Position the seam splice tape on the bottom sheet, aligning the edge of the release paper with the markings. When adhering factory adhered tape, pull the backing from the tape and allow the top sheet to fall freely onto the exposed primed surface. Immediately roll the splice tape with a 3 inch-4-inch-wide silicone or silicone sleeved steel hand roller or a short nap 3-inch paint roller.
- C. When the seam splice tape has been installed for the entire splice length, trim the top sheet as necessary to assure that 1/8 inch-1/2 inch of the seam splice tape will be exposed on the finished splice. Broom the entire length of the splice as the release paper is being removed.
- D. Roll the splice using a 1-1/2 inch-2-inch-wide silicone or silicone sleeved steel hand roller, first across the splice, and then along the entire length of the splice.

3.6 FLASHING APPLICATIONS – Vertical Surfaces, etc.

General: Secure membrane when there is an angle change greater than 2 inch 12 inches with a reinforced perimeter fastening strip [RPS] fastened to the deck or wall, see manufacturer's recommendations for exceptions.

- A. Remove loose or unsecured flashings, mineral surfaced or coated flashings and excessive asphalt to provide a smooth, sound surface for new flashings.
- B. Apply primer to wall surface allow to dry. Roll the field EPDM membrane up the vertical surface evenly and carefully to minimize wrinkles.
- C. Install T-Joint covers at field and other splice intersections as required by manufacturer. Apply tape at laps if membrane is not self-adhered type throughout out the sheet [edge to edge].
- D. Provide termination directly to the vertical by a termination bar set in water block seal and other requirements as shown on the drawings.

3.7 FLASHING APPLICATION - Edge, Pipes and Drains.

General: Install flashing sheets over cants strips and other vertical surfaces, at edges and penetrations through roof as per manufacturer's recommendations, requirements of FMG loss Prevention Data Sheet 1-49 including details and the following requirements.

- A. EDGES
 - 1. Apply primer to the metal edging and membrane. Remove approximately 2 ft.-3 ft. of release paper from the seam flashing and apply to the metal flange and membrane. Lap adjacent rolls of seam flashing a minimum of one inch with a 2 inch-3-inch-wide silicone or silicone sleeved steel hand roller, roll the seam flashing ensure proper adhesion. Additional attention must be given to factory splice intersections and to any change in plane.
 - 2. Apply 6-inch length of seam flashing, a seam Joint Cover, or 6-inch x 6-inch form flash to the inside edge of the seam flashing at all overlaps and at all intersections between the seam flashing and field fabricated splices.
 - 3. Apply seam edge treatment at the intersections of the flashing sections.
 - 4. If the roof edge includes a metal edge and sealant is not applied between the laps in the metal edging, an additional piece of seam flashing shall be applied over the metal lap to the top of the metal edge, after the initial application of seam flashing. Seam edge treatment shall be applied at the intersections of the two flashing sections.
- B. PIPES

1. Flash pipes with manufactures pre-molded flashing to max. extent possible or form flash only when per-molded flashing is not available. Prime and install an additional 12-inch seam flashing over pre-molded flange.

C. DRAINS

1. Remove all existing flashings, leads and cement. Provide a clean even finish between the drain clamping ring and the drain bowl. Position the membrane and cut a hole for the roof drain allowing a $\frac{3}{4}$ inch membrane inside the clamping ring. Make round holes in the membrane to align with the bolts. Install water block seal on the clamping ring flange below the membrane. Tighten the clamping bolts to achieve a constant compression. Replace or repair [bolts broken, cannot be removed] drain where existing clamping ring cannot be bolted securely in place.

3.8 LIQUID FLASHING

- A. Liquid flashing [LF] system [PMA] shall be installed on a clean roof surface with a reinforced polyester fleece fabric in a multi-layer [resin/fleece/resin] configuration with PMA resin applied [fully saturating fabric] at 2 gallons per square feet with resin top coat, Extending vertically and 8 beyond the base of penetration. LF shall be installed where noted or as required by condition per the manufacturer. Install in accordance with manufacturer's printed detail or as shown.

3.9 INSTALLATION OF ROOF ACCESSORIES

- A. Walkway pads and other accessories shall be installed in accordance with the manufacturer's recommendations or as shown on the drawings. Space pads 3 inches apart.
- B. Expansion joint, and other accessories not noted herein shall be installed in accordance with the manufacturer's recommendations and as shown on the drawings.
- C. Rail curbs, equipment stands, and pipe supports shall be installed in accordance with the manufacturer's instructions. Anchoring to substrate and tie downs as shown. Place curbs on deck and position curbs ends to allow water to flow toward drains or gutters.
- D. Equipment enclosure shall be 24-gauge stainless steel, shop or pre-manufactured with top fabricated [angled] to allow no moisture from entering the pipe areas. Install mortar in the bottom of base with polyurethane pourable sealer poured around pipes [2-inch depth minimum]. Seal pipes that exit enclosure with sealant/foam.
- E. Penetration pans shall have mortar installed in the bottom of pitch pans with polyurethane pourable sealer [2-inch min] filled to the top of the pan, then slope.
- F. Roof drain clamp rings/bolts where distorted, corroded or too short, shall be replaced. Clamp rings shall be clean of all asphalt and other deposits. Provide new drain strainers where missing. Install drain inserts if clamping rings cannot be compressed on the new roof membrane due to broken bolts, etc.
- G. A/C condenser and other roof top unit stands shall be installed in accordance with engineered requirements furnished by the manufacturer to include height/load, tie downs and deck/substrate anchoring requirements.

3.10 FIRE SAFETY

- A. Measures to be implemented by the contractor to minimize the possibility of fire and to provide a safe work environment. It is the responsibility of the contractor performing any work to comply with the safety provisions of the National Fire Codes pertaining to such work along with other requirements specified herein. In the event of a fire of any size, contractor shall notify the Local Fire Department.

3.11 WATER CUT-OFF

- A. At the end of the day's work or when precipitation is imminent, a water cut-off or other waterproof protection shall be provided to ensure a watertight condition is obtained, between the new and existing conditions, remove cut-off prior to resuming the installation of the roofing system.

3.12 CLEANING

- A. In areas where finished surfaces are soiled by any other source of soiling caused by work of this section, consult manufacturer for cleaning advice.

END OF SECTION

SECTIONS 07 62 00/07 71 00 - SHEET METAL, FLASHING, TRIM and SPECIALTY ITEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General provision of the contract and Division 1 Specification Sections apply to this section.

1.2 WORK INCLUDES BUT NOT LIMITED TO:

General: Intent of project is to provide new sheet metal components for the new roof system.

- A. Removal of existing sheet metal items as noted and in the preparation of reroofing section.
- B. Installation of new sheet metal items:
 - 1. Wind-rated edges and copings.
 - 2. Fasteners.
 - 3. Bib flashing, counter flashing, expansions joints and other sheet metal items.
 - 4. Equipment support flashings.
 - 5. Equipment enclosures.
 - 6. Scuppers, Conductor Heads
 - 7. Gutters and Downspouts

1.3 RELATED SECTIONS

- A. Section 06 10 53 – Miscellaneous Rough Carpentry for Roofing
- B. Section 07 01 50 – Preparation for Reroofing

1.4 APPLICABLE REFERENCES

- A. General: The following references form a part of this specification.
 - 1. ASTM A653 Metallic Coated, Sheet Steel [Galvanized], Grade A, Hot Dipped, Zinc Coated, Coating Class G90.
 - 2. ASTM A792, Metallic Coated, Sheet Steel [Galvalume and Galvalume plus], Grade 40, Coating Class A250 [galvalume] or AZ55 [galvalume plus], 55 % Aluminum-45 % Zinc Alloy.
 - 3. ASTM A755, Pre-Finished, Sheet Steel [Galvanized/galvalume], Grade 40, Coating Class A250 or G90, Pre-painted by the coil coating process.
 - 4. ASTM B209, Aluminum.
 - 5. ASTM E108 Fire Test of Roof Coverings.
 - 6. [FMG] Factory Mutual Global - Current Approval System [NAV assembly numbers], Loss Prevention Data Sheets for Roof Deck Securement for Above Deck Roof Components, Perimeter Flashings, Wind Design-ANSI/FM 4474, Approval Standard FM 4470 and Roof Loads for Construction
 - 7. [UL] Underwriters Laboratories - Roofing Materials and Systems Directory, Fire Resistance Directory, Current Edition.
 - 8. [NRCA] National Roofing Contractors Association - Current Roofing and Waterproofing Manual, including shop-fabricated edge metal testing data.
 - 9. [AISC] Manual of Steel Construction
 - 10. [SMACNA] Sheet Metal and Air Conditioning Contractors Association-Current Manual
 - 11. [OSHA] Occupational Safety and Health Administration, Guidelines
 - 12. [ASCE] 7-10 Minimum Design Loads for Buildings
 - 13. [ANSI/SPRI/FM] 4435 standard ES-1-17 Wind Design for Edge Systems
 - 14. [NFPA] National Fire Protection Association, 58 Liquefied Petroleum Gas Code
 - 15. [ANSI/SPRI] WD-1 Wind Design Standards

1.5 SUBSTITUTIONS/EQUALS

- A. When a particular make or trade name is specified, it shall indicate the standard quality required. Bidders proposing substitutions shall submit the following ten [10] days prior to bid date. Refer to Contract Documents.
 - 1. Refer to Section 01 25 00 – Substitution Requests.

1.6 QUALITY ASSURANCE

- A. Fabricator/Installer: Company specializing with skilled workers in sheet metal with minimum 5 years documented experience, never been terminated by a manufacturer for workmanship problems and be capable of providing the warranties as specified.
- B. Sheet Metal items and installation shall comply with SMACNA's [Architectural Sheet Metal] and NRCA [Roofing] current manuals.

1.7 COORDINATION

- A. Coordinate sheet metal flashing, trim layout installation with adjoining roofing to provide a leakproof, secure, non-corrosive installation.

1.8 PERFORMANCE REQUIREMENTS

- A. Fire Hazard Classification: Underwriters Laboratories [UL], Use only Class A fire-rated materials as tested in accordance with ASTM E 108 or UL 790 for exterior fire.
- B. Install sheet metal items to withstand wind loads, structural movement, by preventing buckling, opening of joints, hole elongation, failure of joint sealant, failure of connections and other detrimental effects.
- C. All perimeter metal items [copings and edges] must have been tested to resist equal or greater wind design load.

1.9 DELIVERY, STORAGE and HANDLING

- A. Do not overload structure with storage of materials; verify roof deck weight capacity and location of structural supports, only items needed that day shall be stored on the roof. Limit loads on roof to 25 pounds per square foot for uniformly distributed loads for metal or gypsum decks, 75 pounds per square foot for uniformly distributed loads for concrete decks. Store and protect products in accordance with manufacturer's instructions.
- B. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact. Protect sheet metal items during transportation and handling.
- C. Store products in weather-protected environment [manufacturer's plastic wrap is accepted for proper protection, unless wrap is broken, torn, removed], clear of ground 4 inches minimum and exposure from direct sunlight. Use breathable tarps for moisture protection as needed. Damaged materials will be marked 'rejected' by the contractor/owner or Owner's rep. and removed from the site.
- D. Storage of flammable liquids in buildings is prohibited. All combustible debris shall be removed from the site daily.

1.10 WEATHER CONDITIONS

- A. Do not apply materials during inclement weather, high winds or when the chance of rain is 60% or greater, percentage as listed on www.weather.com for the local area, percentage as listed when read at 7 AM local time or at time of work commencement.

1.11 SEQUENCING AND SCHEDULING

- A. Building space underneath roof work is utilized by on-going operations. Coordinate all work with owner including, material storage, scaffolding [as required] and contractor parking. Owner's approval required before proceeding with the work. **Contractor must provide**

overhead protection for owner's workers from falling materials/debris at building entry points.

1.12 MANUFACTURERS WARRANTIES

- A. Provide a manufacturer's warranty for both repairs/replacements due to any faults in the material and workmanship. Any repairs/replacement due to normal wear and tear, material finish defects and workmanship defects. Warranty shall cover finish fading, chalking, cracking, peeling or failure of paint to adhere to base metal.
 - 1. Sheet metal items shall be warranted watertight for [20] twenty years by the roof membrane manufacturer.
 - 2. Sheet metal manufacturer of record must provide a [20] twenty-year finish warranty for the metal fascia, coping and edge as outlined herein, covering, finish and base metal. Warranty shall be a lifetime warranty for defects of material or failure to resist wind speeds.
 - 3. Sheet metal coping and roof edges that terminate into/attach to [incorporated] into the roof membrane shall be warranted for winds up to 72 MPH by the roof membrane manufacturer [part of the roof warranty]. Pre-manufactured items regardless of their location must be warranted and be tested by the metal manufacturer to resist failure [blow off] for wind speeds up to 120 mph and also be certified to meet or exceed the design pressure as stated herein. The installation of these items must be in compliance with the metal manufacturer's installation requirements and field condition attachments guidelines and as shown. The roof manufacturer can incorporate this warranty requirement into their roof warranty if approved by the metal manufacturer/fabricator.
- B. In the event of a default by the Contractor, the Manufacturer will provide a new Contractor to fulfill the warranty obligation.

1.13 PORTABLE FIRE EXTINGUISHERS

- A. Two standard listed multipurpose dry chemical fire extinguisher, NFPA 10, with 10-pound capacity, 4A-60B:C UL rating shall be provided and located near the work area. Additional fire extinguishers shall be provided for different roof levels/work sites.
 - 1. Contractor to ensure all personnel are trained to use fire extinguishers.

1.14 DEFINITIONS

- A. Shop fabricated includes items that will be formed at the fabricator's shop predominately by press brake. Prefabricated or manufactured items will be plant manufactured ready for installation. Both items must be wind rated in compliance with ANSI/SPRI/FM ES-1-17

PART 2 PRODUCTS

General: All products shall be state approved and Building Code approved as applicable. Some items below may not be required for this project, but are outlined herein if required during course of work due to changing conditions or changes in scope.

2.1 FABRICATION

- A. Fabricate sheet metal items to comply with recommendations in SMACNA [architectural Sheet metal manual] and NRCA's [the NRCA roofing manual]. Conceal fasteners and expansion provisions where possible on exposed to view items. Provide expansion provisions as recommended where lapped or bayonet type expansion cannot be used.

2.2 FASTENERS

General: Fasteners/Anchors: strength, type and configuration must meet the required pull test resistance for each attachment application. Fastener's rate and pattern must be FMG, or local code approved to meet the intent of the wind uplift rating specified. All fasteners shall be corrosion resistant steel in accordance with meeting ASTM F1667 or type 304 stainless steel.

- A. Fastener Manufacturers:
 - 1. ITW Buildex
 - 2. IWT Red Head
 - 3. OMG
 - 4. Tru-Fast
 - 5. Scots
 - 6. Equal, and as appropriate and approved by the roof membrane manufacturer
- B. Required embedment of fasteners: Field confirm fastener lengths required.
 - 1. Steel: 3/4-inch.
 - 2. Concrete/concrete block: 1 1/4-inch.
 - 3. Gypsum: 2-inch.
 - 4. Tectum: 2-inch.
 - 5. Wood: 1 1/4-inch.
- C. Summary of fasteners and requirements are as follows:
 - 1. Metal Counterflashing and other LG metal sheets to Wood, ITW Buildex, 'Scots Tek's' [AB point] stainless steel-hex head, 1/4 inch, corrosion resistance steel shank with EPDM washer.
 - 2. Metal Counterflashing and Other LG Sheet Metal [exposed] to Masonry, ITW Red Head, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, HL treads, corrosion resistant steel shank, with EPDM washer.
 - 3. Termination Bars [exposed] to Masonry, ITW Red Head, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, HL treads, corrosion resistant steel shank, with EPDM washer.
 - 4. Metal Sheets or Metal Decking to Metal Decking, #10, ITW Buildex, 'tek/ 1', hex washer head, ABOT self-tapping with corrosion resistant steel shank.
 - 5. General Purpose Stainless Steel: Series 304 fasteners, with or w/out EPDM washers.

2.3 ROOF ACCESSORIES / SPECIALTY ITEMS

General: Sheet Metal Items: All metal components not incorporated into the roof system and not outlined herein or shown on the drawings shall be fabricated with *24 gauge pre-finished meta or 24-gauge stainless steel*.

- A. Penetration Pockets: 24-gauge stainless steel, soldered together with 4-inch roof flange and 4-inch height or size required for condition, only use if another manufacturer approved detail, field flashing, or liquid flashing system will not work for the conditions.
- B. Continuous Cleats: Galvanized steel, 22 gauge.
- C. Counter flashing: Pre-finished, 24-gauge metal, fabricated in lengths maximum 12 feet, designed to be removable. CF to be notched and lapped at inside corners and joints.
- D. Wind Rated Fascia [Pre-Manufactured only]: Pre-finished, 24-gauge galvanized metal face over formed 20-gauge metal continuous rail, FMG approved, size, length and shape/profile as shown, roof membrane manufacturer approved and warranted to meet or exceed design pressures/winds [see wind warranty] and 20 or 30-year finish warranty by the metal manufacturer. ANSI/SPRI/FM 4435 standard ES-1-17 and tested and approved for winds up to 120 MPH. Pre-Manufactured by Metal Era's, One System, Snap-on type or equivalent.
- E. Wind-Rated Coping [pre-manufactured only]: Pre-finished 24-gauge metal coping cap, without exposed fasteners cleated on both sides, [continuous cleated or seat/chair configuration] tapered style [toward roof], butt joint. Provide factory-fabricated corners, intersections. Condition must allow for moisture to drain off edges without moisture to enter under coping cap, ANSI/SPRI/FM 4435 ES-1 tested and approved, size and shape as shown to match existing wall width, roof membrane manufacturer approved and warranted for minimum 72 mph wind resistance or higher to meet design pressures and a 20-year finish, leak proof

warranty by the metal/roof materials manufacturer. Pre-Manufactured by Metal Era's 'Perma-Tite' or equal.

- F. Pre-Manufactured or Shop Fabricated Edge/Gravel Stop: Pre-finished 24 gauge metal face over 22 gauge metal continuous cleat, slotted or prepared for fastener locations on the cleat face/top. Size, length and shape/profile as shown, roof membrane manufacturer approved. Pre-Manufactured by Metal Era, One System Drip or fabricated to match Metal Era's installation requirements.
- G. Bib Metal: 24-gauge stainless steel or pre-finished 24-gauge galvalume metal [match unit color], minimum 4 inch wide. Use stainless steel screws.
- H. Gutter: Pre-finished 24 gauge galvanized, style A, with a 3–4-inch flange back if indicated, size 8 inches, with 1/16 inch thick, 2-inch-wide spacers at 48 inches alternately spaced between brackets. Minimum 20 feet in length, as applicable. Complete with ends, outlets tubes and expansion joints cover fabricated with the same metal as the gutter.
- I. Downspouts: Pre-finished 24 gauge galvanized, square, smooth with flat lock seams, complete with mitered elbows, size 6x6-inch, see drawings for locations.
- J. Downspout Hangers: Pre-finished, 2-inch wide 1/16 inch thick. Color to match downspout color [SMACNA Fig. 1-35 C or G].
- K. Gutter Brackets: 1 ½ inch wide, 1/8-inch-thick steel, painted to match gutter color.
- L. Thru Wall Primary and Overflow Scupper Lining/Plate: 24-gauge, stainless steel, solder all corners, size and shape as existing with 24-gauge pre-finished steel exposed to view plate. Installation [SMACNA FIG.1-30A similar].
- M. Conductor Head: Pre-finished, 24 gauge steel, pop riveted and sealed, [SMACNA, style FIG 1-25F], top opening size as existing with other dimensions in accordance with SMACNA sizing recommendations or as required by condition.
- N. Equipment Enclosure shall be 24-gauge stainless steel, shop or pre-manufactured with top fabricated [angled] to allow no moisture from entering the pipe areas, access to pipes required.
- O. Expansion Joints: 60 mil EPDM sheet attached to 4-inch-wide .032 inch thick aluminum flanges with bifurcated crimp, with a closed cell polyethylene foam backer; Continuous or longest pieces possible [if available], Johns- Manville 'Expand-O-Flash', cant to cant type with bellow size to match existing with shop fabricated termination.

2.4 SHEET METAL

General: Roof membrane manufacturer supplied and approved components [copings/fascia edges - if required/shown] must be used, these sheet metal components must be pre-manufactured and be tested and approved in accordance with ANSI/SPRI/FM ES-1 test method, FM Class Number 4435 approved standard and must be included into the roof warranty. Fabricated by Metal Panel System, Architectural Products, Metal Era, Pac-Clad Peterson, Una-Clad, Drexel Metals or Dimensional Metals, etc. Drip edge/gravel stop edge - roof penetrating flange type, may be pre-manufactured or shop fabricated, [the metal manufacturer may allow the contractor to use their metal/materials/installation methods and shop fabricate and install the items in accordance with their wind rated ES-1 and FM 4435 standard approved tested drip/gravel stop edge rated requirements, only will be accepted if the metal manufacturer and/or the contractor is a certified ES-1 sheet metal shop and will provide/support the wind and finish warranties as outline herein and meet RDA and FM design requirements]. All other metal shall be shop fabricated in accordance with SMACNA 6th Edition or other details or pre-manufactured as shown. All pre-finished metal shall be fabricated using galvalume or aluminum as noted, unless not available or wind resisting testing was used with galvanized steel.

- A. Pre-Finished Sheet Steel [Galvalume]: ASTM A792, grade 40, class A250, 24 or 22 gauge [as noted], primed and preprinted by coil coating, finished exposed to view side with a fluoropolymer Kynar 500 coating and a wash coat .5 mil thick applied to the reverse side, 20-year warranty covering fade, chalking and film integrity. Colors as selected by owner.
- B. Sheet Steel [Galvalume Plus]: ASTM A792, grade 40, 24 or 22 gauge [as noted], coating class AZ55, coated with an organic resin .012 to .090 inches thick, thermally cured. Finished on both sides with a fine sparkle appearance. 20-year warranty covering fade, chalking and film integrity. Colors as selected by owner.
- C. Pre-Finished Sheet Steel [Galvanized]: ASTM A755/A653, G90, 24 or 22 gauge [as noted], primed and preprinted by coil coating, finished exposed to view side with a fluoropolymer Kynar 500 coating and a wash coat .5 mil thick applied to the reverse side, 20-year warranty covering fade, chalking and film integrity. Colors as selected by owner.
 - 1. Laminated metal [PVC Membrane]: Roof membrane manufacturer's minimum 17 mil polyvinyl-chloride [PVC] coating.
- D. Pre-Finished Aluminum: ASTM B209, 3105 H15 alloy, thickness .032, .040 or .050 [as noted], primed and repainted by the coil coating, finished exposed to view side with a fluoropolymer kynar 500 coating and a wash coat .5 mil thick applied to the reverse side, 20-year warranty covering fade, chalking and film integrity. Colors as selected by the owner.
- E. Galvanized Sheet Steel: ASTM A653, hot dipped, zinc-coated, G90, gauges as shown.
- F. Stainless Steel: ASTM A240/A 240M, dead soft fully annealed, smooth 24-gauge, type/grade 304 [painted or not] and 316 [exposed to view].
- G. Steel Plates: ASTM A 36, thickness 1/4 inch or as noted.

2.5 SEALANTS/TAPES

General: Provide joint sealants, backings and other materials as required to seal joint that are compatible with each other based on test and field experience.

- A. ASTM C920, Type S, Grade NS, Class 25 as required for each joint condition, single component, elastomeric silicone polymer, non-staining, non-shrinking, non-sagging and ultra-violet resistance, clear or to match surrounding existing color.
 - 1. Provide where sealant is exposed or movement exceeds butyl sealant capability.
- B. Gutter: GE Silicone II or equal, Clear in color.
- C. Butyl Sealant: ASTM C1311, single component, solvent released butyl rubber sealant, polyisobutylene plasticized.
- D. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release paper.

PART 3 EXECUTION

3.1 EXAMINATION and CONDITIONS

- A. Verify that surfaces and site conditions are ready to receive work.

3.2 PROTECTION

- A. Protect building surfaces/interior spaces against damage from work.
- B. Provide, erect barricades, guardrails as required by applicable regulatory advisory to protect occupants of building and workers.

3.3 INSTALLATION of SHEET METAL and SPECIALTY ITEMS

General: Sheet metal items shall be installed in accordance with manufacturers and NRCA's / SMACNA recommendations and details from their current manual. Anchor sheet metal items

securely in place with provisions for expansion. Use items as required to complete the sheet metal or drainage system. Where dissimilar metals contact each other, protect against galvanic action by coating material as recommended by the fabricator. Seal joints with sealant as required for a watertight condition.

- A. Continuous cleat [for non-pre-manufactured metal components]: Cleats shall not exceed 12 feet in length; allow a ¼ inch gap between pieces. Fasten cleat to wood nailer top as applicable at 4 inches on center [staggered pattern-1 inch from edge] with corrosion resistant annular threaded nails [3/16-inch head], long enough to penetrate the wood 1 ¼ inch.
- B. Penetration pans shall have mortar installed in the bottom of pitch pans with polyurethane pourable sealer [2-inch depth minimum] filled to the top of the pan, then slope.
- C. Bib Flashing shall be installed around all roof top units/supports and all items that cannot be removed and reinstalled. Position under unit curb and anchor to unit with corrosion resistance fasteners with EPDM washers at 12 inches on center unless otherwise noted.
- D. Equipment enclosure shall have mortar installed in the bottom with polyurethane pourable sealer [2-inch depth minimum] filled. Seal pipes that exit enclosure with sealant/foam.
- E. Termination bars shall be placed no more than 1 1/2 inches down from top of base flashing and be fastened at 6 inches on center with concrete self-tapping [tapcon] or wood fasteners, as applicable fitted with an EPDM washer. Provide sealant at top edge of bars.
- F. Counter-flashing [CF] shall be surfaced mounted [SM] or in existing or new riglets/receivers with lap joints 4 inches. Attach SM with concrete self-tapping [tapcon] or wood fasteners, as applicable fitted with an EPDM washer at 12 inches on center, 1-inch minimum embedment. Attach riglets installed CF with components recommended by the manufacturer, including metal wedges and edge crimping. Apply a bead of sealant on the top of 45% angle lip of the metal flashing, if SM type. CF shall overlap base flashing a minimum of three inches, fit tightly to base flashing and shall terminate no lower than 4 inch above finished roof surface, unless approved by the manufacturer.
- G. Wind Rated Pre-Manufactured, ES-1 approved roof fascia shall have a 20-gauge formed extruded anchor bar, face fastened as outlined per the metal manufacturer, 12 inches on center to the nailer with 1 1/2 inch or 2-inch-long # 9 stainless steel fasteners with the roofing membrane extending under the anchor bar. Fascia cover plate shall be cleated and snapped in place with no exposed fasteners. The formed roof flange/cover plate set in approved sealant/mastic on finished roof surfaced in accordance with the written manufacturer's guidelines. Edge face shall exceed down to overlap and cover nailers onto exterior wall minimum 2 inches or existing metal fascia as shown. Follow manufacturer installation instructions.
- H. Wind Rated pre-manufactured ES-1 approved coping sections shall be jointed together with a butt type joint with 8-inch-wide concealed splice located underneath the 10 to 12-foot-long panels, which must allow to expand and contract freely while locked in place. Provide factory-fabricated corners, intersections and ends. Coping metal anchor clips to be anchored to wood nailer or surface material at splice joints and within the coping panel [approx. every three feet on center-2 feet in corners.] or coping that is installed using continuous cleats on both sides shall have cleats anchored on top of nailer at 12 inches on center. Provide self-adhered or adhered 60 mil thick EPDM or TPO or PVC over nailers/substrate to allow moisture to drain off edges without moisture to enter wall under coping cap [provide non-curing dual sealant strips on each side of splice plates], ensure SA EPDM/TPO/PVC membrane covers all wood nailers/substrate. Both methods shall use stainless steel fasteners or other fasteners to meet the wind resistance rating pressures as shown and as recommended by coping manufacturer **print approvals**. Coping shall have a 4-inch vertical end flange where terminating into wall, counter-flash flanges.

- I. Pre-Manufactured /shop fabricated ES-1 approved, continuous cleated edge shall be face anchored into the nailer face at 12 inches on center. Space cleats as outlined. The exposed to view metal edge to be cleated and fastened on top of the nailer at 6 inches on center. Strip-in [watertight] top metal flange onto new field of roof. See Metal Era's one system drip for installation detail meeting ES-1 anchoring requirements.
- J. Gutters shall be minimum 20 feet in length with no joints, if applicable. Gutters shall be installed with 1 1/2-inch-wide, 1/8-inch-thick painted [match gutter color] steel brackets installed at 48 inches on center, min. [1 each per twenty-foot gutter section], if shown. Gutter brackets shall be attached to the substate at with screws. Anchor roof gutter flange to wood nailers or concrete deck with screws or nails driven flush at 4 inches on center, staggered [wood]-12 inches on center [concrete]. Gutters sections shall be lapped 4 inches sealed with two rows of sealant and riveted with two rows of closed end stainless steel rivets offset 1 inch on center.
- K. Downspouts shall be attached to the gutter with screws. Attach downspout sections to wall with 2-inch-wide, 1/16-inch steel straps [2 per 10-foot section] - Fig 1-35 C or G SMACNA, with stainless steel screws anchored into solid support members. Down spouts terminating at ground or roof shall be provided with an elbow fitting and a concrete splash block [provide a roof membrane sheet under blocks that terminate on the roof]. If existing receivers are available downspouts shall be inserted into receives, provide size and shape adapters, as necessary.
- L. Expansion joint, and other accessories not noted herein shall be installed in accordance with the manufacturer's recommendations and as shown on the drawings.

3.4 CLEANING

- A. In areas where finished surfaces are soiled by any other source of soiling caused by work of this section, consult manufacturer for cleaning advice.

END OF SECTION

SECTION 07 90 00 - JOINT PROTECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes sealants and joint backing.

1.2 SUBMITTALS

- A. Product Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.4 QUALITY ASSURANCE

- A. Sealant shall be installed by a qualified sealant applicator for any/all joint sealant exposed to view. Owner reserves the right to request a mockup of the quality for the joint sealant installation.

PART 2 PRODUCTS

2.1 JOINT SEALERS

- A. Manufacturers:
 - 1. Tremco [basis of design]
 - 2. Sika
 - 3. GE Silicones.
 - 4. Pecora Corp.
 - 5. DAP
- B. Compatibility: Provide joint sealants, backings, 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.
- C. Low-Emitting Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Liquid-Applied Sealants: Comply with ASTM C920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- E. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.
- F. Additional Movement Capability: Where additional movement capability is specified, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C920 for uses indicated.
- G. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range, unless otherwise noted.

2.2 SILICONE JOINT SEALANTS:

- A. **Type S-1:** Single component, nonsag, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, Use NT

1. Tremco Spectrem 1 or Spectrem 800 or Equal
- B. **Type S-2:** Single Component, nonsag, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 50, use NT
 1. Tremco Spectrem 2 or Spectrem 3 or Equal
- C. **Type S-3:** Multi-Component, Nonsag, Silicone Joint Sealant: ASTM C920, Type M, Grade NS, Class 50, Use NT
 1. Tremco Spectrem 4-TS or Equal
- D. **Type S-4:** Single Component, nonsag, Traffic-Grade, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, Use T
 1. Tremco Spectrem 800 or Equal
- E. **Type S-5:** Mildew Resistant, Single Component, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, Use NT
 1. Tremco Tremsil 200 Sanitary or Equal

2.3 URETHANE JOINT SEALANTS

- A. **Type U-1:** Single Component, nonsag, Urethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 25 or 35, Use NT:
 1. Tremco Dymonic or Dymonic FC or Equal
- B. **Type U-2:** Single Component, nonsag, Traffic Grade, Urethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, Use T.
 1. Tremco Vulkem 116 or Equal.
- C. **Type U-3:** Multi-Component, nonsag, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, Use T.
 1. Tremco Dymeric 240 or Dymeric 240 FC or Equal
- D. **Type U-4:** Multi-Component, nonsag, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, Use NT.
 1. Tremco Vulken 227 or Equal
- E. **Type U-5:** Multi-Component, nonsag, Traffic Grade, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, Use T.
 1. Tremco Vulken 227 or Equal

2.4 BUTYL JOINT SEALANTS

- A. **Type B-1:** Butyl Rubber based Joint Sealants: ASTM C 1311
 1. Tremco General Purpose Butyl Sealant or Equal

2.5 LATEX JOINT SEALANTS

- A. **Type L-1:** Latex Joint Sealant: Acrylic latex or Siliconized Acrylic Latex: ASTM C834, Type OP, Grade NF or better
 1. Tremco Tremflex 834 or Equal.
- B. **Type L-2:** Paintable Mildew-Resistant Latex Joint Sealant: Acrylic Latex or Siliconized Acrylic Latex: ASTM C834, Type OP, Grade NF or better.
 1. Tremco Tremflex 834 or Equal.

2.6 ACCESSORIES

- A. General: Provide sealant backings of material and type that are nonstaining; 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. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin) as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and

density to control sealant depth and otherwise contribute to producing optimum sealant performance:

1. Oversized to 30 to 50 percent larger than joint width.
- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape 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.
- E. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated. Non-staining type, recommended by sealant manufacturer to suit application.
- F. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- G. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify substrate surfaces and joint openings are ready to receive work.
- B. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

- A. Remove loose materials and foreign matter impairing adhesion of sealant.
- B. Clean and prime joints.
- C. Perform preparation in accordance with ASTM C1193.

3.3 INSTALLATION

- A. Perform installation in accordance with ASTM C1193.
- B. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- C. Install bond breaker where joint backing is not used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.**
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool joints concave.

3.4 SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and non-traffic horizontal surfaces.
 1. Joint locations such as, but not limited to:
 - a. Construction joints in cast-in-place concrete.
 - b. Control joints in unit masonry.
 - 1) Provide joint sealants slightly darker than the adjacent masonry units. Provide multiple colors as may be required for match.

- c. Perimeter joints between masonry, concrete, or stone and frames of doors, windows, storefronts, louvers, and similar openings.
 - d. Lintels and shelf angles to masonry construction.
 - e. Butt joints between metal panels.
 - f. Control and expansion joints in ceiling/soffit and similar overhead surfaces.
 - g. Exterior joints between dissimilar materials where the joining of the two surfaces leaves a gap between the meeting materials or components as may be dictated by various methods of construction to make building watertight.
 - h. Other joints as indicated on Drawings.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-1, Type S-2, Type S-3**
 3. Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
1. Joint locations such as, but not limited to:
 - a. Isolation joints in cast-in-place concrete slabs.
 - b. Perimeter of floor slabs or concrete curbs which abut vertical surfaces.
 - c. Areas around all piping systems that penetrate the slab or foundation walls below grade (utility trenches, electrical conduits, plumbing penetrations, etc.).
 - d. Control and expansion joints in tile flooring.
 - e. Other joints as indicated on Drawings.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-4**
 3. Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal non-traffic surfaces, subject to movement, unless otherwise noted.
1. Joint locations such as, but not limited to:
 - a. Control joints on exposed interior surfaces of exterior walls.
 - b. Interior joints where interior partitions meet exterior walls of dissimilar materials and components.
 - c. Other joints as indicated on Drawings.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type U-1**
 3. Color: As selected by Architect from manufacturer's full range of colors. Paintable Sealant, prep for painted finish.
- D. Joint-Sealant Application: Interior joints in vertical surfaces subject to abuse and movement.
1. Joint locations such as, but not limited to:
 - a. Vertical joints, including control joints and joints between masonry and structural support members, on exposed surfaces of interior unit masonry walls and partitions.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type U-2**
 3. Color: As selected by Architect from manufacturer's full range of colors.
- E. Joint-Sealant Application: Interior joints in vertical surfaces not subject to movement.
1. Joint locations such as, but not limited to:
 - a. Interior perimeter joints of exterior openings.
 - b. Perimeter joints between interior wall surfaces and frames of interior doors, windows, and elevator entrances.
 - c. Interior joints between dissimilar materials where a gap is created where materials meet, unless otherwise noted.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type L-1, Type L-2**
 3. Color: As selected by Architect from manufacturer's full range of colors.

- F. Joint-Sealant Application: Mildew-resistant interior joints in non-painted vertical surfaces and horizontal nontraffic surfaces.
1. Joint locations such as, but not limited to:
 - a. Interior joints between plumbing fixtures and adjoining floors and counters.
 - b. Joints between countertops and backsplashes.
 - c. For interior joints in non-painted vertical and horizontal surfaces where incidental food contact may occur.
 - d. Tile control and expansion joints where indicated.
 - e. Other joints as indicated on Drawings.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-5**
 - a. For potable water storage sealant shall be certified by National Sanitation Foundation as conforming to the requirements of NSF Standard 61 – Drinking Water System Components – Health Effect.
 - b. For surfaces where incidental food contact may occur sealant must comply with United States Department of Agriculture (USDA) guidelines for incidental food contact with cured sealant.
 3. Color: As selected by Architect from manufacturer's full range of colors.
- G. Joint-Sealant Application: Mildew-resistant interior joints in painted vertical surfaces and horizontal non-traffic surfaces.
1. Joint locations such as, but not limited to:
 - a. Interior joints between plumbing fixtures and adjoining painted walls.
 - b. Joints where countertops or backsplashes intersect painted walls.
 - c. For interior joints in painted vertical and horizontal surfaces where incidental food contact may occur.
 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type L-2**
 3. Color: As selected by Architect from manufacturer's full range of colors.
- H. Joint-Sealant Application: Interior or exterior joints in vertical surfaces between laps in fabrications of sheet metal.
1. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type U-1**
 2. Color: As selected by Architect from manufacturer's full range of colors.
- I. Joint-Sealant Application: Exterior joints under metal thresholds and saddles, sill plates, or as bedding sealant for sheet metal flashing and frames of metal or wood.
1. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-1, Type U-1, Type B-1**
 2. Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION

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SECTION 08 63 00 - METAL-FRAMED SKYLIGHTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Aluminum-framed composite polymer-framed skylight assemblies, including skylight glazing system, fasteners, anchors, reinforcement, and flashings.

1.2 REFERENCE STANDARDS

- A. American Architectural Manufacturers Association, Window & Door Manufacturers Association
1. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/ Specification for Windows, Doors, and Skylights (NAFS)
- B. ASTM International:
1. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings
 2. ASTM D 635 - Test Method for Rate of Burning and/or Extent of Time of Burning of Self-supporting plastics in a Horizontal Position
 3. ASTM D 2843 - Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics
 4. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
 5. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
 6. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
 7. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
- C. Code of Federal Regulations:
1. 29 CFR 1910.29 (e) - Occupational Safety and Health Administration Standard: Fall protection systems and falling object protection – criteria and practices
- D. National Fenestration Rating Council:
1. NFRC 100 - Procedure for Determining Fenestration Product U-factors
 2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
- E. National Fire Protection Association:
1. NFPA 70 - National Electrical Code

1.3 COORDINATION

- A. Coordinate dimensions, locations and details of skylight curbs and sub-construction [specified in Section 061053 "Miscellaneous Carpentry"] [specified in Section 077200 "Roof Assemblies"] with approved shop drawings.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at project site prior to delivery of skylights and installation of roof deck and curbs.

1.5 SUBMITTALS

- A. Product Data: For skylights. Include standard construction details, product performance characteristics, and material descriptions, dimensions of individual components and profiles, and finishes, and sub-construction interface requirements.

1. Include test reports of qualified independent testing agency or third party certificates verifying compliance with performance requirements.
- B. Shop Drawings: For skylight assemblies. Include plans, elevations, sections, details, and connections to supporting structure and other adjoining work.
- C. Qualifications: For manufacturer and Installer.
- D. Test reports of qualified independent testing agency or third party certificates verifying compliance with performance requirements.
- E. End Reactions: Manufacturer provides reaction loads to be accommodated by the subconstruction provided by others, based on uniform and concentrated design loads specified by the purchasing entity.

1.6 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.7 COORDINATION

- A. Coordinate Work with installation of roofing system [**and structural curb**].

1.8 WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of skylights that fail in materials or workmanship under normal use within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Deterioration of metals, metal finishes and other materials beyond normal weathering.
 - b. Water infiltration through skylight assembly.
 2. Warranty Period:
 - a. Skylight Assembly: 10 years from completion of work.

PART 2 PRODUCTS

2.1 METAL-FRAMED SKYLIGHT MANUFACTURERS

- A. Velux America, LLC [basis of design]
- B. Approved Equal

2.2 ALUMINUM-CLAD COMPOSITE POLYMER-FRAMED SKYLIGHTS

- A. System Description: Modular skylight daylighting assemblies with composite polymer structural frames, formed aluminum exterior cladding, and prefinished interior surfaces, factory-assembled and factory-glazed with insulating glass units, with mounting hardware, prefabricated prefinished modular flashing, and accessories as required to meet installation and performance requirements indicated.
 1. Basis of Design: **VELUX America LLC, Model [HFC Fixed]** in sizes indicated on the drawings in the following configuration:
 - a. [Gabled Ridge Installation: 25 degree slope: **VELUX Ridgelight.**]
- B. Unit Frames and Sash: Pultruded glass-fiber and polyurethane composite frames, with interior factory-finished with white polyurethane coating.
- C. Weatherproofing Gaskets: Manufacturer's standard dual-seal EPDM rubber and PVC perimeter gaskets.
- D. Mounting Hardware: Manufacturer's standard mill-galvanized steel brackets, factory-supplied with flashing kits.

- E. Exterior Cladding: Manufacturer's standard factory-formed 0.06 inch thick extruded aluminum, powder-coated in manufacturer standard grey and supplied with flashing kits.
- F. Flashings: Manufacturer's standard factory-formed minimum 0.03 inch thick roll-formed aluminum sheet, with integrated mineral wool insulation and snow stop, of type required by skylight unit configuration indicated on drawings, powder-coated in manufacturer standard grey.

2.3 GLAZING

- A. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace.
 - 1. Sealing System: Dual seal, with polyisobutylene and silicone primary and secondary sealants.
 - 2. Spacer: Manufacturer's standard stainless steel non-conductive spacer.
 - 3. Desiccant: Molecular sieve or silica gel, or a blend of both.
 - 4. Edge Deletion: Delete low-E coating prior to fabrication of insulating units according to coated glass manufacturer's instructions.
 - 5. Installation Sealants: Compatible with one another and with other materials they contact, based on testing and field experience of sealant manufacturer.
 - 6. Outer lite extends beyond the spacer at the bottom for condensation control.
- B. High-Performance Low-E Insulating Laminated Glazing Unit:
 - 1. Basis of Design Product: **VELUX, Type 11L Low Energy with Solar Protection Dual Pane.**
 - 2. Outdoor lite: Fully hardened glass.
 - a. Thickness of outdoor glass lite: 0.24 inch.
 - b. Coating: Sun protection coating referenced as Sun 1 (SunGuard SN 51 HT) on second surface.
 - 3. Interspace: 0.87 inch thick, argon-filled.
 - 4. Indoor lite: Two plies of float glass.
 - a. Minimum thickness of each glass ply: 0.19 inch.
 - b. Minimum thickness of interlayer: 0.03 inch.
- C. Curbs: Refer to drawings for site constructed wood curbs.

2.4 PERFORMANCE REQUIREMENTS

- A. Unit Skylight Standard: AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS-edition 2017):
 - 1. Design Pressure (DP): HFC fixed module 39.37 inches x 118.11 inches design pressure of +60 psf and negative design pressure of -100 psf. Ridgelight assembly with three HFC fixed modules 39.37 inches x 94.5 inches and one HVC venting module 39.37 inches x 94.5 inches on both sides with a total assembly design pressure of 70 psf and negative design pressure of 50 psf.
 - 2. Water Test Pressure: minimum of 15 psf with no leakage at 5 gallons per minute spray rate.
 - 3. Air Leakage Rate: 0.01 cfm/sq. ft. as determined according to ASTM E 283 at a static pressure differential of 1.57 lbf/ sq. ft.
- B. Surface-Burning Characteristics of Frames: Provide frames meeting NAFS and identical to specimens tested for fire-exposure behavior in accordance with test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 1. Self-Ignition Temperature: 950 deg F or more with thickness indicated when tested per ASTM D 1929.
 - 2. Flash-Ignition Temperature: 806 deg F or more with thickness indicated when tested per ASTM D 1929.
 - 3. Smoke Density: 70 or less when tested per ASTM D 2843.
 - 4. Burning Characteristics: Tested and labeled in accordance with ASTM D 635: Class CC1.

- C. Fire Ratings for Roof Assemblies with Fire Classifications: Skylight module tested in accordance with ASTM E 108 and listed as passing Burning Brand test with target classification of Class B
- D. Energy Performance
 - 1. Thermal Transmittance: NFRC 100 maximum U-factor:
 - a. Ridgelight modular units:
 - 1) Glazing unit Type 11L Low Energy with Solar Protection Dual Pane:
 - a) Fixed (HFC): 0.38 Btu/sq. ft. x h x deg F.
 - 2. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-unit SHGC:
 - a. Ridgelight modular units:
 - 1) [Glazing unit Type 11L Low Energy with Solar Protection Dual Pane:
 - a) Fixed (HFC): 0.22
 - 3. Visible Transmittance (VT):
 - a. Ridgelight modular units:
 - 1) Glazing unit Type 11L Low Energy with Solar Protection Dual Pane:
 - a) Fixed (HFC): 0.42
 - b) Venting (HVC): 0.42
- E. Fall Protection Standard Compliance: 29 CFR 1910.29(e):
 - 1. HFC fixed module 39.37 inches x 118.11 inches:
 - a. Static load: 400 pounds placed on center of glass with no damage.
 - b. Dynamic load: 100 pounds dropped from 20 feet (2000 lbf-ft) with no damage.

2.5 MATERIALS

- A. Composite Polymer: 80 percent glass fiber and 20 percent two-component polyurethane resin formulated for use as pultruded structural composite.

2.6 FABRICATION

- A. Provide manufactured modular skylight units completely factory-assembled including frames, sash, insulating glass units, flashings, and indicated accessories. Factory glaze units utilizing silicone-based exterior seal.
- B. Fabricate frame components to tolerances utilized on units tested to meet performance requirements, accommodating installation and movement of sash and dynamic movement of perimeter weather gasketing.
- C. Incorporate permanent external drainage channels to manage water flow and drain to the exterior. Provide internal drainage of glazing spaces to exterior through gasketing.
- D. Factory-glaze units with glazing selection specified.

2.7 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Aluminum Finishes
 - 1. Pretreatment: Mechanically clean and chemically pretreat fabricated items in accordance with coating manufacturer's requirements and AAMA requirements for finish indicated.
 - 2. Application: Apply powder coating in accordance with coating manufacturer's requirements and AAMA requirements for finish indicated.
 - 3. Powder Coatings, High Performance Coating Finish Process: One-coat dry system with modified polyester resin, meeting performance requirements of AAMA 2604 and the following:

- a. Product: AkzoNobel Coatings, Inc., Interpon D2000 Series Super Polyester Powder Coating, or comparable product acceptable to Architect.
- b. Color: Manufacturer's standard grey.
- c. Dry Film Thickness, ASTM D 1400: Not less than 60 microns.
- d. Specular Gloss: 10 percent, plus or minus 5 percent.
- e. Surface: Rough texture, matte surface.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Coordinate with installation of roofing and other adjacent Work to ensure weathertight construction.
- B. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- C. Proceed with skylight installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install skylights in accordance with manufacturer's written instructions and approved shop drawings. Coordinate installation of units with installation of substrates, air and vapor retarders, roof insulation, roofing membrane, and flashing as required to ensure that each element of the Work performs properly and that finished installation is weather tight.
 1. Install skylights true to line and without distortion.
 2. Anchor skylights securely to supporting substrates.
- B. Where metal surfaces of skylights will contact incompatible metal or corrosive substrates, including preservative-treated wood, apply bituminous coating on concealed metal surfaces, or provide other permanent separation recommended in writing by skylight manufacturer.
- C. Set skylight structure plumb, level, and true to line, without warp or rack of frames or glazing panels. Anchor securely in place.
- D. Maintain assembly dimensional tolerances, aligning with adjacent Work.
- E. Apply minimum one coat of bituminous coating to concealed aluminum surfaces in contact with dissimilar metals.
- F. Install sill flashings.
- G. Pack fibrous insulation in shim spaces at perimeter of assembly to ensure continuity of thermal barrier.

3.3 ERECTION TOLERANCES

- A. Maximum Variation from Plumb, Level, or Line: 1/8 inch per 10 feet, or 3/8 inch total in overall dimension.
- B. Alignment of Two Adjoining Members Abutting in Plane: Within 1/16 inch.

3.4 FIELD QUALITY CONTROL

- A. Perform field water test in compliance with AAMA 501 on each completed skylight.
- B. Perform one test on each skylight assembly after completion.
- C. When testing results in leakage, eliminate causes of leaks and retest until no leaks occur.

3.5 CLEANING

- A. Clean exposed skylight surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- B. Replace glazing that has been damaged during construction period.
- C. Protect skylight surfaces from contact with contaminating substances resulting from construction operations.

END OF SECTION

SECTION 09 22 16 - NON-STRUCTURAL METAL FRAMING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Metal stud framing and accessories [soffit framing].

1.2 SYSTEM DESCRIPTION

- A. Maximum Allowable Deflection for wall assemblies: 1: 240 of the wall height based upon horizontal loading of 5 lbf/SF.
- B. Design Loads: 5 lbf/SF minimum.
- C. Design framing systems to accommodate deflection of the primary building structure and construction tolerances and to withstand design loads as outlined.
- D. Wall System:
 - 1. Design to provide for movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
 - 2. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

1.3 QUALITY ASSURANCE

- A. Perform Work according to ASTM C754.
- B. Form, fabricate, install, and connect components according to NAAMM ML/SFA 540.
- C. Furnish framing materials according to SSMA - Product Technical Information.

PART 2 PRODUCTS

2.1 COMPONENTS

- A. Framing System Components: ASTM C645.
- B. Studs / Joist Framing: ASTM A653/A653M, rolled steel, channel shaped, punched for utility access, as follows:
 - 1. Depth / Thickness: Coordinate with Details / Notes on Drawings
- C. Tracks and Headers: Same material and thickness as studs, bent leg retainer notched to receive studs.
- D. Headers and Jambs: Metal stud manufacturers proprietary shape used to form headers and jambs, columns, etc.
- E. Furring Channels: ASTM A653 G40
 - 1. Cold Rolled Channels: 16 gauge with 1/2 inch wide flanges, 3/4 inch deep.
 - 2. Hat Channels: ASTM C645-07: 25 gauge, 7/8 inch deep
- F. Channel Bridging:
 - 1. 16 gauge, 1-1/2 inch x 1/2 inch flange
 - 2. Clip angles: 1-1/2 inch x 1-1/2 inch, galvanized steel
- G. Fasteners: ASTM C1002; Type S, GA-216; length to suit application. Refer to Drawings.

2.2 FABRICATION

- A. Fabricate assemblies of framed sections to sizes and profiles required.
- B. Fit, reinforce, and brace framing members to suit design requirements.

- C. Fit and assemble in largest practical sections for delivery to Site, ready for installation.

2.3 SHOP FINISHING

- A. Studs: Galvanize to G40 coating class.
- B. Tracks and Headers: Galvanize to G40 coating class.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify rough-in utilities are in proper location.

3.2 INSTALLATION - GENERAL

- A. Installation Standard: ASTM C754.
- B. Install framing and accessories plumb, square, and true to line, with connections securely fastened.
- C. Install supplementary framing, and blocking as required to suit condition.
- D. Install bracing at terminations in assemblies.
- E. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.
- F. Align stud web openings horizontally.
- G. Secure studs to tracks using fasteners. Do not weld.
- H. Brace stud framing system rigid.
- I. Coordinate placement of insulation in stud spaces after stud frame erection.

3.3 INSTALLATION OF FRAMED ASSEMBLIES

- A. Install framing system components in accordance with spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
- B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- C. Install studs so flanges within framing system point in same direction.
- D. Install tracks at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts that penetrate partitions above ceiling.

3.4 ERECTION TOLERANCES

- A. Installation Tolerances: Install systems that are level to within 1/8 inch in 10 ft. measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.
- B. Maximum Variation from Plumb: 1/8 inch in 10 feet.

3.5 SCHEDULES

- A. Refer to wall types and sections on drawings.

END OF SECTION

SECTION 09 90 00 - PAINTING AND COATING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and field application of paints and other coatings.
- B. Paint all exposed surfaces that are not pre-finished items, finished metal surfaces, operating parts, labels, or materials obviously intended to be left exposed such as brick and tile.
 - 1. Steel and iron
 - 2. Galvanized metal
 - 3. Masonry [Chimney]
- C. Obtain primers and undercoat materials for each coating system from the same manufacturer as the finish coats. Primer and finish coat shall be factory applied, finish coat shall be field applied.
- D. Extra Materials: Deliver to Owner any leftover paint materials, properly labeled.
- E. Minimum surface temperature of 50 degrees required for all coating systems.
- F. Store all materials in tightly closed containers when not in use, away from heat, electrical equipment, sparks and open flames. Use approved bonding and grounding procedures. Keep out of the reach of children and residents.
- G. Transfer materials to approved containers with complete and appropriate labeling.

1.2 SUBMITTALS

- A. Product Data and Color Samples: Provide product data on each coating system component indicating VOC and environmental requirements. Coordinate coating systems for each material/substrate.
- B. Provide draw down samples of each coating for final review and approval by Owner.

1.3 QUALITY ASSURANCE

- A. Conform to all work place safety regulations for storage, mixing, application, and disposal of all paint related materials.
- B. Surface Burning Characteristics:
 - 1. Fire Retardant Finishes: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

1.4 REFERENCES AND REGULATIONS:

- A. Standards: Comply with applicable provisions and recommendations of the following, except when otherwise shown or specified:
 - 1. OSHA Safety Standards for the Construction Industry
 - 2. SSPC Volume 1, Good Painting Practice,
 - 3. SSPC Volume 2, Systems and Specifications, Surface Preparation Guide and Paint Application Specifications of the Steel Structures Painting Council.
 - 4. SSPC and NACE Painter Safety Guidelines, latest editions.
- B. Requirements of Regulatory Agencies, conform with the following:
 - 1. Clean Air Act (CAA)
 - 2. Clean Water Act (CWA)
 - 3. Toxic Substances Control Act (TSCA)

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Store and apply materials in environmental conditions required by manufacturer's instructions.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:
 - 1. Product name and type (description)
 - 2. Application & use instructions
 - 3. Surface preparation
 - 4. VOC content
 - 5. Environmental handling and an SDS
 - 6. Batch date
 - 7. Color number
- B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- C. Handling: Maintain a clean, dry storage area to prevent contamination or damage to the coatings.

1.7 PROJECT CONDITIONS

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

1.8 MOCKUP

- A. Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections and demonstrate aesthetic effects and set quality standards for materials and execution.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

- A. Manufacturers:
 - 1. Sherwin Williams [basis of design]
 - 2. Benjamin Moore
 - 3. PPG
- B. Paints and Coatings - General:
 - 1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such a procedure is specifically described in manufacturer's product instructions. VOCs need to be confirmed by using the products EDS sheets.
- C. Primers:
 - 1. Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- D. Coating Application Accessories:
 - 1. Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required per manufacturer's specifications.
- E. Colors: As selected from a full range of manufacturer's offerings, including premium colors.
- F. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.
 - 1. Lead: Measurable lead content in either the pigment or binder will not be permitted.

2. The finish coats shall match colors selected.

G. Finish Quality:

1. Finishes shall exhibit a high quality, commercial grade appearance of uniform thickness.
2. Finishes shall be free of runs, sags, drips, waves, orange peel, festoons, dry spray, cloudiness, spotting, ropiness, brush marks, roller marks, fish eyes or other surface imperfections, voids, discontinuities, pinholes, holidays and overspray.
3. Final coat shall be uniform in texture, color and gloss, and shall provide an acceptable match with the approved drawdown sample sheet.

2.2 EXTERIOR PAINT APPLICATION SCHEDULE

A. Metals - Ferrous: [Semi-Gloss Finish]

1. 1st Coat: S-W Pro Industrial™ Pro-Cryl® Universal Primer, B66-1300 Series (5.0 mils wet, 1.9 mils dry)
2. 2nd Coat: S-W Emerald® Urethane Trim Enamel Semi-Gloss, K38 Series (4.0 mils wet, 1.3 mils dry per coat)
3. 3rd Coat: S-W Emerald® Urethane Trim Enamel Semi-Gloss, K38 Series (4.0 mils wet, 1.3 mils dry per coat)

B. Metals – Aluminum / Galvanized: [Semi-Gloss Finish]

1. 1st Coat: S-W Pro Industrial™ Pro-Cryl® Universal Primer, B66-1300 Series (5.0 mils wet, 1.9 mils dry)
2. 2nd Coat: S-W Emerald® Urethane Trim Enamel Semi-Gloss, K38 Series (4.0 mils wet, 1.3 mils dry per coat)
3. 3rd Coat: S-W Emerald® Urethane Trim Enamel Semi-Gloss, K38 Series (4.0 mils wet, 1.3 mils dry per coat)

C. Masonry [Chimney at Civic Center]

1. 1st Coat: S-W Loxon Concrete and Masonry Primer, LX02W0050 (5.3-8.0 mils wet, 2.1-3.2 mils dry)
2. 2nd Coat: S-2 Loxon Acrylic Coating Flat, A24W300 Series (8 mils wet, 3.7 mils dry per coat)
3. 3rd Coat: S-2 Loxon Acrylic Coating Flat, A24W300 Series (8 mils wet, 3.7 mils dry per coat)

2.3 PRE-CLEANING AND SURFACE PREPARATION PRODUCTS

A. Pre-cleaning Agents

1. SW No Rinse Prepaint Cleaner
2. Krud Kutter
3. Potable water

B. Pre-cleaning (Power Wash) Equipment

1. Capacity to continuously deliver 3-5 gpm at 2,500 psig of 180-200 degree F hot water.
2. Cleaning system shall affect the 32-ounce per gallon dilution.
3. Manufacturer: Alkota, Model 565T with model 520 water heater or approved equal.
4. Power wash with 15 degree tip capable of delivering hot water at 2500 psig.

C. Power Tool Surface Preparation Media:

1. Scotch Brite No. 07451 by 3 M Corporation, Surface Conditioning disc.
 - a. Texture: A Medium
 - b. Maximum Speed: 18,000 RPM
2. Clean 'N' Strip Disco No CSD2 by 3 M Corporation
 - a. Texture: Course
 - b. Maximum Speed: 8,000 RPM

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly examined and prepared. Notify Architect of unsatisfactory conditions before proceeding.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Proceed with work only after conditions have been corrected, and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
- D. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

- A. Comply with paint manufacturer's written instructions for surface preparation, environmental and substrate conditions, product mixing, and application.
- B. Perform all surface preparation in accordance with SSPC specifications, guidelines and good painting practices.
- C. Proper product selection, surface preparation, and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.
- D. Selection of the proper method of surface preparation depends on the substrate, the environment, and the expected service life of the coating system. Economics, surface contamination, and the effect on the substrate will also influence the selection of surface preparation methods.
- E. The surface must be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.
- F. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50°F, unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50°F or higher to use low temperature products.
- G. Methods:
 - 1. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.
 - 2. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.
 - 3. Steel: Structural, Plate, etc.: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.
 - 4. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.

5. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before Hand Tool Cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
6. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before Power Tool Cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
7. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
8. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
9. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.
10. Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals, SSPC-SP16: This standard covers the requirements for brush-off blast cleaning of uncoated or coated metal surfaces other than carbon steel by the use of abrasives. These requirements include visual verification of the end condition of the surface and materials and procedures necessary to achieve and verify the end condition. A brush-off blast cleaned non-ferrous metal surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, metal oxides (corrosion products), and other foreign matter. Intact, tightly adherent coating is permitted to remain. A coating is considered tightly adherent if it cannot be removed by lifting with a dull putty knife.
11. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
12. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
13. Water Blasting, NACE Standard RP-01-72: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

3.3 APPLICATION

- A. Examination and Verification of Condition: Contractor shall verify the areas and conditions under which the work is to be performed and notify the Owner in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until satisfactory conditions have been corrected. Do not coat over chalk, dirt, scale, moisture, oil, surface contaminants, coatings that have exceeded the manufacturer's re-coat guidelines, or conditions otherwise detrimental to the formation of a durable high quality coating system.
- B. Comply with manufacturer's instructions and SSPC Good Paint Practices Volumes 1 and 2.
- C. Comply with OSHA regulations, State of Ohio and Federal laws, ordinances, and guidelines.
- D. Follow manufacturer's requirements for temperature and humidity at time of application.
- E. Refer to SDS sheets before using any product.
- F. All surfaces must be thoroughly dry before coating applications. Do not apply to wet or damp surfaces.
 - 1. Wait at least 30 days before applying to new concrete or masonry or follow manufacturer's procedures to apply appropriate coatings prior to 30 days.
 - 2. Test new concrete for moisture content.
 - 3. Wait until wood is fully dry after rain or morning fog or dew.
- G. Apply coatings using brush or roller only.
- H. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendation.
- I. Apply coatings using methods recommended by manufacturer.
- J. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- K. Apply coatings at spreading rate required to achieve the manufacturer's recommended dry film thickness.
- L. Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- M. Inspection: The coated surface must be inspected and approved by the Architect or Engineer just prior to the application of each coat.

3.4 CLEAN UP

- A. Clean site and remove debris and empty cans daily. Remove all paint from adjacent surfaces. Clean spills and splatters immediately.
- B. Clean hands and tools immediately after use with soap and water for water based products and with mineral spirits for oil based products.
- C. Follow manufacturer's safety recommendations when using mineral spirits.

3.5 ENVIRONMENTAL REQUIREMENTS

- A. Store and apply materials in environmental conditions required by manufacturer's instructions.

END OF SECTION