



PROJECT MANUAL

FOR

CITY OF ROCHELLE, ILLINOIS

ROCHELLE MUNICIPAL UTILITIES ROOF REPLACEMENT PROJECT

Project Location:

1030 South 7th Street
Rochelle, Illinois 61068

September 23, 2024



WILLETTS HOFMANN
& ASSOCIATES INC

ENGINEERING ARCHITECTURE LAND SURVEYING

809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

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OWNER: City of Rochelle, Illinois

PROJECT: Rochelle Municipal Utilities
 Roof Replacement Project
 1030 South 7th Street
 Rochelle, Illinois 61068
 WHA#2201D23

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TOTAL = 16 Sheets

DATED: September 23, 2024

END OF DOCUMENT

ADVERTISEMENT FOR BIDS

The City of Rochelle Illinois will receive sealed bids for a project entitled Rochelle Municipal Utilities Roof Replacement Project until 10:00 o'clock A.M. local time on the 10th day of October 2024, at the Rochelle City Hall located at 420 North 6th Street, Rochelle, Illinois 61068. Immediately following said time all bids will be publicly opened and read aloud at the same address.

The proposed work for which the City of Rochelle is soliciting bids consists of, but is not limited to, the following: work on four (4) separate unique contiguous roofing systems totaling approximately 37,600 SF including the removal of existing roofing systems and installation of new roofing systems and new gutters and downspouts. Project also includes replacement of an existing roof top HVAC unit, installation of site bollards, interior finish repairs and other associated work.

The Bid and Contract Documents, including Drawings, Specifications, Project Requirements and form of contract, are on file at the office of the Project Engineer, Willett, Hofmann & Associates, Inc., 809 East 2nd Street, Dixon, Illinois 61021 and at the Rochelle City Hall, 420 North 6th Street, Rochelle, Illinois 61068.

Bid and Contract Documents may be obtained on September 23, 2024. Copies of the Bidding Documents shall be obtained electronically in PDF format from the Willett, Hofmann & Associates, Inc. website at www.WillettHofmann.com. Bidders shall click on "Bid Login" on the homepage of the website and follow instructions. The eBidDoc# (project number) is 9326276 for this project. Contract Documents can be downloaded in PDF format from the website by depositing Twenty-Two Dollars (\$22.00) by credit card.

A bid security in an amount equal to not less than five percent (5%) of the total base bid shall be submitted with each bid. Bids may be held by the City of Rochelle for a period not to exceed sixty (60) days from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of bidders, prior to awarding the Contract.

A Pre-Bid Conference has been set for September 27, 2024 at 10:00 AM at the Project Site located at 1030 South 7th Street, Rochelle, Illinois 61068.

Attention is called to the fact that not less than the minimum salaries and wages as set forth in the Contract Documents must be paid on this project, and all Contractors must insure employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin. The City of Rochelle, Illinois is an equal opportunity employer and does not discriminate on the basis of handicapped status in the admission or access to, or treatment or employment in, its programs or activities.

The City of Rochelle, Illinois reserves the right to reject any or all bids or to waive any informalities in the bidding and also reserves the right to reject any non-responsive bid and/or non-responsible bid.

BY ORDER OF THE CITY OF ROCHELLE, ILLINOIS

Date: September 23, 2024

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS

1.1 SUMMARY

- A. Document Includes:
 - 1. Bid submission.
 - 2. Intent.
 - 3. Work identified in contract documents.
 - 4. Contract Time.
 - 5. Availability of documents.
 - 6. Examination of documents.
 - 7. Inquiries and Addenda.
 - 8. Product substitutions.
 - 9. Pre-Bid conference.
 - 10. Bidder qualifications.
 - 11. Submission procedure.
 - 12. Bid ineligibility.
 - 13. Security deposit.
 - 14. Performance Assurance.
 - 15. Insurance.
 - 16. Selection and award of alternates.
 - 17. Bid Opening.
 - 18. Duration of offer.
 - 19. Acceptance of offer.
- B. Related Documents:
 - 1. Document 00 11 16 – Advertisements for Bids.
 - 2. Document 00 32 00 – Special Project Requirements.
 - 3. Document 00 41 13 - Bid Form.
 - 4. Document 00 70 00 – General Conditions.

1.2 BID SUBMISSION

- A. Bids signed and under seal, executed, and dated will be received by the Owner, the City of Rochelle, Illinois, until 10:00 o'clock A.M. local time on the 10th day of October 2024, at the Rochelle City Hall located at 420 North 6th Street, Rochelle, Illinois 61068.
- B. Bids received after the above time will be returned to Bidder unopened.
- C. Amendments to submitted Bids will be permitted when received in writing prior to bid closing and when endorsed by the same party or parties who signed and sealed the Bid.
- D. Bidders may withdraw their Bid by written request made to the Owner at any time before bid closing.

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Document 00 21 13 – Instructions To Bidders

- E. These Contract Documents include a complete set of bidding and contract forms which are for the convenience of Bidders and are not to be detached from the Contract Documents, filled out, or executed. Separate copies of the Bid Forms are furnished for that purpose.

1.3 INTENT

- A. The intent of this Bid request is to obtain an offer to perform the work identified for a Stipulated Sum contract, in accordance with Contract Documents.

1.4 WORK IDENTIFIED IN CONTRACT DOCUMENTS

- A. Work of this proposed Contract consists of, but is not limited to, the following: the work on four (4) separate unique contiguous roofing systems totaling approximately 37,600 SF including the removal of existing roofing systems and installation of new roofing systems and new gutters and downspouts. Project also includes replacement of an existing roof top HVAC unit, installation of site bollards, interior finish repairs and other associated work.

1.5 CONTRACT TIME

- A. Identify Contract Time on the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date identified in the Notice to Proceed.
- B. The Owner requires the work of this contract be completed as quickly as possible. In the event that equal bids are received the bid with the lowest Contract Time will be given preference.

1.6 AVAILABILITY OF DOCUMENTS

- A. Bidding Documents may be obtained as stated in Advertisement for Bids.
- B. Bidding Documents are made available only for the purpose of obtaining offers for this Project. Their use does not grant a license for other purposes.

1.7 EXAMINATION OF DOCUMENTS

- A. Bidding Documents may be viewed at the office of the Project Engineer, Willett, Hofmann & Associates, Inc., 809 East 2nd Street, Dixon, Illinois 61021.
- B. Upon receipt of Bidding Documents verify documents are complete. Notify Project Engineer immediately if documents are incomplete.
- C. Immediately notify Project Engineer upon finding discrepancies or omissions in Bidding Documents.

1.8 INQUIRIES AND ADDENDA

- A. Direct questions in writing to the office of the Project Engineer:
Willett, Hofmann & Associates, Inc.
ATTN: Thomas W. Houck, AIA, PE, LEED AP^{BD+C}
809 East 2nd Street
Dixon, Illinois 61021
Phone: 815-284-3381
Fax: 815-284-3385
E-mail: thouck@willetthofmann.com
- B. Submit all inquiries in writing to the Project Engineer not less than five (5) calendar days before date set for receipt of Bids. Replies will be made by Addenda and any inquiry received after said date may not receive consideration.
- C. Addenda may be issued during bidding period. Addenda will be sent to all registered Plan Holders of record as documented by the office of the Project Engineer. Addenda become part of the Contract Documents. Include resultant costs in the Bid Sum.
- D. In the event an inconsistency, error or ambiguity is not, or cannot be, reported in time to meet the deadline for issuance of an Addendum, the cost of the better quality and/or greater quantity of work shall be included in the Bidder's proposal. The successful bidder will not be allowed any extra compensation for performing the Work of conditions and requirements that the Bidder could have clarified before submitting a bid.
- E. No oral interpretation will be made to any Bidder as to the meaning of the Bidding Documents. Verbal answers are not binding on any party.
- F. Every interpretation made to any Bidder relevant to the Bidding Documents will be in the form of an Addendum. It shall be the Bidder's responsibility, prior to submitting a Bid, to make inquiry as to the Addenda issued. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

1.9 PRODUCT SUBSTITUTIONS

- A. Where Bidding Documents stipulate particular Products, substitution requests will be considered by the Project Engineer up to ten (10) calendar days before receipt of Bids.
- B. With each substitution request, provide sufficient information for Project Engineer to determine acceptability of proposed products. Provide complete information on required revisions to other Work to accommodate each substitution. Later claims for an addition to the Contract Time or Contract Sum because of changes in Work necessitated by use of substitutions may not be considered.
- C. The burden of proof of the merit of the proposed substitution is upon the proposer.

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Document 00 21 13 – Instructions To Bidders

- D. When a request to substitute a Product is made, the Project Engineer may approve the substitution. Approved substitutions will be identified by Addenda.
- E. Provide Products as specified unless substitutions are submitted in this manner and subsequently accepted.
- F. If a proposed substitution is approved prior to receipt of bids such approval shall be set forth in an Addendum. Approval made in any other manner shall not be binding and bidders shall not rely upon them.
- G. Substitute products will not be considered when request is submitted as an attachment to the Bid Form.

1.10 PREBID CONFERENCE

- A. A Pre-Bid Conference is scheduled for September 27, 2024 at 10:00 AM at the project site located at 1060 South 7th Street, Rochelle, Illinois 61068.
- B. General contract and subcontract Bidders and suppliers are invited to attend.
- C. Each Bidder shall visit the site of the proposed work and become fully acquainted with the existing conditions relating to the required construction and labor and shall become fully informed as to the facilities involved, the difficulties and restrictions in attending to the performance of the Contract. The Bidder should thoroughly examine the Drawings, Technical Specifications, and all other Contract Documents. The Contractor, by the execution of the Contract, shall in no way be relieved of any obligation under it due to his/her failure to receive or examine any form or legal instrument or to visit the site and become acquainted with the existing conditions and the Owner will be justified in rejecting any claim based on facts regarding which the Bidder should have been on notice as a result thereof.
- D. Project Engineer shall conduct the meeting and representatives of the Owner will be in attendance.
- E. Summarized minutes of this meeting will be circulated to all present and all registered Plan Holders of record as documented by the office of the Project Engineer.
- F. Information relevant to Bidding Documents will be issued by Addendum.

1.11 BIDDER QUALIFICATIONS

- A. To demonstrate qualification for performing the Work of this Contract, Bidders may be requested to submit written evidence of financial position, previous experience, current commitments, and license to perform work during the bid review process, following the submittal of bids, conducted by the Owner.

- B. If such additional information is requested, Bidders shall be provided a written request of the specific information required.

1.12 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for delivery of Bids in manner and time prescribed.
- B. All bids must be submitted on forms supplied in paper copy only. Submit two (2) original copies of executed offer on Bid Forms provided, signed and sealed with required security deposit in a closed and sealed opaque envelope, clearly labeled with the words “Bid Documents”, Bidder’s name, Project name, Bid Opening Date and Time, and Owner’s name on the outside in order to guard against premature opening of the Bid.
- C. Improperly completed submission information may be cause not to open the Bid Form envelope and cause to declare the Bid invalid or informal.
- D. Bids submitted via fax, email or other electronic methods will not be accepted or acknowledged.
- E. An abstract summary (bid-tab) of submitted Bids will be made available to all registered Plan Holders of record as documented by the office of the Project Engineer following the bid opening.
- F. If the Contract is awarded, it will be awarded by the Owner to a responsible Bidder on the basis of the lowest Bid, which may be comprised of the Base Bid and any selected Alternate Bid items specifically requested by the technical specifications, in any combination that best suits the interests of the Owner. The Contract will require the completion of the work according to the Contract Documents.
- G. Submission of a bid proposal shall be considered certification that the Bidder has not entered into a collusive agreement with any other person, firm, or corporation in regard to any Bid submitted.
- H. Attention of Bidders is particularly called to the requirement that the Bidder must not be delinquent in the payment of any tax administered by the Illinois Department of Revenue and submission of a Bid shall be certification to that effect.
- I. Bidders shall incur all costs associated with the preparation of its Bid.
- J. Sums shall be expressed in both words and numbers. In the event of a discrepancy the amount stated in words shall govern.

1.13 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may be declared unacceptable at Owner’s discretion.

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Document 00 21 13 – Instructions To Bidders

- B. Bid Forms, Appendices, and enclosures which are improperly prepared may be declared unacceptable at Owner's discretion.
- C. Failure to provide security deposit, bid bond or other Bid Form Supplements may invalidate the Bid at Owner's discretion.

1.14 SECURITY DEPOSIT

- A. Bids shall be accompanied by security deposit as follows:
 - 1. Bid Bond in an amount not less than five percent (5%) of the Bid Sum.
 - 2. Certified check in an amount not less than five percent (5%) of the Bid Sum.
- B. Endorse Bid Bond in name of the Owner, the City of Rochelle, Illinois, as obligee, signed and sealed by the principal Contractor and surety.
- C. Endorse certified check in name of the Owner, the City of Rochelle, Illinois.
- D. Security deposit of accepted Bidder will be returned after delivery to the Owner of the fully executed Owner – Contractor Agreement, certificates of required insurance and required Performance and Payment Bonds by the accepted Bidder.
- E. After a Bid has been accepted, security deposits will be returned to the respective Bidders.
- F. If no contract is awarded, all security deposits will be returned.

1.15 PERFORMANCE ASSURANCE

- A. Accepted Bidder: Provide a Performance and Payment bond as described in Document 00 31 50 Insurance and Bonds.
- B. Include the cost of performance assurance bonds in the Bid Sum and identify the cost when requested by the Owner.

1.16 INSURANCE

- A. Accepted Bidder: Provide the required Insurance as described in Document 00 31 50 Insurance and Bonds.

1.17 SELECTION AND AWARD OF ALTERNATES

- A. On Bid Form, indicate variation of Bid Sum for alternates listed and described. Provide a "difference" in Bid Sum by noting an addition to or a deduction from the Base Bid Sum.
- B. All requested Alternates shall be bid. If no change is required enter "No Change". Failure to complete bid for Alternates may be cause for rejection.

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Document 00 21 13 – Instructions To Bidders

- C. No alternate bids will be considered unless alternate bids are specifically requested on the Bid form.
- D. The Owner may accept or reject Alternates in any combination with the Base Bid that best suits the Owners priorities and budget. The successful bidder's lump sum cost shall have the lowest project cost after alternate bids are accepted. Accepted Alternates will be identified in Owner-Contractor Agreement.

1.18 BID OPENING

- A. Bids will be opened publicly immediately after time for receipt of Bids. Bids will be read aloud irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.
- B. Bids will be opened at 10:00 o'clock A.M. local time on the 10th day of October 2024, at the Rochelle City Hall located at 420 North 6th Street, Rochelle, Illinois 61068.

1.19 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after bid closing date.

1.20 ACCEPTANCE OF OFFER

- A. The Owner reserves the right to accept or reject any or all offers and waive any informalities in Bids received whenever such rejection or waiver is in its interest.
- B. After acceptance by the Owner, the Project Engineer on behalf of the Owner will issue to the accepted Bidder, a written Notice of Award.
- C. Within fifteen (15) calendar days of the date of the Notice of Award, the successful Bidder shall execute and deliver to the Owner:
 - 1. An Agreement in the form included in the Contract Documents in such number of copies as the Owner may require.
 - 2. Contractor's Performance and Payment Bonds as specified in the Contract Documents.
 - 3. Certificate of Insurance as specified in the Contract Documents.
 - 4. Other submittal requirements as specified in 00 31 50 Insurance and Bonds.
- D. Following receipt of all required items as listed in 1.20.C herein, the Project Engineer on behalf of the Owner will issue to the accepted Bidder, a written Notice To Proceed.
- E. The Contract time will begin with the date of the Notice To Proceed.

END OF DOCUMENT

INSURANCE AND BONDS**1.1 SUMMARY**

- A. Document includes:
 - 1. Insurance requirements.
 - 2. Bond requirements

1.2 INSURANCE REQUIREMENTS

- A. The Contractor shall not commence work under the Contract until all insurance has been obtained. Certificates of insurance showing coverage as required to be in effect will be filed with the Owner prior to the time of entering into the Contract. Certificates of insurance will be on Accord Forms and shall provide thirty (30) days notice of cancellation. The certificates will be signed by the insurance companies or their authorized agents. The insurance companies must be authorized to do business in the State of Illinois and carry an “A.M. Best” rating of AX or better.
- B. The Contractor shall maintain in force the coverage’s required in this section for the term of the Contract. Also, the Contractor shall not allow any Subcontractor to commence work on any portion of the project without evidence that the Subcontractor has insurance coverage equal to the coverage’s required in this section. The minimum amounts of insurance shall be as follows:
 - 1. AUTOMOBILE including coverage for owned, non-owned and hired vehicles.
 - a. \$1,000,000 Bodily Injury per Person
 - b. \$1,000,000 Bodily Injury per Occurrence
 - c. \$1,000,000 Property Damage per Occurrence
 - d. \$1,000,000 Combined Single Limit
 - 2. WORKER’S COMPENSATION – STATUTORY EMPLOYER’S LIABILITY
 - a. \$500,000 Disease - each employee
 - b. \$500,000 Disease - policy limit
 - c. \$500,000 Each Accident
 - 3. COMMERCIAL GENERAL LIABILITY. Coverage shall be primary and non-contributory. Policy shall include coverage for bodily injury and property damage arising out of an occurrence and shall include:
 - a. \$1,000,000 Each Occurrence
 - b. \$500,000 Premises and Operations
 - c. \$1,000,000 Personal and Advertising Injury
 - d. \$2,000,000 General Aggregate
 - e. \$2,000,000 Products – Comp/Op Agg
 - 4. UMBRELLA LIABILITY.
 - a. \$5,000,000 Each Occurrence
 - b. \$5,000,000 Aggregate

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Document 00 31 50 – Insurance and Bonds

- 5. BUILDER'S RISK.
 - a. Policy shall remain in effect throughout the duration of the Contract.
- 6. ADDITIONAL INSUREDS.
 - a. Owner:
 - 1) The City of Rochelle, Illinois.
 - b. Project Engineer:
 - 1) Willett, Hofmann & Associates, Inc.

1.3 BOND REQUIREMENTS

- A. Bid Bond. As specified in the Instructions to Bidders - Document 00 21 13.
- B. Performance Bond: 100% of the Contract Price.
- C. Payment Bond: 100% of the Contract Price.

END OF DOCUMENT

SPECIAL PROJECT REQUIREMENTS

1.1 SUMMARY

- A. Document Includes:
 - 1. Payment of Prevailing Wage
 - 2. Tax Exempt
- B. Related Documents:
 - 1. Document 00 21 13 - Instructions to Bidders.

1.2 PAYMENT OF PREVAILING WAGE

- A. The Illinois Prevailing Wage Act, 820 ILCS section 130/0.01, *et seq* requires that all laborers, workers, and mechanics employed by or on behalf of a public body in the construction of public works be paid the general prevailing rate of hourly wages (including allotments for training and approved apprenticeship programs, health and welfare, insurance, vacation, and pension benefits) for work of a similar character in the locality in which the work is performed.
- B. The Illinois Department of Labor publishes the current prevailing wage rate at <https://www2.illinois.gov/idol/laws-rules/conmed/pages/rates.aspx>. The rate is revised regularly, and such revisions take effect immediately. It is the CONTRACTOR'S responsibility to ascertain and implement such changes.
- C. Contractor must post the relevant prevailing wage rate(s) at a location on the project site that is easily accessible by workers.
- D. Contractors and Sub-contractors must insert a provision or stipulation regarding the payment of the prevailing wage rate into every public works project and bid specification, subcontract, and contractor's bond.
- E. RECORD KEEPING RESPONSIBILITIES:
 - 1. All contractors and sub-contractors must create and keep for at least three (3) years records of all laborers, mechanics, and other workers employed by them on a public works project.
 - 2. These records must include each worker's name, address, telephone number, social security number, classification, hourly wages paid in each pay period, number of hours worked each day, and the starting and ending times of each workday. Each contractor and subcontractor is required to make these records available for inspection by the public body's agents or Illinois Department of Labor officials at a reasonable time and place upon seven business days' notice.

F. CERTIFIED PAYROLL RECORDS:

1. Contractor shall be responsible for the submittal of Certified Payrolls for this Project directly to the Illinois Department of Labor electronic database per the requirements of Illinois General Assembly Public Act 100-1177.
<https://webapps.illinois.gov/DOL/PayrollCertification/>.
2. Contractor shall submit certification with each pay application certifying that payroll records have been submitted to the IDOL.

1.3 TAX EXEMPT

- A. This project is tax exempt.

END OF DOCUMENT

BID FORM

To: City of Rochelle, Illinois
Rochelle Municipal Utilities
416 North 6th Street
Rochelle, Illinois 61068

Project: Rochelle Municipal Utilities
Roof Replacement Project
1030 South 7th Street
Rochelle, Illinois 61068

Date: _____

Submitted by: (Official full name of firm and legal address)

1. OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Project Manual/Contract Documents dated September 23, 2024, prepared by Project Engineer Willett, Hofmann & Associates, Inc., 809 East 2nd Street, Dixon, Illinois, for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work described on the Drawings and Specifications for the Sum of:

BASE BID:

(\$ _____) in lawful money of the United States of America.

Amount shall be in both words and figures. In case of discrepancy the amount stated in words shall govern.

We have included a bid security, attached herewith, as required by the Instruction to Bidders and all applicable taxes, permitting and fees including: Federal, State of Illinois, County of Ogle and City of Rochelle are included in the Bid Sum. This base bid amount covers all expenses incurred in performing the work required under the contract documents including payment of prevailing wages in accordance with the Illinois Prevailing Wage Act.

ALTERNATE BIDS:

ALTERNATE BID 1: All work as indicated as Alternate Bid 1 on Drawings and Specifications, namely the roof replacements at Roof 2 and Roof 3 and associated work.

ADD _____

(ADD: \$ _____)

Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.

ALTERNATE BID 2: All work as indicated as Alternate Bid 2 on Drawings and Specifications, namely the roof replacement at Roof 4 and associated work.

ADD _____

(ADD: \$ _____)

Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.

No alternate bids will be considered unless specifically requested on this Bid form.

2. **ACCEPTANCE**

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding. The Bidder agrees that this bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving bids. Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract within fifteen (15) calendar days and deliver the required bonds and an acceptable Certificate of Insurance and all other requirements as specified by the bidding documents.

3. **CONTRACT TIME**

If this Bid is accepted, we will:

Be available to start the Work within _____ (_____) calendar days (*not more than (30) thirty*) from Bid Opening upon receipt of Notice to Proceed, and

Complete the Base Bid Work in _____ (_____) calendar days (barring bad weather days) from the date of the Notice to Proceed.

4. **ADDENDA**

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # Dated

Addendum # Dated

Addendum # Dated

Addendum # Dated

5. APPENDICES

The following documents are attached to and made a condition of the Bid:

Bid security in form of: _____

In the amount of: _____

If this Bid is accepted within the indicated time, and we fail to provide the required insurance certificates, required bonds or fail to commence the work, the Bid security shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the Bid security or the difference between this Bid and the Bid upon which a Contract is signed. In the event our Bid is not accepted within the time stated above, the required Bid security will be returned to the undersigned, according to the provisions of the Instructions to Bidders, unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

6. SUPPLEMENTAL INFORMATION

List of Subcontractors\Major Suppliers:

The following work will be performed or provided by subcontractors and coordinated by us (provide additional sheets as necessary):

WORK SUBJECT	NAME

6. BID FORM SIGNATURES

The Corporate Seal of:

(Company Name)

was hereunto affixed in the presence of:

Authorized Signing Officer (Printed or Typed)

Title

Signature of Authorized Signing Officer

Date

END OF DOCUMENT

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Section 00 41 14 – Tax Certification

TAX CERTIFICATION

I, _____ , _____ of
(Name) (Title)

_____ do hereby certify under oath that
(Organization)

_____ is not delinquent in the payment
(Organization)

of any tax administered by the Illinois Department of Revenue.

Date: _____

By: _____

Title: _____

Organization: _____

Subscribed and sworn to before me this

_____ day of _____, 20 ____ .

By _____

Title _____ *Notary Public*

My Commission Expires _____

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Section 00 41 15 – Non-Collusion Affidavit of Prime Bidder

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)
County of _____) ss.

_____, being first duly sworn, deposes and says that:

- (1) She/He is _____ of _____, the Bidder that has submitted the attached Bid;
- (2) She/He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Rochelle or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed)

(Name & Title)

Subscribed and sworn to before me this
_____ day of _____, 20____.

(Notary Public)

My commission expires _____.

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered, and the data given must be clear and comprehensive. This statement must be *notarized*. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he or she desires.

1. Name of the Bidder.
2. Permanent main office address.
3. When were you organized?
4. If a corporation, in what state were you incorporated?
5. How many years have you been engaged in the contracting business under your present firm or trade name?
6. Contracts on hand: *(Please schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)*
7. Describe the general character of work performed by your company.
8. Have you ever failed to complete work awarded to you?
9. Have you ever defaulted on a contract?
10. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year the project was completed.
11. List your major equipment that will be made available for this contract.
12. State your experience in construction work similar in importance to this project.
13. List the background and experience of the principal members of your organization, including the officers.
14. Indicate the present amount of credit available to you:_____.
15. Please provide a bank credit reference:_____.
16. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the City of Rochelle?
17. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Rochelle in verification of the recitals comprising the Statement of Bidder's Qualifications.

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Section 00 41 16 – Statement of Bidder's Qualifications

Dated at _____, this _____ day of _____, 20____.

(Name of Bidder)

By _____

Title _____

State of _____)
County of _____) ss.

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

_____ of _____ and that the answers to the foregoing questions

and all statements therein contained are true and correct.

Subscribed and sworn to before me this
_____ day of _____, 20____.

(Notary Public)

My commission expires _____.

CONTRACT

THIS AGREEMENT, made and concluded this _____ day of _____, 20____, by and between _____ (a corporation organized and existing under the laws of the State of _____) (a partnership consisting of _____) (an individual trading as _____)¹ hereinafter called the "CONTRACTOR", and _____ City of Rochelle _____, hereinafter called the "LOCAL PUBLIC AGENCY".

WITNESSETH: that the CONTRACTOR and the LOCAL PUBLIC AGENCY for the considerations stated herein mutually agree as follows:

ARTICLE 1. STATEMENT OF WORK. The CONTRACTOR shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services, including utility and transportation services, and perform and complete all work required for the construction of the proposed improvements embraced in the Rochelle Municipal Utilities Roof Replacement Project; namely:

Work of this Contract consists of, but is not limited to, the following: the work on four (4) separate unique contiguous roofing systems totaling approximately 37,600 SF including the removal of existing roofing systems and installation of new roofing systems and new gutters and downspouts. Project also includes replacement of an existing roof top HVAC unit, installation of site bollards, interior finish repairs and other associated work.

all in strict accordance with the Contract Documents including all addenda thereto, numbered ____ dated _____, all prepared by Willett, Hofmann & Associates, Inc., acting and in these Contract Documents referred to as the "ENGINEER".

ARTICLE 2. CONTRACT PRICE. The LOCAL PUBLIC AGENCY shall pay the CONTRACTOR for the performance of the Contract, in current funds, subject to additions and deductions, the sum of

_____ (\$_____).

Base Bid plus Selected Alternate Bids

ARTICLE 3. CONTRACT. The executed contract documents shall consist of the following:

- | | |
|----------------------------|--------------------------------------|
| a. This Agreement | f. Performance Bond |
| b. Addenda | g. Payment Bond |
| c. Invitation for Bids | h. General Conditions |
| d. Instructions to Bidders | i. Specifications/Special Provisions |
| e. Signed Copy of Bid | j. Drawings |

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

Section 00 50 10 - Contract

This Agreement, together with other documents enumerated in the ARTICLE 3, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of the Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in ____¹ original copies on the day and year first above written.

CONTRACTOR: _____

BY: _____

²

TITLE: _____

(SEAL)

ATTEST BY: _____

TITLE: _____

OWNER: _____ City of Rochelle, Illinois

(MUNICIPAL SEAL)

BY: _____

TITLE: _____

ATTEST:

BY: _____

TITLE: _____

¹ The number of copies to be executed by the parties must be stated in the Agreement in the space provided. Such additional signed copies shall be prepared as may be required by the surety companies and others. All copies, including conformed copies, shall be compared and checked before distribution.

² Supply description of Contractor: Owner, Partnership or Corporation.

CERTIFICATION

I, _____, certify that I am the _____ of the Corporation named as CONTRACTOR herein; that _____ who signed this Agreement on behalf of the CONTRACTOR, was then _____ of said Corporation; that said Agreement was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

BY: _____

TITLE: _____

(CORPORATE SEAL)

HOLD HARMLESS AGREEMENT

The CONTRACTOR shall indemnify and hold harmless the OWNER and it's Agents and its Employees from and against all claims of personal injury or property damage, including claims against the OWNER, it's Agents or servants, arising out of the Illinois Structural Work Act, and all losses and expenses, including attorneys fees that may be incurred by the OWNER defending such work and caused in whole or in part by any negligent act or omission of the CONTRACTOR, and Sub-Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts caused in part by a party indemnified hereunder. In any and all claims against the OWNER or any of its agents or servants by an employee of a CONTRACTOR, any Sub-Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in anyway by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or Sub-Contractor under Workers' Compensation Acts, Disability Acts, or their Employee Benefit Acts.

Attest:

BY: _____

Title: _____

BY: _____

Title: _____

Date: _____

GENERAL CONDITIONS

1.1 DEFINITIONS

- A. Whenever used in any of the Contract documents the following meanings shall be given to the terms herein defined:
1. The term "Contract" or "Agreement" means the Contract executed by the OWNER and the CONTRACTOR, of which these GENERAL CONDITIONS form a part.
 2. The term "OWNER" means City of Rochelle, Illinois.
 3. The term "CONTRACTOR" means the person, firm or corporation entering into the Contract with the OWNER to construct and install the improvements embraced in this Contract.
 4. The term "Project Area" means the area within which are the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
 5. The term "ENGINEER" means Willett, Hofmann & Associates, Inc, the ENGINEER in charge, serving the OWNER with architectural and/or engineering services, his successor, or any other person or persons, employed by said OWNER for the purpose of directing or having in charge the work embraced in this Contract, the said ENGINEER acting directly or having in charge the work embraced in this Contract, the said ENGINEER having general charge of the work or through any assistant having immediate charge of a portion thereof limited by the particular duties entrusted to him.
 6. The term "Local Government" means the town, village, city, county(ies) or other political subdivision of the State of Illinois within which the Project Area is situated.
 7. The term "Contract Documents" means and shall include, but not be limited to, the following: Executed Contract, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Specifications and Construction Drawings.
 8. The term "Subcontractor" means any individual, firm, or corporation having a contractual responsibility with the CONTRACTOR or with any other subcontractor for the performance of a part of the work at the site.
 9. The term "Drawings" means the Construction Drawings prepared by the ENGINEER.
 10. The term "Specification" means that part of the Contract Documents which describes outlines and stipulates: the quality of the materials to be furnished, the quality of workmanship required and the methods to be used in carrying out the construction work to be performed under this Contract.
 11. The term "Addendum" or "Addenda" means any changes revisions or clarifications of the Contract Documents, which have been duly issued by the OWNER to prospective Bidders prior to the time of receiving Bids.

1.2 SUPERINTENDENCE BY CONTRACTOR

- A. Except where the CONTRACTOR is an individual and gives his personal superintendence to the work, the CONTRACTOR shall provide a competent superintendent satisfactory to the OWNER and the ENGINEER on the work at all times during working hours with full authority

to act for him. The CONTRACTOR shall also provide an adequate staff for the proper coordination and expediting of his work.

- B. The CONTRACTOR shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

1.3 SUBCONTRACTS

- A. The CONTRACTOR shall be as fully responsible to the OWNER for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- B. The CONTRACTOR shall cause appropriate provision to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of the Contract.
- C. Nothing contained in the Contract shall create any contractual relation between any subcontractor and the OWNER.
- D. The CONTRACTOR shall not award work to Subcontractor(s) in excess of 50% of the contract price without prior written approval of the OWNER.

1.4 OTHER CONTRACTS

- A. The OWNER may award, or may have awarded other contracts for additional work, and the CONTRACTOR shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the OWNER. The CONTRACTOR shall not commit or permit any act, which will interfere with the performance of work by any other Contractor as scheduled.

1.5 FITTING AND COORDINATION OF WORK

- A. The CONTRACTOR shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors or materialmen engaged upon this Contract. He shall be prepared to guarantee to each of his subcontractors the locations and measurements that they may require for the fitting of their work to all surrounding work.

1.6 MUTUAL RESPONSIBILITY OF CONTRACTORS

- A. If, through acts or neglect on the part of the CONTRACTOR, any other Contractor or any subcontractor shall suffer loss or damage on the work, the CONTRACTOR shall settle with such other Contractor or subcontractor by agreement or arbitration if such other Contractor or subcontractor will so settle. If such other Contractor or subcontractor shall assert any claim against the OWNER on account of any damage alleged to have been so sustained the OWNER will notify this CONTRACTOR, who shall defend at his own expense any suit based upon such claim, and, if any judgment or claims against the OWNER shall be allowed, the CONTRACTOR shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith.

1.7 ASSIGNMENT OR NOVATION

- A. The CONTRACTOR shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities or responsibilities under this Contract without the written consent of the OWNER provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the OWNER. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the CONTRACTORS rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

1.8 TECHNICAL SPECIFICATIONS AND DRAWINGS

- A. Anything mentioned in the Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Specifications, the Specifications shall govern. In case of any discrepancy in Drawings, or Specifications, the matter shall be immediately submitted to the OWNER without whose decision, said discrepancy shall not be adjusted by the CONTRACTOR, save only at his own risk and expense.

1.9 REQUESTS FOR SUPPLEMENTARY INFORMATION

- A. It shall be the responsibility of the CONTRACTOR to make timely requests of the OWNER for any additional information not already in his possession which should be furnished by the OWNER under the terms of this Contract and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing and list the various items and the latest date by which each will be required by the CONTRACTOR. The first list shall be submitted within two weeks after improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.

1.10 PERMITS AND CODES

- A. The CONTRACTOR shall give all notices required by and comply with all applicable laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the CONTRACTOR shall examine the Drawings and Specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the OWNER. Where the requirements of the Drawings and Technical Specifications fail to comply with such applicable ordinances or codes, the OWNER will adjust the Contract by Change Order to conform to such ordinances or codes (unless

DIVISION 00 – BIDDING AND CONTRACT REQUIREMENTS

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- waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices. Should the CONTRACTOR fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Specifications), the CONTRACTOR shall remove such work without cost to the OWNER, or a Change Order will be issued to cover only the excess cost the CONTRACTOR would have been entitled to receive if the change had been made before the CONTRACTOR commenced work on the items involved.
- B. The CONTRACTOR shall, at his own expense, secure and pay to the appropriate department of the Local Government the fees or charges for all permits required by the local regulatory body or any of its agencies.
 - C. The CONTRACTOR shall comply with applicable local laws and ordinances governing the disposal of surplus materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the improvements embraced in this Contract.

1.11 CARE OF WORK

- A. The CONTRACTOR shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the OWNER.
- B. The CONTRACTOR shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, as may be necessary from the time the work is commenced until final completion and acceptance.
- C. In an emergency affecting the safety of life, limb or property, including adjoining property, the CONTRACTOR, without special instructions or authorization from the OWNER, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the OWNER. The OWNER will determine any compensation claimed by the CONTRACTOR on account of such emergency work.
- D. The CONTRACTOR shall avoid damage as a result of his operations to existing sidewalks, streets, curbs and pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall, at his own expense, completely repair the damage thereto caused by his operations.
- E. The CONTRACTOR shall shore up, brace, underpin, secure and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements embraced in this Contract. The CONTRACTOR shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The CONTRACTOR shall indemnify and save harmless the OWNER from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the OWNER may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

1.12 ACCIDENT PREVENTION

- A. No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions, which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Secretary of Labor.
- B. The CONTRACTOR shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed and the CONTRACTOR shall take or cause to be taken such additional safety and health measures as the OWNER may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable laws.
- C. The CONTRACTOR shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The CONTRACTOR shall promptly furnish the OWNER with reports concerning these matters.
- D. The CONTRACTOR shall indemnify and save harmless the OWNER and ENGINEER from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.

1.13 SANITARY FACILITIES

- A. The CONTRACTOR shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Local Government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

1.14 REVIEW BY OWNER

- A. The OWNER, its authorized representatives and agents shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the CONTRACTOR only by the OWNER and/or its authorized representatives or agents.

1.15 PATENTS

- A. The CONTRACTOR shall hold and save the OWNER, its officers, and employees harmless from liability of any nature or kind, including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, specifically stipulated in the Specifications.

1.16 WARRANTY OF TITLE

- A. No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest therein or any part thereof is retained by the seller or supplier. The CONTRACTOR shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the OWNER free from any claims, liens, or charges. Neither the CONTRACTOR nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the CONTRACTOR for their protection or any rights under any law permitting such persons to look to funds due the CONTRACTOR in the hands of the OWNER. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

1.17 GENERAL GUARANTY

- A. Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements embraced in this Contract by the OWNER or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the CONTRACTOR of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The CONTRACTOR shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of twelve (12) months, or that specified in the technical specifications, from the date of final acceptance of the work.
- B. The OWNER will give notice of defective materials and work with reasonable promptness.

1.18 COMMUNICATIONS

- A. All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- B. Any notice to or demand upon the CONTRACTOR shall be sufficiently stated on the signature page of the Agreement (or at such other office as the CONTRACTOR may from time to time designate in writing to the OWNER), or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office,
- C. All papers required to be delivered to the OWNER shall, unless otherwise specified in writing to the CONTRACTOR, be delivered to the City Clerk at City Hall and any notice to or demand upon the OWNER shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said OWNER at such address, or to such other representatives of the OWNER or to such other address as the OWNER may subsequently specify in writing to the CONTRACTOR for such purposes.
- D. Any such notice shall be deemed to have been given as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post or (in the case of telegrams) at the time of actual receipt as the case may be.

1.19 PARTIAL USE OF SITE IMPROVEMENTS

- A. The OWNER, at its election, may give notice to the CONTRACTOR and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the Specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:
1. The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the CONTRACTOR.
 2. The CONTRACTOR shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
 3. The use of such sections shall in no way relieve the CONTRACTOR of his liability due to having used defective materials or to poor workmanship.
 4. The period of guarantee shall not begin to run until the date of the final acceptance of all work, which the CONTRACTOR is required to construct under this Contract.

1.20 TERMINATION AND DELAYS

- A. *Right of OWNER to Terminate Contract* - In the event that any of the provisions of this contract are violated by the CONTRACTOR, or by any of his subcontractors, the OWNER may serve written notice upon the CONTRACTOR and the surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the CONTRACTOR, such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the OWNER shall immediately serve notice thereof upon the surety and the CONTRACTOR and the surety shall have the right to take over and perform the contract; provided, however, that if the surety does not commence performance thereof within ten (10) days from the date of the mailing to such surety of notice of termination, the OWNER may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the CONTRACTOR and the CONTRACTOR and his surety shall be liable to the OWNER for any excess cost occasioned the OWNER thereby, and in such event the OWNER may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.
- B. *Excusable delays* - The right of the CONTRACTOR to proceed shall not be terminated nor shall the CONTRACTOR be charged liquidated damages for any delays in the completion of the work due:
1. To any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency;
 2. To any acts of the OWNER.
 3. To causes not reasonably foreseeable by the parties to this contract at the time of the execution of the contract which are beyond the control and without the fault or negligence of the CONTRACTOR, including, but not limited to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the OWNER, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, an weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and

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4. To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (1),(2), and (3) of this paragraph “c”.

Provided, however, that the CONTRACTOR promptly notifies the OWNER within ten (10) days in writing of the cause of the delay. Upon receipt of such notification the OWNER shall ascertain the facts and the cause and extent of delay. If upon the basis of the facts and the terms of this contract, the delay is properly excusable, the OWNER shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

1.21 DISPUTES

- A. All claims, disputes and other matters in question arising under this contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall within ten (10) days of commencement of the dispute be presented by the CONTRACTOR to the OWNER for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim, but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime the contractor shall proceed with the work as directed. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the OWNER of notice thereof.
- B. The CONTRACTOR shall submit in detail his claim and his proof thereof. Each decision by the governing body of the OWNER will be in writing and will be mailed to the CONTRACTOR by registered or certified mail, return receipt requested, directed to his last known address.
- C. If the CONTRACTOR does not agree with any decision of the OWNER he shall in no case allow the dispute to delay the work but shall notify the OWNER promptly that he is proceeding with the work under protest and he may then except the matter in question from final release.
- D. All legal recourse sought by the CONTRACTOR, shall be filed with the County Circuit Court System, in the County where the work has taken place.

1.22 DEDUCTION FOR UNCORRECTED WORK

- A. If the OWNER deems it not expedient to require the CONTRACTOR to correct work not done in accordance with the contract documents, an equitable deduction from the contract price will be made by agreement between the CONTRACTOR and the OWNER and subject to settlement, in case of dispute as herein provided.

END OF SECTION

NOTICE OF AWARD

To: _____

Project: The City of Rochelle, Illinois
 Rochelle Municipal Utilities
 Roof Replacement Project
 1030 South 7th Street
 Rochelle, Illinois 61068

The Owner has considered the Lump Sum Proposal submitted by you for the above referenced project in response to the Advertisement for Bids dated September 23, 2024.

You are hereby notified that your Lump Sum Proposal has been accepted in the amount of:

_____ (\$ _____)
Base Bid

You are required by the Project requirements to execute the Agreement (attached herewith) and furnish the required Performance Bond and Payment Bond, Certificate(s) of Insurance and Schedule of Values within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds within fifteen (15) calendar days from receipt of this notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Proposal (Bid) as abandoned and as a forfeiture of your Bid Security. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award.

Dated this _____ day of _____, 20____.

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by

this the _____ day of _____, 20 _____

By _____

Title _____

END OF DOCUMENT

NOTICE TO PROCEED

To: _____

Date: _____

Project: The City of Rochelle, Illinois
 Rochelle Municipal Utilities
 Roof Replacement Project
 1030 South 7th Street
 Rochelle, Illinois 61068

You are hereby notified to commence Work in accordance with the Contract Documents, on _____
and you are to complete the Work in _____ (____) calendar days (barring bad weather
days), unless so modified by Change Order.

City of Rochelle, Illinois

OWNER

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by

this the _____ day of _____, 20 _____

By _____

Title _____

END OF DOCUMENT

SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Contract description.
 - 2. Work by Owner or other Work at the Site.
 - 3. Owner-furnished products.
 - 4. Contractor's use of Site and premises.
 - 5. Work sequence.
 - 6. Permits.
 - 7. Specification conventions.

1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes but is not limited to, the following: work on four (4) separate unique contiguous roofing systems totaling approximately 37,600 SF including the removal of existing roofing systems and installation of new roofing systems and new gutters and downspouts. Project also includes replacement of an existing roof top HVAC unit, installation of site bollards, interior finish repairs and other associated work.
- B. Perform Work of Contract under Stipulated Sum Contract with Owner according to Conditions of Contract.

1.3 WORK BY OWNER OR OTHERS

- A. Bidders are hereby notified that the Owner may perform other work simultaneously with this Project and encompass work areas immediately adjacent to this Project site. Contractors for this Project will be required to coordinate work sequences and site accessibility and other issues with Contractors for any other adjacent projects.
- B. If Work by Owner or Others conflict with the work of this Project the Owner will determine the sequence of work under all contracts.
- C. Coordinate Work with utilities of Owner and public agencies.
- D. Owner will continue to occupy and operate from the existing adjacent facilities. Contractor to accommodate Owner's operations.

1.4 OWNER-FURNISHED PRODUCTS AS NOTED ON DRAWINGS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples to Contractor.
 - 2. Arrange and pay for delivery to Site.

3. Upon delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
5. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:

1. Review Owner-reviewed Shop Drawings, Product Data, and Samples.
2. Receive and unload products at Site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install, and finish products.
4. Repair or replace items damaged after receipt.

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

A. Limit use of Site and premises to allow:

1. Emergency access to the project site and adjacent areas.
2. Owner's continued use of adjacent site and facilities
3. Work by Others if applicable.
4. Minimize project footprint as noted on Drawings.

B. Utility Outages and Shutdown:

1. Coordinate and schedule electrical and other utility outages with Owner and utility companies.
2. Outages: Allowed only at previously agreed upon times.
3. Adjacent Property Owners shall remain fully operational at all times.
4. At least one week before scheduled outage, submit Outage Request Plan to Owner and Project Engineer itemizing the dates, times, and duration of each requested outage.

1.6 WORK SEQUENCE

- A. It is the intent that all Work be completed as soon as possible with all Base Bid work Roof 1 Sheet A1 having the highest priority to be completed in 2024 along with all work on Sheet A5. All other work may follow completion of Roof 1 or be completed simultaneously in any sequence.

1.7 PERMITS

- A. Contractor shall furnish all necessary permits and pay all associated fees for completion of Work including, but not limited to, the following:
1. Building permit – City of Rochelle, Illinois.

1.8 SPECIFICATION CONVENTIONS

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

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Schedule of Values.
- B. Application for Payment.
- C. Change procedures.
- D. Defect assessment.
- E. Alternates.

1.2 SCHEDULE OF VALUES

- A. Submit schedule of values on form acceptable to Project Engineer and Owner.
- B. Submit Schedule of Values at Pre-Construction Meeting and along with each application for payment.
- C. Format: Identify each line item with number and title of major Specification Section. Also identify Supervision, site mobilization, site demobilization, GC Overhead and Profit, Bonds and Insurance, and Shop Drawings\Submittals.
- D. Revise schedule to list approved Change Orders with each Application for Payment.

1.3 APPLICATION FOR PAYMENT

- A. Submit each Application for Payment on form acceptable to Project Engineer and Owner.
- B. Content and Format: Use Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Submit at regular logical intervals not less than every thirty (30) days.
- E. With each application for payment submit payroll certifications for all work performed during the application period certifying compliance with Section 00 32 00 – Special Project Requirements.
- F. Waivers of Lien:
 - 1. Submit Partial Waivers of Lien for materials, contractor and sub-contractor work from the previous application for payment. Partial Waivers of Lien are not required on the first application for payment unless the request is 40% or more of the total contract price in which case partial lien waivers shall be required.
 - 2. Final Waivers of Lien shall be submitted with the final application for payment. Final waivers shall be submitted for all materials, contractor and sub-contractors work and all final waivers shall show total contract dollar amounts and shall correspond with the amounts listed on the Schedule of Values.
- G. Partial Payments:
 - 1. The Contractor shall prepare a draft of the requisition for partial payment and submit it, with required number of copies, to the ENGINEER for approval. The amount of the payment due the CONTRACTOR shall be determined by adding to the total value of work completed to date, the value of materials properly stored on site deducting (1) a retainage amount of ten percent (10%) of the total amount up to 50% complete and five percent (5%) of the total amount after 50% complete, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based upon the estimated quantities of work completed to date on each item and the price established in the cost breakdown and adjusted in accordance with the value of

work completed to date on approved change orders. The value of materials properly stored on site shall be based upon the quantities of materials and the invoice prices. Copies of all invoices shall be provided to the ENGINEER to receive credit for stored materials.

2. Monthly or partial payments made by the OWNER to the CONTRACTOR are moneys advanced for the purpose of assisting the CONTRACTOR to expedite the work of construction. The CONTRACTOR shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the OWNER. Such payments shall not constitute a waiver of the right of the OWNER to require the fulfillment of all terms of the contract and the delivery of all improvements embraced in this contract complete and satisfactory to the OWNER in all details.

1.4 CHANGE PROCEDURES

- A. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Project Engineer of any error, inconsistency, omission, or apparent discrepancy.
- B. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Project Engineer; establish procedures for handling queries and clarifications.
- C. Project Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions.
- D. The Project Engineer may issue a Request For Proposal (RFP) including a description of a proposed change with supplementary or revised Drawings and/or Specifications. A RFP is NOT an authorization to proceed with any work. The Project Engineer and Owner shall evaluate RFP's and if the terms are acceptable to the Project Engineer and Owner, a Change Order will be issued to modify the Contract for Construction.
- E. Contractor may propose changes by submitting a request for change to Project Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change and the effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on the Work by separate or other Contractors.
- F. Document requested substitutions according to Section 01 25 00 - Substitution Procedures.
- G. Document each quotation for change in Project Cost and Time with sufficient data to allow evaluation of quotation.
- H. Execution of Change Orders: Project Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- I. 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 Record Documents.

1.5 DEFECT ASSESSMENT

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

- C. Individual Specification Sections may modify these options in which case said modifications shall govern.
- D. Authority of the Project Engineer to assess defects and identify payment adjustments is final.
- E. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

1.6 ALTERNATES

- A. Alternates requested and quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement. The Owner-Contractor Agreement may identify certain Alternates to remain an Owner option for a stipulated period of time.
- B. Coordinate related Work and modify surrounding Work. Description for each Alternate is recognized to be abbreviated but requires that each change shall be complete for scope of Work affected.
 - 1. Coordinate related requirements among Specification Sections as required.
 - 2. Include as part of each Alternate: Miscellaneous devices, appurtenances, and similar items incidental to or necessary for complete installation.
 - 3. Coordinate Alternate with adjacent Work and modify or adjust as necessary to ensure integration.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

ALTERNATE BIDS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Identification and description of Alternate Work.

1.2 RELATED REQUIREMENTS

- A. Bid Form: Quotation of cost of each Alternate.
- B. Sections of the Specifications applicable to each Alternate.

1.3 PROCEDURES

- A. Alternatives quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted alternatives will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work as required to complete the work, including changes under each Alternate, when acceptance is designated in Owner-Contractor Agreement. Fully integrate the Work of each alternative with all other work.

1.4 SCHEDULE OF ALTERNATIVES

- | | |
|---------------------------|--|
| Alternative Bid 1: | All work as indicated as Alternate Bid 1 on Drawings and Specifications, namely the roof replacements at Roof 2 and Roof 3 and associated work. This will be an ADD to the BASE BID. |
| Alternative Bid 2: | All work as indicated as Alternate Bid 2 on Drawings and Specifications, namely the roof replacement at Roof 4 and associated work. This will be an ADD to the BASE BID. |

END OF SECTION

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance.
- B. Product options.
- C. Product substitution procedures.

1.2 QUALITY ASSURANCE

- A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.
- B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.
- C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Owner.

1.3 PRODUCT OPTIONS

- A. See Section 01 60 00 - Product Requirements.

1.4 PRODUCT SUBSTITUTION PROCEDURES

- A. Document 00 21 13 - Instructions to Bidders specifies time restrictions for submitting requests for substitutions during Bidding period.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
 - 1. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 - 2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
 - 3. Reference to Article and Paragraph numbers in Specification Section.
 - 4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
 - 5. Changes required in other Work.
 - 6. Availability of maintenance service and source of replacement parts as applicable.

7. Certified test data to show compliance with performance characteristics specified.
8. Samples when applicable or requested.
9. Other information as necessary to assist Project Engineer's evaluation.

D. A request constitutes a representation that Bidder/Contractor:

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 that may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
6. Will reimburse Owner and Project Engineer for any review or redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:

1. Submit Request for Substitution to Project Engineer for consideration. Limit each request to one proposed substitution.
2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
3. Project Engineer will notify Contractor in writing of decision to accept or reject request.

1.5 INSTALLER SUBSTITUTION PROCEDURES

A. Document 00 21 13 - Instructions to Bidders specifies time restrictions for submitting requests for substitutions during Bidding period.

B. Document each request with:

1. Installer's qualifications.
2. Installer's experience in work similar to that specified.
3. Other information as necessary to assist Project Engineer's evaluation.

C. Substitution Submittal Procedure:

1. Submit Request for Substitution to Project Engineer for consideration. Limit each request to one proposed substitution.
2. Project Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION - Not Used.

END OF SECTION

ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cash Allowances
 - 2. Payment and modification procedures relating to allowances

1.2 CASH ALLOWANCES

- A. Costs included in Cash Allowances: Cost of product to Contractor or subcontractor, less applicable taxes. Product delivery to site and handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation, finishing and maintenance, if applicable.
- B. Contractor Responsibilities: Assist Architect/Engineer and Owner in selection of products and installers, obtain proposals and execute purchase agreement. Arrange for and process shop drawings, product data, and samples. Arrange for delivery. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- C. Differences in Allowance and actual costs will be adjusted by Change Order.

1.3 ALLOWANCE SCHEDULE

- A. Include in the Lump Sum Proposal the sum of Twenty Thousand and 00/100 Dollars (\$20,000.00) for deck repairs and any other related items currently concealed that are exposed during tear off or any other related similar items at the discretion of the Owner. List Allowance as a separate line item on the schedule of values.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Coordination and Project conditions.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Closeout meeting.
- E. Alteration procedures.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify that utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practical; place runs parallel with lines of building. Use spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.
- E. In finished areas, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of Work in preparation for Substantial Completion.
- G. Coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. Project Engineer will schedule and preside over meeting after Notice of Award.

- B. Attendance Required: Project Engineer, Owner, Contractor, Contractor's Project Superintendent and major Subcontractors as applicable.
 - C. Minimum Agenda:
 - 1. Submission of executed bonds and insurance certificates.
 - 2. Submission of list of Subcontractors, schedule of values, and Progress Schedule.
 - 3. Designation of personnel representing parties in Contract.
 - 4. Communication procedures.
 - 5. Procedures and processing of requests for interpretations and information, field decisions, submittals, substitutions, Applications for Payments, proposal requests, Change Orders, and Contract closeout procedures.
 - 6. Scheduling.
 - 7. Critical Work sequencing.
 - 8. Owner and Adjacent Property Owner operations.
 - D. Project Engineer shall record minutes and distribute to participants within five (5) business days after meeting.
- 1.4 PROGRESS MEETINGS
- A. Contractor shall schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
 - B. Contractor shall make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
 - C. Attendance Required: Job superintendent, Owner, Project Engineer and major Subcontractors and suppliers as appropriate to agenda topics for each meeting.
 - D. Minimum Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems impeding planned progress.
 - 5. Review of submittal schedule and status of submittals.
 - 6. Review of off-Site fabrication and delivery schedules.
 - 7. Maintenance of Progress Schedule.
 - 8. Planned progress during succeeding work period.
 - 9. Other business relating to Work.
 - E. Contractor shall record minutes and distribute copies to participants within five (5) business days after meeting.

1.5 CLOSEOUT MEETING

- A. Contractor shall schedule the project closeout meeting with sufficient time to prepare for requesting Substantial Completion. Contractor shall preside over meeting and be responsible for minutes.
- B. Attendance Required: Contractor, major Subcontractors, Project Engineer, Owner, and others appropriate to agenda.
- C. Notify Project Engineer and Owner a minimum of seven (7) calendar days in advance of the meeting date.
- D. Minimum Agenda:
 - 1. Contractor's preparation and submittal of an initial "punch list."
 - 2. Contractor's preparation and submittal of Record Drawings.
 - 3. Completion time for correcting deficiencies.
 - 4. Coordination for inspections by authorities having jurisdiction as required.
 - 5. Final cleaning.
 - 6. Preparation for final inspections.
 - 7. Final Application for Payment.
 - 8. Contractor's demobilization of Site.
- E. Contractor shall record minutes and distribute copies to participants within five (5) business days after meeting.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION - Not Used.

END OF SECTION

CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Submittals.
- B. Bar chart schedules.
- C. Review and evaluation.
- D. Updating schedules.

1.2 SUBMITTALS

- A. Submit proposed Construction Progress Schedule at Pre-Construction Meeting.
- B. Submit updated Construction Progress Schedule with each Application for Payment.

1.3 BAR CHART SCHEDULES

- A. Format: Bar chart Schedule, to include at least:
 - 1. Identification and listing in chronological order of those activities reasonably required to complete the Work, including:
 - a. Subcontract Work.
 - b. Major equipment design, fabrication, factory testing, and delivery dates including required lead times.
 - c. Project closeout and cleanup.
 - d. Work sequences, constraints, and milestones.
 - 2. Identification of the following:
 - a. Duration, start, and completion for each activity and sub-activity.
 - b. Critical activities and Project float.
 - c. Duration of time that existing building facilities will be closed or of limited access/use.

1.4 REVIEW AND EVALUATION

- A. Participate in joint review and evaluation of schedules with Project Engineer and Owner at each submittal.

1.5 UPDATING SCHEDULES

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.

DIVISION 01 – GENERAL REQUIREMENTS
Document 01 32 16 – Construction Progress Schedule

- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Upon approval of a Change Order, include the change in the next schedule submittal.
- E. Indicate changes required to maintain Date of Completion.

1.6 DISTRIBUTION

- A. Following joint review, distribute copies of updated schedules to Contractor's Project site file, to Subcontractors, suppliers, Project Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION - Not Used.

END OF SECTION

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Definitions.
- B. Submittal procedures.
- C. Product data.
- D. Shop Drawings.
- E. Samples.
- F. Other submittals.
- G. Design data.
- H. Test reports.
- I. Certificates.
- J. Manufacturer's instructions.
- K. Erection Drawings.
- L. Contractor review.
- M. Architect/Engineer review.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect/Engineer's responsive action.
- B. Informational Submittals: Written and graphic information and physical Samples that do not require Architect/Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with an Architect/Engineer-accepted transmittal form.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project and submit electronic submittals via email as PDF electronic files to Architect/Engineer. Coordinate submission of related items.

- F. For each submittal for review, allow fifteen (15) calendar days excluding delivery time to and from Contractor.
- G. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- H. Allow space on submittals for Contractor and Architect/Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized nor processed.
- L. Incomplete Submittals: Architect/Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Architect/Engineer.

1.4 PRODUCT DATA

- A. Product Data: Action Submittal: Submit to Architect/Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit electronic submittals via email as PDF electronic files to Architect/Engineer.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.5 SHOP DRAWINGS

- A. Shop Drawings: Action Submittal: Submit to Architect/Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.

3. Make revisions and provide additional information when required by authorities having jurisdiction.

D. Submit electronic submittals via email as PDF electronic files to Architect/Engineer.

1.6 SAMPLES

A. Samples: Action Submittal: Submit to Architect/Engineer for assessing conformance with information given and design concept expressed in Contract Documents.

B. Samples for Selection as Specified in Product Sections:

1. Submit to Architect/Engineer for aesthetic, color, and finish selection.
2. Submit Samples of finishes, textures, and patterns for Architect/Engineer selection.

C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.

D. Include identification on each Sample, with full Project information.

E. Submit number of Samples specified in individual Specification Sections; Architect/Engineer will retain one sample.

1.7 OTHER SUBMITTALS

A. Closeout Submittals: Comply with Section 01 70 00 - Execution and Closeout Requirements.

B. Informational Submittal: Submit data for Architect/Engineer's knowledge as Contract administrator or for Owner.

C. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.8 TEST REPORTS

A. Informational Submittal: Submit reports for Architect/Engineer's knowledge as Contract administrator or for Owner.

B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.9 CERTIFICATES

A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Architect/Engineer, 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.

- C. Certificates may be recent or previous test results on material or product but must be acceptable to Architect/Engineer.

1.10 MANUFACTURER'S INSTRUCTIONS

- A. Informational Submittal: Submit manufacturer's installation instructions for Architect/Engineer's knowledge as Contract administrator or for Owner.
- B. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Architect/Engineer in quantities specified for Product Data.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.11 ERECTION DRAWINGS

- A. Informational Submittal: Submit Drawings for Architect/Engineer's knowledge as Contract administrator or for Owner.
- B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect/Engineer or Owner.

1.12 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Architect/Engineer.
- B. Contractor: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Architect/Engineer.

1.13 ARCHITECT/ENGINEER REVIEW

- A. Do not make "mass submittals" to Architect/Engineer. "Mass submittals" are defined as six or more submittals or items in one day or twenty (20) or more submittals or items in one week. If "mass submittals" are received, Architect/Engineer's review time stated above will be extended as necessary to perform proper review. Architect/Engineer will review "mass submittals" based on priority determined by Architect/Engineer after consultation with Owner and Contractor.
- B. Informational submittals and other similar data are for Architect/Engineer's information, do not require Architect/Engineer's responsive action, and will not be reviewed or returned with comment.
- C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
- D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order.
- E. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality control.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Mockup requirements.
- F. Testing and inspection services.
- G. Manufacturers' field services.

1.2 QUALITY CONTROL

- A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- C. Perform Work using persons qualified to produce required and specified quality.
- D. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.3 TOLERANCES

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

1.4 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.

- B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
- C. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.5 LABELING

- A. Attach label from agency approved by authorities having jurisdiction for products, assemblies, and systems required to be labeled by project specifications or 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.
- C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.6 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this Section and identified in individual product Specification Sections.
- B. Assemble and erect specified or indicated items with specified or indicated attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mockups shall be comparison standard for remaining Work.
- D. Where mockup has been accepted by Architect/Engineer and is specified in product Specification Sections to be removed, remove mockup and clear area when directed to do so by Architect/Engineer.

1.7 TESTING AND INSPECTION SERVICES

- A. Contractor shall employ and pay for services of an independent testing agency or laboratory acceptable to the Architect/Engineer and Owner to perform specified testing.
 - 1. Before starting Work, submit testing laboratory name, address, and telephone number to Architect/Engineer and Owner.
- B. Independent firm will perform tests, inspections, and other services specified in individual Specification Sections.

1. Laboratory: Authorized to operate at Project location.
 2. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
- C. Testing, inspections, and source quality control may occur on or off Project Site. Perform off-Site testing as required by Architect/Engineer or Owner.
- D. Reports shall be submitted by independent firm to Owner, Architect/Engineer and Contractor, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
1. Submit final report indicating correction of Work previously reported as noncompliant.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
1. Notify Architect/Engineer and independent firm a minimum of twenty four (24) hours before expected time for operations requiring services.
 2. Make arrangements with independent firm and pay for additional Samples and tests required for Contractor's use.
- F. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.
- G. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by same independent firm on instructions from Architect/Engineer. Payment for retesting or re-inspection will be the responsibility of the Contractor within the Contract Price.
- H. Independent Testing Agency Responsibilities:
1. Provide Special Inspections of the International Building Code as identified on the Drawings.
 2. Test Samples of mixes submitted by Contractor.
 3. Provide qualified personnel at Site. Cooperate with Architect/Engineer and Contractor in performance of services.
 4. Perform indicated sampling and testing of products according to specified standards.
 5. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 6. Promptly notify Architect/Engineer and Contractor of observed irregularities or nonconformance of Work or products.
- I. Agency Reports: After each test, promptly submit report to Owner, Architect/Engineer and Contractor. When requested by Architect/Engineer, provide interpretation of test results. Include the following:
1. Date issued.
 2. Project title and number.
 3. Name of inspector.
 4. Date and time of sampling or inspection.
 5. Location in Project.

6. Type of inspection or test.
7. Date of test.
8. Results of tests.
9. Conformance with Contract Documents.

J. Limits on Testing Authority:

1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency or laboratory may not approve or accept any portion of the Work.
3. Agency or laboratory may not assume duties of Contractor.
4. Agency or laboratory has no authority to stop the Work.

K. Contractor shall employ and pay for all services required of the independent testing agency and laboratories.

1.8 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect/Engineer thirty (30) calendar days in advance of required observations.
- C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION - Not Used.

END OF SECTION

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
 - 2. Temporary lighting for construction purposes.
 - 3. Temporary heating.
 - 4. Temporary cooling.
 - 5. Temporary ventilation.
 - 6. Communication services.
 - 7. Temporary water service.
 - 8. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Field offices and sheds.
 - 2. Vehicular access.
 - 3. Parking.
 - 4. Progress cleaning and waste removal.
 - 5. Fire-prevention facilities.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Enclosures and fencing.
 - 3. Water control.
 - 4. Dust control.
 - 5. Noise control.
 - 6. Pollution control.
- D. Removal of utilities, facilities, and controls.

1.2 TEMPORARY ELECTRICITY

- A. Owner will pay cost of energy used from Owner's power service. Exercise measures to conserve energy. Use Owner's existing power service. Contractor shall be responsible for the delivery method and the maintenance of temporary electricity to the locations required.
- B. Do not disrupt Owner's use of service.
- C. Complement existing power service capacity and characteristics as required for construction operations.

- D. Provide power outlets with branch wiring and distribution boxes located as required for construction operations. Provide suitable, flexible power cords as required for portable construction tools and equipment.
 - E. Permanent convenience receptacles shall not be used during construction.
- 1.3 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES
- A. Contractor to provide and maintain lighting as required for construction operations.
 - B. Maintain lighting and provide routine repairs.
 - C. Permanent building lighting shall not be used for construction lighting during construction.
- 1.4 TEMPORARY HEATING
- A. Existing heating systems shall not be used during construction.
 - B. Contractor shall provide and pay for any heating devices and heat as needed to maintain specified conditions for construction operations and shall provide separate metering and reimburse Owner for cost of energy used.
- 1.5 TEMPORARY COOLING
- A. Existing cooling systems shall not be used during construction.
 - B. Contractor shall provide and pay for any cooling devices and cooling as needed to maintain specified conditions for construction operations. Provide separate metering and reimburse Owner for cost of energy used.
- 1.6 TEMPORARY VENTILATION
- A. Ventilate areas as required to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- 1.7 COMMUNICATION SERVICES
- A. Telephone Service: Contractor to provide, maintain, and pay for telephone service as needed for the project. Use of Owner's phone system by Contractor will not be allowed except in case of emergency.
- 1.8 TEMPORARY WATER SERVICE
- A. Owner will pay cost of temporary water as required for the project from Owner's existing water system. Exercise measures to conserve energy. Use Owner's existing water system extended and supplemented with temporary devices as needed to maintain specified conditions for construction operations. Contractor shall be responsible for the delivery method and the maintenance of temporary water to the locations required.

- B. Provide temporary pipe insulation and heat tape to prevent freezing as required.

1.9 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide required Temporary Sanitary Facilities for the Project.

1.10 FIELD OFFICES AND SHEDS

- A. Do not use existing facilities for field offices or for storage.
- B. Contractor may provide temporary Field Office and/or Sheds. Location of Field Office and/or Sheds to be approved by Owner. Existing facilities shall not be used for field offices.
- C. Preparation: Fill and grade Sites for temporary structures sloped for drainage away from buildings.
- D. At completion of Work remove temporary Field Office and/or Sheds and restore areas to same or better condition as original condition.

1.11 VEHICULAR ACCESS

- A. Provide unimpeded access for emergency vehicles throughout the duration of the project.
- B. Provide and maintain access to fire hydrants, fire department connections and control valves free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Use of existing on-Site roads for construction traffic is acceptable however any damage to existing on-Site roads, as determined by the Architect/Engineer shall be repaired at Contractors cost to the satisfaction of the Architect/Engineer and Owner.

1.12 PARKING

- A. Parking on existing on-Site streets and driveways is not permitted. Tracked vehicles are not allowed on paved areas.
- B. Parking on existing on-Site non-paved surfaces is not permitted.
- C. Use of existing parking facilities at locations to be determined by Owner may be used by construction personnel.
- D. Do not allow heavy vehicles or construction equipment in parking areas.
- E. Mud from Site vehicles: Provide means of removing mud from vehicle wheels before entering streets.

1.13 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, before enclosing spaces.
- C. Collect and remove waste materials, debris, and rubbish from Site **DAILY** and dispose of off-Site.

1.14 FIRE-PREVENTION FACILITIES

- A. Prohibit smoking within the project site. Designate area on Site to be approved by Owner where smoking is permitted. Provide approved ashtrays in designated smoking areas.
- B. Provide portable fire extinguishers as required by Code and authority having jurisdiction for project site, temporary field office and sheds.

1.15 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Protect non-owned vehicular traffic, stored materials, Site, and structures from damage.

1.16 ENCLOSURES AND FENCING

- A. Construction protective fencing around project area.

1.17 WATER CONTROL

- A. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment.

1.18 DUST CONTROL

- A. Execute Work by methods that minimize raising dust from construction operations.
- B. Provide positive means to prevent airborne dust from dispersing into atmosphere and into Owner-occupied areas.

1.19 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.
- B. Coordinate noisy construction operations with Owner.

- C. Inform Owner a minimum of twenty-four (24) hours before start of noisy or potentially noisy construction operations.

1.20 POLLUTION 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.

1.21 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials before Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary Work.
- C. Restore existing facilities used during construction to original condition.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION - Not Used.

END OF SECTION

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Equipment electrical characteristics and components.
- F. See Section 01 25 00 – Substitution Procedures.

1.2 PRODUCTS

- A. At minimum, comply with specified requirements and reference standards.
- B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
- C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
- D. Do not use materials and equipment removed from existing premises except as specifically permitted by Contract Documents.
- E. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products according to manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products according to manufacturer's instructions.
- B. Store products with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.

- D. For exterior storage of fabricated products, place products on sloped supports aboveground.
- E. Provide bonded off-Site storage and protection when Site does not permit on-Site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Products complying with specified reference standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and complying with Specifications; no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit Request for Substitution for any manufacturer not named, according to Section 01 25 00 - Substitution Procedures.

PART 2 - PRODUCTS – Not Used.

PART 3 - EXECUTION - Not Used.

END OF SECTION

CLOSEOUT REQUIREMENTS**PART 1 - GENERAL****1.1 SECTION INCLUDES**

- A. Field engineering.
- B. Closeout procedures.
- C. Demonstration and instructions.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Product warranties and product bonds.
- G. Final cleaning.

1.2 FIELD ENGINEERING

- A. Prior to beginning Work, verify and establish elevations of existing facilities to ensure that new Work will meet existing elevations in smooth and level alignment except where specifically detailed or indicated otherwise.
- B. Confirm Drawing dimensions and elevations.
- C. Establish elevations, lines, and levels using recognized engineering survey practices.

1.3 CLOSEOUT PROCEDURES

- A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:
 - 1. Submit maintenance manuals, Project record documents, and other similar final record data in compliance with this Section.
 - 2. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified in compliance with this Section.
 - 3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
 - 4. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
 - 5. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
 - 6. Perform final cleaning according to this Section.
- B. Substantial Completion Inspection:
 - 1. When Contractor considers Work to be substantially complete, submit to Architect/Engineer:
 - a. Written certificate that Work, or designated portion, is substantially complete.

- b. List of items to be completed or corrected (initial punch list).
 2. Within seven (7) calendar days after receipt of request for Substantial Completion, Architect/Engineer and Owner will make inspection to determine whether Work or designated portion is substantially complete.
 3. Should Architect/Engineer and Owner determine that Work is not substantially complete:
 - a. Architect/Engineer will promptly notify Contractor in writing, stating reasons for its opinion.
 - b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Architect/Engineer.
 - c. Architect/Engineer and Owner will reinspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Architect/Engineer's and Owner's inspection.
 4. When Architect/Engineer and Owner finds that Work is substantially complete, Architect/Engineer will:
 - a. Prepare Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified and amended by Architect/Engineer and Owner (final punch list).
 - b. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in Certificate.
 5. After Work is substantially complete, Contractor shall:
 - a. Allow Owner occupancy/use of Project under provisions stated in Certificate of Substantial Completion.
 - b. Complete Work listed for completion or correction within time period stipulated.
 6. Owner will occupy all portions of the project.
- C. Prerequisites for Final Completion: Complete following items before requesting final acceptance and final payment.
 1. When Contractor considers Work to be complete, submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been examined for compliance with Contract Documents.
 - c. Work has been completed according to Contract Documents.
 - d. Work is completed and ready for final inspection.
 2. Submittals: Submit following:
 - a. Final punch list indicating all items have been completed or corrected.
 - b. Final payment request in accordance with Section 01 20 00 – Price and Payment Procedures.
 - c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
 3. Perform final cleaning for Contractor-soiled areas according to this Section.
- D. Final Completion Inspection:
 1. Within seven (7) calendar days after receipt of request for final inspection, Architect/Engineer and Owner will make inspection to determine whether Work or designated portion is complete.
 2. Should Architect/Engineer and Owner consider Work to be incomplete or defective:

- a. Architect/Engineer will notify Contractor in writing, listing incomplete or defective Work.
- b. Contractor shall remedy stated deficiencies and send second written request to Architect/Engineer that Work is complete.
- c. Architect/Engineer and Owner will reinspect Work.
- d. Redo and Inspection of Deficient Work: Repeated until Work passes Architect/Engineer's and Owner's inspection.

1.4 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel not more than two (2) weeks prior to date of Substantial Completion.
- B. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- C. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

1.5 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 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 used.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows:
 - 1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
 - 2. Include locations of concealed elements of the Work.

3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components that are parallel to utilities.
4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
5. Identify and locate existing buried or concealed items encountered during Project.
6. Measured depths of foundations in relation to finish floor datum.
7. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
8. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
9. Field changes of dimension and detail.
10. Details not on original Drawings.

- G. Submit marked-up paper copy documents and/or PDF electronic files to Architect/Engineer at Substantial Completion.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit in PDF composite electronic indexed file to Architect/Engineer.
- B. Submit paper copy data bound in 8-1/2 x 11-inch text pages, three D side ring binders with durable plastic covers.
- C. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project, and subject matter of binder when multiple binders are required.
- D. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- E. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- F. Contents: Prepare table of contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 2. Part 2: Operation and maintenance instructions, arranged by system. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Include the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

- g. Safety precautions to be taken when operating and maintaining or working near equipment.
- 3. Part 3: Project documents and certificates, including the following:
 - a. Shop Drawings and product data.
 - b. Certificates.
 - c. Originals of warranties and bonds.

1.7 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in by responsible Subcontractors, suppliers, and manufacturers.
- B. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Include table of contents and assemble in three D side ring binder with durable plastic cover.
- F. Submit prior to final Application for Payment.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. Execute final cleaning prior to final Project assessment.
- B. Clean surfaces exposed to view; remove temporary labels, stains, and foreign substances.
- C. Clean debris from roofs, gutters, downspouts, and drainage systems.
- D. Clean Site; sweep paved areas, rake clean landscaped surfaces.
- E. Remove waste and surplus materials, rubbish, and construction facilities from Site.

END OF SECTION

SELECTIVE BUILDING DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolishing designated construction.
 - 2. Cutting and alterations for completion of the Work.
 - 3. Protecting items designated to remain.
 - 4. Removing demolished materials.

1.2 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of capped utilities, concealed utilities discovered during demolition and utilities covered during construction.

1.3 PROJECT CONDITIONS

- A. Conduct demolition to minimize interference with on-going building operational areas.
- B. Cease operations immediately if structure appears to be in danger and notify Architect/Engineer and Owner immediately. Do not resume operations until directed.

PART 2 - PRODUCTS

2.1 Not Used.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Notify affected utility companies before starting work and comply with their requirements.
- B. Mark location and termination of utilities.
- C. Erect, and maintain temporary barriers and security devices.
- D. Erect and maintain weatherproof closures for exterior openings.
- E. Erect and maintain temporary partitions to prevent spread of dust, odors, and noise to permit continued Owner occupancy.
- F. Prevent movement of structure; provide temporary bracing and shoring required to ensure safety of existing structure.
- G. Do not close or obstruct building egress path.
- H. Do not disable or disrupt building fire or life safety systems without five (5) days prior written notice to Owner.

3.2 DEMOLITION

- A. Conduct demolition to minimize interference with on-going building operational areas.
- B. Maintain protected egress from and access to adjacent existing buildings at all times.
- C. Do not close or obstruct roadways, vehicle access and circulation routes or sidewalks and walkways without Owner approval.
- D. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer and Owner immediately.
- E. Disconnect and remove designated utilities within demolition areas.
- F. Cap and identify abandoned utilities at termination points when utility is not completely removed. Annotate Record Drawings indicating location and type of service for capped utilities remaining after demolition.

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- G. Demolish in orderly and careful manner. Protect existing improvements and existing conditions to remain.
- H. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
- I. Remove materials as Work progresses and leave a clean site at the end of each work day. Upon completion of Work, leave areas in clean condition.

END OF SECTION

SHEET MEMBRANE ROOFING – FULLY ADHERED – ROOF 1 – BASE BID

PART 1 GENERAL

1.01 DESCRIPTION

- A. Roof Area 1 noted on Drawings. Install Fully Adhered EPDM Roofing System based upon the following installation. Mechanically attach base 3 layers of 2" 20 psi Polyisocyanurate insulation with appropriate length fasteners and 3" insulation plates at 1 per 2 SF or 16 per 4x8 board through the 22 ga. minimum steel deck at center of roof and continuing to the north side of the roof. From the center of the roof, continuing to the south side of the roof, mechanically attach base 1 layer of 2" 20 psi Polyisocyanurate insulation with appropriate length fasteners and 3" insulation plates at 1 per 2 SF or 16 per 4x8 board through the 22 ga. minimum steel deck. Along south edge, mechanically attach base layer of 20 psi Tapered Polyisocyanurate insulation with appropriate length fasteners and 3" insulation plates at the rate of 1 fastener per 2SF through the 22 ga. minimum steel deck. For remaining layers of 2" 20 psi polyiso insulation, 20psi tapered polyiso insulation and HD polyisocyanurate insulation (coverboard), adhere with Adhesive at the rate of 6" on center bead spacing throughout project. Insulation joints shall be staggered. 90mil Non-reinforced EPDM membrane to be adhered to HD polyisocyanurate insulation (coverboard) with Bonding Adhesive. Seams to be completed using 6" Seam Tape. System upon completion of installation and approved inspection shall be warrantable for 30 year, with 72mph wind speed protection, with 2" hail protection and 32 hours accidental puncture coverage.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the new roofing system including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.
- B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work.
- C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid, of any conflicts that will affect their cost proposal.

1.03 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
1. Shop drawings showing layout, details of construction and identification of materials.
 2. Sample of the manufacturer's Total Systems Warranty covering all components of the roofing system.
 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system.

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- 4. Certification of the manufacturer's warranty reserve.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection report to the specifier prior to the issuance of the manufacturer's warranty.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.
- B. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Store materials between 70°F and 90°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 70°F minimum temperature before using.
 - 2. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- C. Insulation and underlayment products must be on pallets, off the ground and tightly covered with waterproof, breathable materials. Manufacturer's wrap does not provide sufficient waterproofing. Insulation and underlayment products that become wet or saturated are to be discarded.
- D. Any materials which are found to be damaged shall be removed and replaced at the contractor's expense.

1.05 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.
- C. Complete overall project work sequence in accordance with Owner's priorities.

1.06 USE OF THE PREMISES

- A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.

1.07 EXISTING CONDITIONS

- A. If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

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- B. Carpentry is required along the North, East and West walls to create a parapet wall to provide a smooth surface to adhere the roofing membrane and provide proper termination device of the newly created parapet wall.
- C. Provide additional wood nailers required to match with insulation thickness to provide for metal edge terminations.

1.08 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to construct, maintain and remove necessary temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.
- C. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains/gutters from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas where work is in progress. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.09 SAFETY

- A. The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. Safety shall be the responsibility of the roofing contractor. All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

1.10 WORKMANSHIP

- A. Contractors installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.

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- C. There shall be a supervisor on the job site at all times while work is in progress.
- D. All field seams and flashing details are to be completed according to manufacturer's specifications and details by the end of each work day.

1.11 QUALITY ASSURANCE

- A. The Roofing System must achieve a UL Class A rating.
- B. The specified roofing assembly manufacturer's installation instructions must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to International Building Code (IBC) and American Society of Civil Engineers (ASCE 7).
- C. The membrane must be manufactured by the material supplier. Manufacturer's supplying membrane made by others are not acceptable.
- D. The manufacturer must have a minimum of 15 years experience in the manufacturing of vulcanized black, thermoset sheeting. The manufacturer shall have domestic manufacturing experience commensurate with the term of warranty coverage of the products supplied.
- E. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- F. The roofing system must be installed by an contractor authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing contractor shall be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years successful experience installing specified roofing systems of equal or greater size. The contractor shall, upon request, be able to document a minimum of three (3) installations completed within the prior three (3) years that are comparable to those required for the work and similar in scope and complexity. Provide complete contact information, warranty history for previous installations and demonstrate in-service performance.
- G. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.
- H. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- I. Upon completion of the installation, the contractor shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to identify any needed corrective repairs that will be required for warranty issuance. Notify the Owner and Architect/Engineer a minimum of seventy-two (72) hours prior to the manufacturer's final inspection.
- J. Non-sales Inspector shall be employed and trained by the manufacturer and have received product-specific training from the manufacturer of the products.
- K. Roofing membrane shall show no visible signs of cracking or crazing from UV weathering when tested in accordance with ASTM D4637.
- L. Roofing membrane shall achieve a zero (no growth) rating in the ASTM G21 test for fungi growth.

1.12 JOB CONDITIONS, CAUTIONS AND WARNINGS

- A. Safety Data Sheets (SDS) must be on location at all times during the transportation, storage and application of materials.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- C. When loading materials onto the roof, the Versico Authorized Roofing Contractor must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weathertight at the end of the work day.
- I. Contaminants such as grease, fats and oils shall not be permitted to come in direct contact with the roofing membrane. An overlay of Epichlorohydrin membrane must be adhered around units which have the potential to emit solvents, grease or oil.

1.13 WARRANTY

- A. Provide manufacturer's 30 year Total System Warranty covering both labor and all materials with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 72 mph measured at 10 meters above ground level. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to such wind coverage.
 - 1. Warranty shall also cover leaks caused by accidental punctures: 32 man-hours per year.
- B. Warranty shall also cover leaks caused by hail up to 2" diameter.
- C. Pro-rated System Warranties shall not be accepted.
- D. Provide a 40 year non-pro-rated membrane material warranty for membrane.

PART 2 PRODUCTS

2.01 GENERAL

- A. Unless otherwise approved by the specifier and accepted by the membrane manufacturer, all products (including insulation, fasteners, fastening plates and edgings) must be

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manufactured and supplied by the roofing system manufacturer and covered by the warranty. Manufacturer of roof membrane shall also manufacture all polymeric components for the roofing system, including, but limited to, membrane, adhesives, primers, flashings, caulks and tapes.

- B. BASIS OF DESIGN: Versico's VersiGard Non-Reinforced (black) fully adhered roofing system. Acceptable alternates applicable to this specification:
1. Carlisle - SynTec Sure-Seal EPDM Membrane
 2. Johns Manville - EPDM NR EPDM Membrane

2.02 MEMBRANE

- A. Furnish VersiGard 90-mil thick Non-Reinforced EPDM (Ethylene, Propylene, Diene Terpolymer) in the largest sheet possible with 6" factory applied Quick Applied Tape (VersiGard QAT). Splice tape shall be a butyl/EPDM based polymer with a minimum thickness of 25-mil. The membrane shall conform to the minimum physical properties of ASTM D4637. When a 10 foot wide membrane is to be used, the membrane shall be manufactured in a single panel with no factory splices to reduce splice intersections.

2.03 INSULATION/UNDERLAYMENT

- A. When applicable, insulation shall be installed in multiple layers. See installation description above for layers of insulation to be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
- B. Basis of Design Insulation shall be VersiCore & SecurShield HD Polyisocyanurate as supplied by Versico. Average R-value required is R30. The insulation must meet ASHRAE 90.1 minimums per IBC-International Building Code.
1. Versico Versicore MP-H Polyiso – A foam core insulation board covered on both sides with a medium weight fiber-reinforced felt facer meeting ASTM C 1289-06, Type II, Class 1, Grade 2 (20 psi). The product is available in 4' x 8' standard size with a thickness from 1 to 4 inches. 4' x 4' tapered panels are also available
 2. Versico SecurShield HD Cover Board– a rigid insulation panel composed of a high-density, closed-cell polyisocyanurate foam core laminated to moisture resistant coated-glass fiber-mat facer for use as a cover board or recover board meeting ASTM 1289-06, Type II, Class 2 (100 psi). Available 1/2" thick 4' x 8' panel weight 11 lbs with an R-value of 2.5.

2.04 FASTENING COMPONENTS

To be used for mechanical attachment of insulation and to provide additional membrane securement:

- A. Fasteners, Plates and Bars: Basis of Design by Versico for the intended purpose.
1. HPV Fasteners: a threaded, #14 fastener with a #3 phillips drive used with steel and wood roof decks.
 2. Seam Fastening Plate: a 2" diameter metal fastening plate used in conjunction with RUSS

or EPDM membrane for additional membrane securement.

3. Insulation Fastening Plates: a nominal 3 inch diameter plastic or metal plate used for insulation attachment.
4. Versico Quick-Applied RTS (Reinforced Termination Strip): a 6" wide, nominal 45-mil thick clean, cured black reinforced EPDM membrane with 3" or wide factory applied quick applied seam tape (VersiGard QAT) laminated along one edge. The 6" wide Quick Applied RTS is used horizontally or vertically at the base of walls, curbs, etc., in conjunction with 2" diameter securement plates or bars below the EPDM deck membrane for additional membrane securement.

2.05 ADHESIVES, CLEANERS AND SEALANTS

Basis of Design by Versico and specifically formulated for the intended purpose.

- A. G200SA Substrate Adhesive: A high-strength, yellow colored, synthetic rubber adhesive used for bonding VersiGard (Black or White) EPDM membranes to various surfaces. Available in 5 gallon pails.
- B. CAV-GRIP 3V Low-VOC Aerosol Contact Adhesive/Primer: a low-VOC, methylene chloride-free adhesive that can be used for a variety of applications including: bonding VersiWeld membrane to various surfaces, enhancing the bond between Versico's VapAir Seal 725TR and various substrates, priming unexposed asphalt prior to applying Flexible DASH Adhesive and for adhering VersiGard EPDM membrane to vertical walls. Coverage rate is approximately 2,000-2,500 sq. ft. per #40 cylinder and 4,000-5,000 sq. ft. per #85 cylinder as a primer, in a single-sided application and 750 sq. ft. per #40 cylinder and 1,500 sq. ft. per #85 cylinder as an adhesive for vertical walls, in a double-sided application.
- C. Versico Weathered Membrane Cleaner: A clear, solvent-based cleaner used to loosen and remove dirt and other contaminants from the surface of exposed EPDM membrane (for repairs, etc.) prior to applying EPDM Primer. Weathered Membrane Cleaner can also be used when applying Splicing Cement. Available in 1 and 5-gallon pails.
- D. VersiGard (Black) Quick Applied Seam Tape (Factory Applied): A 6" wide by 100' long splice tape used for splicing adjoining sections of EPDM membrane.
- E. EPDM Primer: A solvent-based primer used to prepare the surface of EPDM membrane for application of Splice Tape or Quick Applied products. Available in 1 gallon pails.
- F. Lap Sealant: A heavy-bodied material used to seal the exposed edges of a membrane splice. Available in tubes.
 1. Versico's Lap Sealant is a black sealant for use with VersiGard (black) Roofing Systems.
- G. Water Cut-Off Mastic: A one-component, low viscosity, self wetting, Butyl blend mastic used to achieve a compression seal between the EPDM membrane or Uncured EPDM Flashing and applicable substrates. Available in tubes.
- H. Pourable Sealer: A black, two-component, solvent-free, polyurethane based product used for tie-ins and as a sealant around hard-to-flash membrane penetrating objects such as clusters of pipes and for a daily seal when the completion of flashings and terminations cannot be completed by the end of each work day.
- I. One-Part Pourable Sealer: Available in black or white, a one-component, moisture curing, elastomeric polyether sealant used for attaching lightning rod bases and ground cable clips to the membrane surface and as a sealant around hard-to-flash penetrations such as clusters of pipes.

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- J. Flexible DASH Adhesive: An elongating impact resistant two component insulating urethane adhesive used to attach insulation. Packaging formats include 50 and 15 gallon drums as well as Dual Tanks, Dual Cartridges, 5 gallon Jug and 15 or 50 gallon drum formats.
- a. Adhesive to provide 150% elongation in conjunction with fleece backed membrane – ASTM D412.
 - b. MDI content of Part A material less than 25%.

2.06 METAL EDGING AND MEMBRANE TERMINATIONS

General: All metal edgings shall be tested and meet ANSI/SPRI ES-1 standards and comply with International Building Code. All metal work is to be supplied and warranted by the manufacturer.

- A. VersiTrim Drip Edge: a metal fascia/edge system with a 22 gauge continuous anchor cleat and .032 inch thick aluminum or 24 gauge steel fascia. Metal fascia color shall be as designated by the Owner.
- B. VersiTrim Drip Edge: a metal fascia/edge system with a 22 gauge continuous anchor cleat and .032 inch thick aluminum or 24 gauge steel fascia. Metal fascia color shall be as designated by the Owner's.
- C. VersiTrim 200: a coping or fascia, snap-on edge system consisting of a 24 gauge galvanized metal water dam and .040" thick Kynar 500, clear and colored anodized finish or 24 gauge steel, Kynar 500 finish. Metal fascia color shall be as designated by the Owner. ANSI/SPRI ES-1 Certified. Coping FM Approved 1-90. Fascia FM Approved 1-195.2.
- D. VersiTrim 2000: a metal fascia system with an extruded aluminum anchor bar and .040" thick aluminum or 24 gauge galvanized steel fascia. Metal fascia color shall be as designated by the Owner. ANSI/SPRI ES-1 Certified. 2000 Fascia FM Approved 1-645. 2000 Extended Fascia FM Approved 1-270. 2000 Canted Fascia FM Approved 1-270.
- E. VersiTrim One Fascia: A snap-on edge system consisting of a 20 gauge retainer bar, corrosion resistant fasteners and a 24 gauge or 0.040 aluminum Kynar finished fascia cover. A spring clip holds the fascia cover in place. Available in sizes up to 8" fascia height 12' long. Metal fascia color shall be designated by the Owner's Representative. ANSI/SPRI ES-1 Certified.
- F. Gutters to be VersiTrim 200 Model IGG-B Coordinate gutter requirements with Section 07 71 23. All gutters shall be tested and meet ANSI/SPRI GT-1 standards and comply with International Building Code and be compatible with roofing manufacturer's standards and quality requirements.

2.07 WALKWAYS

- A. Protective surfacing for roof traffic as noted on Drawings shall be Versico Quick Applied Walkway Pads (with factory applied tape on the underside of the walkway) adhered to the membrane surface in conjunction with Versico EPDM Primer.

2.08 OTHER MATERIALS

- A. Contractor shall provide and install Metal Flashing and other miscellaneous items needed to fulfill the project requirements and design intent expressed on Drawings.

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.
- B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.02 VAPOR RETARDERS – Not Applicable

3.03 INSULATION PLACEMENT

- A. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- B. Secure insulation to the substrate with the required mechanical fasteners or insulation adhesive Versico Flexible DASH Adhesive in accordance with the manufacturer's specifications.

3.04 MEMBRANE PLACEMENT AND BONDING

- A. Unroll and position membrane without stretching. Allow the membrane to relax for approximately 1/2 hour before bonding. Fold the sheet back onto itself so half the underside of the membrane is exposed.
- B. Apply the Bonding Adhesive in accordance with the manufacturer's published instructions and coverage rates, to both the underside of the membrane and the substrate. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
 - 1. Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded half of the membrane sheet with a soft bristle push broom to achieve maximum contact.
 - 2. Fold back the unbonded half of the membrane sheet and repeat the bonding procedure.
- C. Install adjoining membrane sheets in the same manner, overlapping edges approximately 7 inches. Do not apply bonding adhesive to the splice area.

3.05 MEMBRANE SPLICING

- A. Position membrane sheet to allow for required splice overlap. Mark the bottom sheets with an indelible marker approximately 1/4" to 1/2" from the top sheet edge. The pre-marked line on the membrane edge can also be used as a guide for positioning splice tape.
- B. When the membrane is contaminated with dirt, fold the top sheet back and clean the dry splice area (minimum 3" wide) of both membrane sheets by scrubbing with clean natural fiber rags saturated with Versico's Weathered Membrane Cleaner. When using VersiGard Black Clean (No Dust) membrane, cleaning the splice area is not required unless

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contaminated with field dirt or other residue.

- C. Apply EPDM Primer to splice area and permit to flash off. Primer must be applied to both the top membrane layer and the bottom membrane layer.
- D. When adhering Factory applied Quick Applied Seam Tape (VersiGard QAT), pull the poly backing from QAT beneath the top sheet and allow the top sheet to fall freely onto the exposed primed surface. Press top sheet on to the bottom sheet using firm even hand pressure across the splice towards the splice edge
- E. For end laps, apply 6" Quick Applied Seam Tape to the primed membrane surface in accordance with the manufacturer's specifications. Remove the poly backing and roll the top sheet onto the mating surface.
- F. Tape splices must be a minimum of 5-1/2" wide using 6" wide (Butyl/EPDM) Seam Tape that is a minimum 25-mil thick. Seam Tape must extend 1/8" minimum to 1/2" maximum beyond the splice edge. Field splices at roof drains must be located outside the drain sump.
- G. Immediately roll the splice using positive pressure when using a 2" wide steel roller. Roll across the splice edge, not parallel to it. When VersiGard QAT is used, Versico's Stand-Up Seam Roller can be used to roll parallel to the splice edge.
- H. At all field splice intersections, apply Lap Sealant along the edge of the membrane splice to cover the exposed Quick Applied Seam Tape 2" in each direction from the splice intersection. Install Versico's Quick Applied "T" Joint Covers or a 6" wide section (with rounded corners) of Versico Quick Applied Uncured Flashing over the field splice intersection. Apply additional T-joint cover extending 6" past first.
- I. Provide manufacturer required splice enhancements for membrane and warranty specified.

3.06 FLASHING

- A. Wall and curb flashing shall be cured EPDM membrane. Continue the deck membrane as wall flashing where practicable. Use Quick Applied Curb Wrap when possible to flash curb units.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.07 WALKWAYS

- A. Install walkways at locations as identified on the Drawings.
- B. Adhere walkways to the EPDM membrane in accordance with the manufacturer's specifications.

3.08 DAILY SEAL

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed per manufacturer's recommendations.

3.09 CLEAN UP

- A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris

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from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.

- B. Prior to the manufacturer's inspection for warranty, the contractor must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION

SHEET MEMBRANE ROOFING – FULLY ADHERED – ROOF 2 – ALT BID 1

PART 1 GENERAL

1.01 DESCRIPTION

- A. Roof Area 2 noted on Drawings. At Contractor's Option: To utilize existing insulation, the completion of infrared moisture scan of the existing TPO roof must be completed to determine moisture content and be approved by roofing manufacturer as acceptable for overlay for a 30-year warranty. If majority of roof system is dry and upon approval of the roofing manufacturer, Contractor may leave existing insulation in place removing and replacing any wet or damaged insulation with like thicknesses (2.5"). To prepare the substrate, cut and remove loose, existing TPO membrane between securement plates at field seams. Acceptable to leave existing plates and membrane at this area. Apply the new Fully Adhered EPDM Roofing System based upon the following installation. Install and mechanically attach a new layer of 2.3" 20 psi Polyisocyanurate insulation with appropriate length fasteners and 3" insulation plates at the rate of 1 per 2 SF or 16 per 4x8 board through existing iso and into the 22 ga. minimum steel deck. Adhere HD polyisocyanurate insulation (coverboard) with Adhesive at the rate of 6" on center bead spacing throughout the roof project. Insulation joints shall be staggered. 90mil Non-reinforced EPDM membrane to be adhered to HD polyisocyanurate insulation (coverboard) with Bonding Adhesive. Seams to be completed using 6" Seam Tape. Install taper at north west corner as required to divert water to gutters. System upon completion of installation and approved inspection shall be warrantable for 30 year with 72mph wind speed protection, with 2" hail protection and 32 hours accidental puncture coverage.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the new roofing system including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.
- B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work.
- C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid, of any conflicts that will affect their cost proposal.

1.03 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
1. Shop drawings showing layout, details of construction and identification of materials.
 2. Sample of the manufacturer's Total Systems Warranty covering all components of the roofing system.
 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system.

- 4. Certification of the manufacturer's warranty reserve.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection report to the specifier prior to the issuance of the manufacturer's warranty.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.
- B. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Store materials between 70°F and 90°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 70°F minimum temperature before using.
 - 2. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- C. Insulation and underlayment products must be on pallets, off the ground and tightly covered with waterproof, breathable materials. Manufacturer's wrap does not provide sufficient waterproofing. Insulation and underlayment products that become wet or saturated are to be discarded.
- D. Any materials which are found to be damaged shall be removed and replaced at the contractor's expense.

1.05 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.
- C. Complete overall project work sequence in accordance with Owner's priorities.

1.06 USE OF THE PREMISES

- A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.

1.07 EXISTING CONDITIONS

- A. If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

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- B. Additional wood nailers required to match with insulation thickness to provide for metal edge terminations.

1.08 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to construct, maintain and remove necessary temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.
- C. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains/gutters from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas where work is in progress. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.09 SAFETY

- A. The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. Safety shall be the responsibility of the roofing contractor. All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

1.10 WORKMANSHIP

- A. Contractors installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- C. There shall be a supervisor on the job site at all times while work is in progress.
- D. All field seams and flashing details are to be completed according to manufacturer's specifications and details by the end of each work day.

1.11 QUALITY ASSURANCE

- A. The Roofing System must achieve a UL Class A rating.
- B. The specified roofing assembly manufacturer's installation instructions must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to International Building Code (IBC) and American Society of Civil Engineers (ASCE 7).
- C. The membrane must be manufactured by the material supplier. Manufacturer's supplying membrane made by others are not acceptable.
- D. The manufacturer must have a minimum of 15 years experience in the manufacturing of vulcanized black, thermoset sheeting. The manufacturer shall have domestic manufacturing experience commensurate with the term of warranty coverage of the products supplied.
- E. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- F. The roofing system must be installed by an contractor authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing contractor shall be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years successful experience installing specified roofing systems of equal or greater size. The contractor shall, upon request, be able to document a minimum of three (3) installations completed within the prior three (3) years that are comparable to those required for the work and similar in scope and complexity. Provide complete contact information, warranty history for previous installations and demonstrate in-service performance.
- G. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.
- H. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- I. Upon completion of the installation, the contractor shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to identify any needed corrective repairs that will be required for warranty issuance. Notify the Owner and Architect/Engineer a minimum of seventy-two (72) hours prior to the manufacturer's final inspection.
- J. Non-sales Inspector shall be employed and trained by the manufacturer and have received product-specific training from the manufacturer of the products.
- K. Roofing membrane shall show no visible signs of cracking or crazing from UV weathering when tested in accordance with ASTM D4637.
- L. Roofing membrane shall achieve a zero (no growth) rating in the ASTM G21 test for fungi growth.

1.12 JOB CONDITIONS, CAUTIONS AND WARNINGS

- A. Safety Data Sheets (SDS) must be on location at all times during the transportation, storage

and application of materials.

- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- C. When loading materials onto the roof, the Versico Authorized Roofing Contractor must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weathertight at the end of the work day.
- I. Contaminants such as grease, fats and oils shall not be permitted to come in direct contact with the roofing membrane. An overlay of Epichlorohydrin membrane must be adhered around units which have the potential to emit solvents, grease or oil.

1.13 WARRANTY

- A. Provide manufacturer's 30 year Total System Warranty covering both labor and all materials with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 72 mph measured at 10 meters above ground level. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to such wind coverage.
 - 1. Warranty shall also cover leaks caused by accidental punctures: 32 man-hours per year.
- B. Warranty shall also cover leaks caused by hail up to 2" diameter.
- C. Pro-rated System Warranties shall not be accepted.
- D. Provide a 40 year non-pro-rated membrane material warranty for membrane.

PART 2 PRODUCTS

2.01 GENERAL

- A. Unless otherwise approved by the specifier and accepted by the membrane manufacturer, all products (including insulation, fasteners, fastening plates and edgings) must be manufactured and supplied by the roofing system manufacturer and covered by the warranty. Manufacturer of roof membrane shall also manufacture all polymeric components for the roofing system, including, but limited to, membrane, adhesives, primers, flashings, caulks and tapes.

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- B. BASIS OF DESIGN: Versico's VersiGard Reinforced (black) fully adhered roofing system. Acceptable alternates applicable to this specification:

1. Carlisle - SynTec Sure-Seal EPDM Membrane
2. Johns Manville - EPDM NR EPDM Membrane

2.02 MEMBRANE

- A. Furnish VersiGard 90-mil thick Non-Reinforced EPDM (Ethylene, Propylene, Diene Terpolymer) in the largest sheet possible with 6" factory applied Quick Applied Tape (VersiGard QAT). (Splice tape shall be a butyl/EPDM based polymer with a minimum thickness of 25-mil.) The membrane shall conform to the minimum physical properties of ASTM D4637. When a 10 foot wide membrane is to be used, the membrane shall be manufactured in a single panel with no factory splices to reduce splice intersections.

2.03 INSULATION/UNDERLAYMENT

- A. When applicable, insulation shall be installed in multiple layers. See installation description above for layers of insulation to be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
- B. Basis of Design Insulation shall be VersiCore & SecurShield HD Polyisocyanurate as supplied by Versico. Average R-value required is R30. (Note: The insulation must meet ASHRAE 90.1 minimums per IBC-International Building Code.)
1. Versico Versicore MP-H Polyiso – A foam core insulation board covered on both sides with a medium weight fiber-reinforced felt facer meeting ASTM C 1289-06, Type II, Class 1, Grade 2 (20 psi). The product is available in 4' x 8' standard size with a thickness from 1 to 4 inches. 4' x 4' tapered panels are also available
 2. Versico SecurShield HD Cover Board– a rigid insulation panel composed of a high-density, closed-cell polyisocyanurate foam core laminated to moisture resistant coated-glass fiber-mat facer for use as a cover board or recover board meeting ASTM 1289-06, Type II, Class 2 (100 psi). Available 1/2" thick 4' x 8' panel weight 11 lbs with an R-value of 2.5.

2.04 FASTENING COMPONENTS

To be used for mechanical attachment of insulation and to provide additional membrane securement:

- A. Fasteners, Plates and Bars: Basis of Design by Versico for the intended purpose.
1. HPV Fasteners: a threaded, #14 fastener with a #3 phillips drive used with steel and wood roof decks.
 2. Seam Fastening Plate: a 2" diameter metal fastening plate used in conjunction with RUSS or EPDM membrane for additional membrane securement.
 3. Insulation Fastening Plates: a nominal 3 inch diameter plastic or metal plate used for insulation attachment.
 4. Versico Quick-Applied RTS (Reinforced Termination Strip): a 6" wide, nominal 45-mil

thick clean, cured black reinforced EPDM membrane with 3" or wide factory applied quick applied seam tape (VersiGard QAT) laminated along one edge. The 6" wide Quick Applied RTS is used horizontally or vertically at the base of walls, curbs, etc., in conjunction with 2" diameter securement plates or bars below the EPDM deck membrane for additional membrane securement.

2.05 ADHESIVES, CLEANERS AND SEALANTS

Basis of Design by Versico and specifically formulated for the intended purpose.

- A. G200SA Substrate Adhesive: A high-strength, yellow colored, synthetic rubber adhesive used for bonding VersiGard (Black or White) EPDM membranes to various surfaces. Available in 5 gallon pails.
- B. CAV-GRIP 3V Low-VOC Aerosol Contact Adhesive/Primer: a low-VOC, methylene chloride-free adhesive that can be used for a variety of applications including: bonding VersiWeld membrane to various surfaces, enhancing the bond between Versico's VapAir Seal 725TR and various substrates, priming unexposed asphalt prior to applying Flexible DASH Adhesive and for adhering VersiGard EPDM membrane to vertical walls. Coverage rate is approximately 2,000-2,500 sq. ft. per #40 cylinder and 4,000-5,000 sq. ft. per #85 cylinder as a primer, in a single-sided application and 750 sq. ft. per #40 cylinder and 1,500 sq. ft. per #85 cylinder as an adhesive for vertical walls, in a double-sided application.
- C. Versico Weathered Membrane Cleaner: A clear, solvent-based cleaner used to loosen and remove dirt and other contaminants from the surface of exposed EPDM membrane (for repairs, etc.) prior to applying EPDM Primer. Weathered Membrane Cleaner can also be used when applying Splicing Cement. Available in 1 and 5-gallon pails.
- D. VersiGard (Black) Quick Applied Seam Tape (Factory Applied): A 6" wide by 100' long splice tape used for splicing adjoining sections of EPDM membrane.
- E. EPDM Primer: A solvent-based primer used to prepare the surface of EPDM membrane for application of Splice Tape or Quick Applied products. Available in 1 gallon pails.
- F. Lap Sealant: A heavy-bodied material used to seal the exposed edges of a membrane splice. Available in tubes.
 - 1. Versico's Lap Sealant is a black sealant for use with VersiGard (black) Roofing Systems.
- G. Water Cut-Off Mastic: A one-component, low viscosity, self wetting, Butyl blend mastic used to achieve a compression seal between the EPDM membrane or Uncured EPDM Flashing and applicable substrates. Available in tubes.
- H. Pourable Sealer: A black, two-component, solvent-free, polyurethane based product used for tie-ins and as a sealant around hard-to-flash membrane penetrating objects such as clusters of pipes and for a daily seal when the completion of flashings and terminations cannot be completed by the end of each work day.
- I. One-Part Pourable Sealer: Available in black or white, a one-component, moisture curing, elastomeric polyether sealant used for attaching lightning rod bases and ground cable clips to the membrane surface and as a sealant around hard-to-flash penetrations such as clusters of pipes.
- J. Flexible DASH Adhesive: An elongating impact resistant two component insulating urethane adhesive used to attach insulation. Packaging formats include 50 and 15 gallon drums as well as Dual Tanks, Dual Cartridges, 5 gallon Jug and 15 or 50 gallon drum formats.

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- a. Adhesive to provide 150% elongation in conjunction with fleece backed membrane – ASTM D412.
- b. MDI content of Part A material less than 25%.

2.06 METAL EDGING AND MEMBRANE TERMINATIONS

General: All metal edgings shall be tested and meet ANSI/SPRI ES-1 standards and comply with International Building Code. All metal work is to be supplied and warranted by the manufacturer.

- A. VersiTrim Drip Edge: a metal fascia/edge system with a 22 gauge continuous anchor cleat and .032 inch thick aluminum or 24 gauge steel fascia. Metal fascia color shall be as designated by the Owner.
- B. VersiTrim Drip Edge: a metal fascia/edge system with a 22 gauge continuous anchor cleat and .032 inch thick aluminum or 24 gauge steel fascia. Metal fascia color shall be as designated by the Owner's.
- C. VersiTrim 200: a coping or fascia, snap-on edge system consisting of a 24 gauge galvanized metal water dam and .040" thick Kynar 500, clear and colored anodized finish or 24 gauge steel, Kynar 500 finish. Metal fascia color shall be as designated by the Owner. ANSI/SPRI ES-1 Certified. Coping FM Approved 1-90. Fascia FM Approved 1-195.2.
- D. VersiTrim 2000: a metal fascia system with an extruded aluminum anchor bar and .040" thick aluminum or 24 gauge galvanized steel fascia. Metal fascia color shall be as designated by the Owner. ANSI/SPRI ES-1 Certified. 2000 Fascia FM Approved 1-645. 2000 Extended Fascia FM Approved 1-270. 2000 Canted Fascia FM Approved 1-270.
- E. VersiTrim One Fascia: A snap-on edge system consisting of a 20 gauge retainer bar, corrosion resistant fasteners and a 24 gauge or 0.040 aluminum Kynar finished fascia cover. A spring clip holds the fascia cover in place. Available in sizes up to 8" fascia height 12' long. Metal fascia color shall be designated by the Owner's Representative. ANSI/SPRI ES-1 Certified.
- F. Gutters to be VersiTrim 200 Model IGG-B Coordinate gutter requirements with Section 07 71 23. All gutters shall be tested and meet ANSI/SPRI GT-1 standards and comply with International Building Code and be compatible with roofing manufacturer's standards and quality requirements.

2.07 WALKWAYS

- A. Protective surfacing for roof traffic as noted on Drawings shall be Versico Quick Applied Walkway Pads (with factory applied tape on the underside of the walkway) adhered to the membrane surface in conjunction with Versico EPDM Primer.

2.08 OTHER MATERIALS

- A. Contractor shall provide and install Metal Flashing and other miscellaneous items needed to fulfill the project requirements and design intent expressed on Drawings.

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.
- B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.02 VAPOR RETARDERS – Not Applicable

3.03 INSULATION PLACEMENT

- A. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- B. Secure insulation to the substrate with the required mechanical fasteners or insulation adhesive Versico Flexible DASH Adhesive in accordance with the manufacturer's specifications.

3.04 MEMBRANE PLACEMENT AND BONDING

- A. Unroll and position membrane without stretching. Allow the membrane to relax for approximately 1/2 hour before bonding. Fold the sheet back onto itself so half the underside of the membrane is exposed.
- B. Apply the Bonding Adhesive in accordance with the manufacturer's published instructions and coverage rates, to both the underside of the membrane and the substrate. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
 - 1. Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded half of the membrane sheet with a soft bristle push broom to achieve maximum contact.
 - 2. Fold back the unbonded half of the membrane sheet and repeat the bonding procedure.
- C. Install adjoining membrane sheets in the same manner, overlapping edges approximately 7 inches. Do not apply bonding adhesive to the splice area.

3.05 MEMBRANE SPLICING

- A. Position membrane sheet to allow for required splice overlap. Mark the bottom sheets with an indelible marker approximately 1/4" to 1/2" from the top sheet edge. The pre-marked line on the membrane edge can also be used as a guide for positioning splice tape.
- B. When the membrane is contaminated with dirt, fold the top sheet back and clean the dry splice area (minimum 3" wide) of both membrane sheets by scrubbing with clean natural fiber rags saturated with Versico's Weathered Membrane Cleaner. When using VersiGard Black Clean (No Dust) membrane, cleaning the splice area is not required unless contaminated with field dirt or other residue.
- C. Apply EPDM Primer to splice area and permit to flash off. Primer must be applied to both the top membrane layer and the bottom membrane layer.

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- D. When adhering Factory applied Quick Applied Seam Tape (VersiGard QAT), pull the poly backing from QAT beneath the top sheet and allow the top sheet to fall freely onto the exposed primed surface. Press top sheet on to the bottom sheet using firm even hand pressure across the splice towards the splice edge
- E. For end laps, apply 6" Quick Applied Seam Tape to the primed membrane surface in accordance with the manufacturer's specifications. Remove the poly backing and roll the top sheet onto the mating surface.
- F. Tape splices must be a minimum of 5-1/2" wide using 6" wide (Butyl/EPDM) Seam Tape that is a minimum 25-mil thick. Seam Tape must extend 1/8" minimum to 1/2" maximum beyond the splice edge. Field splices at roof drains must be located outside the drain sump.
- G. Immediately roll the splice using positive pressure when using a 2" wide steel roller. Roll across the splice edge, not parallel to it. When VersiGard QAT is used, Versico's Stand-Up Seam Roller can be used to roll parallel to the splice edge.
- H. At all field splice intersections, apply Lap Sealant along the edge of the membrane splice to cover the exposed Quick Applied Seam Tape 2" in each direction from the splice intersection. Install Versico's Quick Applied "T" Joint Covers or a 6" wide section (with rounded corners) of Versico Quick Applied Uncured Flashing over the field splice intersection. Apply additional T-joint cover extending 6" past first.
- I. Provide manufacturer required splice enhancements for membrane and warranty specified.

3.06 FLASHING

- A. Wall and curb flashing shall be cured EPDM membrane. Continue the deck membrane as wall flashing where practicable. Use Quick Applied Curb Wrap when possible to flash curb units.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.07 WALKWAYS

- A. Install walkways at locations as identified on the Drawings.
- B. Adhere walkways to the EPDM membrane in accordance with the manufacturer's specifications.

3.08 DAILY SEAL

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed per manufacturer's recommendations.

3.09 CLEAN UP

- A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- B. Prior to the manufacturer's inspection for warranty, the contractor must perform a pre-

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inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION

SHEET MEMBRANE ROOFING - MECHANICALLY ATTACHED – ROOF 4 – ALT BID 2

PART 1 GENERAL

1.01 DESCRIPTION

- A.. Roof Area 4 noted on Drawings. Install Mechanically Attached EPDM Roofing System in conjunction with 2.0", 1.5# density Expanded Polystyrene flute fill insulation (contractor to field verify dimensions prior to bid submittal) over the existing metal roof system. Overlay EPS and top flute of metal deck with 3.7" 25 psi polyisocyanurate insulation and mechanically attach with appropriate length fasteners and 3" insulation plates at the rate of 8 per 4'x8' board. Install tapered saddle at intersection of existing adjacent roof on east side as required to divert water around intersecting parapet. Mechanically attach 75-mil thick reinforced EPDM membrane and 9" RTS Strip where applicable with purlin or retro driller fasteners and 2" Polymer Seam plates at the rate of 6" on center. Three (3) perimeter sheets required. Seams to be completed using 6" Seam Tape. System upon completion of installation and approved inspection shall be warrantable for 30 years, with 72mph wind speed protection and with 32 hours accidental puncture coverage.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the new roofing system including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.
- B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work.
- C. The roofing contractor shall confirm all given information and advise the architect/engineer, prior to bid, of any conflicts that will affect their cost proposal.

1.03 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
1. Shop drawings showing layout, details of construction and identification of materials.
 2. Sample of the manufacturer's Total Systems Warranty covering all components of the roofing system.
 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system.
 4. Certification from the membrane manufacturer indicating the fasteners are capable of providing a static backout resistance of 10 inch pounds minimum is required.
 5. Certification of the manufacturer's warranty reserve.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection report to the architect/engineer and Owner prior to the issuance of the manufacturer's warranty.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.
- B. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Store materials between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.
 - 2. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
 - 3. Insulation/underlayment must be stored so that it is kept dry and is protected from the elements. Store bundles flat and upright with the bottom of the bundles elevated 2" or more above the finished surface.
 - 4. Slit the insulation bundle packaging vertically down the center of the two short sides to prevent moisture accumulation within the package. Completely cover the bundle with a waterproof tarp and secure to prevent wind damage and / or displacement.
- D. Any materials which are found to be damaged shall be removed and replaced at the Contractor's expense.

1.05 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.
- C. Complete overall project work sequence in accordance with Owner's priorities.

1.06 USE OF THE PREMISES

- A. Before beginning work, the roofing contractor must secure approval from Owner for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.

1.07 EXISTING CONDITIONS

- A. If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the architect/engineer and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

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- B. Provide additional wood nailers required to match with insulation thickness to provide for metal edge terminations.

1.08 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the building owner will continue to occupy the building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to construct, maintain and remove necessary temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.
- C. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas where work is in progress. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.09 SAFETY

- A. The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. Safety shall be the responsibility of the roofing contractor. All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

1.10 WORKMANSHIP

- A. Contractors installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- C. There shall be a supervisor on the job site at all times while work is in progress.
- D. All field seams and flashing details are to be completed according to manufacturer's specifications and details by the end of each work day.

1.11 QUALITY ASSURANCE

- A. The Roofing System must achieve a UL Class A rating.
- B. The specified roofing assembly manufacturer's installation instructions must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to International Building Code (IBC) and American Society of Civil Engineers (ASCE 7).
- C. The membrane must be manufactured by the material supplier. Manufacturer's supplying membrane made by others are not acceptable.
- D. The manufacturer must have a minimum of 15 years experience in the manufacturing of vulcanized black, thermoset sheeting. The manufacturer shall have domestic manufacturing experience commensurate with the term of warranty coverage of the products supplied.
- E. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- F. The roofing system must be installed by an contractor authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing contractor shall be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years successful experience installing specified roofing systems of equal or greater size. The contractor shall, upon request, be able to document a minimum of three (3) installations completed within the prior three (3) years that are comparable to those required for the work and similar in scope and complexity. Provide complete contact information, warranty history for previous installations and demonstrate in-service performance.
- G. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.
- H. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- I. Upon completion of the installation, the contractor shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to identify any needed corrective repairs that will be required for warranty issuance. Notify the Owner and Architect/Engineer a minimum of seventy-two (72) hours prior to the manufacturer's final inspection.
- J. Non-sales Inspector shall be employed and trained by the manufacturer and have received product-specific training from the manufacturer of the products.
- K. Roofing membrane shall show no visible signs of cracking or crazing from UV weathering when tested in accordance with ASTM D4637.
- L. Roofing membrane shall achieve a zero (no growth) rating in the ASTM G21 test for fungi growth.

1.12 JOB CONDITIONS, CAUTIONS AND WARNINGS

- A. Safety Data Sheets (SDS) must be on location at all times during the transportation, storage

- and application of materials.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
 - C. When loading materials onto the roof, the Contractor must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
 - D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
 - E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
 - F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
 - G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
 - H. New roofing shall be complete and weathertight at the end of each work day.
 - I. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane. An overlay of Epichlorohydrin membrane must be adhered around units which have the potential to emit solvents, grease or oil.

1.13 WARRANTY

- A. Provide manufacturer's 30 year Total System Warranty covering both labor and material with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 72mph measured at 10 meters above ground level. Manufacturer's Certification is required indicating the manufacturer has reviewed and agreed to such wind coverage.
 - 1. Warranty shall also cover leaks caused by accidental punctures: 32 man-hours per year.
- B. Pro-rated System Warranties shall not be accepted.

PART 2 PRODUCTS

2.01 GENERAL

- A. Unless otherwise approved by the specifier and accepted by the membrane manufacturer, all products (including insulation, fasteners, fastening plates and edgings) must be manufactured and supplied by the roofing system manufacturer and covered by the warranty. Manufacturer of roof membrane shall also manufacture all polymeric components for the roofing system, including, but limited to, membrane, adhesives, primers, flashings, caulks and tapes.
- B. BASIS OF DESIGN: Versico's VersiGard Reinforced (black) Mechanically Attached Roofing System. Acceptable alternates applicable to this specification:

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1. Carlisle - SynTec Sure-Seal EPDM Membrane
2. Johns Manville - EPDM NR EPDM Membrane

2.02 MEMBRANE

- A. Furnish VersiGard Reinforced 75-mil thick reinforced EPDM (Ethylene, Propylene, Diene Terpolymer) conforming to the minimum physical properties of ASTM D4637. The membrane shall be manufactured in a single panel with no factory splices to reduce splice intersections with 6" factory applied QA Seam Tape (VersiGard QAT). (Splice tape shall be a butyl/EPDM based polymer with a minimum thickness of 25-mil.) Membrane sheets in rolls 5', 6.5', 8' or 10' wide by 100' long.

2.03 INSULATION/UNDERLAYMENT

- A. When applicable, insulation shall be installed in multiple layers. The first and second layer of insulation shall be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
- B. Basis of Design Insulation shall be expanded polystyrene and polyiso. Average R-value required is R30. The insulation must meet ASHRAE 90.1 minimums per IBC-International Building Code.
 1. Versico VersiCore MP-H Polyiso – A foam core insulation board covered on both sides with a medium weight fiber-reinforced felt facer meeting ASTM C 1289-06, Type II, Class 1, Grade 3 (25 psi). The product is available in 4' x 8' standard size with a thickness from 1 to 4 inches. 4' x 4' tapered panels are also available.
 2. InsulFoam II (EPS: Expanded Polystyrene) – A closed-cell lightweight expanded polystyrene (EPS) that meets ASTM C578, Type II. Nominal density of 1.5 lbs/cubic ft (pcf) available in 4' x 4' or 4' x 8' sizes with thickness from 1/4" to 40". Custom lengths, widths and tapered boards are available.

2.04 ADHESIVES, CLEANERS AND SEALANTS

All products shall be furnished by manufacturer and specifically formulated for the intended purpose.

- A. G200SA Substrate Adhesive: A high-strength, yellow colored, synthetic rubber adhesive used for bonding VersiGard EPDM membranes to various surfaces. Available in 5 gallon pails.
- B. Versico Weathered Membrane Cleaner: A clear, solvent-based cleaner used to loosen and remove dirt and other contaminants from the surface of exposed EPDM membrane (for repairs, etc.) prior to applying EPDM Primer. Weathered Membrane Cleaner can also be used when applying Splicing Cement. Available in 1 and 5-gallon pails.
- C. VersiGard Quick Applied Seam Tape (Factory Applied): A 6" wide (used for Mechanically Attached Roofing Systems and 20-year Warranty Systems) by 100' long splice tape used for splicing adjoining sections of EPDM membrane. Complies with the South Coast Air Quality Management District Rule 1168.
- D. EPDM Primer: A solvent-based primer used to prepare the surface of EPDM membrane for application of Splice Tape or Quick Applied products. This Primer can also be used in

- conjunction with EP-95 Splicing Cement in lieu of Splice Cleaner. Available in 1 gallon pails and pressurized cylinders.
- E. Lap Sealant: A black, heavy-bodied material used to seal the exposed edges of a membrane splice. A pre-formed Lap Sealant tool is included in each carton of Lap Sealant. Available in tubes.
 - F. Water Cut-Off Mastic: A one-component, low viscosity, self wetting, Butyl blend mastic used as a sealing agent between the EPDM membrane or Uncured EPDM Flashing and applicable substrates. Available in tubes.
 - G. Pourable Sealer: A black, two-component, solvent-free, polyurethane based product used for tie-ins and as a sealant around hard-to-flash membrane penetrating objects such as clusters of pipes and for a daily seal when the completion of flashings and terminations cannot be completed by the end of each work day.
 - H. One-Part Pourable Sealer: Available in black or white, a one-component, moisture curing, elastomeric polyether sealant used for attaching lightning rod bases and ground cable clips to the membrane surface and as a sealant around hard-to-flash penetrations such as clusters of pipes.
 - I. CAV-GRIP 3V Low-VOC Aerosol Contact Adhesive/Primer: a low-VOC, methylene chloride-free adhesive that can be used for a variety of applications including: bonding VersiWeld membrane to various surfaces, enhancing the bond between Versico's VapAir Seal 725TR and various substrates, priming unexposed asphalt prior to applying Flexible DASH Adhesive and for adhering VersiGard EPDM membrane to vertical walls. Coverage rate is approximately 2,000-2,500 sq. ft. per #40 cylinder and 4,000-5,000 sq. ft. per #85 cylinder as a primer, in a single-sided application and 750 sq. ft. per #40 cylinder and 1,500 sq. ft. per #85 cylinder as an adhesive for vertical walls, in a double-sided application.

2.05 FASTENERS AND PLATES

To be used for mechanical attachment of insulation and to provide additional membrane securement:

- A. HPV Fasteners: a threaded, #14 fastener with a #3 phillips drive used with steel and wood roof decks.
- B. Pre-Assembled ASAP Fasteners: A pre-assembled 3" diameter Plastic Plate and # 12 threaded fastener with a #3 drive used for insulation attachment into steel or wood decks. Installed using OMG Fastening Tools.
- C. InsulTite Fasteners: A threaded #12 fastener with #3 phillips drive used for insulation attachment into steel or wood decks.
- D. Purlin Fasteners: Specifically designed for use with Versico's Metal Retrofit Roofing System to secure membrane and RUSS to structural steel purlins. The self drilling point can penetrate 12-18 gauge steel with superior pullout resistance.
- E. Term Bar Nail-Ins: A 1-1/4" long expansion anchor with a zinc plated steel drive pin used for fastening the Versico Termination Bar or Seam Fastening Plates to concrete, brick, or block walls.
- F. Insulation Fastening Plates: a nominal 3 inch diameter plastic or metal plate used for insulation attachment.
- G. Polymer Seam Plate: a 2" diameter plastic fastening plate incorporating barbs on the underside of the plate. This plate is required for membrane and RUSS attachment installed

in conjunction with steel roof decks. May also be used for insulation attachment.

- H. VersiGard Quick Applied RTS (Reinforced Termination Strip): a 6" or 9" wide, nominal 45-mil thick clean, cured black reinforced EPDM membrane with 3" wide factory applied tape laminated along one edge for the 6" wide RTS and along both edges for the 9" wide RTS.
 - 1. 6" wide Quick Applied RTS is used horizontally or vertically at the base of walls, curbs, etc., in conjunction with 2" diameter Fastening Plates below the EPDM deck membrane for additional membrane securement (Polymer Seam Plates are required for steel decks).
 - 2. 9" wide Quick Applied RTS is for perimeter membrane securement.

2.06 METAL EDGING AND MEMBRANE TERMINATIONS

- A. General: All metal edging s shall be tested and meet ANSI/SPRI ES-1 standards and comply with International Building Code. All metal work is to be supplied and warranted by the manufacturer.
- B. VersiTrim Drip Edge: a metal fascia/edge system with a 22 gauge continuous anchor cleat and .032 inch thick aluminum or 24 gauge steel fascia. Metal fascia color shall be as designated by the Owner's.
- C. VersiTrim 200: a coping or fascia, snap-on edge system consisting of a 24 gauge galvanized metal water dam and .040" thick Kynar 500, clear and colored anodized finish or 24 gauge steel, Kynar 500 finish. Metal fascia color shall be as designated by the Owner. ANSI/SPRI ES-1 Certified. Coping FM Approved 1-90. Fascia FM Approved 1-195.2.
- D. VersiTrim 2000: a metal fascia system with an extruded aluminum anchor bar and .040" thick aluminum or 24 gauge galvanized steel fascia. Metal fascia color shall be as designated by the Owner. ANSI/SPRI ES-1 Certified. 2000 Fascia FM Approved 1-645. 2000 Extended Fascia FM Approved 1-270. 2000 Canted Fascia FM Approved 1-270.
- E. VersiTrim One Fascia: A snap-on edge system consisting of a 20 gauge retainer bar, corrosion resistant fasteners and a 24 gauge or 0.040 aluminum Kynar finished fascia cover. A spring clip holds the fascia cover in place. Available in sizes up to 8" fascia height 12' long. Metal fascia color shall be designated by the Owner's Representative. ANSI/SPRI ES-1 Certified.
- F. Gutters to be VersiTrim 200 Model IGG-B Coordinate gutter requirements with Section 07 71 23. All gutters shall be tested and meet ANSI/SPRI GT-1 standards and comply with International Building Code and be compatible with roofing manufacturer's standards and quality requirements.

2.07 WALKWAYS

- A. Protective surfacing for roof traffic as noted on Drawings shall be Versico Quick Applied Walkway Pads (with factory applied tape on the underside of the walkway) adhered to the membrane surface in conjunction with Versico EPDM Primer.

2.08 OTHER MATERIALS

- A. Contractor shall provide and install Metal Flashing and other miscellaneous items needed to fulfill the project requirements and design intent expressed on Drawings.

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.
- B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.02 VAPOR RETARDERS – Not Applicable

3.03 INSULATION PLACEMENT AND ATTACHMENT

- A. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- B. Secure insulation to the substrate with the required mechanical fasteners in accordance with the manufacturer's specifications.

3.04 MEMBRANE PLACEMENT AND ATTACHMENT

- A. Unroll and position membrane without stretching. Allow the membrane to relax for approximately 1/2 hour prior to attachment. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
- B. Secure the membrane (along the pre-printed blue line approximately 3" from the edge of the membrane sheet) with the required Versico Fastener and Versico securement plate or bar spaced a maximum of 12" on center. The minimum distance between the edge of the fastening plate and the edge of the membrane must be 2 inches.
- C. Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.

3.05 MEMBRANE SPLICING

- A. Tape splices where fastening plates are located (along the length of the membrane) must utilize 6" wide factory applied seam tape (VersiGard QAT). Tape splices at end roll sections (along the width of the membrane without fastening plates) shall utilize 3" wide Quick Applied Seam Tape.
- B. Overlap adjacent sheets and mark a line approximately 1/4" to 1/2" from the top sheet edge.
- C. Apply EPDM Primer to splice area and permit to flash off. Primer must be applied to both the top membrane layer and the bottom membrane layer.
- D. When adhering factory applied tape (VersiGard QAT), pull the poly backing from QAT beneath the top sheet and allow the top sheet to fall freely onto the exposed primed surface. Press top sheet on to the bottom sheet using firm even hand pressure across the splice towards the splice edge.

- E. For end laps, apply 6" Quick Applied Seam Tape to the primed membrane surface in accordance with the manufacturer's specifications. Remove the poly backing and roll the top sheet onto the mating surface.
- F. Immediately roll the splice using positive pressure when using a 2" wide steel roller. Roll across the splice edge, not parallel to it. When using VersiGard QAT, Versico's Stand-Up Seam Roller can be used to roll parallel to the splice edge.
- G. At all field splice intersections, apply Lap Sealant along the edge of the membrane splice to cover the exposed Quick Applied Seam Tape 2" in each direction from the splice intersection. Install Versico's Quick Applied "T" Joint Covers or a 6" wide section (with rounded corners) of Versico Quick Applied Uncured Flashing over the field splice intersection. Apply additional T-joint cover extending 6" past first.

3.06 FLASHING

- A. Wall and curb flashing shall be cured EPDM membrane. Continue the deck membrane as wall flashing where practicable. Use Quick Applied Curb Wrap when possible to flash curb units.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.07 WALKWAYS

- A. Install walkways at locations as identified on the Drawings.
- B. Adhere walkways to the EPDM membrane in accordance with the manufacturer's specifications.

3.08 DAILY SEAL

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed per manufacturer's recommendations.

3.09 CLEAN UP

- A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- B. Prior to the manufacturer's inspection for warranty, the Contractor must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION

MANUFACTURED GUTTERS AND DOWNSPOUTS

1.1 SUMMARY

- A. Section Includes:
 - 1. Gutters and downspouts.
 - 2. Splash pads.

1.2 REFERENCE STANDARDS

- A. National Roofing Contractors Association:
 - 1. NRCA - The NRCA Roofing Manual.
- B. Sheet Metal and Air Conditioning Contractors:
 - 1. SMACNA - Architectural Sheet Metal Manual.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer information regarding components, materials, and finishes.
- B. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.
- C. Samples: Submit one (1) sample 6" long each component, illustrating component design, finish, color, and configuration.
- D. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.

1.4 QUALITY ASSURANCE

- A. Perform Work according to [NRCA Roofing Manual] [SMACNA Manual] [CDA-A4050].

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years' **documented** experience.
- B. Installer: Company specializing in performing Work of this Section with minimum five (5) years' documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- B. Storage:
 - 1. Store materials according to manufacturer instructions.
 - 2. Prevent contact with materials capable of causing discoloration, staining, or damage.
 - 3. Slope to drain.
- C. Protection:
 - 1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
 - 2. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation.
 - 3. Provide additional protection according to manufacturer instructions.

1.7 EXISTING CONDITIONS

- A. Field Measurements:
 - 1. Verify field measurements prior to fabrication.
 - 2. Indicate field measurements on Shop Drawings.

1.8 WARRANTY

- A. Furnish minimum twenty (20)-year manufacturer's warranty for gutter and downspout finishes.

PART 2 - PRODUCTS

2.1 PERFORMANCE AND DESIGN CRITERIA

- A. Sizing: Comply with NRCA Roofing Manual and SMACNA Manual for sizing components based on rainfall intensity determined by storm occurrence of once in 10 years.
- B. Supplier/manufacturer to verify sizing requirements prior to bid submittal.

2.2 GUTTERS AND DOWNSPOUTS

- A. Description:
 - 1. Gutters:
 - a. Material: Sheet metal.
 - b. Profile: rectangular.
 - c. Size: min 7.5" x 7.5"
 - 2. Downspouts:
 - a. Material: Same metal type as gutters.
 - b. Profile: rectangular.
 - c. Size: min 4"x6"
 - 3. Splash Pads:
 - a. Material: Precast concrete.
 - b. Size: min 30"L x 12"W
 - c. Minimum Compressive Strength: 3,000 psi at 28 days.
 - d. Minimum Air Entrainment: 5 percent.

2.3 MATERIALS

- A. Prefinished Aluminum Sheet:
 - 1. Comply with ASTM B209.
 - 2. Alloy and Temper: Manufacturer's standard based on specified finish.
 - 3. Thickness: 0.032 inch.
 - 4. Finish: Plain.
 - 5. Color: As selected from manufacturer's standard.

2.4 FABRICATION

- A. Forming of Sections:
 - 1. Description:
 - a. Square and accurate in size.
 - b. Maximum possible lengths.
 - c. Free of distortion or defects detrimental to appearance or performance.
 - 2. Shapes: As specified.
 - 3. Allow for expansion at joints.
- B. Fabricate with required connection pieces.
- C. Hem exposed edges of metal.
- D. Seal watertight.

2.5 ACCESSORIES

- A. Anchors and Supports:

DIVISION 7 – THERMAL AND MOISTURE PROTECTION
Section 07 71 23 – Manufactured Gutters and Downspouts

1. Profile: To suit gutters and downspouts.
2. Anchoring Devices: Type as recommended by manufacturer.
3. Supports:
 - a. Gutters: Furnish brackets and straps as recommended by manufacturer.
 - b. Downspouts: Furnish brackets and straps as recommended by manufacturer.
- B. Fasteners: Same material and finish as gutters and downspouts.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are ready to receive gutters and downspouts.

3.2 PREPARATION

- A. Paint concealed metal surfaces and surfaces in contact with dissimilar metals using protective backing paint to minimum dry film thickness of 15 mils.

3.3 INSTALLATION

- A. Sheet Metal:
 1. Join lengths with formed sealed watertight seams.
 2. Flash gutters to downspouts and accessories.
- B. Slope gutters to downspouts with minimum recommended slopes.
- C. Set splash pads under downspouts and secure in place.

END OF SECTION

