

# Rockton School District 140

Rockton Grade School   Whitman Post Elementary   Stephen Mack Middle School

## *Roofing Project Specification*

*Project Specification Number 20-0320*

*Rockton School District 140  
1050 E. Union St.  
Rockton, IL 61072*



### *Prepared for:*

*Rockton School District 140  
Mr. Glenn Terry, Superintendent  
Mr. Tim Ehlers, Director of Facilities and Grounds*

### *Prepared By:*

*The Tremco Roofing and Building Maintenance Group  
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*December 15, 2020*

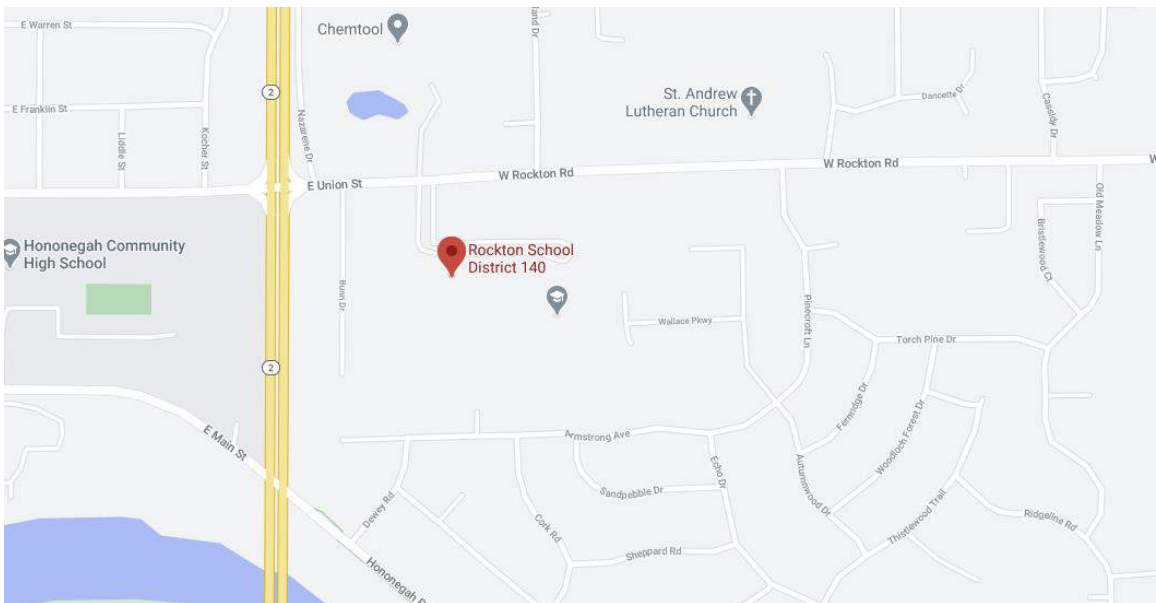
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**TREMCO**

**SATELLITE IMAGE:**



**VICINITY MAP:**



Rockton School District 140  
1050 E. Union St.  
Rockton, IL 61072

# Rockton School District 140

Rockton Grade School   Whitman Post Elementary   Stephen Mack Middle School

**ROCKTON GRADE SCHOOL  
ROOF RESTORATION  
PROJECT SPECIFICATIONS  
PROJECT NO. 20-0320  
December 15, 2020**

## **NOTICE OF INVITATION FOR BID (IFB)**

Rockton School District 140 invites bidders to submit bids to furnish the following Roof Restoration Work located at the Rockton Grade School.

This Notice Inviting Bids is for the award of a contract providing all labor, materials, permits, and services required for the roofing project at 1050 East Union St., Rockton, IL, 61072. The project scope consists of repairing damaged roofing components, removing abandoned units, and installing a new Fluid Applied Coating to the existing metal roof.

IFB and Contract Documents may be requested by emailing Tim Ehlers at [ehlers@rockton140.org](mailto:ehlers@rockton140.org). The documents will be available beginning Wednesday January 13, 2021.

Bids must be received by Wednesday February 3, 2021 at Rockton School District 140 – District Office, at 1050 East Union St., Rockton, IL, 61072 up until 3:00 P.M. CST, at which time and place bids received will be logged for evaluation. Bid opening will be promptly at 4:00 P.M on Wednesday February 3, 2021. Late bids will not be accepted.

Prospective Bidders and organizations who intend to submit a bid are required to attend the mandatory pre-bid conference. The conference is to be held on Wednesday January 13, 2021 at 10:00 A.M. CST for the purpose of answering questions and discussing requirements, at 1050 East Union St., Rockton, IL, 61072. Only those organizations that have submitted a responsive bid and attended the required pre-bid meeting will be considered in the evaluation of bids. The award will be made to the lowest responsible and responsive bidder whose bid meets the requirements of the invitation for bids. Prevailing wage rates apply for this project.

The successful bidder will be required to furnish a performance and payment bond for this project.

All communications relative to this Invitation for Bid shall be submitted via email only to [ehlers@rockton140.org](mailto:ehlers@rockton140.org) and the deadline for inquiries is no later than Monday, February 1, 2021 by end of business day at 5:00 PM CST. Rockton School District 140 at its option may respond to all questions, submitted in writing via letter or email, in the form of an addendum. No oral comments shall be of any force or effect with respect to this solicitation.

All contractors are hereby notified that they shall be properly licensed under the State laws governing their trades. Rockton School District 140 reserves the right to cancel this Notice Inviting Bids at any time, and further reserves the right to reject all submitted bids, without giving any reason for such action, at its sole discretion and without liability. All costs incurred by Bidders, as a result of preparing Bids under this Notice Inviting Bids, shall be the sole responsibility of each Bidder. This Notice Inviting Bids creates no obligation upon the Rockton School District 140 to enter into a contract.

The Bidder shall guarantee its Bid for a period of ninety (90) calendar days from the date of the opening. Award of this contract is subject to approval by the Board of Commissioners of the Rockton School District 140 of the City of Rockton, IL. The Rockton School District 140 reserves the right to waive informalities and to reject any and all bids.

Contact Tim Ehlers, Director of Building and Grounds by phone 815-624-1236, or email to [ehlers@rockton140.org](mailto:ehlers@rockton140.org).

This institution is an equal opportunity provider and employer.

DIVISION 0-BIDDING & CONTRACT REQUIREMENTS  
Section 00020 - Invitation to Bid

The Owner invites bids for the replacement of existing roofing:

**PROJECT TITLE AND LOCATION**

Roof Restoration Work

Rockton Grade School  
1050 E. Union St., Rockton, IL 61072

**BID DATE**

**EMAIL BIDS WILL BE RECEIVED BY:**  
**Tim Ehlers, Director of Facilities and Grounds at**  
**ehlers@rockton140.org by 3:00 p.m., February**  
**3<sup>rd</sup>, 2021**

**MANDATORY PRE-BID MEETING:**

**Tuesday, January 13th, 2021 at 10:00 a.m. at**  
**Rockton Grade School 1050 E. Union St.,**  
**Rockton, IL 61072**

**PAYMENT**

Progress payments will be discussed in more detail at  
the pre-construction meeting.

**OWNER**

**ROCKTON SCHOOL DISTRICT 140**  
**1050 E. Union St., Rockton IL 61072**

**PROJECT COMPLETION**

**TBD at pre-bid**

**BID SCOPE**

Single Lump Sum

**BID OPENING**

**Public**

**BID SECURITY**

10% Bid Bond or Cashier's Check  
100% Payment/Performance Bond

**AWARD OF CONTRACT**

Approximately April 2021

**SUBMIT BIDS TO**

**ehlers@rockton140.org**  
**Or**

**Mail a copy to:**  
**Rockton School District 140**  
**1050 E. Union St.**  
**Rockton, IL 61072**

DIVISION 0 - BIDDING & CONTRACT REQUIREMENTS  
Section 00300 - Bid Form

**PROJECT IDENTIFICATION:**

**ROCKTON SCHOOL DISTRICT 140  
Rockton Grade School  
Roof Restoration 20-0320**

**BID PROPOSALS TO:**

**ROCKTON SCHOOL DISTRICT 140  
ATTN: Director of Facilities and Grounds  
1050 E. Union St.  
Rockton, IL 61072**

- A. The undersigned Bidder agrees, if this bid proposal is accepted, to enter into an agreement with Owner, on the form AIA A101 or other contract indicated, to perform and furnish the Work as specified or indicated in the Bidding Documents for the Proposal price and within the proposal times indicated in this bid proposal and in accordance with the other terms and conditions of the Contract Documents
- B. In submitting this bid proposal, Bidder represents, as more fully set forth in the Agreement, that:
1. The Bid proposal will remain subject to acceptance for 180 days after the day of the proposal delivery.
  2. The Owner has the right to reject this proposal for any reason.
  3. Bidder accepts the provisions of the Instructions and Supplementary Instructions to bidders regarding disposition of Bid security.
  4. Bidder has carefully examined and compared copies of the Bidding documents.
  5. Bidder has visited and examined the Project sites and roofs and conducted such additional investigations as the Bidder deemed necessary or advisable for the purpose of determining the scope of work and all conditions affecting its performance and to become thoroughly familiar with the general, local, and site conditions and Bidder has compared the Bidding Documents with its observations and knowledge derived from the foregoing examination and investigation and has determined based thereon that there are no ambiguities, conflicts, errors or omissions in the Bidding Documents which have not been resolved adequately by Addenda issued by the District or Consultant prior to the opening of bids for the Project.
  6. Bidder is familiar with federal, state, and local laws, codes and regulations that are applicable to the Project, the performance of the Work and the conduct by Bidder of its business, and the requirements thereof and obligations of a bidder or contractor there under and bidder agrees to comply therewith.
  7. This proposal is genuine and not made in the interest of or on behalf of an undisclosed person, firm, or corporation and is not submitted in conformity with an agreement or rules of a group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited another Bidder to submit a false or sham proposal; and proposal submitter has not sought by collusion to obtain for itself an advantage over another Bidder or over Owner.
  8. Proposal submitter has received the following Addenda receipt of which is hereby acknowledged:

Date

Number

\_\_\_\_\_

Proposal Submitter \_\_\_\_\_

- C. Proposal Submitter will complete the Work indicated in and accordance with the Contract Documents for the following prices:

**BASE BID NO. 1 – 1975 Roof Section**

Rockton Grade School  
Roof Restoration – Fluid Applied

Total Bid \$ \_\_\_\_\_

Work Days to Complete \_\_\_\_\_

**ALTERNATE BID NO. 1 – 2006 Roof Section**

Rockton Grade School  
Roof Restoration – Fluid Applied

Total Bid \$ \_\_\_\_\_

Work Days to Complete \_\_\_\_\_

**UNIT PRICES**

If the required quantities of the items listed below are increased or decreased by Change Order, the adjustment unit prices set forth below shall apply to such increased or decreased quantities.

Deck Repair - Metal	\$ _____/sq.ft.
Deck Replacement – Metal	\$ _____/sq.ft.
Deck Coating – Metal	\$ _____/sq.ft.
Wood Blocking Replacement (Treated 2x6)	\$ _____/ln.ft.
Time and Material Cost	\$ _____/manhour

The Proposal is SUBMITTED ON \_\_\_\_\_, 2021

By \_\_\_\_\_  
(SEAL). (Firm Name)

\_\_\_\_\_  
(Name or Person Authorized to Sign) (Signature)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Zip Code) (Telephone Number)

TO: [ehlers@rockton140.org](mailto:ehlers@rockton140.org)

Or

**Mail a copy to:**  
**Rockton School District 140**  
**1050 E. Union St.**  
**Rockton, IL 61072**

I/We \_\_\_\_\_ Of

\_\_\_\_\_ Agree  
to supply all necessary labor, material, transportation, delivery and services for the execution of the Work described above in complete accordance with the Contract Documents for the stipulated sums.

**Note: This project must be started within the provided schedule**

- D. Proposal submitter agrees that the Work will be substantially complete and ready for final payment in accordance with the Contract Documents on or before the dates or within the number of calendar days indicated.
- E. I/We will commence Work within \_\_\_\_ calendar days of a contract award and will complete all Work in accordance with the Contract Documents within \_\_\_\_ calendar days of commencement.
- F. The following submittals are attached to and made a condition of this bid:
  - 1. Insurance Certificates
  - 2. Bid Bond
  - 3. Safety Program Affidavit
  - 4. Project Schedule



## DOCUMENT 00202 – INSTRUCTIONS TO BIDDERS

## 1.1 ADVERTISEMENT FOR BIDS/LEGAL NOTICE

- A. An Advertisement for Bids/Legal Notice, published as a separate document, is part of these instructions.

## 1.2 LAWS AND REGULATIONS

- A. Applicable provisions of the laws of the State of Illinois shall be observed in the receiving of bids and awarding of contracts for the Work. Applicable provisions of the laws of the State of Wisconsin shall be observed in letting and executing the Work.
- B. Bids shall not include any Sales or Use Tax on materials, equipment and supplies incorporated in the Work or totally consumed in the Performance of the Work.

## 1.3 DEFINITIONS

- A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bids, Notice to Bidders, these Instructions to Bidders, bid forms, and other sample bidding and contract forms and certification form provided by the Owner. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor (including all referenced exhibits), Conditions of the Contract (General, Supplementary and Special if any), Drawings, Specifications, Contractor Certifications and all Addenda issued prior to execution of the Contract.
- B. Addenda are written or graphic instruments issued by the Owner or Consultant prior to the execution of the Contract that modify or interpret the Bidding Documents.
- C. The Base Bid is the sum stated in the Bid for which the bidder offers to perform the Work described or indicated in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids accepted by the Owner.
- D. An Alternate Bid is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- E. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work as described in the Bidding Documents. A Unit Price includes all costs associated with the performance of the portion of the Work for which the Unit Price is provided, including but not limited to labor, materials, equipment, transportation, overhead and profit.
- F. A Bidder is a person or entity who submits a Bid to the Owner and who meets the requirements set forth in the Bidding Documents.

- G. “Indicated” and “shown” mean as described, detailed, discussed, scheduled, referenced, or called for in, or reasonably inferable from, the Contract Documents, in order to produce a first class Work product.

#### 1.4 BIDDING DOCUMENTS

- A. Obtaining Bidding Documents: Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement for Bids/Legal Notice. Bidders shall use complete sets of Bidding Documents in preparing Bids. The Owner and Consultant assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- B. Examination of Bidding Documents and Site: Before submitting a bid, the Bidder shall carefully examine the drawings, read the specifications and all other Bidding documents, visit and examine roof and the site of the Work and perform such other investigations as the Bidder deems necessary or desirable in order to determine the scope of the Work and all conditions affecting its performance. The Bidder shall fully inform himself prior to bidding as to all existing conditions and limitations under which the Work is to be performed and he/she shall include in the bid a sum to cover the cost of all items necessary to perform the Work as set forth in the Contract Documents. No allowance will be made to the Bidder because of lack of such examination, investigation or knowledge. The submission of a bid shall be construed as conclusive evidence that the Bidder has made such examination and investigation.
- C. Interpretation or Correction of Bidding Documents: If the Bidder is in doubt as to the interpretation of any part of the Bidding Documents, or finds discrepancies in or omissions from any part of the Contract Documents, he/she must submit a written Request for Interpretation thereof not later than 5 days prior to opening of bids. Address all communications to the Owner & Consultant.

#### 1.5 ADDENDA

- A. Any interpretation, correction to, or addition to the Contract Documents will be made by written Addendum and will be delivered by email or fax to each prime Bidder of record and the plan services indicated in the Advertisement for Bids. The written Addenda constitute the only interpretations of the Contract Documents; the Owner and Consultant accepts no responsibility for any other claimed interpretations.
- B. It is the responsibility of each Bidder to verify that he/she has received all Addenda prior to submitting a bid. It is also the responsibility of each Bidder to verify that all sub-Bidders and material suppliers whose prices are incorporated in the Bidder’s bid are familiar with the Bidding Documents in their entirety, including all Addenda issued up to the time of bid opening.
- C. In the event a conflict or omission is discovered in the Bidding Documents after the issuing of the last addendum such that an interpretation cannot be issued by the Owner prior to bidding, the Bidder is directed to estimate on and provide the quantity and quality of material and labor consistent with the overall represented and indicated Work so as to provide all materials, equipment, labor, and services necessary for the completion of the Work in accordance with the Bidding Documents.

## 1.6 SUBSTITUTIONS DURING BIDDING

- A. Requests for Substitution are accepted following award of the contract only under limited conditions. Bidders are referred to “Product Requirements” for direction on the conditions under which Requests for Substitution will be considered.
- B. By submitting a bid, the Bidder represents that his/her bid is based upon the materials and equipment indicated in the Bidding Documents, which include the Addenda. The Bidders are encouraged to request approval of qualifying substitute materials and equipment when the specifications sections list materials and equipment by product/manufacturer name. Bidders’ Requests for Substitution will be received and considered by the Owner and Consultant when all of the following conditions are satisfied, as determined by the Owner and Consultant; otherwise requests will be returned without action:
1. Extensive revisions to Contract Documents are not required.
  2. Proposed changes are in keeping with the general intent of Contract Documents, including the level of quality of the Work represented by the requirements therein.
  3. The request is made at least 10 days prior to the bid date, fully documented, and properly submitted.
- C. Substitution Request Submittal
1. Requests for Substitution must be made in writing through a prime contract Bidder only. Requests for substitution of materials and equipment will be considered if received by the Owner and Consultant no later than 10 days prior to the bid opening; requests received later than 10 days prior to the bid opening, and requests not utilizing the provided Request for Substitution Form with all information completed and attached, will be rejected.
  2. Submit requests in the form and in accordance with the following:
    - a. Submit 2 copies of each written Request for Substitution for consideration, using the form provided in the Project Manual. Identify the product or the fabrication or installation method to be replaced in each request. Include related specification sections and drawing number.
    - b. Provide complete documentation on both the product specified and the proposed substitute including the following information as appropriate:
      - 1) Comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
      - 2) Copies of current, independent third-party test data of salient product or system characteristics.
      - 3) Samples where applicable or requested.
      - 4) A detailed comparison of significant qualities of the proposed substitute with those of the work specified.
      - 5) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors, which will become necessary to accommodate the proposed substitute.
      - 6) Illinois Licensed Professional Engineer report, signed and sealed by Engineer stating system is equal to or superior to the system specified.
    - c. Provide certification by the manufacturer that the substitute proposed is equal to or superior in every respect to that required by the Contract Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the application indicated. The Bidder in submitting the Request for Substitution waives the right to additional payment or an extension of Contract

Time because of the failure of the substitute to perform as represented in the Request for Substitution.

- d. Any material submitted as equal to or superior to the specified material must be accompanied by a report signed and sealed by a professional engineer licensed in the state in which the installation is to take place.

D. Owner's Action

- 1. The Owner and Consultant may request additional information or documentation necessary for evaluation of the request. The Owner or Consultant will notify all Bidders of acceptance of the proposed substitute by means of an Addendum to the Bidding Documents.

- E. Owner's approval of a substitute during bidding does not relieve the Contractor of the responsibility to submit required shop drawings and to comply with all other requirements of the Contract Documents.

1.7 BIDDING PROCEDURES

A. Form Of Bid

- 1. Bids must be submitted on the Bid Form provided, properly executed and with all items filled out in ink or typed. Do not change or add words to the Bid Form. Unauthorized conditions, qualifications, limitations, or provisions on or attached to the Bid Form may be cause for rejection of the bid. Bidder's information on the Bid Form that is altered by erasure or by interlineation prior to submittal must be initialed and explained by notation on the Bid Form above the signature of the Bidder. All signatures must be witnessed.

B. Submission Of Bids

- 1. Each bid shall be delivered to the location indicated on the Bid Form on or before the day and hour set for receipt and opening of bids.

Bid for (name of prime contract)	_____
Name of Project	_____
Bidder's Name	_____
Bidder's Address	_____
Contractor's License No.	_____
Date and Time of Bid Opening	_____

- 2. If not delivered in person, this envelope shall be enclosed in a second envelope for posting to the location indicated for receipt of bids. This envelope shall be addressed as follows:

Bid for (name of prime contract)	_____
Owner name	_____
Street address OR Post Office Box 0000	_____
City Name, State, Zip Code	_____
Contractor's License No.	_____
Date and Time of Bid Opening	_____

Date and Time of Bid Opening

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3. It is the sole responsibility of the Bidder to see that his/her bid is received in proper time. No faxed or e-mail bid or modification of a bid will be considered. No bids submitted after the time fixed for receiving bids will be considered; late bids will be returned to the Bidder unopened.
- C. Acknowledgement Of Addenda
1. Bidder must acknowledge all Addenda received in the spaces provided on the Bid Form. By submitting a bid, Bidder indicates that all considerations issued by addendum are incorporated in the bid.
- D. Bid Supplements
1. Attached to the Bid Form will be certain supplements that are included in this Project Manual following the Bid Form. Bidders shall complete all forms, entering "Not Applicable" where information does not apply to their portion of the Work. Absence of any of the Bid Supplements included in the Project Manual will be reason for possible rejection of bid.
- E. Contractor Certifications
1. Attached to the Bid Forms or contained in the Project Manual will be one or more certifications regarding the Bidder's compliance with applicable laws. **Failure of a bidder to complete/submit a required certification shall be the basis for immediate rejection of that Bidder's bid.** The certification of the successful Bidder shall become a part of the Contract with the Owner.
- F. Status Of Bidders
1. Proprietors submitting bids shall indicate their status as proprietors.
  2. Bidders submitting bids for partnerships shall indicate their status as partners and shall submit, upon request of the Owner within 24 hours following receipt of bids, a certified copy of the power of attorney authorizing the executor of the bid to bind the partnership.
  3. Bidders submitting bids for corporations shall indicate their status as corporations and shall submit, upon request of the Owner within 24 hours following receipt of bids, a certified copy of the board of directors' authorization for the Bidder to bind the corporation and shall affix the corporate seal on the bid.
  4. Bidders shall provide, upon request of the Owner, within 24 hours following receipt of bids, the following:
    - a. Names and addresses of proprietors, of all members of a partnership, or of the corporation's officers.
    - b. Name of county or state where the partnership is registered or where the corporation is incorporated. Corporations must be licensed to do business in the project state at the time of executing the contract.
- G. Bid Security
1. Each bid shall be accompanied by good and sufficient bid security in the form of a Bid Bond, a cashier's check, or a money order, (no cash), in the name of the Owner, for an amount not less than 10 percent of the amount of the bid, which security shall be conditioned to secure the Owner as liquidated damages, not as penalty, from loss or damage by reason of the withdrawal of the bid, or by failure of a Bidder to enter into a contract for performance of the Work should his/her bid be accepted by the Owner.

2. If a surety bond is required, it shall be written on AIA Document A301, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.
3. The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either the Contract has been executed and bonds, if required, have been furnished, or the specified time has elapsed so that Bids may be withdrawn, or all Bids have been rejected.

#### 1.8 MODIFICATION AND WITHDRAWAL OF BIDS

- A. A bid may be withdrawn on personal requests received from Bidder prior to submission time. A withdrawn bid may be resubmitted up to submission time. **Negligence or error on the part of the Bidder in preparing his/her bid confers no right for withdrawal of the bid after it has been opened.**
- B. Telegraphic and faxed bids will not be considered. Email bids are acceptable.
- C. No Bidder may withdraw a bid within 180 days following the opening of bids.

#### 1.9 AWARD OR REJECTION OF BIDS

- A. The Contract, if awarded, will be awarded to the lowest responsive and responsible Bidder, subject to the Owner's right to reject any or all bids and to waive any informality in the bids or in the bidding. Failure to complete all information required on the Bid Form and Bid Form Supplements, may result in rejection of bid. The Owner shall have the right to accept alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low bidder on the basis of the sum of the Base Bid, Unit Prices and Alternates accepted.
- B. Bids may be rejected if the Bid Form shows any unexplained erasures, omissions, alterations of form, additions not called for, added restrictions or qualifying conditions or other irregularities of any kind.
- C. The Owner and Consultant may make such investigations as he/she deems necessary to determine the responsibility of the Bidder and the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Owner and Consultant all such information for this purpose as the Owner and Consultant may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such Bidder fails to satisfy the Owner and Consultant that such Bidder is properly qualified and able to carry out the obligations of the Contract and to complete the Work contemplated therein within the Contract Time.

#### 1.10 ACCEPTANCE

- A. The acceptance of a bid will be a Notice of Award, signed by a duly authorized representative of the Owner; no other act by the Owner or his/her agents shall constitute the acceptance of a bid. The acceptance of a bid by the Owner shall bind the successful Bidder to execute the Contract. The Bidder to whom the Contract is awarded by the Owner, shall, sign and deliver to

the Owner for execution by the Owner all required copies of the Agreement, along with all required insurance and bonding documents. The rights and obligations provided for in the Contract shall become effective upon the parties only with formal execution of the Agreement by the Owner.

#### 1.11 BONDS AND CERTIFICATES

- A. Unless otherwise stipulated in the Bidding Documents, the Bidder shall deliver to the Owner a Performance Bond, a Payment Bond, and a Labor and Material Bond, each in the amount of 100 percent of the Contract Sum, with a corporate surety authorized to transact business in the Project State, within 3 days following execution of the Contract, or prior to commencement of the Work, whichever occurs first. Attorneys-in-fact who sign bonds must file with each bond a certified and effective dated copy of their power of attorney.
- B. Satisfactory certificates of insurance in the amounts specified in the Contract Documents shall be furnished prior to commencement of Work.
- C. All bonds and policies or certificates of insurance must meet with the approval of the Owner before the Contractor will be allowed to commence the Work. Failure or refusal to furnish or to furnish on a timely basis bonds or insurance policies or certificates in a form satisfactory to the Owner shall subject the Bidder(s) to forfeiture of bid bond. Delay in commencement of the Work as the result of delay in the furnishings of the required bonds and/or policies or certificates of insurance shall not extend the Contract time.
- D. The form of the Agreement that the successful Bidder, as Contractor, will be required to execute is the form of Agreement referenced in the Project Manual.

END OF SECTION 00202

## SECTION 01100 - SUMMARY

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Work covered by the Contract Documents.
  - 2. Type of the Contract.
  - 3. Work under other contracts.
  - 4. Use of premises.
  - 5. Owner's occupancy requirements.
  - 6. Work restrictions.
  - 7. Specification formats and conventions.

## 1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Rockton School District 140 – Restoration Project.  
Project Location: Rockton Grade School
- B. Owner: Rockton School District 140

## 1.4 TYPE OF CONTRACT

- A. Project will be carried out under a single prime contract.

## 1.5 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

## 1.6 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as discussed during pre-bid meeting.



- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
  - 2. Driveways and Entrances: Keep driveways, parking lots, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  - 3. Sanitary Facilities: The Contractor shall provide adequate, temporary chemical toilets for use by his employees. The toilets shall be in place at the project site when the work is commenced. Upon completion of the Work, remove these facilities and all traces thereof.
- C. Parking: Park in designated areas only. Parking shuttle is the responsibility of the Contractor. Obtain and display Owner-furnished parking permits. Non-permitted vehicles and vehicles located in areas other than approved parking areas must be attended or they will be subject to towing.
- D. Deliveries: Provide representative to receive all materials and offload at the job site. The Owner will refuse all deliveries to other locations.
- E. Personnel Identification: All construction personnel in occupied portions of the facility must wear Owner-furnished identification badges at all times. Personnel without proper identification are subject to removal from the site by the Owner.
- F. Safety and Security: Comply with Owner's requirements related to security and fire drills and alerts.
- G. Burning/Welding Operations: Comply with Owner's requirements related to Burning and Welding permits. Coordinate turning off of fire/smoke detection systems in affected areas. Contractor shall be responsible for Fire Department response fees related to construction operations.
- H. Smoking: No smoking is allowed on the premises
- I. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

## 1.7 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

2. Provide not less than 72 hours notice to Owner of activities that will affect Owner's operations.

## 1.8 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed outside the existing building during normal business working hours Monday through Friday, except otherwise indicated.
  1. Weekend Hours: Will be discussed during pre-bid meeting
  2. Early Morning Hours: Will be discussed during pre-bid meeting
  3. Hours for Utility Shutdowns: Will be discussed during pre-bid meeting
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  1. Notify Owner not less than 3 days in advance of proposed utility interruptions.
  2. Do not proceed with utility interruptions without Owner's written permission.

## 1.9 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where used within a sentence or phrase.

END OF SECTION 01100

## Scope of Work

### ROOF SYSTEM - METAL RESTORATION

Wire brush and prepare areas of visible rust down to a smooth clean surface

Repair any damage or or defects to the existing metal roof, flashing and trim

Clean the existing roof system with a high pressure power washer of atleast 2000 psi prior to application: All surfaces must be clean, dry, solid and free of dirt, grease, oil, algae & other debris

Replace all loose fasteners with new oversized gasketed fastners

Prime all areas with specified primer and application rates

The base of all roof penetrations must be sealed with SolarGard Seam Sealer at the rate of 15 Sq. Ft per gallon per course in a three course application with permafab reinforcement (sealer/fabric/sealer)

All lap seams (horizontal & vertical) must be treated with back-brushing SolarGard seam sealer.

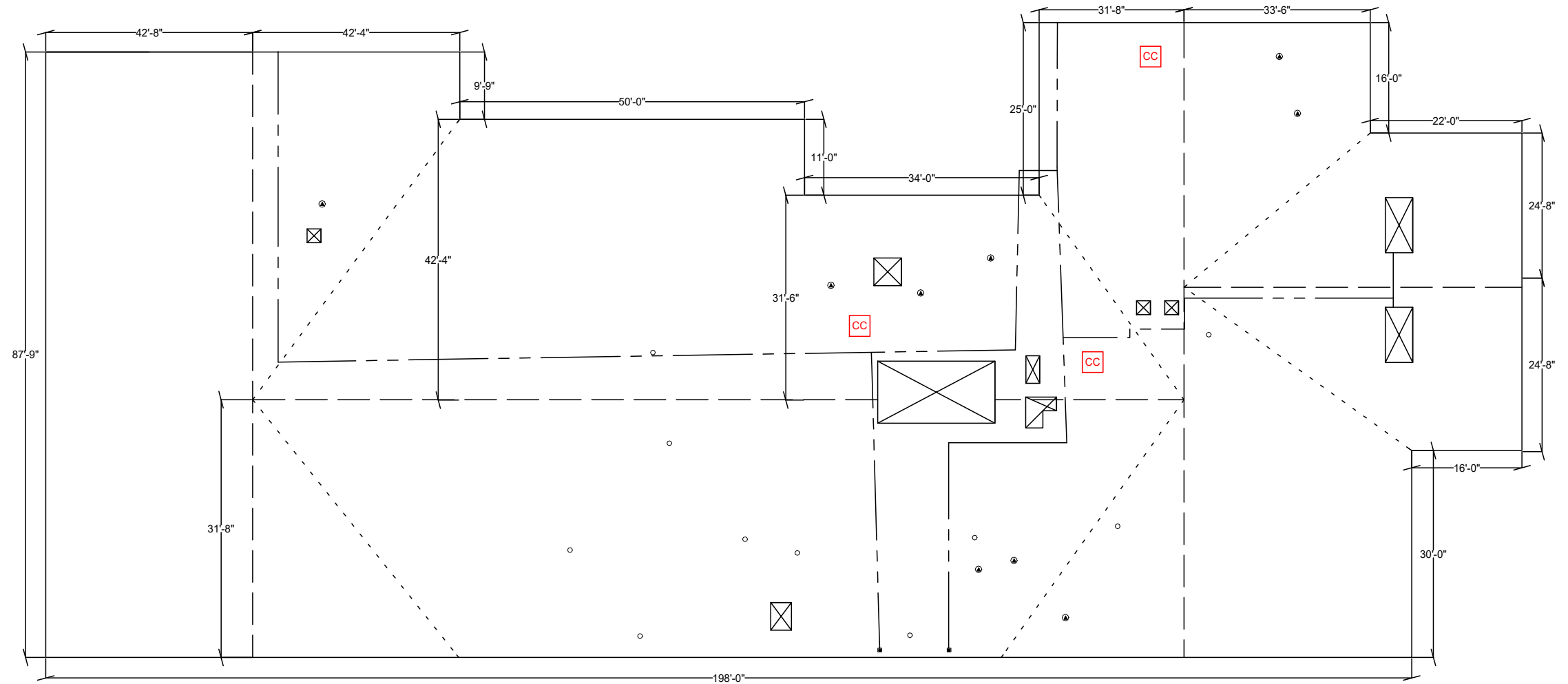
Seams with openings greater then 1/8" must be fastened down with self tapping gasketed fasteners and then sealed with a three course application

Encapsulate all fasteners with Solar guard seam sealer at an approx rate of 200-250 fasteners per gallon

SolarGard seam sealer must cure for 24-48 hours prior to the application of the restoration coating

Apply SolarGard Hy-Build as specified. On metal roofs with with irregular panel and rib design, multiply feet by 1.15 to calculate actual surface area to be coated.

Reseal all existing sealnt joints on all penetrations, coping, counterflashing, etc. throughout the roof



ROOF PLAN



ROCKTON GRADE SCHOOL

1050 EAST UNION STREET  
ROCKTON, IL 61072

**TREMCO**  
Construction Products Group

REVISED	DATE
	12.3.2020
	SCALE
	AS SHOWN
	COMM. No.
	PRJ. MGR.
	DRAWN BY
	RJC

ROOF PLAN

DRAWING No.

RP1

## SECTION 070150.71 - RESTORATION OF METAL ROOFING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Roof coating preparation including restoration of metal roof panel joints, fasteners, and flashing, and cleaning preparation for coating.
  - 2. Application of coating on metal roofing.
- B. Related Requirements:
  - 1. Division 00 Document "Available Information," including the following pre-construction test report attachments.
    - a. Roofing fastener inspection.
    - b. Photographic survey of existing roof conditions.
  - 2. Division 01 Section "Summary" for use of the premises and phasing requirements, and for restrictions on use of the premises due to Owner or tenant occupancy.

#### 1.2 MATERIALS OWNERSHIP

- A. Demolished materials shall become Contractor's property and shall be removed from Project site.

#### 1.3 DEFINITIONS

- A. Roofing Terminology: Refer to glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Existing Roofing System: Metal roofing, and components and accessories between deck and metal roofing.
- C. Roofing Coating Preparation: Existing roofing that is to remain and be prepared to accept restorative coating application.
- D. Patching: Removal of a portion of existing metal roofing system from deck or removal of selected components and accessories from existing metal roofing system and replacement with similar materials.
- E. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.

- F. Existing to Remain: Existing items of construction that are not indicated to be removed.
- G. Manufacturer/Roofing Manufacturer: Manufacturer of roofing restoration products, unless otherwise indicated.

#### 1.4 ROOFING CONFERENCES

- A. Roofing Rehabilitation Preinstallation Conference: Conduct conference at Project site to review methods and procedures related to roofing system.
  - 1. Meet with Owner, roofing coating materials manufacturer's representative; roofing coating Installer including project manager and foreman; and installers whose work interfaces with or affects rehabilitation including installers of roof accessories and roof-mounted equipment requiring removal and replacement as part of the Work.
  - 2. Review methods and procedures related to coating preparation, including metal roofing coating system manufacturer's written instructions.
  - 3. Review temporary protection requirements for existing roofing system that is to remain uncoated, during and after installation.
  - 4. Review roof drainage during each stage of coating and review roof drain plugging and plug removal procedures.
  - 5. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 6. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect coating.
  - 7. Review HVAC shutdown and sealing of air intakes.
  - 8. Review shutdown of fire-suppression, -protection, and -alarm and -detection systems.
  - 9. Review governing regulations and requirements for insurance and certificates if applicable.
  - 10. Review existing conditions that may require notification of Owner before proceeding.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product specified.
- B. Sustainable Design Submittals:
  - 1. Product Test Reports: For roof coating, indicating that coated roof will comply with solar reflectance index requirements.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Roofing Inspector.
- B. Contractor's Product Certificate: Submit notarized certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing rehabilitation system.
- D. Warranties: Unexecuted sample copies of special warranties.
- E. Photographs or Video Recordings: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, which might be misconstrued as having been damaged by coating operations. Submit before Work begins.
- F. Inspection Reports: Daily reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions required and carried out.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: To include in maintenance manuals.
- B. Warranties: Executed copies of approved warranty forms.

#### 1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and the following:
  - 1. Qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Approval of Other Manufacturers and Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:
  - 1. Product data, including certified independent test data indicating compliance with requirements.
  - 2. Samples of each component.
  - 3. Sample submittal from similar project.
  - 4. Project references: Minimum of five installations of specified products with Owner and Architect contact information.

5. Sample warranty.
  6. Approved manufacturers must meet separate requirements of Submittals Article.
- C. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
- D. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
1. An authorized full-time technical employee of the manufacturer.

#### 1.9 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with rehabilitation work only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.
1. Store all materials prior to application at temperatures recommended by manufacturer.
  2. Apply coatings within range of ambient and substrate temperatures recommended by manufacturer.
  3. Do not apply roofing in snow, rain, fog, or mist.
- B. Protect building to be rehabilitated, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from rehabilitation operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
- E. Owner will occupy portions of building immediately below re-coating area. Conduct re-coating so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

#### 1.10 WARRANTY

- A. Manufacturer: Manufacturer's standard warranty form, covering work of this Section and extended system components indicated, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period.
1. Warranty Period: 12 years from date of completion.

- B. Installer Warranty: Installer's warranty signed by Installer, covering the Work of this Section (and extended system components indicated) (, on form acceptable to Roofing Manufacturer and Owner) (, on form included in Project Manual).
  - 1. Warranty Period: 2 years from date of completion.
- C. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
  - 1. Inspections to occur in following years: 2, 5, and 10 following completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by a manufacturer meeting qualification requirement in Quality Assurance Article.
- B. Basis-of-Design Manufacturer/Product: The roof system specified in this Section is based upon products of Tremco, Inc., Beachwood, OH, (800) 562-2728, [www.tremcoroofing.com](http://www.tremcoroofing.com) that are named in other Part 2 articles. Provide specified products.

### 2.2 PERFORMANCE REQUIREMENTS

- A. General: Provide coated metal roofing system that remains weathertight; does not permit the passage of water; and resists specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.

### 2.3 MATERIALS, GENERAL

- A. General: Restoration materials recommended by roof coating manufacturer for intended use and compatible with components of existing metal roofing system.

### 2.4 METAL COATING MATERIALS

- A. Metal Restoration Coating:
  - 1. Acrylic Coating, Elastomeric: High-solids breathable acrylic polymer coating formulated for use on masonry, EIFS, stucco and metal substrates.
    - a. Basis of design product: Tremco, Solargard Hy-Build.
    - b. Tensile Strength at 77 deg. F, (25 deg. C): 375 psi (2585 kPa).
    - c. Tear Resistance, ASTM D522: 135 lbf/in (23 kN/m).



- d. Elongation at 77 deg. F, (25 deg. C) ASTM D2370: 200 percent.
- e. Flexibility at -15 deg F (-26 deg C), ASTM D522: Pass 1/2-inch mandrel bend.
- f. Solids by volume, minimum ASTM D5201): 50 percent.
- g. Water Vapor Permeance, ASTM E96: 12 perms.
- h. Minimum thickness, Metal Roof Applications: 32 mils (0.81 mm) wet.

B. Metal Primer:

- 1. Acrylic corrosion-resistant primer formulated for use with acrylic emulsion metal coatings.
  - a. Basis of design product: Tremco, Solargard Rust Primer WB.
  - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 3 g/L.
  - c. Solids, by weight: 50 percent.
  - d. Application; 100 to 200 sq. ft per gal: 8 to 16 wet mils, (0.20 - 0.40 mm) wet.

2.5 AUXILIARY MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and roofing coating system.

B. Seam Reinforcing Fabric:

- 1. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings and as a protection layer under pavers or stone aggregates.
  - a. Basis of design product: Tremco, Permafab.
  - b. Tensile Strength, Minimum, ASTM D1682: 50 lbf (23 kg) avg..
  - c. Elongation, Minimum, ASTM D1682: 60 percent.
  - d. Tear Strength, Minimum, ASTM D1117: 16 lbf (7.3 kg) avg..
  - e. Weight: 3 oz./sq. yd (102 g/sq. m).

C. Seam Sealer Mastic: Waterproof seam and fastener patching material.

- 1. Elastomeric Seam Sealer: White, single-component high solids moisture curing aliphatic polyurethane sealant, low-VOC, formulated for compatibility and use with specified roofing substrates.

- a. Basis of design product: Tremco, SOLARGARD Seam Sealer.
  - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 75 g/L.
  - c. Tensile Strength, ASTM D412: 270 psi (1861 kPa).
  - d. Tear Strength, ASTM D412: 35 pli.
  - e. Elongation, ASTM D412: 700 percent.
- D. Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.
- 1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
    - a. Basis of design product: Tremco, TremSEAL Pro.
    - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
    - c. Hardness, Shore A, ASTM C661: 40.
    - d. Adhesion to Concrete, ASTM C794: 35 pli.
    - e. Tensile Strength, ASTM D412: 350 psi (2413 kPa).
    - f. Color: Closest match to substrate.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM 4470; designed for fastening metal roofing components to substrate; tested by fastener manufacturer for required pullout strength; and acceptable to roofing system manufacturer.
- F. Metal Flashing Sheet: Provide metal flashing sheet matching type, thickness, finish, and profile of existing metal flashing and trim.

### PART 3 - EXECUTION

#### 3.1 EXISTING WARRANTIES

- A. Notify warrantor of extent of work. Do not proceed with work that will diminish Owner's protection under existing warranties unless directed by Owner.

#### 3.2 EXAMINATION

- A. Examine existing roofing substrates, with Installer present, for compliance with requirements and for other conditions affecting application and performance of roof coatings

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
2. Verify compatibility with and suitability of substrates.
3. Verify that substrates are visibly dry and free of moisture.
4. Verify that metal roofing is free of rust affecting structural integrity of roofing, or other indications of impending metal roof system failure.
5. Application of coatings indicates acceptance of surfaces and conditions.

### 3.3 PREPARATION

- A. Protect existing roofing system that is indicated not to be coated, and adjacent portions of building and building equipment.
  1. Comply with warranty requirements of existing roofing manufacturer.
  2. Maintain temporary protection and leave in place until roofing rehabilitation has been completed.
- B. Shut down air intake equipment in the vicinity of the Work in coordination with the Owner. Cover air intake louvers before proceeding with rehabilitation work that could affect indoor air quality or activate smoke detectors in the ductwork.
  1. Verify that rooftop utilities and service piping affected by the Work have been shut off before commencing Work.
- C. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors.
  1. Do not permit water to enter into or under existing metal roofing system components that are to remain.

### 3.4 ROOFING COATING PREPARATION

- A. Metal Roofing Surface Preparation:
  1. Remove ridges, buckles, failed or loose roofing fasteners, and other substrate irregularities from existing metal roofing that would inhibit application of uniform, weathertight coating.
  2. Repair metal roofing at locations where irregularities have been removed.
  3. Provide replacement fasteners where required.
  4. Clean substrate of contaminants such as dirt, debris, oil, and grease that can affect adhesion of coating by power washing at minimum 2000 psi. Remove existing coatings if any. Allow to dry thoroughly.

5. Verify that existing substrate is dry before proceeding with application of coating.
6. Perform adhesion testing before proceeding with application of coating.

### 3.5 FLASHING REPAIR

- A. Repair existing base flashings around parapets, curbs, walls, and penetrations.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.
- C. Repair flashings, copings, and other roof-related sheet metal and trim elements. Reseal joints, replace loose or missing fasteners, and replace components where required to leave in a watertight condition.

### 3.6 ROOF COATING APPLICATION

- A. Primer: Spot prime cleaned rusted or bare areas with metal primer at manufacturer's recommended application rate and allow to dry.
- B. Metal Roofing Seam Reinforcement Plies: Coat horizontal and vertical seams with detail course of seam sealer according to manufacturer's written instructions. Embed seam reinforcement fabric in seam sealer.
- C. Coating: Apply number of coats and thickness of coats indicated in Part 2 product listing and as required in manufacturer's written instructions. [Apply minimum of two coats.]
- D. Joint Sealant: Apply joint sealant at exposed movement joints, terminations, and where required for complete weathertight application.

### 3.7 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 070150.71

## SECTION 06105 - MISCELLANEOUS CARPENTRY

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following:
  1. Rooftop equipment bases and support curbs.
  2. Wood blocking, cants, and nailers.

## 1.3 DEFINITIONS

- A. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  1. NELMA - Northeastern Lumber Manufacturers Association.
  2. NLGA - National Lumber Grades Authority.
  3. SPIB - Southern Pine Inspection Bureau.
  4. WCLIB - West Coast Lumber Inspection Bureau.
  5. WWPA - Western Wood Products Association.

## 1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
  2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
  3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

- B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:

1. Preservative-treated wood.

## 1.5 QUALITY ASSURANCE

- A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria":

1. Miscellaneous lumber.
2. Hardboard underlayment.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
3. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA C2 (lumber), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and one of the following:
  - a. Chromated copper arsenate (CCA).
  - b. Ammoniacal copper zinc arsenate (ACZA).
  - c. Ammoniacal, or amine, copper quat (ACQ).
  - d. Copper bis (dimethyldithiocarbamate) (CDDC).

- e. Ammoniacal copper citrate (CC).
  - f. Copper azole, Type A (CBA-A).
  - g. Oxine copper (copper-8-quinolinolate) in a light petroleum solvent.
2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry material after treatment to a maximum moisture content of 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
  3. Wood framing members less than 18 inches (460 mm) above grade.
  4. Wood floor plates that are installed over concrete slabs directly in contact with earth.

## 2.3 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
1. Rooftop equipment bases and support curbs.
  2. Blocking.
  3. Cants.
  4. Nailers.
- B. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:
1. Mixed southern pine, No. 2 grade; SPIB.
  2. Hem-fir or Hem-fir (north), Standard or 3 Common grade; NLGA, WCLIB, or WWPA.
  3. Spruce-pine-fir (south) or Spruce-pine-fir, Standard or 3 Common grade; NELMA, NLGA, WCLIB, or WWPA.
  4. Eastern softwoods, No. 3 Common grade; NELMA.
  5. Northern species, No. 3 Common grade; NLGA.
  6. Western woods, Standard or No. 3 Common grade; WCLIB or WWPA.

## 2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Wood Screws: ASME B18.6.1.
- C. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M).
- D. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- E. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
  1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
  2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Apply field treatment complying with AWP A M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- E. Countersink fastener heads on exposed carpentry work and fill holes with wood filler.
- F. Use fasteners of appropriate type and length. Pre-drill members when necessary to avoid splitting wood.



3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for screeding or attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

END OF SECTION 06105

## SECTION 07620 - SHEET METAL FLASHING AND TRIM

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This Section includes the following sheet metal flashing and trim:
  - 1. Formed roof drainage system.
  - 2. Formed low-slope roof flashing and trim.
  - 3. Formed wall flashing and trim.
  - 4. Formed equipment support flashing.
- B. Related Sections include the following:
  - 1. Division 6 Section "Miscellaneous Carpentry" for wood nailers, curbs, and blocking.
  - 2. Division 7 Section "07552 SBS Modified Bitumen Roofing Systems" for installing sheet metal flashing and trim integral with roofing membrane.
  - 3. Division 7 Section "Roof Accessories" for manufactured roof accessory units.
  - 4. Division 7 Section "Joint Sealants" for field-applied sheet metal flashing and trim sealants.

## 1.3 PERFORMANCE REQUIREMENTS

- A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

## 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Samples for Initial Selection: For each type of sheet metal flashing and trim indicated with factory-applied color finishes.

## 1.5 QUALITY ASSURANCE

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" and the NRCA's most recent addition of "The NRCA Roofing and Waterproofing Manual". Conform to dimensions and profiles shown unless more stringent requirements are indicated.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.

## 1.7 COORDINATION

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
  - 2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

### 2.2 SHEET METALS

- A. Flashing Metal: ASTM A 525(86) 24 gauge, minimum pre-finished galvanized steel, manufacturer's standard color, which will be selected by the Owner.
- B. Lead Sheet: ASTM B 749, Type L51121, copper-bearing lead sheet.

### 2.3 UNDERLAYMENT MATERIALS

- A. Felts: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.

## 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
- C. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized, heavy bodied for hooked-type expansion joints with limited movement.
- D. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

## 2.5 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" and the NRCA's most recent addition of "The NRCA Roofing and Waterproofing Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.
- B. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
- C. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
  - 1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" and FMG Loss Prevention Data Sheet 1-49 for application but not less than thickness of metal being secured.

## 2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Copings: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 10-foot- (3-m-) long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight.
  - 1. Joint Style: Butt, with 12-inch- (300-mm-) wide concealed backup plate.
  - 2. Fabricate copings from the following material:
    - a. Prepainted, Metallic-Coated Steel: 0.0396 inch (1.0 mm) thick.

- B. Roof and Roof to Wall Transition Expansion-Joint Cover: Fabricate from the following material:
  - 1. Prepainted, Metallic-Coated Steel: 0.0336 inch (0.85 mm) thick.
- C. Base Flashing: Fabricate from the following material:
  - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.7 mm) thick.
- D. Counterflashing: Fabricate from the following material:
  - 1. Prepainted, Metallic-Coated Steel: 0.0217 inch (0.55 mm) thick.
- E. Roof-Penetration Flashing: Fabricate from the following material:
  - 1. Lead: 4.0 lb/sq. ft. (1.6 mm thick), hard tempered.
  - 2. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 3. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.7 mm) thick.
- F. Roof-Drain Flashing: Fabricate from the following material:
  - 1. Lead: 4.0 lb/sq. ft. (1.6 mm thick), hard tempered.

## 2.7 MISCELLANEOUS SHEET METAL FABRICATIONS

- A. Equipment Support Flashing: Fabricate from the following material:
  - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.7 mm) thick.
- B. Overhead-Piping Safety Pans: Fabricate from the following material:
  - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.7 mm) thick.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.
  - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
  - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Torch cutting of sheet metal flashing and trim is not permitted.

- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
  - 1. Bed flanges in thick coat of asphalt roofing cement where required for waterproof performance.
- C. Seal joints with butyl sealant as required for watertight construction.
  - 1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).

### 3.3 ROOF DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.
- B. Downspouts: Join sections with 1-1/2-inch (38-mm) telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch (25 mm) away from walls; locate fasteners at top and bottom and at approximately 60 inches (1500 mm) o.c. in between.
  - 1. Provide elbows at base of downspout to direct water away from building.
- C. Splash Pans: Install where downspouts discharge on low-sloped roofs. Set in asphalt roofing cement compatible with roofing membrane.

### 3.4 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements and SMACNA's "Architectural Sheet Metal Manual." and the NRCA's most recent addition of "The NRCA Roofing and Waterproofing Manual". Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.
- B. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
- C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for butyl sealant, extending a minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.
- D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with butyl sealant.

- E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:
  - 1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
  - 2. Seal with butyl sealant and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

### 3.5 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07620