

SECTION 077100 - PREFABRICATED FASCIAS COPINGS AND EXPANSION JOINTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Work included: Furnishing and installing factory fabricated and finished raised edge, gravel stop, coping, and expansion joint systems.

1.02 RELATED SECTIONS

- A. Section 076200 – Sheet Metal Flashing and Trim
- B. Section 075552 – Modified Bitumen Membrane Roofing

1.03 REFERENCE STANDARDS

References in these specifications to standards, test methods, codes etc., are implied to mean the latest edition of each such standard adopted. The following is an abbreviated list of associations, institutions, and societies which may be used as references throughout these specifications.

FM	Factory Mutual Engineering and Research Norwood, MA
ANSI	American National Standards Institute Washington, DC
SPRI	Single Ply Roofing Industry Waltham, MA

1.04 SUBMITTALS

- A. Submittals Prior to Contract Award:
 - 1. Submit a letter from the approved roofing membrane manufacturer confirming that the factory fabricated metal accessory systems furnished for the project are supplied or manufactured by the approved roofing membrane manufacturer and that each component section is embossed with the approved roofing membrane manufacturer's logo.
 - 2. Latest edition of the prefabricated metal component supplier's specification.
 - 3. Latest edition of prefabricated metal component supplier's Installer's Guide for gravel stop system.

4. Samples: Available on request; sized to represent metal components adequately.
5. Copy of the roofing system manufacturer's inclusion addendum offering coverage of the prefabricated systems under the standard terms of the roofing guarantee.

1.05 QUALITY ASSURANCE

- A. Agency Approvals: The proposed factory fabricated metal component shall conform to the following requirements. No other testing agency approvals will be accepted.
 1. The roof perimeter fascia systems shall be certified through third party verification by the manufacturer/supplier to meet performance design criteria according to the most recent edition of ANSI/SPRI/FM 4435/ES-1: Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.
 2. ANSI/SPRI ES-1 RE-2 Test Method for UL Classification Rating of 135 psf for Roof Perimeter Fascia Systems.
- B. Scope of Work: The work to be performed under this specification shall include but is not limited to the following: Attend necessary job meetings and furnish competent and full time supervision, experienced mechanics, all materials, tools, and equipment necessary to complete, in an acceptable manner, the prefabricated metal installation in accordance with this specification. Comply with the latest written application instructions of the supplier of the prefabricated metal components.
- C. Local Regulations: Conform to regulations of public agencies, including any specific requirements of the city and/or state of jurisdiction.
- D. Manufacturer Requirements:
 1. Ensure that the factory fabricated metal components are embossed with the roofing membrane manufacturer's logo.
 2. Ensure that the factory fabricated metal component manufacturer/supplier provides direct trained company personnel to attend necessary job meetings, perform periodic inspections as necessary, and conducts a final inspection upon successful completion of the project

1.06 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Delivery: Deliver materials in the manufacturer's original packaging.
- B. Storage: Store materials out of direct exposure to the elements.
- C. Strippable Film Masking: Do not remove the strippable film masking on the metal component until immediately following installation. Do not allow extended UV or heat exposure to metal components covered with strippable film masking.

- D. Damaged Material: Any materials that are found to be damaged will be automatically rejected, removed and replaced at the Contractor's expense.

1.07 PROJECT/SITE CONDITIONS

A. Requirements Prior to Job Start

1. Verify that all other trades responsible for related work are complete prior to installing the prefabricated metal components.
2. Mounting surfaces shall be straight and secure and provide adequate widths to properly support the prefabricated metal component.
3. Safety: Familiarize every member of the application crew with all safety regulations recommended by OSHA, SMACNA and other industry or local governmental groups.

B. Protection Requirements

1. Prefabricated Metal Component Protection: Provide protection against mechanical damage for newly applied prefabricated metal component surfaces throughout the project.
2. Limited Access: Prevent access by the public to materials, tools and equipment during the course of the project.
3. Debris Removal: Remove all debris daily from the project site.
4. Site Condition: Complete, to the owner's satisfaction, all job site clean-up including building interior, exterior and landscaping where affected by the construction.

1.08 GUARANTEE/ ADDENDUM

- A. Roof Membrane Guarantee Addendum: In addition to the specified guarantee, furnish the Owner with the roofing manufacturer's inclusion addendum to the guarantee offering coverage of the prefabricated gravel stop, coping, and expansion joint systems under the standard terms of the roof membrane/roof system guarantee.
- Siplast Paraguard Roof Perimeter System Inclusion Addendum or an Addendum from the manufacturer that was pre-approved under paragraph 3.3 "Instructions to Bidders"

PART 2 PRODUCTS

2.01 PREFABRICATED METAL COMPONENT SUPPLIER

- A. This design is based on products by Siplast, however subject to compliance with requirements, equal products or systems are acceptable with prior approval; written requests may be submitted in accordance with "Instructions to Bidders" paragraph 3.3.

- Siplast
1000 East Rochelle Blvd.
Irving, TX 75062

B. Factory fabricated Gravel Stop: Factory fabricated gravel stop components shall be factory formed according to the requirements of the membrane manufacturer and embossed with the roofing manufacturer's logo. The gravel stop system shall consist of the following components:

- A factory formed retainer cleat with pre-punched nail holes fabricated from 24 gauge, G90 galvanized steel, secured using galvanized roofing nails.
- A factory formed gravel stop with pre-punched nailing holes, secured using galvanized roofing nails. fabricated from minimum 22 gauge stainless steel having a mill finish.
- Factory formed concealed splice plates.
- Factory formed welded miters.

- Proform Gravel Stop, by Siplast, Inc., Irving, TX (800) 922-8800 or product from pre-approved manufacturer.

C. Factory fabricated Roof-To-Roof-Expansion Joint: Factory fabricated roof-to-roof expansion joint components shall be factory formed according to the requirements of the membrane manufacturer and embossed with the roofing manufacturer's logo. The roof-to-roof expansion joint system shall consist of the following components:

- A factory formed cap fabricated from minimum 22 gauge stainless steel having a mill finish.
- A factory formed traveler cleat fabricated from 20 gauge, G90 galvanized steel.

Specially designed shouldered cleat fasteners to allow for traveler cleat movement.

- Factory formed gutter/splice plates fabricated from 0.040 inch aluminum with EPDM sealing gaskets.
- Factory formed curb rails fabricated from 24 gauge, G90 galvanized steel.
- A flexible membrane vapor retarder / insulation retainer.
- Factory formed welded transitions to Proform edge, miters, end caps, tees, and crosses.

- Paraguard Roof-To-Roof Expansion Joint System, by Siplast, Inc., Irving, TX (800) 922-8800 or product from pre-approved manufacturer.

PART 3 EXECUTION

3.01 SUBSTRATE PREPARATION

- A. Perimeter Nailers: Perimeter nailers shall be flat and level to the building perimeter edge. The front edge of the nailer must be flush with the outside face or wall of the building. Anchor all perimeter nailers in strict accordance with the guidelines set forth in FM Global Property Loss Prevention Data Sheet 1-49.
- B. Curbs for Expansion Joint Components: Curbs must be straight, level, and properly anchored to the building structural deck. Any curbs, which are improperly installed or anchored, must be corrected prior to installation of the expansion joint systems.
- C. Flashing Membrane Installation: Ensure that all roofing flashing treatments used in conjunction with factory fabricated metal components are installed according to the roofing membrane manufacturer's specifications, current technical guide, and details prior to installation of the factory fabricated metal component.
- D. Surface Cleaning: Sweep or vacuum all surfaces to receive the metal components, removing all loose aggregate, soil, and foreign substances prior to installation of the factory fabricated metal components.

3.02 FACTORY FABRICATED METAL COMPONENT INSTALLATION

- A. Install metal components in accordance with the roofing/waterproofing manufacturer's instructions and the following requirements.
- B. Factory fabricated Gravel Stop
 1. Place the continuous retainer cleat to the roofing surface firmly against the perimeter nailer. The retainer cleat should be level and the nailing slots should align centered with the nailer underneath. Fasten the retaining cleat in accordance with the gravel stop system manufacturer's installation instructions.
 2. Starting at the corners, trowel a bead of the roofing manufacturer's specified mastic over the base ply of membrane where the flange of the exterior fascia is to be set. Hook the drip edge of the exterior fascia over the retainer cleat and fasten the flange through the pre-punched holes in accordance with the gravel stop system manufacturer's installation instructions. Slide a concealed joint splice plate halfway into the fascia to allow the next section to fit halfway over the joint splice plate as well. Allow a 1/8 inch gap between gravel stop sections for thermal movement. Increase the gap to 1/4 inch when installing in temperature below 40°F.
 3. After installation of the factory fabricated gravel stop is complete, ensure that the roofing stripping and finish plies are installed in accordance with the roofing membrane manufacturer's specifications and details.
- C. Factory fabricated Roof to Roof Expansion Joint

1. Fasten the curb rails to the previously flashed curbs using roofing nails every 24 inches on center.
2. Place the traveler cleat over the curb rails, allowing the horizontal slots to center over the rail. Secure the traveler cleat in accordance with the expansion joint system manufacturer's installation instructions.
3. Guttered splice plates are placed over the traveler cleat on 5 foot centers, ensuring that a splice plate is placed centered where there will be a joint in the cap sections. Set each guttered splice plate in a 1 inch dollop of the roofing manufacturer's specified elastomeric sealant.
4. Hook the bottom edge of the cap face of one side securely on the drip edge of the traveler cleat. While maintaining engagement, rotate the cap length over the cleat and press the cap firmly downward on the back edge above the traveler cleat until it locks onto the cleat. Allow a 1/8 inch gap between expansion joint sections for thermal movement. Increase the gap to 1/4 inch when installing in temperature below 40°F.
5. Isolate continuous runs of expansion joint into manageable zones to control thermal movement by securing every fifth section of expansion joint cap to the traveler cleat in accordance with the expansion joint system manufacturer's installation instructions.

3.03 FIELD QUALITY CONTROL AND INSPECTIONS

- A. Site Condition: Leave all areas around the job site free of debris, construction materials, equipment and related items after completion of job.
- B. Issuance Of The Addendum to the Roofing Membrane/System Guarantee: Complete all post installation procedures and meet the factory fabricated metal manufacturer/supplier's final endorsement for issuance of the addendum to the specified roofing/waterproofing guarantee.

END OF SECTION 077100