

SECTION 07 7200 ROOF ACCESSORIES

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 DESCRIPTION OF WORK

- A. Roof specialties which are compatible with the roofing systems specified, including:
 - 1. Drains, pipe, couplings and insulation.
 - 2. Galvanized steel roof access ladders.
 - 3. Roof walkway pads.
 - 4. Snow guard assemblies.
- B. Prepare, prime and paint miscellaneous rooftop items indicated.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Masonry - Section 04 50 00
- B. PVC Roofing - Section 07 54 19
- C. Sheet Metal Flashing & Specialties - Section 07 62 00

1.4 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. A firm (Installer) with not less than 5 continuous years experience performing Roof Specialty work similar to that required for this project, employing personnel skilled in the specified work.
 - a. The Installer shall directly employ the personnel performing the work of this section.
 - b. The Installer shall have a full time supervisor/foreman on the roof when work is in progress. The Supervisor shall have a minimum of 5 years experience in roofing work similar in nature and scope to this project, and speak fluent English.
 - 2. The Installer shall provide a reference list of at least three projects of comparable size and similar design, within a fifty mile radius of this project, which may be observed by representatives of the Owner:
 - a. The reference list shall include at a minimum, the completion date, a description of the work performed, the Owner's name - contact person - phone number and address and the Architect's name - contact person and phone number.
 - b. The Installer shall provide the reference list prior to contract award if requested.
- B. Material Quality: Obtain each product from a single Manufacturer, which has manufactured the same product in the United States of America for not less than 5 continuous years.
- C. Pre-Work Conference: Meet at the project site approximately one week prior to starting work, with the Architect, Owner and other representatives concerned about the work, to discuss the following:
 - 1. How the building will be kept watertight as work progresses.
 - 2. Generally accepted industry practice, the Manufacturer's instructions for handling and installing his products, and specified work requirements.
 - 3. The condition of the substrate (deck), curbs, penetrations and other preparatory work needed.
 - 4. Submittals, both completed and yet to be completed.
 - 5. The construction schedule, forecast weather, availability of materials, personnel, equipment and facilities needed to proceed and complete the work on schedule.
 - 6. A schedule for Architect inspections.

1.5 SUBMITTALS

- A. Submit the following items far enough in advance to obtain approval prior to performing any work:
 - 1. Pre-work site and building inspection report with photos to document conditions before work starts.
 - 2. Manufacturer's installation instructions and technical data sheets for each item. Material sample submittals are not needed unless requested to show color and texture.
 - 3. Samples of the Contractor's and Manufacturer's guarantee/warranty forms.
 - 4. Material Safety Data Sheets.
- B. Simultaneously provide all Material Safety Data Sheets needed for this project, for all specification sections - collated by section, in three ring binders. Provide two binders for each building / school.
- C. Simultaneously provide all technical submittals needed for this project, for all technical sections, collated by section.
 - 1. Technical submittals shall be prepared and made by the firm that will perform the actual work.
- D. Payment requisitions will not be processed until all submittals are received and approved.

1.6 GUARANTEE

- A. Provide a Contractor's written Guarantee which warrants that all work will remain free of material and workmanship defects and in a watertight condition for a five year period beginning upon Final Completion:
 - 1. Defective work includes but is not limited to the following types of failure: leakage, delamination, lifting, loosening, splitting, cracking, and undue expansion.
 - 2. The Contractor's Guarantee shall provide that the Contractor will make the repairs and modifications necessary to enable the work to perform as warranted at his own expense.
 - 3. The Guarantee shall include the removal and replacement of items or materials installed as part of the original work, if removal is needed to affect guaranteed repairs.
- B. Provide one Contractor's Guarantee that covers "all work performed" when a single trade contract is awarded for work specified in multiple Sections.
- C. The Guarantee shall be issued no more than 30 days before the satisfactory completion of punch list work.
- D. Guarantee coverage shall include the removal and replacement of related material installed as part of the original work, if removal is needed to make warranty repairs.
- E. Guarantee coverage may be cancelled, for the affected portion of the work, if the work is damaged by winds in excess of 72 mph, by hail, lightning, insects or animals, by failure of the structural substrate, by exposure to harmful chemicals, by other trades or vandalism, or if the Owner fails to maintain the roof and specialties in accordance with, or makes roof alterations contrary to, the Manufacturers printed recommendations.
- F. Guarantee coverage shall be reinstated, for the remainder of the original term, if the Owner restores the specialty item to the condition it was in prior to the damage occurring.
- G. The Contractor's Surety Company may add a rider to the Performance Bond which clarifies that Bond Coverage expires two years after Final Completion; i.e., Performance Bond Coverage does not run for the entire five year term of the Contractor's Guarantee.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Provide the Manufacturer's standard units, modified as necessary to comply with the specified requirements. Fabricate each unit in a shop to the greatest extent possible.

2.2 DRAINS, PIPE, COUPLINGS & INSULATION

- A. Conventional cast iron roof drains, installed with drain receivers, under deck clamps if appropriate, cast iron strainers, cast iron clamping rings and factory installed stainless steel gravel screens Series 1011 as manufactured by Jay R. Smith Manufacturing Company.
- B. Drain pipe: cast iron pipe with no hub fittings, minimum 3inch diameter, and larger to match the existing building drain lines.
- C. No-hub couplings: heavy duty rubber neoprene sleeve couplings with full length Type 304 stainless steel shields and at least 4 worm drive clamps, conforming to ASTM A564.
- D. Insulation: 1 inch thick pre-molded 3.5 lb. heavy density fiberglass pipe insulation, UL rated non-combustible with service jackets and prefabricated fitting covers.

2.3 GALVANIZED STEEL ROOF ACCESS LADDERS

- A. Fabricate ladders from 1-1/4 inch inside diameter steel pipe rails, spaced 22 inches apart, and 3/4 inch solid steel rebar rungs spaced 12 inches on center. Fit the rungs into drilled holes in the centerline of the rails, weld and grind the welds smooth. Hot dip galvanize coat the ladder and mounting brackets after fabrication. Install with Type 316 stainless steel hardware.

2.4 ROOF WALKWAY PADS

- A. 96 mil thick, rolled-out, polyester reinforced heat-weldable protection mat as manufactured by Sarnafil under the trade name SarnaTred, or approved equal.

2.5 SNOW GUARD ASSEMBLIES

- A. 2 pipe snow guard assembly consisting of 1 inch outside diameter aluminum pipes, a 1/8 inch thick Type 302 stainless steel base plate, and milled 6061-T6 aluminum snow guard block and ice flags as manufactured by Alpine Snow Guards, Model #115R and #95 Ice Flags.

2.6 PAINT AND PRIMER

- A. Alkyd base rust inhibiting exterior primer and high gloss finish paint for ferrous metal surfaces as manufactured by Benjamin Moore or equal.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Field measure existing openings. Comply with manufacturer's instructions and recommendations. Coordinate with the installation of roof deck, other substrates to receive specialty units, vapor barriers, roof insulation, roofing and flashing to ensure that each element of the work performs and fits properly, and that combined elements are waterproof and weathertight. Anchor units securely to supporting structural substrates, adequate to withstand lateral and thermal stresses as well as inward and outward loading pressures.

3.2 DRAINS, PIPE COUPLINGS & INSULATION

- A. Install new roof drains where indicated on the drawings:
 - 1. Remove existing roofing and insulation. Carefully cut opening into the existing roof deck and reinforce the underside of the deck.
 - 2. Install the drain flush with or slightly recessed below the deck surface to achieve maximum drainage.
 - 3. Support the drain with a stamped sump drain receiver, secure it with an under deck clamp.
 - 4. Connect the new drain to the existing drain line to conform to all applicable codes, and insulate the underside of the new drain and drain line.

3.3 GALVANIZED STEEL ROOF ACCESS LADDERS

- A. Install ladders at the exterior locations shown. Support and secure each ladder at the top and bottom and at intermediate points spaced a maximum of 5 feet on center. Use bolted steel

brackets, anchored with 1/2 inch diameter stainless steel epoxy set bolts. Space the ladders to provide 7 inches of toe clearance. Extend the rails 42 inches and goose-neck form them to provide additional support at the top of the ladder.

3.4 ROOF WALKWAY PADS

- A. Install walkway pads to provide a path 3 feet wide, spot adhered to a broomed gravel surface, for walkways where shown, at all roof access points, e.g.; doors, ladders and hatches, and under concrete pavers used for conduit and pipe supports.
- B. Install walkway pads to provide a 39 inches wide path where shown on the drawings, and at all roof access points, i.e., ladders and doors. Fully adhere the walkway pads and heat weld the perimeter to the roof surface.

3.5 SNOW GUARD ASSEMBLIES

- A. Install snow guard assemblies as shown on the drawings driven through the existing roofing and insulation. Install brackets spaced 4 feet on center, with a steel plate on the underside of the deck. Fasten the snow guard plate to the interior plate with four flat head stainless steel bolts with nylon locking nuts. Join pipe sections with couplings, and install end caps onto each end of all pipes. Secure each length of pipe with set screw collars or by inserting 3/16 inch cotter pins into holes drilled on each side of the center bracket.
- B. Prime and paint the steel plates on the underside of the deck with two finish coats of paint after installation.

3.6 PAINTING

- A. Scrape and wire brush roof top equipment indicated on the drawings to remove loose and peeling paint and surface rust.
- B. Install one coat of primer and two finish coats of paint using a brush or roller. Wait 24 hours for each coat of paint top dry before applying the next coat.

3.7 MISCELLANEOUS

- A. Provide and install any sealants needed, where shown or required.
- B. Perform mechanical and electrical work using skilled and licensed tradesmen.
- C. Provide new material, couplings, transition pieces, blocking, fasteners and the similar accessories needed to complete the work.

3.8 CLEANING, PROTECTION AND WATERTIGHTNESS

- A. Conduct an inspection of the interior and exterior of the building and grounds and submit a written report with photos to document any pre-existing leakage or damage, prior to performing any work.
- B. The Owner will conduct a similar inspection at the completion of the work, and the Contractor will be charged for all leakage or damage which was not documented in the Contractor's report, or repaired to the Owners satisfaction at the Contractor's expense.
- C. Provide any equipment, material and labor necessary to protect the site, the building, its contents and occupants, pedestrians, and surrounding landscaped and paved areas from damage due to the construction work or from inclement weather during construction.
- D. Do not perform work during inclement weather. Protect incomplete work and the building from damage by inclement weather which may occur unexpectedly. Make all work areas watertight at the end of each day's work.
- E. Frequently clean up all refuse, rubbish, scrap materials and debris so the work site presents a neat, orderly and workmanlike appearance.
- F. Carefully clean the roof to remove all residual debris when work is complete. After cleaning the roof, thoroughly clean all drain sumps, drain lines, leader heads and leaders. Do not allow debris to enter the drainage system.

END OF SECTION