

SECTION 07510
MODIFIED BITUMEN ROOFING SYSTEM

PART 1 GENERAL

1.1 RELATED DOCUMENTS:

- A. The provisions of the General Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section.

1.2 SECTION INCLUDES:

- A. Multi-ply mop applied modified bitumen roofing system consisting of three membrane interplys and a mineral surfaced fire rated cap sheet. System shall be installed as follows:
 - 1. Hot mopped to an approved rigid insulation substrate.
 - 2. Mechanically attached to an approved lightweight concrete substrate.
- B. Flashing material shall be an approved system by the roofing manufacturer for use with their roofing system.
- C. Torch Applied

1.3 REFERENCES

- A. FS-HH-I-1972/GEN – Polyisocyanurate Insulation.
- B. ASTM D41 – Standard Specification for Asphalt Primer for Used in Roofing, Damp-proofing, and Waterproofing.
- C. ASTM D312 – Standard Specification for Asphalt Used in Roofing.
- D. ASTM D2178 – Standard Specification for Asphalt-Impregnated Glass Felt used in Roofing and Waterproofing.
- E. NRCA - Roofing and Waterproofing Manual, Current Edition.
- F. UL - Fire Hazard Classifications.
- G. UL – Roofing System & Material Guide.
- H. ASTM D2842 – Standard Test Method for Water absorption of Rigid Cellular Plastics.
- I. ASTM E96 – Standard Test Method for Water Vapor Transmission of Materials.
- J. ASTM E108 Standard Test Methods for Fire Test of Roof Coverings.
- K. Current ASCE Minimum Design Loads for Buildings and Other Structures
- L. Florida Building Code.

1.4 SUBMITTALS

- A. Product Data: Submit specifications, installation instructions and general recommendations from manufacturers of roofing system materials, for type of roofing required.
 - 1. Include data substantiating that materials comply with requirements, including list of materials proposed for use and manufacturer's product data sheets for other products.
 - 2. Provide s228.6 0 Td (c).44014(u)-5.49451(b)-5.49451(m)8.76894(i(r)3.32943()-2.74725(u)-5.49451(s)444(

1. Provide fastening pattern layout in compliance with the Current ASCE Minimum Design Standards.
 2. Copy of product approval for the system, per FBC requirements.
- C. Samples: Submit 12" x 12" square of membrane with granule surface and base sheets.
- D. Certificates:
1. Submit Manufacturers certification that materials and components furnished conform to specified requirements and that materials furnished are compatible for decks indicated.
 2. At completion of work, submit Manufacturers certification that roofing system was installed in accordance with Manufacturers warranty requirements.
- E. Safety Provisions: Submit a complete detailed schedule of special safety provisions implemented to insure the health and safety of the people. Work shall not start without prior acceptance of these provisions by the Owner. These provisions shall include but are not limited to:
1. Maintaining existing exits and fire protection.
 2. Dust free operation.
 3. Sequencing of work.
 4. Removal of debris from work area.

- E. Rooftop Storage: Disperse material evenly across the roof to avoid concentrated loading.

1.7 PROJECT CONDITIONS

- A. Proceed with roofing work only if existing and forecasted weather conditions permit work in accordance with manufacturers' recommendations and warranty requirements.
- B. Do not apply roofing membrane to damp deck surface.

1.8 WARRANTIES

- A. Installer's Warranty: Provide written warranty signed by the roofing Installer and the Contractor agreeing to replace or repair defective components and workmanship of the total roofing system, including roofing membrane, flashing, insulation and roofing accessories as required to maintain the total roofing system in a watertight condition at no expense to the Owner, for a period of two-years after the date of substantial completion of the entire Project.
- B. Manufacturer's Warranty: Provide written warranty s

5. Soprema, Sopralene or Elastophene system equal to the GAF and Manville system.
 6. Other pre-approve equal.
- B. Membrane Characteristics: Three-layers of inter-ply felt sheets and mineral surfaced cap sheet.
1. Roof covering shall be Class A fire rating.
 2. Three-Modified Inter-ply Membrane Sheets: Premium, asphalt coated, fiberglass base sheet, ASTM D2178, Type VI.
 3. One-Modified Bitumen Cap Sheet: A fire resistant, premium, fiberglass/polyester composite reinforced, granular surfaced, modified bitumen cap sheet.
 4. Primer: ASTM D41.
 5. Roofing Cement: ASTM D4586, asbestos-free.
 6. Mineral Granules: Size No. 11 ceramic, white in color, free of fines and dust, unaffected by airborne acids and ultraviolet radiation.
- C. With pre-approval from the FI Tech Architect, may substitute 20-year 3-ply system, such as Manville 3CID-FR for rigid substrate or CLD-FR for lightweight substrate.

2.2 ACCESSORIES

- A. Roof System Vents: Manufacturer's standard spun alu

1. Due to the incompatibility of various materials with the roofing membrane, the Representative shall inspect the substrate and shall have a barrier applied for complete separation and protection of the roofing membrane and accessories.
- B. Install all vents, drains, curbs, nailers, blocking, insulation and projections through the roof before starting membrane installation.
 1. Only with Architect's written approval, proper provision for re-inspection, and continued warranty protection can these items be installed after the membrane's installation.

3.2 PREPARATION OF SUBSTRATE

- A. Insulation: The applicator shall carefully inspect all surfaces to receive insulation and assure all surfaces are satisfactory prior to beginning installation. Beginning insulation installation constitutes acceptance of substrate without recourse.
- B. Roofing Membrane: The manufacturer's Technical Service Representative shall carefully inspect the substrate receiving the roofing and provide a written report.
- C. Install all nails, blocking, vertical surfaces, etc. prior to proceeding with membrane installation.
- D. Verify that all units are properly secured in place prior to proceeding with membrane installation.

3.3 RIGID INSULIN

ritten report.

3. Apply cap sheet with minimum rate of application of modified bitumen asphalt of 20 to 30 lbs. per 100 sq ft. Apply cap sheet parallel to the underlying roofing and lap, so that the flow of water is over or parallel to, but never against the laps.
 4. Solid mop heated bitumen under and between felts and provide complete uniform coating without bitumen displacement. Felt shall not touch felt.
 5. Lay felts parallel to long dimension of roof. Do not work on or allow point loads on newly applied felts.
 6. Broom or press felts into heated bitumen providing tight, smooth lamination without wrinkles, buckles, kinks, or fish-mouths. Cut out and patch fish-mouths.
 7. Complete application of roofing system without pockets or blisters. Cut-off felts at top of cant strips.
 8. Provide mastic membrane stripping at all vertical laps and coat with non-asbestos aluminum roof coating.
 9. Embed mineral roofing granules into overrun of hot bitumen at sides and edges of cap sheet laps for an overall granule-surfaced roof.
- C. Complete installation of roofing system up to line of termination of day's work. Install temporary water cut-offs of plastic cement and base sheet strips at end of each day's work. Remove upon resumption of work.
- D. Composition Base Flashing:
1. Install in accordance with requirements of roofing system manufacturer.
 2. Install where roofing system abuts vertical surfaces and at other locations detailed.
- E. Flashings: Install metal flashings, and then flash with torch applied flashing material in such a manner as to prevent leaks.
- F. Venting: Provide aluminum one-way vent stacks for every 900 s.f. of roof area or as recommended by manufacturer.

3.6

