

## REMEDIAL SPECIFICATIONS—EXECUTION

### Base Bid—Approximately 7,600 Square Feet

- A. Adhere to all written manufacturer's installation requirements for provision of indicated system warranty.
- B. Preparation
  - 1. Remove existing ballast course and discard.
  - 2. Remove existing EPDM membrane, flashings, and sheet-metal at projections and perimeter locations and discard.
  - 3. Inspect perimeter wood blocking and replace all missing, split, and/or deteriorated wood blocking with new wolmanized blocking based on Unit Pricing.
- C. Insulation
  - 1. Replace up to 15% existing insulation with matching thickness polyisocyanurate.
    - a. Replace additional insulation as determined defective based on Unit Pricing.
  - 2. Sump insulation at drains 8'-0" x 8'-0" using tapered polyisocyanurate insulation panels.
    - a. Prime concrete decking at drain sump area using Tremprime WB primer.
    - b. Adhere tapered insulation using low rise insulation adhesive.
- D. Waterproofing Membrane
  - 1. Install new 60-mil Tremco TPA reinforced tri-polymer-alloy membrane over prepared insulation substrate.
  - 2. Position roofing ply at low point of roof and square with perimeter roof edge.
  - 3. Install field membrane ply to extend over perimeter blocking locations and secure with 1" cap nail to face of wood blocking course.
  - 4. Overlap at side and end laps 3" minimum.
  - 5. Seaming:
    - a. All surfaces must be clean and dry.
    - b. Heat welding:
      - 1) Allow hot air welder to reach proper temperature.
      - 2) Insert nozzle tip of the hot air welder into seam area. Move nozzle at a steady speed along the seam area immediately applying pressure behind the air nozzle with a neoprene roller or weighted wheel to insure positive contact of heated thermoplastic surfaces.
      - 3) Width of all welded laps shall be 1-1/2" minimum.
      - 4) Field test welded laps to insure proper construction. Perform field test after lap area cools to ambient temperature. Properly constructed laps will not separate at the lap interface when tested.

E. Flashings

1. Curb Flashings:

- a. Install additional wood blocking as required as part of Base Bid to provide a minimum of 8" flashing height from field membrane surface to top of curb.
- b. Install compatible thermoplastic flashing ply and adhere to curb using compatible bonding adhesive per manufacturer's flashing requirements.
  - 1) Extend flashing ply to top of exposed curb and secure with 1" cap nails.
  - 2) Extend flashing ply onto field of roof beyond toe of curb 3" minimum.
- c. Seal flashing ply at corners and field membrane per previous heat-welding instructions.

2. Base Flashings:

- a. Remove contaminants from base flashing substrate.
- b. Flashing height to be 8" minimum.
- c. Adhere to substrate using compatible bonding adhesive per manufacturer's flashing requirements.
- d. Install water-block sealant between at top edge of flashing ply and substrate course.
- e. Secure flashing to substrate using metal termination bar and hit-anchors placed 8" on-center.
- f. Install continuous course of Tremseal D urethane sealant to top edge of flashing to insure waterproof condition. Tool sealant to insure uniform contact with substrate course.
- g. Fabricate and install new sheet-metal counterflashing per Sheet-Metal instructions.

3. Expansion Joint:

- a. Install EPDM sheeting as to drape in expansion cavity and secure to vertical wood blocking course and adjacent substrate using 1" cap nail and/or mechanical fastener.
- b. Fill draped expansion void with compressed fiberglass batt insulation.
- c. Install thermoplastic flashing ply onto top of vertical wood blocking course secure with 1" cap nail.
- d. Continue flashing so as to extend onto adjacent substrate. Provide for building movement expansion by insuring sufficient flashing is loosely laid across expansion cavity.
- e. Install water-block sealant between at top edge of flashing ply and substrate course.
- f. Secure flashing to substrate using metal termination bar and alloy hit-anchors placed 8" on-center.
- g. Install continuous course of Tremseal D urethane sealant to top edge of flashing to insure waterproof condition. Tool sealant to insure uniform contact with substrate course.
- h. Adhere flashing ply to vertical wood blocking course using compatible bonding adhesive and extend onto field membrane 3" minimum.

E. Flashings (cont'd)

3. Expansion Joint:

- i. Seal flashing ply at corners and field membrane per previous heat-welding instructions.
- j. Fabricate and install new sheet-metal counterflashing per Sheet-Metal instructions.

4. Drains:

- a. Replace missing, broken, or PVC drains with new cast iron components.
- b. Connect new drain bowls to plumbing using no-hub connectors as part of Base Bid.
- c. Install field membrane into insulation sump and trim as required.
- d. Install water cut-off sealant course at drain bowl.
- e. Install additional non-reinforced thermoplastic drain flashing ply and heat weld to field membrane. Extend into drain bowl.
- f. Install drain clamping ring. Install cast iron strainer dome.

5. Projections:

a. Round Projections:

- 1) Install compatible thermoplastic pre-formed boots at round projections.
- 2) Heat-weld to field of roof membrane.
- 3) Install water-block sealant at projection and secure top of boot to projection using clamping ring.
- 4) Tighten clamping ring and install continuous course of Tremseal D urethane sealant to top edge of flashing to insure waterproof condition. Tool sealant to insure uniform contact with substrate course.

b. Conduit Entry Locations:

- 1) Install wood blocking at all projection locations requiring metal flange securement as part of Base Bid. Secure wood blocking to concrete substrate using Tapcon mechanical fasteners.
- 2) Fabricate pitch-pan flashing at conduit entry location(s) using thermoplastic clad sheet-metal. Fabricate with continuous flange.
  - a) Install water-block sealant to bottom of flange and secure through field membrane into wood blocking course.
  - b) Install thermoplastic flashing ply and heat-weld to sheet-metal flange and field membrane.
  - c) Clean conduit and/or related pipework free of contaminants.
  - d) Seal bottom of pitch pan with foam or batt insulation at deck entry point.
  - d) Fill pitch pan with pourable grade Tremseal Pitch Pan Sealer.

E. Flashings (cont'd)

6. Perimeter Fascia Metal:

- a. Install Tremlock ESS fascia metal per manufacturer's installation requirements.
- b. Fascia width to match existing metal coverage with color selection by owner. .

F. Related Sheet-Metal

1. Surface-Mount Counter-Flashing:

- a. Fabricate sheet-metal counter-flashing using 24-guage fluoropolymer coated steel at base flashing and expansion joint locations to meet roofing manufacturer's installation requirements.
- b. Sheet-metal to extend beyond top of flashing ply 3" minimum.
- c. Install water-block sealant between sheet-metal and substrate course.
- d. Secure sheet-metal flashing to masonry substrate using alloy hit-anchors placed 8" on-center.
- e. Install continous course of Tremseal D urethane sealant to top edge of flashing to insure waterproof condition. Tool sealant to insure uniform contact with substrate course.

G. Ballast Surfacing:

1. Install new polyethelene stone mat over surface of field membrane. Overlap stone mat at ends and side 6" minimum.
2. Furnish and supply new ballast course to fully cover stone mat and field membrane.
3. Minimum rate of application shall be 1,000 pounds per 100 square feet. Insure all membrane surfaces are fully covered and ballasted.

H. Related Project Items:

1. Full-time job-site inspection services to be provided by roofing manufacturer as part of Base Bid.
2. Provide 20-year Tremco Quality Assurance Warranty as part of Base Bid proposal.
3. Contractor to furnish Two Year Contractor Workmanship Guarantee to roofing Manufacturer.
4. Remove all debris and clean site to owner's requirements.

**END OF SECTION**