



# Application Guidelines for Self Adhered Thermoplastic and Thermoset Roofing Systems

## PART 1 GENERAL

### 1.01 DESCRIPTION

- A. This guideline describes typical application methods for self adhered thermoplastic or thermoset single-ply roofing membrane. The SPRI manufacturer/supplier shall be contacted for specific information about particular products and systems.
- B. These membranes are applicable for new roofing, replacement, and recovering on substrates that have been accepted by the SPRI manufacturer/supplier.
- C. Related Work

[Reference appropriate sections here, e.g.:

- 1. Sheet metal
- 2. Concrete
- 3. Sealants and caulking
- 4. Plumbing
- 5. Masonry
- 6. Carpentry
- 7. Curtain wall
- 8. HVAC
- 9. Electrical]

### 1.02 SCOPE

The roofing contractor shall furnish and install a self adhered thermoplastic or thermoset roofing membrane as described in this guideline and in accordance with the requirements of the SPRI manufacturer/supplier.

### 1.03 QUALITY ASSURANCE

- A. The roofing system shall be installed by a contractor authorized by the SPRI manufacturer/supplier.
- B. There shall be no deviations from the SPRI manufacturer's/supplier's specifications without the prior written approval of the SPRI manufacturer/supplier.
- C. Applicable code/insurance requirements shall be identified by the owner or his representative.
- D. Upon completion of the installation, an

inspection may be made by a representative of the SPRI manufacturer/supplier to determine that the visible elements of the roofing system have been installed in accordance with SPRI manufacturer's/supplier's specifications, details and approved changes.

### 1.04 SUBMITTALS

- A. Shop drawings required by the project specifications shall be accepted by the SPRI manufacturer/supplier prior to submittal.
- B. The contractor shall submit written verification from the SPRI manufacturer/supplier that he/she is an authorized applicator.
- C. The contractor shall verify that the specifications for the roofing project are in accordance with the recommendations of the SPRI manufacturer/supplier.
- D. The contractor shall submit evidence that the system to be installed meets specified code/insurance requirements.
- E. The contractor shall submit evidence that the fastener types and spacings are acceptable to the SPRI manufacturer/supplier.

### 1.05 REFERENCES

- A. Flexible Membrane Roofing: A Professional's Guide to Specifications, Parts 1 and 2. SPRI, 2003
- B. Wind Load Design for Fully Adhered and Mechanically Fastened Systems. SPRI 2001.
- C. ANSI/SPRI RP-4-2002, Wind Design Standard for Ballasted Single-Ply Roofing Systems.
- D. SPRI Application Guidelines for Fasteners used with Flexible Membrane Roofing Systems, SPRI, 1988, Revised 2000.
- E. Loss Prevention Data Sheet 1-49, "Perimeter Flashing." FM Global.
- F. ANSI/SPRI ES-1-1998 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems. SPRI, 1998.

### 1.06 DELIVERY, STORAGE & HANDLING

- A. Materials shall be delivered in their original unopened containers.

**DISCLAIMER:** SPRI has prepared these generic specifications for use only as a guideline. This guide is not intended to be used verbatim as an actual specification. Specific installation instructions and procedures for each particular job must be obtained from the manufacturer supplying the materials. SPRI, ITS MEMBERS AND EMPLOYEES DO NOT WARRANT THAT THIS GUIDE IS PROPER AND APPLICABLE UNDER ALL CONDITIONS.

- B. Packaging shall be clearly labeled with the manufacturer's/supplier's name, product name, and such identifying numbers as are appropriate.
- C. Prolonged exposure of curable materials to temperatures greater than 80° F will reduce the shelf life of those materials.
- D. Adhesives, sealants and coatings should be at a minimum temperature of 60° F before application.
- E. All flammable materials shall be stored in a cool dry area away from the sparks and open flames. Precautions outlined on containers or provided by the manufacturer/supplier shall be followed.
- F. Materials damaged in handling or storage shall not be used without the authorization of the manufacturer/supplier.
- G. Material Safety Data Sheets available from the manufacturer/supplier shall be available at the job site at all times.

### 1.07 JOB CONDITIONS

- A. If waste products, petroleum, grease, oil, solvents, mineral oil or other contaminants come into contact with the roofing system, the SPRI manufacturer/supplier shall be contacted for protection or repair requirements.
- B. Self adhered thermoplastic and thermoset roofing membranes shall not be installed during periods of precipitation or temperatures below 50°F. The contractor shall consult with the manufacturer/supplier as certain precautions will apply.
- C. Each day's roofing work shall be completed in accordance with SPRI manufacturer's/ supplier's specifications including flashings, terminations and surfacing.
- D. When the roofing contractor will not be the primary contractor: The roofing contractor shall advise the general contractor concerning potential damage to the membrane and the precautions to be taken to avoid such damage during construction.  
  
When the roofing contractor will be the primary contractor: The roofing contractor shall take precautions necessary to avoid damage to the membrane during construction.
- E. When staging material on the roof and during application, the contractor shall ensure that overloading of the deck and structure does not occur. The load limit for this project is \_\_\_\_\_ [Specify load limit here].
- F. For projects requiring removal of the existing roof system: Only as much existing roofing and insulation as can be replaced and made watertight the same day shall be removed.

- G. The substrate shall be suitable to receive the self adhered thermoplastic or thermoset membrane.
- H. Any deteriorated deck or flashing substrate which is discovered shall be promptly reported to the architect or owner.
- I. The roofing contractor shall investigate all existing roof drain lines. Non-functioning drains shall be reported to the owner's representative prior to job start.
- J. The contractor shall conform to all OSHA, EPA and other pertinent safety requirements.
- K. Installation of a self adhered thermoplastic or thermoset membrane system over an existing coal tar pitch or resaturated built-up roof may require that special precautions be included in the design and application. The SPRI manufacturer/supplier shall be contacted for additional design information.
- L. When expanded or extruded polystyrene insulation is proposed: The membrane and insulation shall be compatible or special precautions may be required. The SPRI manufacturer/supplier shall be contacted for additional design information.
- M. Self adhered thermoplastic and thermoset membranes shall not be installed in direct contact with any bituminous products or materials containing bitumens or derivatives thereof, unless specifically accepted by the SPRI manufacturer/supplier.

### 1.08 WARRANTY

Various warranty types may be available from the SPRI manufacturer/supplier. Consult the SPRI manufacturer/supplier for durations and terms available.

## PART 2 PRODUCTS

### 2.01 GENERAL

All components of the roofing system shall be manufactured, supplied or accepted by the SPRI manufacturer/supplier.

### 2.02 MEMBRANE

- A. The roofing membrane shall be provided in a thickness recommended by the SPRI manufacturer/supplier for the intended application. Results shall be provided for the tests and conditions listed for the appropriate membrane type in Flexible Membrane Roofing: A Professional's Guide to Specifications, Part 1.
- B. [It is advisable to prevent chemical contaminants from coming into direct contact with the roofing membrane. If resistance to specific chemicals is required, list chemicals and exposure conditions here:]

### 2.03 RELATED MATERIALS

- A. Flashings
  - 1. Membrane flashings
  - 2. Coated or laminated metal flashings
  - 3. Prefabricated flashings

- B. Sealant/Caulking
- C. Bonding Adhesive
- D. Seaming Components
  - 1. Solvent welding solution and equipment
  - 2. Hot air welding equipment
- E. Lap Sealant
- F. Night Seal
- G. Mechanical Termination: metal, plastic, rubber, beveled wood, or plates and screws
- H. Surface Mounted Reglet: corrosion resistant material
- I. Foam Rod Stock
- J. Separation Layer
- K. Vapor or Air Retarder
- L. Insulation: (specify type, thermal conductance or resistance value, and ASTM standard)
- M. Sheet Metal: aluminum, galvanized steel, stainless steel, copper
- N. Sheet Metal Fasteners: annular ring nails or screws compatible with specified sheet metal material
- O. Membrane/Insulation Fasteners and Plates: conforming to the performance requirements defined in the SPRI Application Guidelines for Fasteners Used with Flexible Membrane Roofing Systems (see section 2.4 of this publication)
- P. Batten Strips
- Q. Thermal Barrier: as required by code/insurance requirements
- R. Wood Nailers: As required by SPRI member
- S. Roof Walkways: pads, wood planks, coatings or weather-resistant concrete roofing pavers
- T. Ballast

Work shall not proceed until the substrate defect has been repaired or replaced.

- B. The roof surface shall be free of standing water, ice or snow.
- C. Slope  
[Steep slopes may require additional design considerations. The SPRI manufacturer/supplier shall be consulted for more information.]

### 3.03 SUBSTRATE PREPARATION

- A. For existing graveled surfaces: Loose gravel shall be removed. If necessary, accumulations of bitumen or other irregularities shall be scratched and removed so as to produce a flat smooth surface. Insulation boards shall lay flat from one board to another.
- B. All areas of wet insulation shall be removed and replaced.
- C. Surfaces on which the self adhered thermoplastic or thermoset membrane is to be applied shall be compatible, clean, smooth, free of fins, sharp edges, dust, loose and foreign material, oil, grease and bitumen.
- D. Building codes may require a thermal barrier between the roof deck and some roof insulations. [The self adhered thermoplastic or thermoset roofing membrane shall not be adhered directly to perlite.]
- E. The SPRI manufacturer's/supplier's specifications for substrate preparation shall be satisfied prior to membrane application.

### 3.04 VAPOR RETARDER

[The design professional shall determine the necessity for and the placement of the vapor retarder within the roof system assembly. If applicable, insert installation instructions for vapor retarder here.]

### 3.05 WOOD NAILERS

- A. Wood nailers shall be installed as specified on project drawings and in accordance with the requirements of the SPRI manufacturer/supplier.
- B. Nailers shall be securely anchored to deck to resist the minimum force of 100 lbs. per linear foot or greater as required by the SPRI manufacturer/supplier. [Loss Prevention Data Sheet 1-49, "Perimeter Flashing" (FM Approvals) contains recommendations for spacing and size of fasteners.]
- C. The thickness of the nailer shall be such that the top of the nailer is flush with the surface to which the membrane is to be applied.

### 3.06 INSULATION

- A. Insulation shall be installed according to the insulation manufacturer's/supplier's instructions.
- B. Insulation shall be adequately supported to sustain normal roof traffic without damage.
- C. Insulation material shall be installed in parallel

## PART 3 EXECUTION

### 3.01 PRE-JOB

The primary contractor shall conduct a pre-roofing conference before any work begins, so all parties involved in the roofing system construction or who may work on or through the roofing system understand their obligations with respect to the roofing membrane.

### 3.02 SUBSTRATE INSPECTION/APPROVAL

- A. A proper substrate (as defined by the SPRI manufacturer/supplier) shall be provided to receive the roofing system. The roofing contractor shall notify the owner or architect in writing of any defects in the substrate.

courses with end joints staggered and adjacent boards butted together with no joints greater than ¼ inch.

- D. If more than one layer of insulation is used, all joints between layers shall be offset.
- E. Where field trimmed, insulation shall be fitted tightly around roof protrusions and terminations.
- F. Insulation Attachment:
  - 1. When insulation is to be mechanically fastened: Only fasteners, stress plates and fastening patterns accepted for use by both the roofing membrane and insulation manufacturers/suppliers shall be used. Fastening patterns which meet applicable code/ insurance requirements shall be utilized.
  - 2. When insulations are to be adhered: Only adhesive accepted by both the roofing membrane and insulation manufacturer/supplier shall be used.
- G. Tapered insulation boards shall be installed in accordance with the insulation manufacturer's/supplier's shop drawings.
- H. No more insulation shall be applied than can be covered with the roof membrane by the end of the day or before the onset of inclement weather.

### 3.07 FASTENERS

- A. Fasteners shall be driven perpendicular to the work surface.
- B. The fastener assembly (distribution plates, batten bars and fasteners) shall be installed so as to avoid abrasion to the membrane.
- C. The fastener manufacturer's recommendations shall be followed for:
  - 1. Fastener suitability for specific applications
  - 2. Proper drill bit for drilling correct hole size (diameter and depth) into concrete, lightweight concrete, gypsum and cementitious/wood fiber decks.
  - 3. Minimum depth of embedment into deck to achieve required resistance to pull out.
  - 4. Fastener length to provide proper fastening into deck.
  - 5. Installation tools
- D. Fasteners that are improperly installed shall be removed or corrected. Improper installation may be characterized as:

- 1. Overdriven: Fastener is driven to the point that it is causing the stress distribution surface to become concave (or deform, in the case of batten strips). [Excessive driving may cause failure by disengaging the fastener threads from the deck.]
- 2. Underdriven: Fastener head is not properly seated on the stress distribution surface.
- 3. Snapped: Fastener breaks under the driving load.
- 4. Bent: Fastener is bent to the point that it adversely affects the installation.
- 5. Not Engaged: Fastener is improperly located or of insufficient length.

### 3.08 METAL FLASHINGS

Edge metal systems shall be installed as required by the SPRI manufacturer/supplier. Such flashings shall be located at the perimeter of the entire roof and follow SPRI ES-1 guidelines. Flashings shall be located around such other roof projections and penetrations as specified on the project drawings and shall be fastened to the wood nailer as required by the SPRI manufacturer/supplier.

### 3.09 MEMBRANE INSTALLATION

The self adhered thermoplastic or thermoset membrane must be installed membrane side up. Premarked lines on the membrane are used to determine proper overlap.

- A. First Panel Application:
  - 1. Position the self adhered thermoplastic or thermoset membrane over the approved substrate without stretching.
  - 2. Unroll 20 ft. – 30 ft. of the self adhered thermoplastic or thermoset membrane at the starting point of the roof with the selvage edge (if there is a selvage edge) on the down slope side of the roll to facilitate proper lapping of the seams (shingle lapped).
  - 3. Fold 10 ft. – 15 ft. of the panel back length ways upon itself exposing the release liner. The portion of the unrolled panel left after folding back 10 ft. – 15 ft. is intended to help keep the panel aligned with original layout position.
  - 4. Peel the release liner from the adhesive film back to the point of membrane fold and lay the liner to the side of the panel (do not cut release liner).
  - 5. Roll the membrane with the exposed adhesive onto the approved substrate in line with the original layout position. Maintain a smooth radius of the sheet to maximize the contact area.
  - 6. To promote maximum adhesion apply pressure using a minimum 5 pound per linear inch weighted roller to the installed section of the self adhered thermoplastic

or thermoset membrane. The direction of the weighted roller should be across the width of the self adhered thermoplastic or thermoset membrane panel.

7. Fold the self adhered thermoplastic or thermoset membrane back to the point that the release liner becomes accessible and peel the release liner from the adhesive film as the roll travels along the installation path.
8. To promote maximum adhesion, apply pressure using a minimum 5 pound per linear inch weighted roller to the installed section of the self adhered thermoplastic or thermoset membrane. The direction of the weighted roller should be across the width of the self adhered thermoplastic or thermoset membrane panel.

B. Subsequent Panel Application (For Panels that have release liners that are split/perforated)

1. For the 2nd and subsequent panels laid out, unroll the self adhered thermoplastic or thermoset membrane and allow to relax a minimum of thirty minutes. Position the top membrane to overlap the bottom membrane using the pre-printed layout lines ensuring the lap is shingled in the direction of the flow of water.
2. Fold sheet back width ways, (example: 6 ft wide panel would be folded back so that 3' x 100' of the perforated/overlapped release liner would be exposed). Ensure the sheet fold is smooth with no wrinkles or buckles.
3. Remove the release liner from the pre-applied adhesive at the perforation or overlap. The release liner will either be perforated or overlapped near the center of the back side of the membrane.
4. Roll the membrane with the exposed adhesive onto the approved substrate in line with the original layout position. Maintain a smooth radius of the sheet to maximize the contact area.
5. To promote maximum adhesion, apply pressure using a minimum 5 pound per linear inch weighted roller to the installed section of the self adhered thermoplastic or thermoset membrane. The direction of the weighted roller should be across the width of the self adhered thermoplastic or thermoset membrane panel.
6. If the self adhered thermoplastic or thermoset membrane is treated with a pre-applied adhesive from edge to edge follow section 3.09 D for seaming instruction for the overlap area.

7. Fold back the unbonded half of the sheet with release liner still in place. Ensure the sheet fold is smooth with no wrinkles or buckles. Repeat the steps 3-5 in Section 3.09 B.

C. Subsequent Panel Application for self adhered thermoplastic or thermoset membranes that have a continuous release liner, (that is not split or perforated.)

1. For the 2nd and subsequent panels laid out, unroll the membrane and allow to relax a minimum of thirty minutes. Position the top membrane to overlap the bottom membrane using the pre-printed layout lines ensuring the lap is shingled in the direction of the flow of water.
2. Fold the panel back length ways (ex. 6' x 100' panel folded back in half will expose 6' x 50' panel with the release liner facing up). Carefully score/cut the release liner at the fold being careful not cut the underside of the roofing membrane.
3. Peel several feet of the release liner off the pre-applied adhesive from the exposed section. Roll this membrane into place ensuring that the membrane is set at the proper overlap. This will keep the panel aligned with the original layout position.
4. While walking away from the fold toward the exposed substrate, pull the release liner off at a 45° angle from the self adhered thermoplastic or thermoset membrane. This allows for correct placement of the membrane.
5. To promote maximum adhesion apply pressure using a minimum 5 pound per linear inch weighted roller to the installed section of the self adhered thermoplastic or thermoset membrane. The direction of the weighted roller should be across the width of the self adhered thermoplastic or thermoset membrane panel.
6. Fold back the other half of the panel and repeat steps 3-5 in Section 3.09 C.

D. Seaming/Field Splices

1. The overlapping sheet sides shall be welded together using hot air, seam tapes or pre-applied adhesives with primers as required by the SPRI manufacturer/supplier.
  - a. When hot air seaming is used follow SPRI "Guidelines for the Fabrication of Field Splices Using Hot Air Seaming Procedures."
  - b. When seam tapes are used for seaming follow SPRI "Guidelines for the Fabrication of Field Splices Using Tape Adhesive for Vulcanized EPDM Sheets Used in Roofing Applications."
  - c. When pre-applied adhesive is used for seaming follow below:

- i. Fold back the top sheet of the positioned sheets from Section 3.09 B or C with release liner in place to prepare for the cleaning or priming procedure. The top sheet should overlap the bottom sheet a minimum of 3 inches. Broom or wipe the splice area of the lower sheet to remove excess dirt. If necessary, scrub the splice area with a low sudsing soap (approved by the membrane manufacturer) and water to remove dust, dirt or other contaminants and rinse with clean water being careful not to wet the substrate. Allow the splice area to dry.
  - ii. The area to be spliced on the lower sheet may need to be cleaned following a procedure required by the system supplier. Extra care should be taken to clean factory splice step-offs and other areas where dusting agents may have accumulated.
  - iii. Primer, if specified by the systems supplier, shall be stirred with a clean wooden paddle until uniformly mixed. Typical time for stirring is 5 minutes, but this should be confirmed by the manufacturer. Stir periodically during use to prevent settling.
  - iv. The primer should be uniformly applied with a clean paint brush, paint roller, clean natural fiber cloth, or primer application tool supplied by the manufacturer and allowed to dry, in accordance with the systems suppliers recommendations.
  - v. Lay the top sheet over so that it rests on the bottom sheet with the release liner still in place. The release liner of the top sheet will be resting on the bottom sheet.
  - vi. Remove the release liner by pulling it from the splice area. Parallel to the roof surface and approximately perpendicular to the splice direction.
  - vii. Firmly mate the top sheet to the bottom sheet
- by applying firm hand pressure perpendicular to and along the length of the splice. This will assure maximum contact and minimize entrapped air.
- viii. Immediately roll the splice perpendicular to its long axis with a maximum 2 inch wide roller specified by the systems supplier.
  - iv. Follow any special instructions by the systems supplier for addressing intersecting field splices (T-joint).
  - x. If lap sealant is required, clean a minimum 1 inch wide area over the splice edge (typically no waiting period is necessary). Apply the lap sealant in a minimum of ¼ inch diameter bead per the systems supplier's instructions.
  - xi. Visually inspect the completed field splices for fishmouths, bubbles, blisters and wrinkles. Repairs, if necessary, should be completed by cutting out the affected area and overlaying with a piece of the same material following the guidelines above.
2. The sheet ends shall be addressed by overlapping or butting the ends as required by the SPRI manufacturer/supplier.
    - a. When overlapping sheet ends follow pre-applied splicing instructions 3.09 D, 1, c.
    - b. When butt splicing the sheet ends follow below:
      1. Tightly butt the ends of two consecutive rolls assuring that adjacent sheets are properly aligned.
      2. Either weld a minimum 6 inch cover strip following SPRI "Guidelines for the Fabrication of Field Splices Using Hot Air Seaming Procedures" or adhere a minimum 6 inch wide cover strip with pre-applied adhesive following pre-applied splicing instructions 3.09 D,1, c.
      3. If there is a gap or angle between the two consecutive rolls from step 3.09 D, 2, b, i. overlap the ends of the two consecutive rolls.
      4. Cut through both membranes in the overlap area. Remove the cut end of the lower membrane under the upper membrane and the cut end of the upper membrane. This leaves a very well fit butt splice between the two adjacent roll ends. Then follow step 3.09 D, 2, b, ii.
  3. The welded seams shall be checked for continuity and integrity. Any imperfections shall be corrected.
  4. All seaming details shall be completed daily as

required by the SPRI manufacturer/supplier.

E. Membrane Termination/Securement

1. Mechanical securement shall be provided at all membrane terminations at the perimeter of each roof level, roof section, curb flashing, skylight, expansion joint, interior wall, penthouse, etc.
2. Mechanical securement shall be provided at any angle change where the slope or combined slopes exceed(s) two inches in one horizontal foot.
3. Mechanical securement shall meet the pull-out strengths required by the SPRI manufacturer/supplier and the SPRI Wind Design Guide for Adhered Roofing Systems, whichever shall be greater.
4. All membrane termination fasteners shall be sealed in accordance with SPRI manufacturer's/supplier's requirements.

be flashed in accordance with the SPRI manufacturer's/suppliers specifications.

2. The flashing seal shall be made directly to the penetration passing through the roofing membrane.
3. Existing flashing shall be removed where required. [Where the new flashing is terminated to an intermediate element (metal flashing, masonry, insulation, surface treatment, etc.) which itself could fail and admit moisture beneath the membrane, FAILURE OF THAT ELEMENT TO REPEL MOISTURE MAY BE BEYOND THE LIMITS OF THE SELF ADHERED THERMOPLASTIC OR THERMOSET MEMBRANE ROOFING SYSTEM.]
4. When bonding or sealing directly to metal, the manufacturer's/supplier's details shall be consulted for the use of metal primer.
5. Pre-molded or prefabricated flashings shall be used where their installation is recommended by the SPRI manufacturer/supplier.
6. Pipe Clusters and Unusual Shapes

**3.10 FLASHINGS**

A. Base Flashings

1. The longest pieces of flashing material which are practical shall be used. All flashings and terminations shall be performed in accordance with the manufacturer's/supplier's applicable details.
2. Flashing shall not be applied over existing thru-wall flashings or weep holes.
3. When using flashing on a vertical surface, the flashing shall be secured before the seam between the flashing and the main roof sheet is completed.
4. The flashing membrane shall extend the prescribed distance onto the main roof sheet beyond the mechanical securement.
5. Care shall be taken to ensure that the flashing does not bridge where there is a change of direction (e.g. where the parapet meets the roof deck).
6. The top of the installed flashings shall be fastened under the metal counterflashings, coping cap or metal reglet. The maximum distance between fasteners shall be 12 inches on center.

B. Penetrations

1. All penetrations (pipes, supports, soil stacks, cold vents, etc.) passing through the roofing membrane shall

- a. Clusters of pipes and other penetrations which cannot be sealed with membrane or prefabricated flashing shall be sealed by surrounding them with approved sealer.
- b. Penetration pans shall be installed, flashed and filled with approved sealer as shown in the manufacturer's published details.
- c. Penetration pans shall not be used where pre-molded, prefabricated, or field fabricated flashings are possible.

7. Roof Drains

Roof drains shall comply with SPRI RD-1.

- a. Existing flashing and asphalt shall be removed in preparation for sealant and membrane.
- b. A smooth, clean finish shall be provided on the mating surfaces between the clamping ring and the drain base.
- c. Insulation shall be tapered around the drain to prevent the membrane from bridging and to provide a smooth transition from the roof surface to the drain clamping ring.
- d. The seal between the membrane and the drain base shall be provided by sealant under constant, even compression from the drain clamping ring. The sealant shall be as specified by the SPRI manufacturer/supplier.
- e. The contractor shall consult the SPRI manufacturers/ supplier's published

details for the various methods of installation.

8. Fascia
  - a. Fascia shall be fabricated from membrane-coated metal or other acceptable metal and shall be fastened to wood nailer as required by the SPRI manufacturer/supplier.
  - b. Joints in fascia shall be sealed as required by the SPRI manufacturer/supplier.

### 3.11 WALKWAYS

- A. Walkways shall be provided where specified.

[Walkway systems shall be installed at all traffic concentration points (e.g. roof hatches, access doors, rooftop ladders, etc.) regardless of traffic frequency. Walkways shall be provided in areas receiving regular traffic (once or more per month) to service rooftop units or where a passageway over the surface is required.]

- B. Walkways shall not be installed over flashings or field seams until field inspections have been conducted.

### 3.12 WATER CUT-OFFS

The contractor shall ensure that water does not flow beneath the completed sections of the new roofing system. Water cut-offs shall be provided on a daily basis and at the onset of inclement weather. Water cut-offs shall be removed prior to the resumption of work. The integrity of the water cut-off is the sole responsibility of the roofing contractor. Any membrane contaminated by cut-off material shall be cleaned or removed.

### 3.12 MEMBRANE REPAIR

- A. Correction of damage to the membrane may be accomplished by applying a membrane section over the affected area and seaming to the main roof sheet in accordance with the seaming procedures required by the SPRI manufacturer/supplier.
- B. Consult the SPRI/NRCA Manual of Inspection, Maintenance and Emergency Repair of Single-Ply Roofing Systems, 1992 and the ARMA/NRCA/SPRI Repair Manual for Low Slope Membrane Roofing Systems, 1997.