

FIRESTONE PLATINUM ROOFING SYSTEM  
APPLICATION GUIDE

December 1, 2011

## Table of Contents

2.01	GENERAL	3
2.02	JOB SITE CONSIDERATIONS (CAUTION AND WARNINGS)	3
2.03	ROOF SUBSTRATE PREPARATION	4
2.04	WOOD NAILER LOCATION AND INSTALLATION	5
2.05	INSULATION INSTALLATION	6
2.06	MEMBRANE INSTALLATION	7
2.07	MEMBRANE SEAMING	8
2.08	FIRESTONE QUICKSEAM FLASHING INSTALLATION	9
2.09	ADDITIONAL MEMBRANE SECUREMENT AND BASE TIE-IN FLASHING	10
2.10	SEAM EDGE TREATMENT	11
2.11	FLASHING – PENETRATIONS	11
2.12	FLASHING - WALLS, PARAPETS, MECHANICAL EQUIPMENT CURBS, ETC.	13
2.13	FLASHING - GRAVEL STOPS OR ROOF EDGE METALS	14
2.14	MEMBRANE REPAIR	15
2.15	TEMPORARY CLOSURE	16
2.16	ACRYLITOP PC-100 COATING	16
2.17	ROOF WALKWAYS	17
2.18	SHEET METAL WORK	17

## 2.01 GENERAL

This section of Firestone's Technical Manual provides instructions for the installation of Firestone's Platinum Roof System. Reference to the Platinum EPDM Design Guide, Technical Information Sheets (T.I.S.), and other sections of Firestone's Technical Specifications may be necessary to ensure that the finished roof system is installed in compliance with Firestone requirements.

The Firestone Platinum System and Warranty requires special considerations with regards to fasteners, insulations, membrane gauge, and attachment requirements. These requirements are provided as a part of this application guide.

NOTE: IF A PROPOSED APPLICATION FALLS OUTSIDE OF THIS SPECIFICATION, CONTACT FIRESTONE TECHNICAL SERVICES FOR ADDITIONAL INFORMATION, PRIOR TO BID AND INSTALLATION.

## 2.02 JOB SITE CONSIDERATIONS (CAUTION AND WARNINGS)

### A. Safety:

1. Comply with all applicable regulatory safety and health regulations.
2. Consult container labels, Material Safety Data Sheets (MSDS) and Technical Information Sheets (TIS) for specific safety instructions for all products used on the project.
3. Keep all adhesives, sealants and cleaning materials away from ALL ignition sources (i.e., flames, fire, sparks, etc.). Do not smoke while using these materials.
4. Care must be used when installing fasteners or other required roof related items to avoid possible conduits and other piping in and or under the deck.
5. Fumes from adhesive solvents may be drawn into the building during installation through rooftop intakes. Refer to Firestone's Technical Information Sheet "Recommended Guidelines for Application of Roofing Materials to an Occupied Building".
6. Do not use heat guns or open flames to dry adhesives and primers.

### B. Cautions:

1. Store Firestone Platinum EPDM membranes in the original undisturbed plastic wrap in a manner to protect it from becoming damaged. Insulation must be properly stored and protected from ignition sources, moisture and damage. Consult container labels, Material Safety Data Sheets and Technical Information Sheets for specific safety, use and storage instructions for all products used on the project.
2. Do not use oil-base or bituminous-base roof cement with any Firestone EPDM membrane.
3. Store Firestone Insulations properly protected from ignition sources, moisture and damage.

### C. Cold weather:

1. When the outside temperature is below 40 °F (4.4 °C), certain combinations of temperature and humidity may cause condensation on the surface of solvent-based adhesives and primers. If this condition occurs, discontinue the application. When the ambient air conditions no longer cause condensation on adhesive surfaces and the membrane is clean and dry then re-apply additional adhesive or primer and proceed.
2. The consistency of sealants, adhesives and primers will begin to thicken as the temperature drops. To minimize this, the following is recommended:
  - a.) Start work with sealants, adhesives and primers that have been stored between 60 °F and 80 °F (15.5 °C and 26.7 °C). Insulated and heated boxes may be helpful.
  - b.) Complete test areas to determine if conditions will cause problems such as condensation with the application of the materials.
  - c.) Stop the operation or change to another warm container when material becomes too thick to properly apply.
3. When the outside temperature is below 40 F (4.4 °C), installation of the Firestone Platinum EPDM System requires additional application procedures:
  - Ensure that the roof surface is dry. Moisture, even trace amounts, may cause poor adhesion, and may lead to moisture entrapment within the roofing system.
  - Use of temporary roofs should be considered when roof applications must occur in cold or potentially wet weather to permit continued interior construction or roof-top work to proceed.
4. If using Water-Based Bonding Adhesive (WBBA), temperatures and substrate must be at least 40 °F (4.4 °C) and rising for the material to be applied and perform as designed. Longer drying times should be expected for lower temperatures and higher humidity. Plan ahead for material staging.

## 2.03 ROOF SUBSTRATE PREPARATION

**It is the roofing contractor's responsibility for ensuring that the substrate is acceptable for the Firestone roof system.**

### **A. Correct Substrate Defects:**

1. Defects that need to be corrected before work can commence should be brought to the attention of the General Contractor or Owner in writing and addressed by them.
2. Complete removal of all existing roof system components is required. Re-cover applications are not acceptable for the Firestone Platinum Roof System.

### **B. Remove Moisture:**

Ponded water, snow, frost and/or ice, present in more than trace amounts must be removed from the work surface(s) prior to installing the Firestone Platinum Roof System.

### **C. Prepare Surface:**

Acceptable substrates to which the Firestone Platinum Roof System is installed must be properly prepared prior to membrane installation. The surface must be relatively even, clean, dry, smooth, free of sharp edges, fins, loose or foreign materials, oil, grease and other materials that may damage the membrane. Rough surfaces that could cause damage to the membrane must be overlaid with insulation.

**D. Fill Voids:**

All surface voids of the immediate substrate greater than 1/4" (6.35 mm) wide must be filled with insulation.

**2.04 WOOD NAILER LOCATION AND INSTALLATION**

- A. Firestone Building Products no longer requires the use of treated wood nailers. This is due to the new EPA requirements that have caused treated lumber to have more corrosive properties than the previous generation of wood treatments.
- B. Wood nailers must be installed as specified by the project designer or as noted in Firestone Details and the System Design Guide. Install wood nailers as follows:

**If architectural specifications require the use of treated wood nailers, the following Firestone requirements apply:**

- Refer to the Firestone Design Guide for the appropriate Firestone fastener to be used for securing membrane into wood nailers.
  - Nails penetrating treated wood nailers must be hot-dipped galvanized, meeting ASTM A653, Class G185 or as currently recommended by industry associations.
  - Aluminum fasteners, flashings and accessory products must not make direct contact with treated wood nailers.
  - Uncoated metal and painted metal flashing and accessories, except for 300-series stainless steel, must not make direct contact with treated wood nailers.
  - When in doubt of the type of treatment of the wood nailer or its compatibility with a metal component, use EPDM membrane as a separator.
- C. Because of recent EPA regulations regarding treated wood, new treatments for lumber may be highly corrosive to fasteners. Contact the fastener manufacturer for their recommendations on fasteners if attaching nailers that have been treated with corrosive materials.

**A. Wood nailer grade:**

- 1. When wood nailers are used, Firestone specifications require the use of wood that is kiln-dried (Southern Pine, Douglas Fir) structural grade #2 or better, unless otherwise noted. While being stored on the roof, properly elevate and cover non-treated wood to protect from the weather and keep dry. Nailers must be properly anchored to provide secure attachment through the warranty term. Nailers are not covered by the Firestone warranty

**B. Size of nailer**

- 1. Nailers shall be a minimum thickness of 2" x 4" nominal (1-1/2" (37.1mm) x 3-1/2" (89mm)) and exceed the width of any metal flange attached to it by a minimum of 1/2"

(12.7mm).

### **C. Position Wood Nailer**

1. Total wood nailer height must match the total thickness of insulation being used and should be installed with a 1/8" (3.2 mm) gap between each length and each change of direction. When more than one nailer thickness is used end joints should be staggered a minimum of 12" from the prior layer in straight runs.

### **D. Secure Wood Nailer**

1. Wood nailers must be firmly fastened to the deck or building. Mechanically fasten wood nailers to resist a minimum force of 200 lb/f (890 N) in any direction. Refer to attachment requirements of the roofing system as specified by the project designer if greater than 200 lb/f (890 N).

### **E. Taper Wood Nailer**

1. The wood nailer must be tapered (if applicable) so that it will always be flush at the point of contact with the insulation (refer to Firestone Details).

### **F. Poured-in-place decks**

1. For new construction over poured-in-place decks or fill, and all recover projects, a waterproof separator membrane shall be placed between the non-treated lumber and the deck.

### **G. Installation of Wood Nailers by Others**

1. Make these specifications and details available when nailers are to be installed by others. Work that compromises the integrity of the roof system may jeopardize the roof warranty.

### **H. For additional information**

1. Please consult the NRCA Special Report, "Use of Treated Wood in Roof Assemblies." This Technical Bulletin is also posted on the Firestone website at [www.Firestonebpc.com](http://www.Firestonebpc.com)

## **2.05 INSULATION INSTALLATION**

### **A. Install Insulation:**

Install only as much insulation as can be covered with roofing membrane and completed before the end of the day's work or before the onset of inclement weather.

### **B. Fit Insulation:**

Neatly fit insulation to all penetrations, projections, and nailers. Insulation should be loosely fitted, with gaps greater than 1/4" (6.3 mm) filled with acceptable insulation. The edges of insulation boards running parallel with the deck should be supported by the top flange. Under no circumstances should the membrane be left unsupported over a space greater than 1/4" (6.3 mm). Tapered insulation with acceptable facers for bonding must be installed around roof drains so as to provide proper slope for drainage as shown in Firestone Details.

**C. Stagger Insulation Joints:**

When installing multiple layers of insulation, all joints between layers must be staggered.

**D. Attach Insulation:**

**1. Using Firestone Fasteners**

The Firestone Insulation must be fastened at a rate of no less than 16 Firestone Fasteners and Insulation Plates per 4' x 8' (1.2 m x 2.4 m) board. Refer to the Technical Information Sheet for the specific insulation for attachment patterns. The Firestone Fastener must be appropriate for the deck or substrate.

**\*\* Firestone I.S.O. SPRAY S, I.S.O. TWIN PACK, I.S.O.Stick and I.S.O. FIX are not acceptable insulation adhesives when a Firestone Platinum PHW Limited Warranty is to be issued. Firestone HailGard Fastener can only be used in conjunction with HailGard insulation.**

**2. Using Firestone I.S.O. SPRAY S, I.S.O.Stick, I.S.O. Twin Pack, I.S.O. Fix**

Insulation may be attached using I.S.O.SPRAY S, I.S.O.Stick, I.S.O. Twin Pack, and I.S.O. Fix on the specific deck types indicated in the chart above.

- a. Apply the adhesive in strict accordance with the instructions provided with the product and the Technical Information Sheets that are a part of this Technical Manual.
- b. It may be necessary to prime the substrate prior to installing the insulation in adhesive.
- c. If used on a metal deck (where allowed by specification), the edge of the board parallel with the roof deck should be completely supported.
- d. The insulation boards should be no larger than 4' X 4' (1.2 m X 1.2 m).
- e. It is necessary to walk boards in or weight them down to ensure complete adhesion to the substrate.
- f. Additional layers of insulation may be installed in the same fashion.

**2.06 MEMBRANE INSTALLATION**

**A. Place Membrane and Allow to Relax:**

Place the Platinum membrane panel, without stretching, over the acceptable substrate and allow the membrane to relax for a minimum of 30 minutes before splicing or attaching. The Firestone Platinum System must be installed so that the seams shed the flow of water.

**B. Fold the Membrane Back:**

After making sure the sheet is placed in its final position allowing for the minimum 3" (76.2 mm) lap width per Firestone specifications. Fold the sheet back evenly onto itself without wrinkles to expose the underside mating surface of the sheet.

**C. Remove Dusting Agent and Dirt:**

Sweep the mating surfaces with a stiff broom to remove any dusting agent or dirt that may have accumulated.

**D. Apply the Bonding Adhesive:**

Apply bonding adhesive with either a 9" (228 mm) wide solvent-resistant paint roller, commercial-grade adhesive sprayer or power roller. Adhesive must be applied in a relatively uniform thickness to both surfaces at approximately the same time. If adhesive is spray-applied, it must be back-rolled with a paint roller to assure proper contact and coverage. Refer to Firestone Technical Information Sheets and container labels for specific application instructions.

**E. Stop Bonding Adhesive Short of Seam Area:**

Care must be taken not to apply bonding adhesive over an area that is to be later spliced to another sheet or flashing. All bonding adhesive must be completely removed from the seam area.

**F. Apply Bonding Adhesive at Specified Coverage Rate:**

Refer to the container label and Technical Information Sheet for specific application requirements and coverage rates.

**G. Test Bonding Adhesive for Readiness (Touch-Push Test):**

Allow the bonding adhesive to flash-off. Touch the adhesive surface in the thickest area with a clean, dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness. If either motion exposes wet or stringy adhesive when the finger is lifted, the adhesive is not ready for mating. Flash-off time will vary depending on ambient conditions.

**H. Bond the Membrane to the Substrate:**

Starting at the fold, roll the previously coated portion of the membrane into the coated substrate slowly and evenly to minimize wrinkles.

**I. Broom the Membrane:**

To assure proper contact, compress the bonded half of the membrane to the substrate with a stiff push broom.

**J. Repeat Procedure to Complete the Membrane Installation:**

Fold the un-adhered half of the membrane back onto itself, and repeat the procedure.

## **2.07 MEMBRANE SEAMING**

**A. Position and Fold Back the Lap Edge:**

Position the membrane at the seam area by overlapping membrane 4" (102 mm) for 3" (76 mm) QuickSeam Tape. Once the membrane is in place, mark the bottom membrane 1/2" (12.7 mm) to 3/4" (19 mm) from the edge of the top membrane every 4' (1.2 m) to

6' (1.8 m) using the marking crayon provided with the QuickSeam Tape. Tack the membrane back with Single-Ply QuickPrime Primer as necessary to hold back the membrane at the splicing area.

**B. Apply Single-Ply QuickPrime Primer to Seam Area:**

Remove excess amounts of dusting agent on the membrane and at factory splices using a stiff push broom. Stir Single-Ply QuickPrime Primer thoroughly before and during use. Dip the QuickScrubber or QuickScrubber Plus into the bucket of Single-Ply QuickPrime Primer, keeping the pad flat. Apply the Single-Ply QuickPrime Primer using long back and forth type strokes with pressure along the length of the splicing area until surfaces become dark gray in color. Apply Single-Ply QuickPrime Primer to both surfaces at the same time. Change the scrub pad every 200 feet (61 m) of seam or when the pad will no longer hold the proper amount of Single-Ply QuickPrime Primer. Additional scrubbing is required at all factory seams and at areas that may have become contaminated or have excess amounts of dusting agent.

**C. Apply the QuickSeam Splice Tape:**

After allowing the Single-Ply QuickPrime Primer to dry properly using the Touch-Push Test, apply the QuickSeam Splice Tape to the bottom membrane, aligning the edge of the release paper with the markings. Immediately roll the splice tape with a 3" to 4" (76 mm to 102 mm) wide silicone hand roller, a short nap 3" (76 mm) paint roller, Firestone QuickRoller, or a clean QuickScrubber or QuickScrubber Plus pad and handle.

**D. Check the Splice Tape Alignment:**

When the QuickSeam Splice Tape has been installed for the entire seam length, position the top membrane to rest on top of the tape's release paper backing. Trim the top panel as necessary to assure that 1/8" to 1/2" (3.1mm to 12.7 mm) of the QuickSeam Seam Tape will be exposed on the finished seam.

**E. Remove Release Paper Backing:**

To remove the paper backing from the tape, allow the top membrane to fall freely onto the QuickSeam Splice Tape. Start to peel the release paper backing off the QuickSeam Splice Tape by pulling against the weight of the bottom panel at approximately a 45° angle to the tape and parallel with the roof surface. Broom the entire length of the seam at a 45° angle as the release paper is being removed.

**F. Roll the Seam**

Roll the seam using a 1-1/2" to 2" (38 mm - 51 mm) wide silicone hand roller or the Firestone QuickRoller, first across the width of the seam and then along the entire length of the seam.

**2.08 FIRESTONE QUICKSEAM FLASHING INSTALLATION**

All 3" (76 mm) field seams and all EPDM flashing seams must be covered with an additional treatment of Firestone QuickSeam Flashing, centered over the completed field seam, according to the following instructions:

**A. Clean the Lap Edge:**

Clean the seam edge a minimum of 3" (76 mm) on each side of the lap using Firestone Single-Ply QuickPrime Primer applied with QuickScrubber or QuickScrubber Plus and pads.

**B. Apply Firestone QuickSeam Flashing:**

Place the roll of the QuickSeam Flashing on the roof a few feet ahead of the application starting point. Situate the roll so that it unrolls from the top of the roll. The release paper will be on top. Peel the release paper up and back from the QuickSeam Flashing. The QuickSeam Flashing should then be turned under and starting 3" (76 mm) ahead of the splice, press down. Take care to avoid wrinkles. Do not stretch the QuickSeam Flashing during installation. Lap adjoining rolls of QuickSeam Flashing a minimum of 4" (102 mm).

**C. Roll the QuickSeam Flashing:**

Roll the flashing using a 1-1/2" to 2" (38 mm - 51 mm) wide silicone hand roller or the Firestone QuickRoller, first across the width of the flashing and then along the entire length of the flashing. Additional attention must be given to factory seam intersections and to any change in plane.

## **2.09 ADDITIONAL MEMBRANE SECUREMENT AND BASE TIE-IN FLASHING**

Secure the membrane (base tie-in) at all locations where the membrane goes through an angle change greater than 1" (25.4 mm) in 12" (305 mm) (i.e., roof edges, curbs, interior walls, etc.).

**A. Using Firestone QuickSeam Reinforced Perimeter Fastening Strip (QSRPF)**

1. Attach the QSRPF Strip to the penetration, parapet wall or deck using Firestone 2" (51 mm) Seam Plates or Firestone Batten Strips fastened a maximum of 12" (305 mm) o.c. Roll the membrane into place and then fold back, exposing the underside of the membrane and the QSRPF Strip. When using batten strips, apply Firestone AP Sealant over each fastener head, assuring that the fastener head is completely covered.
2. Apply Single-Ply QuickPrime Primer to the membrane where it will mate with the QuickSeam Splice Tape and allow to dry. Apply Firestone Bonding Adhesive to the back half of the QSRPF, to the membrane that is to be bonded to the penetration or wall, and to the penetration or wall itself.
3. After the surfaces have dried properly as determined by using the Touch-Push Test, remove the release paper from the QuickSeam Reinforced Perimeter Fastening Strip and roll the membrane into place, assuring a tight fit into the transition between the horizontal and vertical surfaces. Continue to roll the membrane up the wall and broom in place with a stiff push broom. Roll the membrane over the QuickSeam Tape with a 1-1/2" to 2" (38 mm x 51 mm) wide silicone roller or the Firestone QuickRoller, across the tape and then along its length.

**B. Using Firestone Batten Strip**

1. Install the Firestone Platinum Membrane per Firestone Details and attach to the vertical substrate using Firestone Batten Strips at a maximum of 12" (305 mm) o.c. (Polymer Battens may only be used over wood or metal substrates). Apply Firestone AP Sealant over each fastener head, assuring that the fastener head is completely covered.

2. Cut a piece of flashing from .060" (1.5 mm) or .090" (2.3 mm) of RubberGard Membrane or QuickSeam Curb Flashing large enough to completely cover the substrate of the wall or curb and extend onto the roof membrane a minimum of 3" (76 mm). Complete the splice between flashing and the main roof membrane using QuickSeam Splice Tape before adhering flashing to the vertical surface. All 3" (76 mm) flashing seams must be covered with an additional treatment of Firestone QuickSeam Flashing.
3. Apply bonding adhesive at about the same time to both the flashing and the surface to which it is being bonded so as to allow approximately the same flash-off time. Apply bonding adhesive evenly to avoid globs.
4. After the bonding adhesive has dried properly as determined by the Touch-Push Test, roll the flashing into the adhesive evenly and carefully so as to minimize wrinkles. Broom the flashing to the substrate with a stiff push broom to assure proper contact.

## **2.10 SEAM EDGE TREATMENT**

Seam edge treatment is required at all joint covers, edge metal etc. where required in the Platinum Details.

### **A. Apply Splice Adhesive to Seam Edge:**

Using a Splice Adhesive brush, apply SA-1065 Splice Adhesive a minimum of 1" (25.4mm) on either side of the seam edge. Allow the Splice Adhesive to dry. If the seam edge has become contaminated, it will be necessary to clean the edge with Firestone Splice Wash prior to applying the adhesive.

### **B. Apply the Lap Sealant to Seam Edge:**

Apply a continuous bead of Lap Sealant, approximately 3/8" x 1/4" (9.5 mm x 6.35 mm) 20-22 lineal feet (6 m - 6.7 m) per 10 oz. (295 cc) tube centered over the seam edge using a standard caulking nozzle. Using the Firestone supplied Lap Sealant tool, feather the Lap Sealant immediately, taking care to leave a mound of sealant directly over the seam edge (refer to Lap Splice Details). Alternately, Lap Sealant may be applied using the plastic nozzle applicator supplied by Firestone, assuring the applicator is centered at the seam edge.

## **2.11 FLASHING – PENETRATIONS**

### **A. General:**

1. Remove all existing flashing (i.e. metal, bituminous materials, mastic, etc.).
2. Flash all penetrations passing through the membrane.
3. The flashing seal must be made directly to the penetration.

### **B. Pipes, Round Supports, Structural Steel Tubing, etc.:**

1. Flash penetrations with Firestone EPDM Pre-Molded Pipe Flashings wherever possible.

Do not cut or patch EPDM Pre-Molded Pipe Flashings to assist in their installation.

2. Flash penetrations using QuickSeam FormFlash when the use of Pre-Molded EPDM Pipe Flashings is not possible.
3. Refer to Firestone's Technical Information Sheet for minimum and maximum pipe diameters that can be successfully flashed with Pre-Molded EPDM Pipe Flashings.
4. Refer to Firestone's Technical Information Sheet for minimum and maximum pipe diameters that can be successfully flashed with Pre-Molded EPDM Pipe Flashings.
5. Structural Steel Tubing: Use a field-fabricated pipe flashing detail when the corner radius is greater than 1/4" (6.35 mm) and the longest side of the tube does not exceed 4" (101.6 mm). When the tube exceeds 4" (101.6 mm), use a standard curb detail including base-tie in and suitable termination.
6. Additional flashing treatments are required for pipe flashings. See the applicable Firestone Detail for flashing requirements.

### **C. Roof Drains:**

These specifications apply for installation of cast iron drains only. For all other drain types contact Firestone Technical Services.

1. Remove existing clamping ring. Remove any broken clamping hardware and replace.
2. Remove all existing flashing (including lead flashing), roofing materials and cement
3. from the existing drain in preparation for Platinum membrane and Water Block Seal.
4. Provide a clean even finish on the mating surfaces between the clamping ring and the drain bowl.
5. Install tapered insulation with suitable bonding surfaces around the drain to provide a smooth transition from the roof surface to the drain. Slope into drain cannot be greater than 4" in 12" (101.6 mm in 305 mm) for standard membrane and 1" in 12" (25.4 mm in 305 mm) for reinforced membrane.
6. Position the membrane and cut a hole for the roof drain allowing a 1/2" (12.7 mm) to 3/4" (19.1 mm) of membrane inside the clamping ring. Make round holes in the membrane to align with clamping bolts (a paper punch may be used). Do not cut the membrane back to the bolt holes.
7. Install Firestone Water Block Seal on the clamping ring seat flange below the membrane. Use a minimum of one half of a 10 oz. (295 cc) tube for a 10" (254 mm) drain.
8. Install the roof drain clamping ring and all clamping bolts. Tighten the clamping bolts to achieve constant compression
9. Additional flashing treatments are required for drains. See the applicable Firestone Detail for flashing requirements.

### **D. Pipe Clusters and Unusual Shaped Penetrations:**

1. The following types of penetrations require the installation of a Firestone QuickSeam Penetration Pocket and storm hood:
  - Rigid pipes with an outside diameter less than 1".
  - Flexible pipes or conduits.
  - Clusters of pipes.
  - Unusual shapes, e.g. structural beams, channels or angles.
2. A minimum clearance of 1" (25.4 mm) between penetrations, pipes, conduits, etc., and on all sides of the penetration pocket, is required to assure adequate space for the application of Firestone Pourable Sealer around each penetration.
3. Should the penetration pocket exceed 5" (127 mm), it must be flashed with a shop fabricated penetration pocket, in accordance with Firestone Platinum Details.
4. Install storm hoods over each penetration pocket to protect the Pourable Sealer.

See the Technical Information Sheet and installation instructions that are provided with the Firestone QuickSeam Penetration Pocket for additional information.

#### **E. Hot Pipes:**

Protect the Firestone Platinum System components from direct contact with steam or heat sources when the in-service temperature is in excess of 180 °F (60 °C). In all such cases, flash to an intermediate "cool" sleeve.

#### **F. Flexible Penetrations**

Provide a weathertight gooseneck set in Water Block Seal and secured to the deck. Flash in accordance with Firestone Details.

#### **G. Scuppers:**

1. Provide and install a new welded watertight sleeve.
2. Set welded watertight scupper in Water Block Seal and secure scupper to the structure.
3. Flash in accordance with Firestone Details.

#### **H. Expansion Joints:**

1. Install where specified by the project designer. Install expansion joints in accordance with Firestone details.

### **2.12 FLASHING - WALLS, PARAPETS, MECHANICAL EQUIPMENT CURBS, ETC.**

#### **A. General:**

Using the largest pieces of QuickSeam Curb Flashing or .060" (1.5 mm) or .090" (2.3 mm) RubberGard EPDM membrane practical, flash all walls, parapets, curbs, etc., to the height of 8" or greater.

**B. Evaluate Substrate:**

An acceptable substrate must be smooth, sound and dry. Existing stucco, cobblestone, textured masonry, corrugated metal panels or any uneven surface is not a suitable substrate to receive flashing. Such surfaces must be prepared to provide an acceptable substrate by attaching minimum 5/8" (15.9 mm) exterior grade or pressure treated plywood. Attach as required for structural integrity.

**C. Install Additional Membrane Securement at Curbs, Penetrations, Walls, etc.:**

Base tie-ins are required where the membrane goes through an angle change greater than 1" (25.4 mm) in 12" (305 mm). Refer to Section 2.09 of this specification.

**D. Provide Termination:**

Provide termination directly to the vertical substrate as shown in Firestone Details.

**E. Provide Intermediate Attachment:**

Intermediate attachment of membrane is required at 36" (914 mm) intervals in accordance with Firestone Details unless:

1. The wall surface is smooth, without noticeable high spots or depressions (i.e., plywood, poured or precast concrete, or hollow core block or masonry walls where joints are flush with masonry surface).

**AND**

2. The membrane has been installed underneath a coping to the outside edge of the wall per Firestone Details

**2.13 FLASHING - GRAVEL STOPS OR ROOF EDGE METALS**

**A. Flash Gravel Stops or Roof Edge Metals using Firestone QuickSeam Flashing:**

**1. Clean the Membrane and Metal Edge:**

Remove excess amounts of dusting agent by brooming. Apply Single-Ply QuickPrime Primer to the metal edging and membrane as described in Firestone Specifications. Allow the Single-Ply QuickPrime Primer to flash-off.

**2. Apply QuickSeam Flashing:**

Place the roll of QuickSeam Flashing on the roof a few feet ahead of the application starting point, positioned so that it unrolls from the top of the roll (release paper will be on top). Remove approximately 2' to 3' (.6 m to .9 m) of release paper and apply to the metal flange and Firestone Platinum Membrane. Lap adjacent rolls of QuickSeam Flashing a minimum of 1" (25.4 mm).

**3. Roll the QuickSeam Flashing:**

With a 1-1/2" to 2" (38 mm to 51 mm) wide silicone hand roller or the Firestone QuickRoller, roll the QuickSeam Flashing to assure proper adhesion. Additional attention must be given to factory seam intersections and to any change in plane.

#### **4. Special Considerations (End Laps, "T" Joints, etc.):**

- a. An additional layer of QuickSeam FormFlash must be installed over the QuickSeam Flashing. The QuickSeam FormFlash must be installed in a manner so as to completely cover the metal flange and extend beyond the QuickSeam Flashing onto the Firestone Platinum Membrane.
- b. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, an additional piece of QuickSeam Flashing must be applied over the metal lap to the top of the gravel stop, after the final application of QuickSeam FormFlash is applied. Seam Edge Treatment must be applied at the intersections of the two flashing sections. Refer to Detail PRE-3.

### **2.14 MEMBRANE REPAIR**

#### **A. Clean the Membrane:**

1. When repairing membrane, which has been in service, it is necessary to remove accumulated dirt. Proper membrane preparation is made by scrubbing the membrane with a scrub brush and warm soapy water, rinsing with clear water and drying with clean cotton cloths. Clean the area using clean cotton cloths with Firestone Splice Wash. Additional cleaning using Firestone Splice Wash is often necessary.
2. As an alternative, Firestone Membrane PreWash can be used to clean existing membrane. Spray Membrane PreWash on the membrane and allow to stand for approximately ten minutes. Remove PreWash with power washer and allow membrane to dry before any repair activity. Refer to Technical Information Sheet for Membrane PreWash for more detailed instructions.
3. Cleaned membrane is then primed with Single-Ply QuickPrime Primer prior to completing the repair, in accordance with Firestone Details

#### **B. Repair Cuts/Punctures in the Membrane or Wrinkles Within 18" (458 mm) of a Seam:**

1. A wrinkle running toward a seam or within 18" (458 mm) of a seam must be repaired. The wrinkle must be cut out so that the membrane lays flat and patched with a piece of Firestone Platinum Membrane having no factory seams that extends a minimum of 3" (76 mm) beyond the boundaries of the cut in all directions. If the wrinkle occurs through QuickSeam Flashing or QuickSeam FormFlash, like material must be used for repair. QuickSeam Flashing or QuickSeam FormFlash may not extend onto the roof surface more than 6" (152 mm). QUICKSEAM FLASHING OR QUICKSEAM FORMFLASH CANNOT BE USED TO REPAIR CURED MEMBRANE.
2. Repair a cut or puncture in the Firestone Platinum Membrane with Firestone Platinum Membrane. The repair must extend a minimum of 3" (76 mm) beyond the boundary of the affected area in all directions. Round all corners of the repair piece (Example: a pinhole will require a minimum 6" x 6" (152 mm x 152 mm) patch).
3. When repairing Firestone Platinum Membrane, 3" QuickSeam Tape and QuickPrime Plus must be used. Refer to section 2.07.1 for specific application instructions.
4. All 3" (76 mm) seams must be covered with an additional treatment of 5" Firestone QuickSeam Flashing, centered over the completed field seam, refer to section 2.08.1

for application instructions.

## **2.15 TEMPORARY CLOSURE**

- A. Temporary closures which assure that moisture does not damage any completed section of the new roofing system are the responsibility of the licensed applicator. Completion of flashings, terminations and temporary closures is required to provide a watertight condition.
- B. See the V-Force Membrane Technical Information Sheet for further information.

## **2.16 ACRYLITOP PC-100 COATING**

AcryliTop PC-100 can be applied to the Firestone Platinum Membrane or flashing to offer a reflective surface, and add to its service life. In addition, refer to the Technical Information Sheets and Material Safety Data Sheets for AcryliTop PC-100, AcryliTop PC-100 Base Coat and Membrane PreWash for additional information on application, storage and safety.

### **A. Clean membrane surface:**

Before applying the AcryliTop PC-100, the Firestone Platinum Membrane must be cleaned using Firestone's Membrane PreWash. Clean the roof of debris, as needed, with a broom or leaf air blower. Remove any leaves or large pieces of debris, such as stones, branches, etc. Apply Membrane PreWash at a rate of 300 to 500 square feet of membrane surface (27.9 sq. m to 46.5 sq. m) using a 2 to 3 gallon (7.6 L to 11.4 L) agricultural tank sprayer and allow to dry for 5 to 10 minutes (application rates may vary depending on the cleanliness of the membrane). Ensure that tank sprayer has a pressure relief valve. Do not allow PreWash to come in contact with other surfaces. Using a 3000 to 4000 psi (20.7 mPa

to 27.6 mPa) pressure washer that provides a minimum of 4 gallons (15.1 L) per minute, remove the PreWash working first away from the drains or gutters, then back towards them. A 40° fan spray nozzle for pressure washing should be used. Should deposits of dirt and dusting agent remain, additional cleaning with the pressure washer is required. (Caution: Do not allow the spray wand to be closer than 12 inches (304.8 mm) from the membrane to prevent damage).

### **B. Apply AcryliTop PC-100 Base Coat (Only required when using a roller application):**

After the membrane has dried, apply Firestone AcryliTop PC-100 Base Coat at a rate of approximately 200 square feet (18.5 sq. m) per gallon (3.8 L) using a 3/8" (9.5 mm) nap paint roller. At this rate, membrane may be slightly visible through the base coat. Allow Base Coat to dry thoroughly before applying the AcryliTop PC-100 Top Coat.

### **C. Apply AcryliTop PC-100:**

#### **a. ROLLER APPLICATION:**

Using a 3/8" (9.5 mm) nap paint roller, apply the AcryliTop PC-100 coating at a 90° angle to the AcryliTop PC-100 Base Coat at a rate of approximately 200 square feet (18.5 sq. m) per gallon (3.8 L) or as necessary to assure complete coverage of the AcryliTop PC-100 Base Coat. The finished dry mil thickness of both coatings be a minimum of 10 mils total.

**b. SPRAYER APPLICATION:**

Once the membrane is properly cleaned, apply AcryliTop PC-100 at a rate of approximately 100 square feet (9.3 sq. m) per gallon (3.8 L), resulting in a minimum 10 mil dry film thickness. The sprayer used for application of the AcryliTop PC-100 should be a 30:1 ratio pump using a pressure of 90-100 psi (620.5 kPa to 689.5 kPa) at a rate of 125 cubic feet (3.5 cu. m) per minute.

## **2.17 ROOF WALKWAYS**

### **1. Lay Out Firestone RubberGard QuickSeam Walkway Pads:**

Install walkway pads in locations as specified by the project designer and in accordance with the System Design Guide Section of this Manual. Layout Firestone RubberGard QuickSeam Walkway Pads so that the flat surface is over the completed RubberGard Membrane, spacing each pad a minimum of 1" (25.4 mm) and a maximum of 3" (76 mm) from each other to allow for drainage.

### **2. Attach Firestone RubberGard QuickSeam Walkway Pads to the Membrane:**

**a. Clean the Membrane:**

Clean the membrane using Firestone Single-Ply QuickPrime Primer where the QuickSeam Splice Tape will contact the membrane.

**b. Place Walkpad:**

Remove the release paper from the QuickSeam Splice Tape. Turn the walkpad over and place it in the Single-Ply QuickPrime Primer.

**c. Apply Pressure:**

Walk on the pad to press in place assuring proper adhesion.

## **2.18 SHEET METAL WORK**

For specific installation instructions for Firestone Sheet Metal, refer to the System Design Guide and Technical Information Section of this manual.

For sheet metal work not supplied by Firestone, refer to fabrication and installation requirements specified by the project designer, as well as industry standards.

END OF SECTION