



June 15, 2016

Technical Bulletin TB-2016-03

I. Gum box revisions:

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. The installation details when installing flexible lines in gum boxes (pitch pockets) has been revised.

Standards being replaced:

.2 Flexible lines shall be contained within a curbed enclosure or gum cup provided boxes are filled with two-part pourable sealer. The flexible line must be supported until the sealer has cured.

NEW Standard:

.2 Only armoured, waterproof flexible service lines are permitted and shall be contained within a curbed enclosure or gum cup. The top 50mm (2") of the gum cup shall be filled with two-part pourable sealer and the flexible line must be supported until the sealer has cured. Rubberized asphalt and plastic cement are not acceptable sealants.

This change will be referenced in the following sections of the ARCA Roofing Application Standards Manual;

- B.U.R. 2.3.5.
- MB 2.3.5.
- EPDM 2.3.5.
- TP 2.3.5.



II. Required fire resistive underlayment

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. **When torching membranes over heat sensitive insulation material, the standard has been revised.**

Standard being reinstated/revised:

MB 5.6.4.

When torching membranes directly to glass faced gypsum board, direct the majority of torch flame towards the modified bitumen rolls rather than the surface of the gypsum roof board. Gypsum board joints shall be supported and staggered a minimum distance of 150mm (6") from the joints of the underlying substrate or insulation.

Standard being revised:

MB 5.6.5.

When torching over heat sensitive substrates or insulation, all joints must be protected with a minimum 150mm (6") wide, 1.5mm (60mil) thick self-adhesive fire tape.



III. Fall Arrest Anchor Waterproofing clarifications:

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

2. Fall Arrest anchors waterproofing clarification (BUR & MB).

NEW Standard:

BUR 2.3.6.4.

MB 2.3.6.4.

Fall Arrest Anchors shall be waterproofed to ARCA Standards. Flanges shall not be fabricated less than 100mm (4") nor more than 200mm (8") in width.

3. Fall Arrest anchors waterproofing clarification (EPDM).

NEW Standard:

EPDM 2.3.7.4.

Fall Arrest Anchors shall be waterproofed in accordance with Sections EPDM 2.3.5. and EPDM 2.3.6.

4. Fall Arrest anchors waterproofing clarification (TP).

NEW Standard:

TP 2.3.7.4.

Fall Arrest Anchors shall be waterproofed in accordance with Sections TP 2.3.5. and TP 2.3.6.

These changes will be referenced in the ARCA Roofing Application Standards Manual.



IV. Auxiliary Leveling Surface Securement.

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. Auxiliary Leveling Surface securement using drywall screws.

Standard being replaced:

MB 3.2.2.3.

When using drywall screws for attachment, use a minimum of twenty (20) per 1200 x 2400mm (4'x8') sheet or a minimum six (6) screws for 600 x 1200mm (2'x4') sheets.

NEW Standard:

MB 3.2.2.3.

When using drywall screws for attachment, use a minimum of twenty (20) per 1200mm x 2400mm (4'x8') sheet.

2. Auxiliary Leveling Surface securement using screws and plates.

Standard being replaced:

MB 3.2.2.4.

Follow Factory Mutual (FM) requirement for screws and plates.

NEW Standard:

MB 3.2.2.4.

When using screws and plates for attachment, use a minimum of eight (8) per 1200mm x 2400mm (4'x8') sheet.

This change will be referenced in the ARCA Roofing Application Standards Manual.



V. Fall Arrest Anchor waterproofing clarification on Protected Membrane systems.

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. Fall Arrest Anchors on Protected Membrane systems.

Standard being replaced:

MB 9.3.3.

Deck level pedestal fall protection roof anchors may be waterproofed with an ARCA Warranty Ltd. approved one-piece manufactured metal specialty flashings. The one-piece metal specialty flashing shall incorporate a minimum 75mm (3") wide integral flange. The flashing flange shall be mechanically fastened to the structure or decking over the primary membrane prior to the application of the membrane flashing.

NEW Standard:

MB 9.3.3.

Pedestal fall protection roof anchors shall be waterproofed with an ARCA Warranty Ltd. approved one-piece manufactured metal specialty flashings. The one-piece metal specialty flashing shall incorporate a minimum 100mm (4") wide flange. The flange shall be mechanically fastened to the structure or decking over the primary membrane prior to the application of the membrane flashing.

This change will be referenced in the ARCA Roofing Application Standards Manual.



VI. Membrane “T” joint junctions:

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. **Membrane Splice Overlap and membrane “T” joint junctions.**

Standard being replaced:

TP 6.5.4.1.

Membrane splice overlaps and membrane "T" joint junctions shall be covered with a minimum 150 x 150 mm (6" x 6") square of heat welded thermoplastic membrane as required by the membrane manufacturer.

NEW Standard:

TP 6.5.4.1.

Membrane splice overlaps and membrane "T" joint junctions shall be covered with a minimum 100 mm (4") wide heat welded thermoplastic membrane as required by the membrane manufacturer.

This change will be referenced in the ARCA Roofing Application Standards Manual.



VII. Thermoplastic (TP) design addition:

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after June 1, 2016.

1. Thermoplastic membrane designs.

Standard being replaced:

TP 6.1.1.

Thermoplastic membrane designs can be categorized as a fully adhered, mechanically fastened, loose-laid ballasted, and protected membrane.

NEW Standard:

TP 6.1.1.

Thermoplastic membrane designs can be categorized as a fully adhered, mechanically fastened, loose-laid ballasted, non-penetrating induction fastening and protected membrane roofing systems.

2. Thermoplastic membrane designs.

Standard being replaced:

TP 6.1.2.

Mechanically fastened and fully adhered thermoplastic membranes of 60 mil thick or less shall be applied over a high-density insulation cover board in a conventional insulated roof system.

NEW Standard:

TP 6.1.2.

Mechanically fastened, non-penetrating induction fastening and fully adhered thermoplastic membranes of 60 mil thick or less shall be applied over a high-density insulation cover board in a conventional insulated roof system.

This change will be referenced in the ARCA Roofing Application Standards Manual.



VIII. Loose Laid Ballasted and Mechanically Fastened EPDM membranes:

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. Loose Laid Ballasted and Mechanically Fastened EPDM membranes on dimensional lumber decks.

Standard being replaced:

EPDM 3.2.3.1.1

A single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite roof insulation shall completely cover dimensional lumber decks.

NEW Standard:

EPDM 3.2.3.1.1.

In an uninsulated system, a single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite roof insulation shall completely cover dimensional lumber decks.

2. Loose Laid Ballasted and Mechanically Fastened EPDM membranes on plywood and OSB decks.

Standard being replaced:

EPDM 3.2.3.2.1

A single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite insulation shall completely cover plywood and O.S.B. decks.

NEW Standard:

EPDM 3.2.3.2.1.

In an uninsulated system, a single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite roof insulation shall completely cover plywood and OSB decks.



3. Loose Laid Ballasted and Mechanically Fastened EPDM membranes on concrete decks.

Standard being replaced:

EPDM 3.2.3.3.1

Precast and cast-in-place concrete decks shall be completely covered with a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation.

NEW Standard:

EPDM 3.2.3.3.1.

In an uninsulated system, a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation shall completely cover precast and cast-in-place concrete decks.

4. Loose Laid Ballasted and Mechanically Fastened EPDM membranes on steel decks.

Standard being replaced:

EPDM 3.2.3.4.1

Steel decks shall be completely covered with a single layer of minimum 25mm (1”) thick fiberboard or perlite insulation.

NEW Standard:

EPDM 3.2.3.4.1.

In an uninsulated system, a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation shall completely cover steel decks.

5. Loose Laid Ballasted and Mechanically Fastened EPDM membranes on deck fills.

Standard being replaced:

EPDM 3.2.3.5.1

A single layer of minimum 12.7mm (½”) fiberboard or perlite roof insulation shall completely cover bituminous deck fills.

NEW Standard:

EPDM 3.2.3.5.1.

In an uninsulated system, a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation shall completely cover bituminous deck fills.

This change will be referenced in the ARCA Roofing Application Standards Manual.



IX. Loose Laid Ballasted and Mechanically Fastened TP membranes:

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. Loose Laid Ballasted and Mechanically Fastened TP membranes on dimensional lumber decks.

Standard being replaced:

TP 3.2.3.1.1

A single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite roof insulation shall completely cover dimensional lumber decks.

NEW Standard:

TP 3.2.3.1.1.

In an uninsulated system, a single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite roof insulation shall completely cover dimensional lumber decks.

2. Loose Laid Ballasted and Mechanically Fastened TP membranes on plywood and OSB decks.

Standard being replaced:

TP 3.2.3.2.1

A single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite insulation shall completely cover plywood and O.S.B. decks.

NEW Standard:

TP 3.2.3.2.1.

In an uninsulated system, a single layer of minimum 12.7mm ($\frac{1}{2}$ ") thick fiberboard or perlite roof insulation shall completely cover plywood and OSB decks.



3. Loose Laid Ballasted and Mechanically Fastened TP membranes on concrete decks.

Standard being replaced:

TP 3.2.3.3.1

Precast and cast-in-place concrete decks shall be completely covered with a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation.

NEW Standard:

TP 3.2.3.3.1.

In an uninsulated system, a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation shall completely cover precast and cast-in-place concrete decks.

4. Loose Laid Ballasted and Mechanically Fastened TP membranes on steel decks.

Standard being replaced:

TP 3.2.3.4.1

Steel decks shall be completely covered with a single layer of minimum 25mm (1”) thick fiberboard or perlite insulation.

NEW Standard:

TP 3.2.3.4.1.

In an uninsulated system, a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation shall completely cover steel decks.

5. Loose Laid Ballasted and Mechanically Fastened TP membranes on deck fills.

Standard being replaced:

TP 3.2.3.5.1

A single layer of minimum 12.7mm (½”) fiberboard or perlite roof insulation shall completely cover bituminous deck fills.

NEW Standard:

TP 3.2.3.5.1.

In an uninsulated system, a single layer of minimum 12.7mm (½”) thick fiberboard or perlite roof insulation shall completely cover bituminous deck fills.

This change will be referenced in the ARCA Roofing Application Standards Manual.

X. Door sill height clarification

1. Minimum membrane flashing height on BUR membranes.

Standard being replaced: BUR 7.1.6.

For conventional designs, maintain a minimum membrane flashing height of 200mm (8") above the surface of the primary membrane.

NEW Standard: BUR 7.1.6.

The minimum height of the membrane flashing at a wall, roof penetration, or curb shall be 200mm (8") above the primary membrane surface in a conventional design and 200mm (8") above the insulation or concrete paver ballast material in a protected membrane or combination design. The minimum height of membrane flashing at door sills shall be 100mm (4") above the primary membrane surface, or concrete paver surface measured at the door sill location.

2. Minimum membrane flashing height on SBS membranes.

Standard being replaced: MB 7.1.6.

The minimum height of the membrane flashing at a wall, roof penetration, or curb shall be 200 mm (8") above the primary membrane surface in a conventional design and 200 mm (8") above the insulation or concrete paver ballast material in a protected membrane or combination design. The minimum height of membrane flashing at door sills shall be 100 mm (4") above the primary membrane surface, or concrete paver surface.

NEW Standard: MB 7.1.6.

The minimum height of the membrane flashing at a wall, roof penetration, or curb shall be 200mm (8") above the primary membrane surface in a conventional design and 200mm (8") above the insulation or concrete paver ballast material in a protected membrane or combination design. The minimum height of membrane flashing at door sills shall be 100mm (4") above the primary membrane surface, or concrete paver surface measured at the door sill location.

3. Minimum membrane flashing height on EPDM membranes.

Standard being replaced: EPDM 7.1.6.

The minimum membrane flashing height on any interior curb, penetration or wall is 200mm (8") above the primary membrane in a conventional and loose laid ballasted roof design.

NEW Standard: EPDM 7.1.6.

The minimum height of the membrane flashing at a wall, roof penetration, or curb shall be 200mm (8") above the primary membrane surface in a conventional design and 200mm (8") above the insulation or concrete paver ballast material in a protected membrane or combination design. The minimum height of membrane flashing at door sills shall be 100mm (4") above the primary membrane surface, or concrete paver surface measured at the door sill location.



4. Minimum membrane flashing height on Thermoplastic membranes.

Standard being replaced: TP 7.1.6.

The minimum membrane flashing height for curbs is 200 mm (8") above the primary membrane surface in a conventional design and 75 mm (3") above the insulation or concrete paver ballast for loose-laid ballasted design.

NEW Standard: TP 7.1.6.

The minimum height of the membrane flashing at a wall, roof penetration, or curb shall be 200mm (8") above the primary membrane surface in a conventional design and 200mm (8") above the insulation or concrete paver ballast material in a protected membrane or combination design. The minimum height of membrane flashing at door sills shall be 100mm (4") above the primary membrane surface, or concrete paver surface measured at the door sill location.

This change will be referenced in the ARCA Roofing Application Standards Manual.



XI. Re-roofing over existing stramit deck material:

1. **When re-roofing with EPDM, TPO or PVC over stramit material, the standard has been revised to provide for consistent interpretation.**

Standard being replaced:

When the primary membrane is being removed from Stramit or glass fiber insulation, that have a facer, the condition of the insulation facer after the tear off determines the surface preparation method for the application of the new roof membrane. When less than seventy percent (70%) of the facer remains intact, an initial layer of secondary insulation/cover board must be mechanically fastened to the structural deck, followed by another layer of secondary insulation/cover board adhered with hot bitumen. When more than seventy percent (70%) of the facer remains intact both layers of secondary insulation/cover board may be adhered with hot bitumen. Care must be taken to ensure that the existing primary insulation is adequately attached to the existing vapour retarder membrane and structural deck. When thermal upgrading is required, the first layer of the secondary insulation/cover board may be substituted for/by the upgraded insulation material. Attachment requirements remain the same.

NEW Standard:

When the primary membrane is being removed from stramit or glass fiber insulation, that have a facer, the condition of the insulation facer after the tear off determines the surface preparation method for the application of the new roof membrane. When re-roofing over stramit the first layer of approved coverboard must be mechanically fastened to the structural joist or deck. If the first layer is fibreboard, then the second layer of approved 12.7mm (1/2") coverboard may be adhered or mechanically fastened with screws and plates. When thermal upgrading is required, the first layer of the secondary insulation/cover board may be substituted for/by the upgraded insulation material. Attachment requirements remain the same.

This change will be referenced in the following sections of the ARCA Roofing Application Standards Manual;

- E.P.D.M. 10.2.8.
- TP 10.2.8.



XII. Membrane Flashing Acceptable Substrates:

1. Approved membrane flashing substrate materials has been revised to provide clarification.

Standard being replaced:

The membrane flashing shall be uniformly supported by and secured to an acceptable, solid substrate. Acceptable substrates consist of minimum 12.7 mm (1/2") thick plywood, minimum 11 mm (7/16") oriented strand board, minimum 6 mm (1/4") factory-coated glass faced gypsum roof board or cement board over wood sheathing, dimensional lumber, smooth concrete, smooth surfaced concrete block or masonry and minimum 22 gauge flat sheet metal.

NEW Standard:

The membrane flashing shall be uniformly supported by and secured to an acceptable, solid substrate. Acceptable substrates consist of minimum 12.7mm (1/2") thick plywood, minimum 11.1mm (7/16") thick oriented strand board, dimensional lumber, smooth concrete, smooth surfaced concrete block or masonry and minimum 22 gauge flat sheet metal.

This change will be referenced in the following sections of the ARCA Roofing Application Standards Manual;

- MB 7.1.3
- E.P.D.M. 7.1.3
- TP 7.1.3

2. **Clarification when using cement board as an approved membrane flashing substrate has been revised to provide clarification.**

Standard being replaced:

MB 7.1.4.

Factory-coated (pre-primed) glass faced gypsum roof board or cement board is an acceptable substrate for the application of self-adhesive SBS modified bitumen membrane flashing when a minimum 12.7 mm (1/2") thick wood sheathing is provided as a nailable support. Glass faced gypsum board or cement board shall be suitably fastened into the wood sheathing and/or parapet wall studs with screws and 70 mm wide plates. Thickness subject to approval from the authority having jurisdiction to meet non-combustible requirements of the ABC. (See Figure 4c)

NEW Standard:

MB 7.1.4.

Factory-coated glass faced gypsum roof board or cement board, both must be a minimum 6.4mm (1/4"), are acceptable substrates for the application of self-adhesive SBS modified bitumen membrane flashing when a minimum 12.7mm (1/2") thick wood sheathing or 11.1mm (7/16") oriented strand board is provided as a nailable support. Glass faced gypsum board or cement board shall be suitably fastened into the wood sheathing and/or parapet wall studs. Thickness subject to approval from the authority having jurisdiction to meet non-combustible requirements of the Alberta Building Code. (See Figure 4c).

Standard being replaced:

E.P.D.M. 7.1.4.

Factory-coated (pre-primed) glass faced gypsum roof board or cement board is an acceptable substrate for the application of fully adhered thermoplastic membrane flashing when a minimum 12.7 mm (1/2") thick wood sheathing is provided as a nailable support. Glass faced gypsum board or cement board shall be suitably fastened into the wood sheathing and/or parapet wall studs with screws and 70 mm (2 3/4") wide plates. Thickness subject to approval from authority having jurisdiction to meet non-combustible requirements of the ABC. (See Figure 1a)

NEW Standard:

E.P.D.M. 7.1.4.

Factory-coated glass faced gypsum roof board or cement board, both must be a minimum 6.4mm (1/4"), are acceptable substrates for the application of fully adhered EPDM membrane flashing when a minimum 12.7mm (1/2") thick wood sheathing or 11.1mm (7/16") oriented strand board is provided as a nailable support. Glass faced gypsum board or cement board shall be suitably fastened into the wood sheathing and/or parapet wall studs. Thickness subject to approval from the authority having jurisdiction to meet non-combustible requirements of the Alberta Building Code. (See Figure 1a).



Standard being replaced:

TP 7.1.4.

Factory-coated (pre-primed) glass faced gypsum roof board or cement board is an acceptable substrate for the application of fully adhered thermoplastic membrane flashing when a minimum 12.7 mm thick wood sheathing is provided as a nailable support. Glass faced gypsum board shall be suitably fastened into the wood sheathing and/or parapet wall studs with screws and 70 mm (2 3/4") wide plates. Thickness subject to approval from authority having jurisdiction to meet non-combustible requirements of the ABC. (See Figure 1a).

NEW Standard:

TP 7.1.4.

Factory-coated glass faced gypsum roof board or cement board, both must be a minimum 6.4mm (1/4"), are acceptable substrates for the application of fully adhered thermoplastic membrane flashing when a minimum 12.7mm (1/2") thick wood sheathing or 11.1mm (7/16") oriented strand board is provided as a nailable support. Glass faced gypsum board or cement board shall be suitably fastened into the wood sheathing and/or parapet wall studs. Thickness subject to approval from the authority having jurisdiction to meet non-combustible requirements of the Alberta Building Code. (See Figure 1a).

These change will be referenced in the ARCA Roofing Application Standards Manual.



XIII. Slate Tile design guidelines.

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. **Slate Tile (Section 4) design authority.**

Standard being replaced:

SS Section 4

4.1.2.2.

When reroofing with slate tiles a letter from a registered structural engineer shall be made available for the Regulation Authority. The design shall be in accordance with the National Building Code and the letter shall state that the roof will support the dead and live loads imposed.

NEW Standard:

SS Section 4

4.1.2.2.

When reroofing with slate tiles a letter from a registered structural engineer shall be made available for the Regulation Authority. The design shall be in accordance with the Alberta Building Code and the letter shall state that the roof will support the dead and live loads imposed.

This change will be referenced in the ARCA Roofing Application Standards Manual.

XIV. Concrete Tile design standards.

The following standards have been reviewed and approved by ARCA Warranty Ltd., and will be in effect for jobs bid after July 22, 2016.

1. **The concrete tile design standards, SS Section 3: Concrete Tile Roofing will be removed from the ARCA Roofing Application Standards Manual.**

This change will be referenced in the ARCA Roofing Application Standards Manual.