

BUILT-UP ROOFING

SECTION 10 - RE-ROOFING

10.1 GENERAL

- .1 Re-roofing encompasses both primary membrane replacement and replacement of the entire roofing assembly above the structural deck.
- .2 Due to the unique nature of re-roofing, relief from the Warranty Certificate standards may be requested. When relief is requested, applications shall be made in a written submission to the ARCA Warranty Ltd. Technical Committee. This request for relief is termed a "Variance Request" and must contain all pertinent information explaining why relief is being requested.
- .3 The Warranty Certificate standards, as itemized in this manual, are applicable to re-roofing as well as new construction, with the exception that the existing drainage slope may be retained in a conventional membrane design if less than 1:100 (1/8"/ft.).
- .4 The maximum roof slope permitted for re-roofing is 1:6 (2"/ft.).
- .5 Sheet metal flashings, including lead flashings, adhered to the primary membrane shall be replaced with new materials. Base and cap flashings may be reused provided they are in good condition, fabricated to the Warranty Certificate standard and fit properly.
- .6 The Warranty Certificate can only be issued on self-contained roof areas. Control joints may be required to create a self-contained area when partial roofing system replacement is carried out. Special attention to drainage provisions may be necessary.
- .7 Roof mounted equipment may need to be removed and reinstalled to facilitate replacement of the roofing system beneath them. Equipment mounted on properly constructed curbs of sufficient height may not require removal.
- .8 A minimum clearance of 100 mm (4") shall be maintained between the underside of service lines and the surface of the completed roofing system.
- .9 When the existing built-up roofing systems is of a different bitumen type than the new system to be applied (e.g. Coal tar pitch to asphalt), care must be taken to ensure that the two dissimilar bitumens do not come into contact with each other.
- .10 In some instances there may be two (2) roof systems one above of the other, over an existing roof area. Where two (2) primary membranes are present and both primary membranes shall be removed.
- .11 Prior to reroofing, all damaged or deteriorated decks and substrates shall be replaced or repaired with similar materials.

10.2 PRIMARY MEMBRANE REPLACEMENT

- .1 When considering an existing conventional insulated roofing system for primary membrane replacement the following factors require evaluation:
 - a) The effect that the lack of a vapour retarder may have had on the failure of the existing membrane,
 - b) The type, condition and thickness of the existing insulation and the amount of moisture that may have infiltrated the insulation (dryness),
 - c) The existing roof deck type and its structural integrity if moisture reached the deck, and
 - d) The attachment of roofing system components to their existing substrates.
- .2 When membrane replacement is undertaken, uncorrected defects hidden from view, such as wet insulation or a deteriorated deck, could jeopardize roofing system performance.
- .3 Wet and damaged insulation shall be removed and replaced with new insulation, to match the existing thickness.
- .4 When an existing vapour retarder membrane is present, or when the existing insulation is fully adhered to a concrete deck, care must be taken to ensure all wet insulation is located and replaced.
- .5 Under no circumstance shall a phenolic resin insulation product be left in place or reused.
- .6 Existing wood fiberboard, mineral fiber/perlite, glass fiber or Stramit primary insulation may be left in place whether or not they are covered by a secondary insulation/cover board.
- .7 Existing polyisocyanurate, urethane, foam glass, cork, expanded polystyrene, glass fiber less than 38 mm (1.5") thick and extruded polystyrene primary insulation less than 38mm (1.5") thick must be removed and replaced, except when covered by a secondary insulation/cover board consisting of wood fiberboard or perlite insulation. Exercise extra caution to ensure that all wet primary insulation is located and replaced when there is a secondary insulation/cover board in place.
- .8 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.

- .9 Regardless of the primary insulation type or the presence of an existing secondary insulation/cover board, in all cases a new secondary insulation/cover board layer meeting ARCA Warranty Certificate application standards is required to provide a consistent substrate for the application of the new roof membrane.

10.3 ROOFING SYSTEM REPLACEMENT

- .1 After tear-off the exposed substrate shall be inspected for deterioration or damage and repairs undertaken prior to the application of the replacement roofing system.
- .2 Control joints, parapets, curbs and roof/wall junctions shall be adjusted to comply with the minimum height requirements for new construction.
- .3 For conventional and combination designs, the application of a vapour retarder is a requirement whether or not the original roofing system contained a vapour retarder membrane.
- .4 An existing vapour retarder may be left in place if well adhered. Any wet or damaged membrane shall be removed and an additional one (1) ply of felt adhered with hot bitumen shall cover the entire membrane surface.

10.4 PROTECTED MEMBRANE DESIGN RE-ROOFS

- .1 A five (5) year Warranty Certificate may be issued for built-up protected membrane design re-roofs when the roof drainage slope is less than 1:50 provided that inorganic felt is used and the field of the completed built-up membrane is either covered with Type 4 primary insulation incorporating drainage channels on its underside or an accepted inorganic drainage mat placed between the primary membrane and the Type 4 insulation.

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| 10.4 Added December 2010 |
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10.5 INSPECTION

- .1 When primary membrane replacement occurs over existing IN 3 insulating Stramit, or over rigid glass fiber insulation, inspection of the exposed insulation by an ARCA Accepted Inspector is required at the time of tear off, for both rural and urban projects. Additionally, if there is a history of leaking, the inspector shall perform moisture meter or cut tests, one (1) for each 1000 ft² of insulation area. These inspections are in addition to the normal inspections for warranty issuance.
- .2 ARCA administration shall be notified of the condition of structural stramit decks prior to reroofing.

End of Section