Word processing versions of this specification are available. Contact your Lexcan representative for further information.

This specification is presented as a guide only. The specifying authority remains responsible to verify all requirements and installation methods, including the suitability of a product or system for a particular application. Lexcan does not make any recommendation or offer any warranty, expressed or implied, other than those agreed upon in advance, made in writing and relating to a specific project.

Spec Note: This retrofit roof system requires that the existing metal roof is properly secured to the structural purlins and is free from excessive corrosion. Lexcan will not be held responsible for a failure or seperation of the underlying substrate to which this roof system is fixed. If there is doubt over the structural integrity of the metal roof or its securement, consult an engineer for approval.

Spec Note: Lexcan requires that pull-out tests be conducted with the insulation fasteners and metal roof in question prior to work commencing. Fastener pull-out test results must meet minimum requirements as specified in our Design A System Data Bulletin. Lexcan will not be responsible if the insulation fasteners fail to meet minimum pullout resistance requirements.

Spec Note: This specification is acceptable only for metal roofed buildings that DO NOT fall within one of the following situations:

- **The building is higher than 21 m (70') in height.**
- **The building has large openings (combined area equal to 10% of the total wall area or greater) or overhang roofs.**
- **The building is located within 500 m of the seacoast, bay or a large lake.**
- **The building is located on top of a hill (Add height of the hill to the height of the building to see if it is higher than 21 m (70').**
- **Pressurized buildings**
- **The building is located in mountainous terrain.**
- **The building is located on or adjacent to an airport.**
- **Any wind zone of 160 km/hour (100 m.p.h.) according to Factory Mutual guidelines.**

If the building meets one or more of the above criteria, consult Lexcan for an alternative specification.

Spec Note: Specifier should indicate choice from provided alternatives by either deleting the inappropriate section or crossing out the undesired choice(s) in square brackets (ex: Hi-Tuff TPO [Grey; White]).

1.0 GENERAL

1.1 Section Includes:

1. Substrate preparation.
2. Wood blocking
3. Roofing accessory installation.
4. Insulation installation.
5. Membrane installation.
6. Membrane flashing.
7. Metal flashing

1.2 Related Work Under Other Sections

1.3 Description

1. Furnish and install a Lexcan adhesive adhered TPO Roofing System and related roofing accessories in strict accordance with specifications and details approved by Lexcan Limited.

1.4 Quality Assurance

1. The roof and proposed roof construction is to meet all the “Roof Design Considerations” requirements detailed in Lexcan's Design A System Data bulletin for a Hi-Tuff TPO adhesive adhered roof system, unless specifically approved in writing by Lexcan.

2. General Contractor shall restrict access to the roof by all other trades during and after the roofing system construction. General Contractor shall ensure that other trade personnel permitted access to the roof take proper care to prevent damage to work done under this section.

3. Roofing contractor shall be an approved applicator of Lexcan roofing systems as determined by Lexcan Limited.
4. Workmen shall be trained and experienced in the installation of this type of roofing system and shall be under full time competent supervision.

5. Prior to work beginning, contractor shall arrange at his expense for a series of pull-out tests of the specified

insulation fasteners from the subject metal roof deck. The test shall be conducted a minimum of four (4) different times in randomly selected yet representative locations around the roof. Results are to be submitted to the [roof system supplier; specifier] for final approval before work commences.

1.5 Submittals

1. Shop Drawings are to be prepared detailing roof size, membrane sheet placement, quantity, type and spacing of membrane fasteners, location and type of penetrations and type of vapour retarder, insulation and insulation fastener to be used.

2. Submit shop drawings and any proposed non-standard details to Lexcan a minimum of two weeks prior to job start for approval.

3. (Optional): Submit shop drawings, current Lexcan installation instructions and detail drawings being used on this project to the [architect, consultant, owner].

4. Roof fastener pull-out test results described in section 1.4.5.

1.6 Delivery, Storage & Handling

1. Deliver all roofing materials in original, unopened containers, complete with labels indicating brand name, contents, usage instructions and safety precautions. Membrane rolls are to be left in their unopened packaging until immediately prior to use.

2. Protect membranes from cuts, abrasion or other abuse that might adversely affect performance in service.

3. WHIMS safety bulletins on all hazardous products are to be readily available to the work crew at all times.

4. Adhesives, sealants and flashing accessories are to be stored in a clean, dry area at a temperature between 5°C and 27°C. If exposed to a lower temperature, restore to an acceptable level before using.

5. Do not work during periods of rain, fog, sleet, snow or cold temperatures (below - 15°C).

6. Ensure insulation and membrane fasteners will not damage or penetrate under deck wires, conduits, pipes etc.

1.7 Warranty

1. Contractor shall advise Lexcan in writing a minimum of two weeks prior to job start that a warranty has been requested for this project and the probable start date of roofing work.

2. Roofing System supplier shall provide a written [material, watertight] warranty on supplier's standard form for a period of [5,10] years from the date of roofing system completion.

3. Roofing Contractor shall provide a written warranty against leaks or workmanship defects for a period of two years from the date of roofing system completion.

2.0 PRODUCTS

1. Product substitutions must be approved in advance by both the specifier and the roofing system supplier to verify compatibility and acceptability. The manufacturer of the substitute product must specifically recommend their product for this type of application.

2.1 Insulation & Insulation Securement

NOTE: The following construction panels are accepted for use as coverboards over top of a base layer of insulation used to fill the space between the metal roof ribs.

- **Polyisocyanurate insulation, between 33 mm (1.3") and 51 mm (2.0") thick, as per 2.1.3 below.**
- **Dens-Deck Prime, minimum 13 mm (1/2") thick, manufactured by Georgia-Pacific and supplied by the roof system supplier.**
- **Plywood, minimum 13 mm (1/2" thick**

Minimum 19 mm (3/4") thick x 122 cm (4') x 244 cm (8') plywood may be used as the membrane substrate without underlayment support provided,
a) the plywood can be mechanically fastened into the upper ribs of the metal roof,
b) the maximum spacing of the ribs is 305 mm (12") and
c) the plywood can be butted together with edges accurately centred over upper ribs.
If this alternative is to be used, Lexcan recommends that the air space between the metal roof and the plywood be screened to prevent insect infiltration at both the eave and the roof peak.

1. INSULATION FASTENERS: Insulation securement screws are to be Factory Mutual listed and approved #12 diameter with round or flat head, corrosion treated to withstand 30 cycles of the Kesternich test with only a minimum amount of red rust showing. Fasteners must penetrate a minimum 12 mm (1/2") into steel decks or 25 mm (1") into wood decks. Holes for concrete anchors must be pre-drilled not less than 21 mm (1/2") deeper than the penetration depth of the fastener, with a drill bit recommended by the fastener manufacturer. Stress plates are to be 76 mm (3") diameter galvalume metal to fit screw.
ACCEPTABLE PRODUCT FOR WOOD OR METAL DECKS: Lexgrip™ Insulation Fasteners or Lexgrip™ Pre-Assembled Insulation Fasteners treated with Cx-5 coating, complete with metal stress plate.

2. EXPANDED POLYSTYRENE INSULATION: ASTM C-578-92 Type [I;II] expanded polystyrene insulation panels, pre-cut to fit tightly between metal roof ribs or standing seams with minimum thickness equal to the height of the rib / standing seams.
ACCEPTABLE PRODUCT: Expanded polystyrene insulation supplied by roof system supplier.

3a. POLYISOCYANURATE ROOF INSULATION: ___ mm (__") thick black glass/felt faced polyisocyanurate foam insulation meeting the requirements of CAN/ULC-S704 and having a minimum compressive strength of [140 kPa (20 psi); 175 kPa (25 psi)]. Thickness shall be between between 33 mm (1.3") and 51 mm (2.0").
ACCEPTED PRODUCT: [Isolex™; Isolex - 25] Isocyanurate Insulation.

or -

3b. COVER BOARD: __ mm (__") thick primed glass mat covered water resistant gypsum core board.
ACCEPTABLE PRODUCT: __ thick Dens-Deck Prime, supplied by the Roofing System Supplier.

or -

3c. COVERBOARD: __ mm (__") thick x 122 cm (4') x 244 cm (8') construction grade plywood, dry and warp free.

2.2 Roofing Membrane System

1. Membrane: [Light Grey, White, Tan], [1.1 mm; 1.5 mm; 2.0 mm] thick polyester scrim reinforced TPO membrane meeting the physical characteristics shown in table 1.

Table 1: Lexcan Hi-Tuff TPO Membrane Specifications

PROPERTY .045" THICK	A.S.T.M. TEST METHOD	PROPERTY BEFORE AGING	PROPERTY AFTER AGING
Thickness Tolerance	ASTM D-751	± 10%	± 10%
Thickness over Scrim	ASTM D-4637 Optical	0.381 mm (0.015")	
Elongation at Fabric Break	ASTM D-751	25% typical	25% typical
Breaking Strength	ASTM D-751, Mtd A	1.0 kN (225 lbf) min. 1.5 kN (340 lbf) typical	1.0 kN (225 lbf) min. 1.5 kN (340 lbf) typical
Tearing Strength	ASTM D-751, (B Tongue Tear)	245 N (55 lbf) min. 578 N (130 lbf) typical	245 N (55 lbf) min. 578 N (130 lbf) typical
Puncture Resistance	FTM 101 C, Mtd. 2031 1.1 mm (0.045") Thick: 1.5 mm (0.060") Thick:	1.11 kN (250 lbf) min. 1.33 kN (300 lbf) typ. 1.56 kN (350 lbf) typ.	1.11 kN (250 lbf) min. 1.33 kN (300 lbf) typ. 1.56 kN (350 lbf) typ.
Linear Dimensional Change	ASTM D-1204		± 1 % max. (-0.5% typical)
Brittleness Point	ASTM D-2137	- 40°C min. (- 46°C typical)	
Ozone Resistance	ASTM D-1149 (168 hrs @ 100pphm)	No Cracks	No Cracks
Water Absorption	ASTM D-471 (7 days @ 70°C)		+ 4.0% max. + 2.0% typical

Water Vapour Permeance	ASTM E-96 (7 days @ 70°C)	0.10 Perms max. 0.05 Perms typical	
Accelerated Weathering 5040kJ / m² Xenon-Arc 10 X Magnification	ASTM G-26 (0.70 W / m²) (80EC B.P.T.)		No Cracks No loss of breaking or or tearing strength
Solar Reflectance, % 65% req'd for Energy Star™	albedo x 100 Spectrum Reflectometer	White: 75 min., 87 typical Tan: 65 min., 70 typical	
Resistance to Microbial Growth	ASTM D-2374 S. Florida, 2 yrs.		9 - 10 typical

SPEC NOTE: Certain properties of 2.0 mm thick membrane significantly exceed the performance values given above. For the physical properties of these membrane, consult Lexcan.

2. Parapet / Wall Flashing: TPO membrane as described in 2.2.1, cut to appropriate widths and lengths.
3. Corner & Protrusion Flashing: Lexcan Hi-Tuff TPO non-reinforced Flashing.
4. MEMBRANE CLEANER: TPO Seam Cleaner.
5. CUT MEMBRANE EDGE SEALANT: TPO Cut Edge Sealant.
6. BONDING ADHESIVES: Lexcan BA-90 Bonding Adhesive.
7. WATER CUT-OFF MASTIC: Lexcan Hi-Tuff TPO All Purpose Sealant.
8. POURABLE SEALER: Lexcan Hi-Tuff TPO All Purpose Sealant.
9. NIGHT SEALANT: Lexcan FP-180 Night Sealant (Approved Alternates accepted).
10. TERMINATION SEALER TAPE: Lexcan Termination Sealer Tape.
11. TERMINATION BAR: Lexbar Termination Bar.
12. PIPE FLASHINGS: TPO Pre-formed Pipe Boots or Split Pipe Boots.
13. IRREGULAR ROOF PROTRUSIONS: Hi-Tuff Sealant Pockets and Lexcan Hi-Tuff TPO All Purpose Sealant.
14. TRAFFIC PADS: Lexcan Hi-Tuff TPO Walkway Pads.
15. ROOF EDGE & FLASHING METAL: Lexcan Hi-Tuff polymer coated steel, matching the colour of the membrane, supplied in sheets 1220 mm x 3048 mm (4' x 10').

2.3 Wood Nailers, Counter Flashing & Fascia

1. Wood nailers shall be new, #2 wood or better wood, factory treated for rot resistance. Creosote or asphalt treated wood is not acceptable. Nailers are required at all roof edges or gravel stops and shall be installed so that the top is flush with the top of the membrane underlayment, ± 5 mm (1/4").

2a. COUNTER-FLASHING: Galvanized steel sheet metal, minimum 0.61 mm (24 ga.) thick, prefinished with modified silicone, Baycoat 5000 series. Colour as selected and approved by the specifier [to match colour of existing metal flashing].

or

b. COUNTER-FLASHING: to ASTM A606-75 high strength low alloy rolled architectural grade sheet steel, minimum 0.61 mm (24 ga.) thick, pre-painted to the colour approved by the specifier [to match colour of existing metal flashing].

2.4 Flashing Accessories

1. HVAC & ELECTRICAL FLASHINGS : To be fabricated from seamless spun aluminum, complete with primer coated flanges. Use appropriate flashing for each application.
ACCEPTED PRODUCTS:
Flash-Tite Electrical Wire Outlet Post [30 cm; 46 cm] high base, complete with rigid PVC cap fitting. Model no. WPF-A___.
Flash-Tite Electrical Wire Socket or Switch Posts [30 cm; 46 cm] high base, complete with rigid PVC cap fitting. Model no. [EOP-A__; ESP-A___].
Flash-Tite B-Vent Flashing, diameter to match chimney diameter, complete with adjustable galvanized steel rain collar.
Flash-Tite pre-fabricated mastic sealer pockets ("pitch pockets"). [130 mm (5"); 230 mm (9")] high x appropriate diameter to exceed diameter or width of protrusion by 50 mm (2"). Pockets to be sealed with Lexcan Pourable Sealer, a two-part urethane, self-levelling sealant.

2.5 Other Roofing Products

Note: The following product specifications are provided in case they are needed. Delete if not applicable.

1. CURBS: 16 ga. galvanized steel supplied with 25 mm (1") thick polyisocyanurate or fibreboard insulation as described above. Curb shall be [305 mm (12"); 457 mm (18"); 610 mm (24"); __] high with inside dimensions of [762 mm x 914 mm (2'6" x 3'); 762 mm x 1372 mm (2'6" x 4.5'); 762 mm x 2438 mm (2'6" x 8'); __ x __]. 75 mm (3") wide flange shall come complete with pre-drilled securement holes.
   ACCEPTABLE PRODUCT: Lexcor Custom Insulated Curbs.

2. ROOF HATCH: Inside dimensions of hatch shall be [762 mm x 914 mm (2' 6" x 3'0"); 762 mm x 1372 mm (2' 6" x 4' 6"); 762 mm x 2438 mm (2' 6" x 8' 0"); ___ x ___] to match opening in roof deck. Curb and doors shall be [14 ga. primer coated galvanized steel; 11 ga. mill finished aluminum] and shall be neatly welded and ground at corners. Door(s) shall have 25 mm glass fibre insulation and a door liner of [18 ga. primer coated galvanized steel; 22 ga. mill finished aluminum]. Curb shall be [305 mm (12"); 457 mm (18"); 610 mm (24")] high with 25 mm (1") rigid fibre insulation secured to the curb exterior and 89 mm (3.5") wide pre-punched flanges. Hatch shall be completely assembled wtih heavy duty pintle hinges, torsion bar operated doors, neoprene draft seal, latching mechanism, padlock hasp and an automatic hold-open handle with rubber grip. All hardware shall be [cadmium plated; stainless steel]. [Safety Bar Option: 35 mm diameter Safety Bar coated with 20 mil PVC, colour coated roof safety green. Safety bar shall be mounted on the [right; left] corner of hatch curb without impeding door operation]. [Skylight Option: Hatch door shall be glazed with [single; double] acrylic domes manufactured to support up to 195 kg / m^2 live load. [Single; inside] dome shall be [clear; bronze; white]. [Outer dome shall be white]].
   Secure hatch to deck with: _____ fasteners.
   ACCEPTED PRODUCT: Lexcor Roof Hatch Model No._____
   Note: For double door or heat, smoke & explosion vent specifications, refer to Lexcor Roof Hatch & Vent data bulletin # 8.05.

3. SKYLIGHT(S): [Single; Double] dome pre-assembled acrylic skylights with [Standard; No-Frost] frame extruded from 6063-T5 aluminum alloy. Skylight(s) shall have outside dimensions of ___ x ___ to fit a [41 mm (1-5/8"); 100 mm (4")] wide curb. [Single dome; outer dome] shall be [clear; white translucent] [and inner dome shall be [clear; white translucent]. [Optional Curb: Skylights shall be supplied with a 230 mm (9") high extruded aluminum curb 23 mm (.093") thick, complete with a 76 mm (3") wide flange and insulated with 51 mm (2") wide fibre insulation covered by 61 mm (.015") internal aluminum liner].
   Secure skylight to [curb; deck] with: _____ fasteners.
   ACCEPTED PRODUCT: Lexcor [Skylight; Insulated Curb Skylight] Model No._____
   Note: For custom and round skylight specifications, refer to Lexcor product data bulletin #11.05.

3.0 EXECUTION

1. Only install as much insulation as can be completely and properly covered by the waterproofing membrane by the end of each work period.

2. Comply with current Lexcan published installation instructions and details throughout the roofing membrane installation.

3. There shall be no smoking by any personnel while on the roof. Protect the roof membrane at all times from high heat sources such as cigarette butts or sparks from nearby welding.

3.1 Inspection

1. Examine roof deck to verify proper placement of all roof openings, pipes, curbs, sleeves, ducts, vents and drains. Existing surface shall be dry, reasonably smooth and even.

2. The contractor is responsible to ensure that all corroded or significantly deteriorated decking is repaired or replaced, as appropriate. Attachment of the roofing system to corroded metal panels will void the warranty. If in doubt, obtain a pre-inspection and written approval from a Lexcan technical representative in advance.

3.2 Wood Nailers

1. Standing seam metal roofs require two layers of wood nailers at the building eaves (perpendicular to slope) and may require two at the rake ends. The first layer is installed between the raised standing seams, flush with the

top surface of the standing seams. These nailers are fastened on maximum 30 cm (12") centres to the structural purlins. In no cases shall less than 2 fasteners be installed per section of nailer. In all cases fasteners shall be installed within 3 inches from ends of nailers. The top wood nailer is then fasted to the bottom nailer with insulation fasteners spaced at maximum 30 cm (12") penetrating bottom nailer a minimum of 1 inch.

2. Finished nailers shall be finished to be level with adjacent construction or insulation ± 1/4".

3.3 Insulation Installation

1. All insulation panels and cover boards are to be tightly butted together with a maximum 6 mm (1/4") space between panels.

2. Base layer insulation shall be expanded polystyrene pre-cut to fit tightly between the standing seams and of a thickness to match the height of the standing seams. Insulation may be loosely laid between the standing seams.

3. For buildings with corrugated metal roofs, a compressible filler such as batt insulation must be installed beneath the perimeter wood nailers to minimize air infiltration beneath the roofing system.

4. Install appropriate size insulation fasteners according to the required spacing and density of [Roofing System Supplier, Factory Mutual Systems, insulation manufacturer]. Where F.M. guidelines are not being used and unless otherwise approved in writing by Lexcan, the minmum acceptable fastening density is one fastener / 0.19 m^2 (2.0 ft^2) or 16 fasteners per 4' x 8' panel. If using Isolex™ polyisocyanurate insulation, the following densities may be used:

SINGLE OR TOP PANEL THICKNESS

1.5" to 1.9" (38 mm to 48 mm):	One fastener / 0.25 m^2 (3.2 ft^2) or 12 fasteners per 4' x 8' panel.
2.0" (51 mm) and thicker*:	One fastener / 0.37 m^2 (4.0 ft^2) or 8 fasteners per 4' x 8' panel.

All cut insulation panels or cut parts shall have a minimum of two (2) fasteners.
Plywood coverboard without a supporting base of insulation shall be positioned and cut so that panel edges are centred over upper ribs.
All fasteners must be a minimum of 15 cm (6") from each edge of the board. Boards must conform to the deck surface. Irregular surfaces will require additional fasteners. Adjacent insulation panels shall have joints staggered from each other. If the insulation manufacturer's fastening requirements exceed those of Lexcan, they must be used in lieu of Lexcan's.

3.4 Positioning & Adhering Membrane Sheets

1. The contractor shall be responsible for the suitability of the substrate surface to accept the membrane. Ensure insulation surface or substrate is clean, flat and free from dirt, debris or sharp objects that might be detrimental to the performance of the membrane.

2. The ambient temperature should be +5° C and rising when fully adhering the membrane.

3. For roofs with edge drainage, start at the low edge with the first sheet and install adjacent sheets by overlapping the lower sheets. For roofs with interior drainage, start with the first sheet centred on the drain valley and install adjacent sheets by overlapping the lower sheet*.

*: If the substrate type or deck size prevents ineffective weather tie-off then it may be necessary to start at a high point and work down. Care should be taken to install laps shingle fashion, however to ensure proper run-off.

4. Unroll the first membrane and position it in accordance with 3.4.3 above. Fold the sheet in half lengthwise to expose one half of the sheet underside.

5. Apply Lexcan BA-90 Bonding Adhesive with a roller to the underside of the roofing membrane and the substrate at the net coverage rate of 5.7 m^2 (60 Sq.Ft.) / gallon. Do not apply the Bonding Adhesives to areas on the membrane that are to be heat welded. Apply both adhesives evenly, without globs or puddles. Allow both adhesives to flash-off until they are tacky but do not string when touched with a dry finger.

6. If the adhesive becomes contaminated by blowing dust, moisture, walking in it, etc. it should be allowed to completely dry (no longer tacky) and new adhesive applied to both surfaces.

7. When the adhesives have sufficiently dried, carefully unroll the glued portion of the membrane back over the glued substrate, avoiding wrinkles, voids or air pockets. Immediately roller or brush the membrane heavily with a push broom to assure 100% complete contact.

8. Fold back the other half of the sheet and repeat steps 3.4.4 through 3.4.7.

9. Layout subsequent sheets by positioning them so they overlap the previously adhered sheet by 50 mm (2"). Heat weld the subsequent sheet to the first sheet as per section 3.5 below. Once the weld has cooled, completely fold the subsequent sheet back over the splice to expose the entire underside of the subsequent sheet. Apply Lexcan BA-90 Bonding Adhesive and install as per sections 3.4.5 through 3.4.7 above.

3.5 Splicing Membrane Sheets

1. Field seams must be welded with an automatic hot air welder operated by an individual thoroughly trained and competent in the machine's operation. Small work and repairs can be done efficiently with a hand welder, however, hand-held welders are not an accepted means of field seaming.

2. Hot air weld all seams a minimum of 38 mm (1.5”) wide.

3. Dirty, dusty or contaminated membrane or membrane exposed for more than seven days prior to welding must be cleaned with TPO Seam Cleaner. With a clean scrub pad saturated with TPO Seam Cleaner, aggressively scrub the seam area of the roof membrane. Follow with a final one swipe pass, being careful not to re-deposit contaminants back onto the cleaned area. Ensure that the Seam Cleaner and adjacent Bonding Adhesive has completely flashed off before welding. Follow standard welding procedures with a 20% reduction in speed.

4. All splices are to be probed along their entire length with a seam probing tool to verify that the welder is operating effectively. The membrane must be allowed to cool prior to testing. In addition, there should be a destructive peel strength test performed at the start of each day and each time the robot welder is reused after being allowed to cool. The destructive test sample should be 5 cm (2") wide and should show membrane delamination from the scrim prior to weld failure.

5. Cut membrane edges shall be sealed by applying TPO Cut Edge Sealant along the exposed edge.

3.6 Perimeter Flashing & Securement

1. Install the [roof edge system; gravel stop; drip edge] according to an approved Lexcan detail and in accordance with the manufacturer's directions.

2. The field membrane shall be mechanically fastened with Lexgrip or Lexgrip PA Membrane fasteners through the insulation, vapour retarder [existing roofing] to the structual deck on 30 cm (12") centres along all parapet walls, curbs, skylights, expansion joints and all other roof penetrations that exceed 60 cm (24") in any dimension. Nailers are required at all roof edges, gravel stops or drip edges.

3. Hi-Tuff TPO membrane shall be used for all vertical flashings and shall extend from a seam just beyond the perimeter fastener row, up the curb or parapet. Apply with Lexcan BA-90 Bonding Adhesive as per sections 3.4.5 to 3.4.7. Be careful not to wrinkle the membrane or bridge it at the vertical / horizontal juncture (crease the membrane first). Brush the membrane heavily with a push broom to assure complete contact.

4. Unless approved detail shows otherwise, membrane must either terminate in a reglet, be fastened according to paragraph 3.6.5 below, or be carried over top of wall or parapet and counter-flashed with sheet metal or a stone cap. All metal work must be installed to be wind resistant and sealed and waterproofed in an acceptable manner.

5. If terminating membrane part way up a wall or parapet, apply Termination Sealer Tape to backside of membrane edge. Press membrane against wall and roll with a steel hand roller. Fasten Lexbar Termination Bar along the upper edge of the membrane into the wall, using appropriate fasteners on 15 cm (6") centres. Apply Hi-Tuff All Purpose Sealant along upper edge of Lexbar and over top of all fastener heads.

3.7 Protrusion & Corner Flashings

1. Install pre-formed metal flashings, drain hoppers etc. according to the manufacturer's installation instructions. Old existing flashings must be thoroughly cleaned of all contaminants or replaced with new flashings. Do not flash to lead.

2. Flash all corners, vent pipes, posts, curbs and pre-formed flashings in strict accordance with current Lexcan installation instructions and details. Use Lexcan BA-90 Bonding Adhesive on the underside of the unreinforced TPO Flashing and the substrate, as per section 3.5, above. Do not apply the Bonding Adhesives to areas on the Flashing that are to be seamed. Seam as per section 3.6 above.

3. All flashing shall be mechanically fastened at the top, under or through appropriate counterflashing with approved fasteners and in accordance with Lexcan details.

4. Membrane connections to drains are to be sealed with All Purpose Sealant or Termination Sealer Tape and clamped with a clamping ring to assure a 100% continuous seal, as per Lexcan details. Field seams shall not run through drains.

3.8 [OPTIONAL] Traffic Walkways

1. Ensure membrane to receive traffic pads is clean and dry. If the membrane is not clean and dry, follow the steps in section 3.6.2 before proceeding with the remainder of this section.

2. Position the walkway pad and cut to desired length. Wherever possible, walkway pad shall not cover seams. When installed adjacent to a seam, the pad should be kept a minimum 50 mm (2”) from the edge of the seam on the bottom sheet and 15 cm (6”) away from the edge of the seam on the top sheet.

   When covering seams is unavoidable, the lap seam should be completed per section 3.6 above and thoroughly probed, with any deficiencies corrected prior to pad installation.
   Where drainage around the pads is desired, cut pads to a uniform length and space the sections 50 mm (2”) apart.

3. Weld the perimeter of the walkway pad to the membrane following standard welding procedures. Leave 25 mm to 50 mm (1” to 2”) gaps in the weld on the low slope edge every 60 cm (2 ft.) to prevent the accumulation of water under the pad.

3.9 Metal Counter-flashing, Cap, Fascia and Scupper Flashing

1. Allow warranty inspector to inspect all membrane flashings and roofing before installation of metal counterflashing and fascia. Obtain prior specifier approval over location of joints, etc.

2. Install all metal counter-flashing and fascia in strict accordance with CRCA 'FL' specifications and good roofing practice.

3. Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance and performance. Mitre all corners. Irregular or badly fabricated work will not be accepted. Hem all edges 12 mm (1/2") and cut corners of straight edges on a 45° angle. Remove all burrs and metal scrap.

4. Use concealed fastening and clamping (termination) bars to secure fascia and counter-flashing.

5. Use standard 2.44 m (8') metal lengths. Space joints symmetrically and evenly in relation to the module, columns, pre-cast panels or other distinguishing features of the building. Use tight fitting S-lock joints. Fabricate joints to permit free movement of metal without leaking.

6. Apply isolation membrane or coating to separate dissimilar metals or metal from concrete.

7. Caulk end and movement joints and any exposed fastener heads with colour matching specification urethane sealant.

3.10 Temporary Night Seal

1. At the end of each day or at the threat or onset of inclement weather, the insulation shall be protected by extending the membrane beyond the insulation and sealing it to the deck with an approved temporary sealant. Ensure membrane edge is either mechanically fastened or sufficiently ballasted to protect against wind uplift.

2. When resuming work, cut and dispose of portion of membrane contaminated with the night sealant.

3.11 Clean-Up

1. Remove all cut pieces, wrappings, waste and debris from the job site.

2. Ensure that the membrane is cleaned of all spilled adhesives or residues and presents an aesthetically attractive appearance.

4.0 WARRANTY INSPECTION

1. Upon completion of the roofing system, an authorized Lexcan representative will make an inspection of the installation for warranty acceptance.

END OF SECTION