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| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | November 13, 2009 | Modified ‘Related Section’ |
| 3 | June 8, 2012 | Addition of References and Replacement Parts sections to this page. |
| 4 | July 6, 2012 | Change tab settings in page 1-13. |
| 5 | April 23, 2015 | General Formatting |
| 6 | April 7, 2016 | Phase 1 update (AV) |
| 7 | November 29, 2016 | Updated based on Legal’s comments (eDOCs # 6396343) |

NOTE:

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# GEneral

## Section Includes

### Materials and installation for modified bituminous roofing for either conventional Build Up Roofing (BUR) or Protected Membrane Roofing (PMR) systems.

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.*

### *Contractor is responsible for coordination of the Work.*

### *This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for ...[item]... specified under this Section.

### *[List Sections specifying products installed but not supplied under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Product requirements for ...[item]... for installation under this Section.

### *[List Sections specifying related requirements.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: *[Optional short phrase indicating relationship*].

#### Section 01060 – Regulatory Requirements

#### Section 01300 – Submittals

#### Section 01351 – Health and Safety

#### Section 06100 – Rough Carpentry

#### Section 07620 – Sheet Metal Flashing

#### Section 07900 – Joint Sealers

## References

### Comply with the latest edition of the following statutes, codes, standards, and all amendments thereto:

#### American Society for Testing and Materials International, (ASTM).

##### ASTM C726-12, Standard Specification for Mineral Wool Roof Insulation Board.

##### ASTM C728-15, Standard Specification for Perlite Thermal Insulation Board.

##### ASTM C1177/C1177M-13, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.

##### ASTM C1396/C1396M-14a, Standard Specification for Gypsum Board

##### ASTM D41/D41M-16, Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.

##### ASTM D312/D312M-15, Standard Specification for Asphalt Used in Roofing.

##### ASTM D448-12, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.ASTM D2178/D2178M-15, Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.

##### ASTM D6162/D6162M-00A(2015)e1, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fibre Reinforcements.

##### ASTM D6163/D6163M-00(2015)e1, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fibre Reinforcements.

##### ASTM D6164/D6164M-11, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

#### Canadian General Standards Board (CGSB).

##### CAN/CGSB 51.33-M89, Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction.

#### Canadian Roofing Contractors Association (CRCA).

##### CRCA Roofing Specifications Manual.

#### Canadian Standards Association (CSA International).

##### CAN/CSA-A123.3-05 (R2015), Asphalt Saturated Organic Roofing Felt.

##### CAN/CSA-A123.4-04 (R2013), Asphalt for Constructing Built-Up Roof Coverings and Waterproofing Systems.

##### CSA A231.1-14/A231.2-14, Precast Concrete Paving Slabs/Precast Concrete Pavers.

##### CSA O121-08 (R2013), Douglas Fir Plywood.

##### CSA O151-09 (R2014), Canadian Softwood Plywood.

#### Department of Justice Canada (Jus).

##### Canadian Environmental Protection Act, 1999 (CEPA).

#### Health Canada / Workplace Hazardous Materials Information System (WHMIS).

##### Material Safety Data Sheets (MSDS).

#### Transport Canada (TC).

##### Transportation of Dangerous Goods Act, 1992 (TDGA).

#### Underwriters Laboratories' of Canada (ULC).

##### CAN/ULC-S701-11, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.

##### CAN/ULC-S704-11, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.

##### CAN/ULC-S706-09, Standard for Wood Fibre Thermal Insulation for Buildings.

## Performance Requirements

### Compatibility between components of roofing system is essential. Provide written declaration to the Consultant stating that materials and components, as assembled in system, meet this requirement.

## Submittals

### Submittals in accordance with Section 01300 - Submittals.

### Submit [two] [\_\_\_] copies of most recent technical roofing components data sheets describing materials' physical properties.

### Submit shop drawings in accordance with Section 01300 - Submittals.

### Indicate [flashing,] [control joints,] [tapered insulation] details.

### Provide layout for tapered insulation.

### Manufacturer's Installation Instructions: indicate special precautions required for seaming the membrane.

### Manufacturer's Certificate: certify that [products] [\_\_\_] meet or exceed [specified requirements] [\_\_\_].

## Quality Assurance

### Submit laboratory test reports certifying compliance of [bitumens] [and] [roofing felts] [and] [membrane] with specification requirements.

### Convene pre-installation meeting [one] [\_\_\_] week prior to beginning roofing work, with [roofing Subcontractor's representative] [\_\_\_] [and] [ Contractor] [Consultant] [\_\_\_] to:

#### Verify Work requirements.

#### Review installation and substrate conditions.

#### Co-ordination with other building subtrades.

#### Review [manufacturer's] [\_\_\_] installation instructions and warranty requirements.

## Health and Safety

### Do construction occupational health and safety in accordance with Section 01351 – Health and Safety

## Storage and Handling

### Provide and maintain dry, off ground weatherproof storage.

### Store rolls of felt and membrane in upright position. Store membrane rolls with selvage edge up.

### Remove only in quantities required for same day use.

### Place plywood runways over completed Work to enable movement of material and other traffic.

### Store sealants at +5 degrees Celsius minimum.

### Store insulation protected from [daylight] [and] [weather] [\_\_\_] and deleterious materials.

### Handle roofing materials in accordance with manufacturer's written directives, to prevent damage or loss of performance.

## Environmental Requirements

### Do not install roofing when temperature remains below 18 degrees C for torch application, or [ 5 degrees C] [to manufacturers' recommendations] [\_\_\_] for mop application.

### Minimum temperature for solvent based adhesive is 5 degrees Celsius.

### Install roofing on dry deck, free of snow and ice, use only dry materials and apply only during weather that will not introduce moisture into roofing system.

## Warranty

### For the Work of this Section the 12 months warranty period prescribed in subsection [GC ] [\_\_\_] of General Conditions "C" is extended to [24 months] [60 months].

### Contractor hereby warrants that modified bituminous roofing and membrane flashings will stay in place and remain leak-proof in accordance with General Conditions (GC) - [CCDC GC 12.3] [\_\_\_], but for [two years] [five years].

## Measurement and Payment

*[Choose one of the following payment language provisions that best suits the individual project.*

*If this Section is not specifically referenced by an item in the Bid Form, please use the following language:*

### The work of this Section will not be measured separately for payment. All costs associated with the work of this Section shall be included in the Contract Price.

*OR If this Section is specifically referenced in the Bid Form, use the following language and identify the relevant item in the Bid Form:*

### All costs associated with the work of this Section shall be included in the price(s) for Item No(s). \_\_\_ in the Bid Form.

*If the work of this Section is to be measured and paid for by several different methods, please amend the standard wording given above to reflect the different methods of measurement and payment.*]

# PRODUCTS

## Deck Covering

### Gypsum board sheathing: to ASTMC1396/C1396M-14A [Standard] [Type X] [[9.5] [12.7] mm thick] [thickness as indicated in the Contract Documents].

### Cementitious Board: to [\_\_\_] [[\_\_\_] mm thick] [thickness as indicated in the Contract Documents].

### Plywood:

#### To [CSA O121-08 (R2013)] [CSA O151-09 (R2014)] [treated] [[\_\_\_] mm thick] [as indicated in the Contract Documents].

## Deck Primer

### Asphalt primer: to ASTM D41/D41M-11.

## Vapour Retarder

### Two ply asphalt laminated membrane to [CAN/CGSB 51.33-M89] [\_\_\_], Type [1] [2], and fire retardant adhesive.

### Two ply bituminous membrane consisting of:

#### No. 15 asphalt saturated [organic] [glass] roofing felts to [CAN/CSA A123.3-05 (R2015)] [ASTM D2178/D2178M-15] [\_\_\_].

#### Type 2 asphalt to [CAN/CSA A123.4-04 (R2013)] [ASTM D312/D312M-15] [\_\_\_]. Provide Equiviscous Temperature (EVT), Finished Blowing Temperature (FBT) and Flash Point Temperature.

### Base sheet vapour retarder: to [ Consultant to amend with replacement standard given CGSB 37 GP 56M has been withdrawn and amend as required] [ASTM D6162/D6162M-00A (2015)e1] [ASTM D6163/D6163M-00 (2015)e1] [ASTM D6164/D6164M-11], [Styrene Butadiene Styrene (SBS) elastomeric polymer] [Atactic Polypropylene (APP) thermoplastic polymer], prefabricated sheet, [glass] [polyester] reinforcement, weighing [60] [90] [95] [100] [180] g/m2.

##### Top and bottom surfaces: [Sanded/sanded] [sanded/polyethylene] [\_\_\_].

### Self adhesive [air/vapour barrier modified bitumen membrane] [vapour retarder waterproofing membrane strip, non-woven polyester reinforcement and elastomeric bitumen] [\_\_\_].

## Membrane

### Base sheet: to [Consultant to amend with replacement standard given CGSB 37 GP 56M has been withdrawn and amend as required] [polyester fibres to ASTM D6164/D6164M-11] [glass fibres to ASTM D6163/D6163M-00 (2015)e1] [combination of polyester and glass fibres to ASTM D6162/D6162M-00A (2015)].

#### [Styrene Butadiene Styrene (SBS) elastomeric polymer] [Atactic Polypropylene (APP) thermoplastic polymer] [\_\_\_] prefabricated sheet, [glass] [polyester] [\_\_\_] reinforcement, having nominal weight of [180] [100] [\_\_\_] g/m2.

#### Type [1,] [2,] [fully adhered] [\_\_\_].

#### Class [A granule surfaced] [C plain surfaced].

#### Grade [1 standard service] [heavy duty service].

#### Top and bottom surfaces:

##### [Sanded/sanded] [sanded/polyethylene] [\_\_\_].

#### Base sheet membrane properties: to [Consultant to amend with replacement standard given CGSB 37 GP 56M has been withdrawn and amend as required]] [\_\_\_].

##### Strain energy (longitudinal/transversal): [9.0/7.0] [8.1/8.8] [\_\_\_] kN/m.

##### Breaking strength (longitudinal/transversal): [17.0/18.0] [17.0/12.5] [\_\_\_] N/5 cm.

##### Ultimate elongation (longitudinal/transversal): [60/70] [60/65] [\_\_\_] %.

##### Tear resistance: [85] [60] N.

##### Cold bending at -30 degrees Celsius : no cracking.

##### Softening point: 110 degrees Celsius.

##### Static puncture resistance: greater than [400] [300] [\_\_\_].

##### Dimensional Stability: [-0.3] / [0.3] %.

#### ULC certification: Class [A] [B] [\_\_\_].

### Cap sheet membrane: to *[Consultant to amend with replacement standard given CGSB 37 GP 56M has been withdrawn and amend as required]* [polyester fibres to ASTM D6164/D6164M-11] [glass fibres to ASTM D6163/D6163M-00 (2015)e1] [combination of polyester and glass fibres to ASTM D6162/D6162M-00A (2015)e1].

#### [Styrene Butadiene Styrene(SBS) elastomeric polymer] [Atactic Polypropylene (APP) thermoplastic polymer], prefabricated sheet, [glass] [polyester] reinforcement, having nominal weight of [250] [180] [\_\_\_] g/m2.

#### Type [1,] [2,] [fully adhered] [\_\_\_].

#### Class [A granule surfaced] [B metallic surfaced] [C plain surfaced] [\_\_\_].

##### Colour for granular surface: [black] [blue] [brown] [green] [gray] [red] [sienna] [\_\_\_].

#### Grade [1 standard service] [heavy duty service].

#### Bottom surface [sanded] [polyethylene] [\_\_\_].

#### Cap sheet membrane properties: to [Consultant to amend with replacement standard given CGSB 37 GP 56M has been withdrawn and amend as required]] [\_\_\_].

##### Strain energy (longitudinal/transversal): [13.0/10.0] [11.0/11.4] [\_\_\_] kN/m.

##### Breaking strength (longitudinal/transversal): [25.0/16.0] [\_\_\_] kN/m.

##### Ultimate elongation (longitudinal/transversal): [63/73] [60/65] [\_\_\_] %.

##### Tear resistance: [80] [\_\_\_] N.

##### Cold bending at -30 degrees Celsius: No cracking.

##### Softening point: 110 degrees Celsius.

##### Static puncture resistance: greater than [400] [ 370] [\_\_\_].

##### Dimensional Stability: [-0.2] / [0.2] %.

#### ULC certification: Class [A] [B] [\_\_\_].

## Adhesive

### Adhesive for securing overlay board and insulation: [asphalt extended vulcanized adhesive, two component unit, consisting of two liquids mixed on site to produce pourable adhesive] [\_\_\_].

## Overlay Board

### Overlay Board: [12.5] [19] [25] mm [6 mm thick asphalt based recovery board with non-woven glass facers, as recommended by the membrane manufacturer] [asphalt impregnated fiberboard] [perlite board] [\_\_\_].

#### Install over insulation to provide torch safe surface.

## Bitumen

### Asphalt: to [CAN/CSA A123.4-04 (R2013)] [ASTM D312/D312M-15], Type [2] [3].

## Polystyrene Insulation

### [Extruded polystyrene (XPS) insulation] [Expanded polystyrene (EPS) insulation] to [CAN/ULC-S701-11] [\_\_\_], Type [2] [4], thickness [[\_\_\_] mm] [as indicated], [square] [shiplapped] [vented] edges.

## Expanded Polystyrene Insulation (Fibreboard Faced)

### Polystyrene: to [CAN/ULC-S701-11] [\_\_\_], Type [1] [2] [\_\_\_], thickness [[\_\_\_] mm] [as indicated] [\_\_\_].

### Insulating fibreboard facing: to [CAN/ULC-S706-09] [\_\_\_], Type I, thickness 2 [[\_\_\_] mm] [as indicated], [uncoated] [\_\_\_].

### Size [\_\_\_] mm x [\_\_\_] mm, [square] [shiplapped] edges.

## Extruded Polystyrene Composite Insulation (Concrete Topping)

### Polystyrene: to [CAN/ULC-S701-11] [\_\_\_], Type [4] [\_\_\_], thickness [[\_\_\_] mm] [as indicated] [\_\_\_].

### Concrete topping: latex modified concrete, 10 mm thick, [smooth surface] [\_\_\_], colour [grey] [\_\_\_].

### Size 600 mm x 1,200 mm, tongue and groove edges.

## Fibrous Glass Insulation

### To [ASTM C726-12] [\_\_\_], thickness [[\_\_\_] mm] [as indicated], [\_\_\_] x [\_\_\_] mm maximum size, square edges, unfaced. [Tapered shape to provide [1:50 ] [1:25] slope with minimum thickness of [\_\_\_] mm at drains] [\_\_\_].

## Isocyanurate (Urethane) Insulation

### To [CAN/ULC-S704-11] [\_\_\_], Type [\_\_\_], facing [\_\_\_], flame spread classification: [less than 500] [unrated], thickness [[\_\_\_] mm] [as indicated] [\_\_\_].

## Cellular Glass Insulation

### [Thickness [\_\_\_] mm] [As indicated] [\_\_\_] x [\_\_\_] mm maximum size, [tapered shape to provide [1:50 ] [1:25] slope with minimum thickness of [\_\_\_] mm at drains] [\_\_\_].

## Expanded Perlite Insulation

### Mineral aggregate thermal roof insulation: to [ASTM C728-15] [\_\_\_], Type [1] [2] thickness [[\_\_\_] mm] [as indicated] [\_\_\_], [\_\_\_] x [\_\_\_] mm maximum size, square edges.

## Insulating Fibreboard

### To [CAN/ULC S706-09] [\_\_\_], Type 1 roof board, surface coated, [[\_\_\_] mm [thick] [thickness as indicated] [\_\_\_]] [\_\_\_].

## Sealers

### Plastic cement: [asphalt, to *Consultant to amend with replacement standard given CGSB 37.5 has been withdrawn and amend as required]* [coal tar, to *[Consultant to amend with replacement standard given CGSB 37 GP 19M has been withdrawn and amend as required]*.

### Sealing compound: to *[ Consultant to amend with replacement standard given CAN/CGSB 37.29 has been withdrawn and amend as required]* [\_\_\_], rubber asphalt type.

### Sealants: [\_\_\_]. [Caulking - see Section [07900 - Joint Sealers]] [\_\_\_].

## Walkways

### Walkways to consist of one additional ply of cap sheet membrane. Colour to be different from field membrane as selected by [York Region Representative] [Consultant].

### [Adjustable paver] [[35] [60-90] [90-150] [\_\_\_] mm in height,] [\_\_\_]. Pedestals and levelling plates made of high density [polyethylene] [polypropylene] [with integral spacer ribs on upper surface].

## Carpentry

### Refer to Section 06100 - Rough Carpentry.

## Cant Strips

### Cut from [pressure-treated wood] [38 mm thick] [prefabricated] [fibreboard] [fibreglass] [rigid mineral wool fibre] material, to measure 140 mm on slope.

## Fasteners

### Covering to steel deck: No. 10 flat head, self tapping, Type A or AB, cadmium plated screws.

### Insulation to deck: coated insulation fasteners and galvanized plates must meet applicable standards for wind uplift and corrosion resistance, [as recommended by insulation manufacturer] [\_\_\_].

# EXECUTION

## Workmanship

### Do examination, preparation and roofing Work in accordance with the [Roofing Manufacturer's Specification Manual] [and] [CRCA Roofing Specification Manual] [[Provincial] [Territorial] Roofing Association Manual] [\_\_\_], particularly for fire safety precautions, and to [ULC] [\_\_\_]Design No. [\_\_\_].

### Do priming for asphalt roofing in accordance with *[Consultant to amend with replacement standard given CGSB 37 GP 15M has been withdrawn and amend as required*].

### The interface of the walls and roof assemblies will be fitted with durable rigid material [sheet metal] [plywood] providing connection point for continuity of air barrier.

### Assembly, component and material connections will be made in consideration of appropriate design loads, [with reversible mechanical attachments] [\_\_\_].

## Examination of Roof Decks

### Inspect deck conditions with the Consultant including parapets, construction joints, roof drains, plumbing vents and ventilation outlets to determine readiness to proceed.

### Prior to beginning of work ensure:

#### Decks are firm, straight, smooth, dry, free of snow, ice or frost, and swept clean of dust and debris. Do not use calcium or salt for ice or snow removal.

#### Curbs have been built.

#### Roof drains have been installed at proper elevations relative to finished roof surface.

#### Plywood and lumber nailer plates have been installed to deck, walls and parapets as indicated in the Contract Documents.

### Do not install roofing materials during rain or snowfall.

## Protection

### Cover walls, walks [, slopped roofs] and adjacent work where materials hoisted or used.

### Use warning signs and barriers.

### Clean off drips and smears of bituminous material immediately.

### Dispose of rain water off roof and away from face of building until roof drains or hoppers installed and connected.

### Protect roof from traffic and damage. Comply with precautions deemed necessary by [York Region Representative] [Consultant].

### At end of each Working Day or when stoppage occurs due to inclement weather, provide protection for completed Work and materials out of storage.

### Metal connectors and decking will be treated with rust proofing or galvanization.

## Preparation of Steel Deck (Channel Type)

### Install sound absorbing insulation in flutes of acoustical steel roof deck in accordance with [deck manufacturer's instructions].

### Steel decking will be treated with rust proofing or galvanization.

### Install sand in flutes of steel [\_\_\_] mm wide at [\_\_\_] mm on centre.

## Deck Covering

### Mechanically fasten to steel deck [Gypsum Board Sheathing] [Glass Mat Gypsum Board] [Cementitious Board] [Plywood] with [reversible mechanical attachments] [screws] [\_\_\_] to steel deck's upper rib surfaces, spaced [400] [\_\_\_] mm on centre each way.

### Place with long axis of each sheet transverse to steel deck ribs, with end joints staggered and fully supported on ribs.

## Priming Concrete Deck

### Apply deck primer to [deck] [wood] [metal] [concrete] [gypsum board] [cementitious board] [\_\_\_] roofing substrate at the rate [recommended by manufacturer] [2.5 L per 10 m2] [\_\_\_].

## Vapour Retarder (Steel Deck)

### Adhere vapour retarder using solvent based adhesive as per manufacturer's instructions.

## Vapour Retarder (Concrete/Gypsum)

### Embed two piles of felts [organic] [glass] in hot bitumen spread at rate of [1 kg/m2 for organic asphalt] [1.2 kg/m2 for glass asphalt].

### Modified bituminous vapour retarder sheet.

## Vapour Retarder (Wood Deck)

### Secure one ply underlay sheet with [reversible mechanical attachments] [roofing nails] [\_\_\_] spaced at 150 mm on centre along seams and at 300 mm in field of sheets.

### Embed two piles of felts [organic] [glass] in hot bitumen spread at rate of [1 kg/m2 for organic asphalt] [1.2 kg/m2 for glass asphalt].

### Modified bituminous vapour retarder sheet. Unroll and let relax prior to installation.

## Exposed Membrane Roofing Application

### Insulation: fully adhered, adhesive application:

#### Adhere insulation to [steel deck] [laminated vapour barrier] using solvent based adhesive.

#### Place boards in parallel rows with ends staggered, and in firm contact with one another.

#### Cut end pieces to suit.

#### Apply adhesive in continuous ribbons at 300 mm on centre.

#### Separate the membrane and insulation with a drainage layer or slipsheet.

### Insulation: fully adhered, bitumen application:

#### Embed insulation in 1 to 1.5 kg/m2 mopping of bitumen.

#### Place boards in parallel rows with ends staggered, and in firm contact with one another.

#### Cut end pieces to suit.

### Insulation: mechanically fastened application:

#### Mechanically fasten insulation using [screws and pressure distribution plates] [reversible mechanical attachments].

#### Number and pattern of screws per board to meet Contract Document requirements.

#### Place boards in parallel rows with ends staggered, and in firm contact with one another.

#### Cut end boards to suit.

### Tapered insulation application:

#### Mop insulation to vapour retarder [and top layer of insulation to bottom layer] [\_\_\_] with hot asphalt at rate of 1 kg/m2.

#### Install tapered insulation as [first] [second] insulation layer, in accordance with shop drawings. Stagger joints between layers 150 mm minimum.

### Overlay Board: adhesive application:

#### Adhere overlay board to insulation with vulcanized adhesive at the rate of one litre per m2.

#### Place boards in parallel rows with end joints staggered. Cap joints approximately 25 mm.

#### Cut ends to suit and apply adhesive in continuous ribbons at 300 mm on centre.

### Base sheet application:

#### Starting at low point of roof, perpendicular to slope, unroll base sheet, align and reroll from both ends.

#### Unroll and embed base sheet in uniform coating of asphalt applied at rate of 1.2 kg/m2, at 230 degrees Celsius.

#### Unroll and torch base sheet onto substrate taking care not to burn membrane or its reinforcement or substrate.

#### Lap sheets 75 mm minimum for side and 150 mm minimum for end laps.

#### Application to be free of blisters, wrinkles and fishmouths.

### Cap sheet application:

#### Starting at low point on roof, perpendicular to slope, unroll cap sheet, align and reroll from both ends.

#### Unroll and embed cap sheet in uniform coating of asphalt applied at rate of 1.2 kg/m2, EVT at point of contact.

#### Unroll and torch cap sheet onto base sheet taking care not to burn membrane or its reinforcement.

#### Lap sheets 75 mm minimum for side laps and 150 mm minimum for end laps. Offset joints in cap sheet 300 mm minimum from those in base sheet.

#### Application to be free of blisters, fishmouths and wrinkles.

#### Do membrane application in accordance with the manufacturer's recommendations.

### Flashings:

#### Complete installation of flashing base sheet stripping prior to installing membrane cap sheet.

#### [Nail] [mop] [torch] [base] [and] [cap] sheet onto substrate in 1 metre wide strips.

#### Lap flashing base sheet to membrane base sheet minimum 150 mm and seal by mopping or torch welding.

#### Lap flashing cap sheet to membrane cap sheet 250 mm minimum and torch weld.

#### Provide 75 mm minimum side lap and seal.

#### Properly secure flashings to their support, without sags, blisters, fishmouths or wrinkles.

#### Do work in accordance with the [manufacturer's recommendations] [Section 07620 - Sheet Metal Flashing].

### Roof penetrations:

#### Install roof drain pans, vent stack covers and other roof penetration flashings and seal to membrane in accordance with the [manufacturer's recommendations and details] [and] [Section] [\_\_\_].

## Cants

### Install [prefabricated] [wood] [fibre] [mineral wool fibre] cants [over rigid insulation] [wood insulation stops].

### Apply hot bitumen to receiving surface and embed cant firmly by hand. [Fasten wood cants to wood insulation stops] [\_\_\_].

### Angle cut cants to fit tightly on back and bottom where roof to wall angle varies from 90 degrees.

## Walkways

### Install walkway [membrane] [concrete paving slabs] [in accordance with manufacturer's instructions] [and] as indicated.

#### Apply primer to cap sheet membrane and torch apply, ensuring selvage edge is removed.

### Install pavers, level on insulation pads, as indicated in the Contract Documents.

## Field Quality Control

### Inspection and testing of roofing application will be carried out by testing laboratory designated by [York Region Representative][Consultant] .

### The cost of testing will be paid [as a cash allowance item][by the Contractor].

## Cleaning

### Remove bituminous markings from finished surfaces.

### In areas where finished surfaces are soiled caused by work of this section, consult manufacturer of surfaces for cleaning advice and complying with their [documented] [\_\_\_] instructions.

### Repair or replace defaced or disfigured finishes caused by work of this section.

**END OF SECTION**