1. GENERAL

1.1 Work Included

.1 Conventional, 2-ply, modified bituminous roofing to be installed around HVAC unit and electrical transformer ensuring continuity with existing roofing.

1.2 References

.1 CAN2-51.32M – Sheathing, Membrane, Breather Type.

.2 CBSB 37-GP-9M – Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing.

.3 CGSB 37-GP-63M – Cloth, Glass, Coated, for Membrane Waterproofing Systems and Built-Up Roofing.

.4 CGSB 51-GP-20M – Thermal Insulation Extruded, Expanded Polystyrene.

1.3 System Description

.1 Conventional roof system: Two-ply torched on conventional SBS membrane system with insulation on concrete deck, curb, and pedestals.

1.4 Qualifications

.1 Applicator: company specializing in performing the work of this section with three (3) years documented experience and approved by system manufacturer.

.2 Work of this section to conform to manufacturer's instructions.

1.5 Manufacturer's Representative

.1 The roofing material manufacturer shall delegate a representative to visit the work at commencement of work and periodically during work in progress.

.2 At all times permit and facilitate access to the work site and roofs to the manufacturer's representative.

1.6 Delivery, Storage, and Handling

.1 Deliver, store, protect, and handle products to site under provisions of Section 01600.

.2 Deliver products in manufacturer's original containers, dry, undamaged, and with seals and labels intact.

.3 Store products in weather-protected environment, clear of ground and moisture.

.4 Stand roll materials on end.

1.7 Environmental Requirements

.1 Do not apply roofing membrane during inclement weather.

.2 Do not apply roofing membrane to damp or frozen deck surface.

.3 Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during the same day.

1.8 Warranty

.1 Provide warranty for a period of five (5) years from the date of acceptance of the work.

2. PRODUCTS

2.1 Membrane Materials

.1 Air/Vapour Membrane Base Sheet, Base and Cap Sheet Flashing: Soprema Sopralene Flam 180 or accepted alternate.

.1 Description: Roofing membrane with a non-woven polyester reinforcement and thermofusible SBS modified bitumen. Both sides shall be protected by a thermofusible plastic film. This membrane is to be applied by torching only.

.2 Components:

.1 Reinforcement: non-woven polyester, 180 g/m^2.
.2 Thermofusible elastomeric bitumen: mix of selected bitumen and SBS thermoplastic polymer.

.2 Membrane Cap Sheet Flashing: Soprema Sopralene Flam 250 GR.

.1 Description: Roofing membrane with a non-woven polyester reinforcement and thermofusible SBS modified bitumen. The top side shall be self-protected with coloured granules. The underside shall be protected by a thermofusible film. This membrane is to be applied to torching only.

.2 Components:

.1 Reinforcement: 250 g/m^2 of non-woven polyester.
.2 Elastomeric asphalt: mix of selected bitumen and SBS thermoplastic polymer.

2.2 Sheet Materials

.1 Fibreboard Protection Board: to CAN/CSA-A247-M, Type 2, 13 thick, asphalt impregnated.

.2 Torchable Overlay: Recovery Board “Sopraboard”.

2.3 Insulation

.1 Roof Insulation: Polyisocyanurate board – see Section 07212.

.2 Sloped: extruded polystrene board.

3. EXECUTION

3.1 Preparation

.1 Inspect roof area and existing roofing for suitability for the application of the roofing system. Report any deficiencies and concerns to the Contractor and the Contract Administrator.

.2 Vapour Barrier: Apply vapour barrier to concrete surface using adhesive, lap 75 mm at sides and seal.

.3 Insulation: Mop on two layers of 38 mm insulation; stagger joints of second layer with joints of first layer. Butt insulation tight with adjacent boards at all edges.

.4 Protection Board: Mop on one layer of fibreboard. Offset joints of fibreboard with joints of insulation.

.5 Torchable Board: Mop on one layer of Flame Retardant Sheathing (stagger joints).

3.2 Roof Membrane

.1 Install roofing membrane to manufacturer's written instructions.

.2 Base Sheet Installation:

.1 Base sheet membrane shall be unrolled dry on torchable overlay panels for alignment.

.2 Base sheet shall be torch welded on torchable overlay, in accordance with recommendations of the membrane manufacturer. Base sheet shall have side laps of 75 mm and end laps of 150 mm.

.3 Make sure the membrane is properly welded, without air pockets, wrinkles, fishmouths, or tears.

.4 Torch welding speed varies depending on the weather. In cold conditions it slows down and in warm and dry conditions it speeds up.

.3 Base Sheet Flashing Installation:

.1 Surface where membrane is applied shall receive an asphalt primer coating at the rate of 0.25 L/m^2. Primer must be dry before application of the base sheet flashing.

.2 Base sheet shall be laid in strips one metre wide to the vertical surfaces, extending on to the flat surface of the roof a minimum of 100 mm. Side laps shall be 75 mm and shall

be staggered a minimum of 100 mm with the laps of the base sheet in order to avoid excessive thickness.

.3 Base sheet shall be torch welded directly on its support from bottom to top. Torch welding shall soften the underside of the base sheet without overheating, resulting in a uniform adhesion over the entire surface. When allowed by the support, the base sheet top edge shall be nailed on 300 mm centres.

.4 Ensure new roofing sheet welds to existing roofing to form a continuous watertight joint.

.4 Cap Sheet Installation:

.1 Once the base sheet and stripping has been applied and does not show any defects, the cap sheet can then be laid.

.2 Cap sheet shall be unrolled starting from the lowest point of the roof. Cap sheet shall be rerolled from both ends prior to torching. Care must be taken to ensure alignment of the first roll (parallel with the edge of the roof).

.3 Cap sheet shall be torch welded on to the base sheet membrane. During this application, both surfaces shall be simultaneously melted, forming an asphalt bead that shall be pushed out in front of the cap sheet.

.4 Avoid overheating.

.5 Base sheet and cap sheet shall be staggered a minimum of 300 mm.

.6 Cap sheet shall have side laps of 75 mm and end laps of 150 mm.

.7 Make sure the two membranes are properly welded without unwelded areas.

.8 After installation of the cap sheet, check all lap seams on the cap sheet.

.9 For aesthetics, care should be taken to avoid excessive asphalt seepage along the joints.

.5 Cap Sheet Flashing Installation:

.1 Cap sheet stripping shall be laid in strips 1 metre wide. There must be at least 150 mm of cap sheet overlap on the deck. Side laps shall be 75 mm and shall be staggered a minimum of 100 mm from cap sheet laps and base sheet laps, in order to avoid excessive thickness.

.2 Cap sheet stripping shall be torch welded directly on its base sheet, proceeding from bottom to top. Torching shall soften the two membranes and ensure a uniform weld. Use a degranulator.

3.3 Cleaning

.1 Remove bituminous markings from finished surfaces.

.2 In areas where finished surfaces are soiled caused by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.

.3 Repair or replace defaced or disfigured finish due to work of this section.

3.4 Protection

.1 Protect building surfaces against damage from roofing work.

.2 Where traffic must continue over finished roof membrane, protect surfaces.

END OF SECTION