Part 1 GENERAL

1.1 GENERAL REQUIREMENTS

1. Conform to Sections of Division 1 as applicable.

1.2 RELATED WORK

As required

1.3 REFERENCES

CGSB 37-GP-9Ma	Primer, Asphalt, Unfilled for Asphalt Roofing, Dampproofing and Waterproofing
CGSB 37-GP-56M	Membrane, Modified Bituminous, Prefabricated and Reinforced for Roofing

1.4 SYSTEM DESCRIPTION

1. Provide 2 ply SBS modified bituminous sheet waterproofing to extent indicated on Drawings, including but not limited to following:

    1. Asphalt primer.
    2. Sheet membrane and torched on.
    3. Protection board on foundation walls.

1.5 SUBMITTALS

1. Manufacturer's Data:

    1. Submit product information from waterproofing Manufacturer prior to commencement of work of this Section verifying following:

    2. Selected material is from those specified;

    3. Composition and physical characteristics;

    4. Surface preparation requirements;

    5. Priming and application procedures.

2. Shop Drawings:

    1. Submit shop drawings in accordance with the General Conditions of Contract showing method of installation and layout of membrane layer including providing continuity of membrane (tanking), details of inside and outside corners, flashing of protrusions and penetrations.

    2. 1.5.2.2 Provide shop drawings approved and signed by manufacturer's technical representative.

1.6 QUALITY ASSURANCE

1. Perform work using skilled and experienced waterproofing tradespeople fully conversant with standards, methods and techniques required for installation of waterproofing system specified herein. Ensure installer is qualified, has minimum 3 years experience and is approved by membrane manufacturer.

2. Arrange for visit to Site by waterproofing manufacturer technical representatives before beginning waterproofing installation, to discuss with applicator, Contractor and Consultant procedures to be adopted, to analyze Site conditions and inspect surfaces to be waterproofed, in order that recommendations may be made and recorded.

3. Discuss following items:

    1. Weather conditions under which work will be done;
    2. Reinforcement joint design;
    3. Suitability of material to be used;
    4. Priming operation.

1.7 DELIVERY, STORAGE AND HANDLING

1. Deliver and store materials in a dry location, in original containers with manufacturer's wrappers and seals intact.

2. Keep membrane materials dry, stored in rolls standing on end, selvage edge up, elevated from contact with moisture, at temperatures not less than 5 deg C (41 deg F) or more than 49 deg C (120 deg F). Handle rolls with care to avoid crushing, puncturing or other damage. Ensure selvage edge is not damaged during handling and banding strips are removed before application of membrane. Do not use wet or damp membrane.

3. Store primers between 15 deg C and 26 deg C (59 deg F and 79 deg F), or restore to temperature ranges before use.

1.8 MANUFACTURER'S GUARANTY

1. Provide membrane manufacturer's guaranty naming Owner as beneficiary and covering defects and deficiencies and weathertightness of complete membrane and flashings for 10 years from date Work is certified as substantially performed.

2. Guaranty shall cover materials and include repair or replacement at manufacturer's expense, to extent required, of work of this Section in event of leaks or other failure if such failure results from defects and deficiencies of membrane and flashings.

1.9 WARRANTY

1. Warrant work of this Section against defects and deficiencies in accordance with General Conditions of the Contract. Promptly correct any defects or deficiencies, which become apparent within warranty period, to satisfaction of Consultant and at

no expense of Owner. Defects include but are not limited to actual leakage and blow off.

Part 2 PRODUCTS

2.1 MATERIALS

1. General: Ensure materials are compatible and satisfactory to membrane manufacturer.

2. Asphalt Primer: CGSB 37-GP-9Ma or as approved by manufacturer.

3. Waterproofing Sheet Membrane: CGSB 37-GP-56M, Type 1, Class A, Grade 2, non-woven polyester reinforcement (180 g/m^2) and thermofusible elastomeric asphalt, both side protected by thermofusible plastic film, minimum 3 mm 90.118") thick and be applied by torching only. Sopralene Flam 180 by Soprema Waterproofing Inc., or Vadaflex NP 18p/p by Monsey Bakor Inc. or Torchflex TP-180-FF-Base by IKO Industries Ltd.

4. Reinforcing Sheet Membrane: CGSB 37-GP-56M, Type 1, Class A, Grde 2, non-woven polyester reinforcement (180 g/m^2) and thermofusible elastomeric asphalt, both side protected by thermofusible plastic film, minimum 3 mm (0.118") thick and be applied by torching only. Sopralene Flam 180 by Soprema Waterproofing Inc., or Vadaflex NP 18p/p by Monsey Bakor Inc. or Torchflex TP-180-FF-Base by IKO Industries Ltd.

5. Protection Board: minimum 3 mm (1/8") thickness; Sopraboard by Soprema Waterproofing Inc. or 990-31 Protection Board by Monsey Bakor Inc. or Protectoboard by IKO Industries Ltd.

6. Adhesive for Protection Board: as recommended by membrane manufacturer.

7. Edge Fasteners and Binding Bars: as recommended by membrane manufacturer.

8. Sealant: as recommended by membrane manufacturer.

Part 3 EXECUTION

3.1 INSPECTION

1. Report any defects or irregularities in substrate detrimental to waterproofing application. Do not proceed until corrected.

2. Ensure that substrate surfaces are smooth, dry, clean and free of ice and debris.

3. Ensure that concrete substrate of mud slab has received wood float finish.

4. Do no waterproofing during rain, fog, sleet or snow, or upon surfaces covered with dust, water, dew, ice, frost, snow and similar conditions.

5. Protection:

    1. Protect adjacent work, building and property from damage during waterproofing operations.

    2. Verify no vent pipes venting flammable fumes (i.e. fuel storage tanks) are located in area of work.

    3. Do not have gasoline or other flammable solvents in work area while torching.

    4. Protect existing and completed portions of Work from damage.

    5. Cold Weather Application:

        1. Remove moisture from substrate before application of membrane.

        2. Daily weather forecasts shall be followed to determine commencement of work or to anticipate possible suspension.

        3. At temperatures below 10 deg C (50 deg F), store membrane material in warm and dry storage until ready to use. Bring out to work area only enough rolls for immediate use.

        4. Unroll membrane and allow roll to relax in sunlight for 30 to 45 minutes before application. Reroll from both ends and apply in both directions.

3.2 INSTALLATION

1. General: Use only torch type approved by manufacturer of waterproofing membrane system.

    1. Clean existing surfaces of all pervious coatings and material to clean concrete substrate.

2. Primer:

    1. Apply primer to concrete masonry substrate to which membrane shall be adhered to directly in accordance with manufacturer's instructions. Allow primer to cure.

    2. Ensure primer coating is dry before application of base sheet.

    3. Waterproofing Sheet Membrane – Foundation Walls:

        1. Provide reinforcing layers of membrane in areas of potential high substrate stress. There areas to include interior and exterior corners, footing to foundation wall joint, openings, sleeves. Place reinforcing membrane strips in widths wide enough to bear minimum 150 mm (6")

on each surface as indicted on Drawings. Ensure that reinforcing layers are totally fused prior to membrane application.

2. Start membrane application at low point. Fuse membrane to primed substrate utilizing approved equipment. Ensure complete adhesion.

3. Set each sheet vertically from toe of footing to high point. End lap each lower course 150 mm (6") and side laps 75 mm (3"). Shift membrane minimum of 300 mm (12") between adjacent end laps.

4. Proceed with application until entire surface is waterproofed.

5. Inspect completed membrane at end of working day as well as before back fill operation. Patch any hole or tears with appropriate membrane material. Extend patch 100 mm (4") in all directions from edge of puncture or tear.

6. Eliminate potential abrasion, breaks and punctures by covering waterproofing with protection board using asphalt based adhesive upon completion of membrane installation.

7. Mechanically fasten uppermost edge of membrane to concrete masonry substrate using applicable fasteners, metal washers, minimum 5 fasteners per sheet, and binding bars.

8. Seal top edge of binding bars to provide positive protection against entry of water in waterproofing system.

3.3 FIELD QUALITY CONTROL

1. Manufacturer's Field Services: Representative of membrane manufacturer shall visit Site on day waterproofing is commenced and periodically thereafter, to ensure work is properly performed. Upon completion of work of this Section, manufacturer's representative shall inspect waterproofing and verify quality of workmanship to yield weather-tight waterproofing system and issue manufacturer's guaranty. Manufacturer's representative shall inform Consultant, Contractor and Sub-Contractor executing work of this Section promptly in writing when inspection is complete and provide detailed report.

End of Section 07 12 00