SECTION 07260

VAPOR RETARDERS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Reinforced vapor retarders.

B. Tape to seal joints

C. Liquid Mastic to repair and patch vapor retarder.

D. Pipe boots for sealing penetrations.

1.2 RELATED SECTIONS

A. Section 03300 - Cast-In-Place Concrete: Slabs on grade.

B. Section 05310 - Steel Deck.

C. Section 05400 - Cold Formed Metal Framing: Wall and roof framing.

D. Section 06100 - Rough Carpentry: Wall and roof framing.

E. Section 06150 - Wood Decking: Timber or lumber roof deck.

F. Section 06160 - Sheathing: Roof sheathing.

G. Section 07220 - Roof and Deck Insulation.

H. Section 07410 - Metal Roof and Wall Panels.

I. Section 07420 - Plastic Roof and Wall Panels.

J. Section 07500 - Membrane Roofing.

K. Section 07610 - Sheet Metal Roofing.

1.3 REFERENCES

A. ASTM D 882 - Tensile Properties of Thin Plastic Sheeting; 2001.

B. ASTM D 1709 - Impact Resistance of Plastic Film by the Free-Falling Dart Method; 2001.

C. ASTM D 2582 - Puncture-Propagation Tear Resistance of Plastic Film and Thin Sheeting; 2000.

D. ASTM D 3776 - Mass Per Unit Area (Weight) of Woven Fabric; 1996.

E. ASTM D 4833 - Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products; 2000.

F. ASTM E 96 - Water Vapor Transmission of Materials; 2000.

G. ASTM E 1643 - Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 1998.

H. ASTM E 1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 1997.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Samples: Submit manufacturer's samples of reinforced vapor retarders.

D. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Pre-installation Meeting: Conduct a pre-installation meeting two weeks before start of installation of reinforced vapor retarders. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and installer. Review installation, protection, and coordination with other work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage:
   1. Store products in manufacturer's unopened packaging until ready for installation.
   2. Store materials in a clean, dry area in accordance with manufacturer's instructions.

C. Handling: Protect materials during handling and installation to prevent damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturer: ECC Vapor Barrier, a Division of Engineering Control Corp. (ECC), which is located at: 170 Keyland Court, Bohemia, NY 11716; Tel: (631) 750-3930; Fax: (212) 710-4597; Email: info@emailecc.com; Web: www.engineeringcontrolcorp.com

B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 REINFORCED VAPOR RETARDERS

A. Reinforced Vapor Retarder: VIP Type 2 for use under concrete slabs; complying with ASTM E 1745 Class A.
   1. Material: 4-ply laminate, with a high-strength cord grid surrounded by two layers of high-density polyethylene and combined with a layer of geotextile fiber.
   2. Polyethylene thickness: 20 mils (0.51 mm)
   3. Color: Blue.
   4. Roll Size: 6 feet by 130 feet (1.83m x 39.62m) or 780 square feet (72.46 square meters).
   5. Application(s):
      a. Use on subgrade exterior walls on inside face of framing.
      b. Use on subgrade exterior walls, secured to outside face of poured and cured wall.
      c. Use under concrete slabs, over aggregate fill.
      d. Use under concrete slabs, under aggregate fill.

2.3 ACCESSORIES

A. General: Ensure accessories are from same manufacturer as reinforced vapor retarders.

B. Mastic Tape: ECC STRIP Tape.
   1. Description: Black, double-sided, asphaltic, pressure-sensitive, mastic tape.
   2. Width: 1.97 inches (50 mm)
   3. Thickness: 39.4 mils (0.039 in. / 1.0 mm).
   4. Length: 65.6 feet (20 m).

C. Liquid Mastic Sealant: ECC Mastic Liquid Patch.

D. Pipe Boots: ECC Pipe SEALS.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine surfaces and areas to receive reinforced vapor retarders. Notify Architect in writing defects of work and other unsatisfactory site conditions that would cause defective installation of vapor retarders. Do not begin installation until unacceptable conditions have been corrected.

B. Field-verify dimensions of site.

C. Commencement of work will imply acceptance of substrate.

3.2 INSTALLATION

A. Install reinforced vapor retarders in accordance with manufacturer's instructions and ASTM E 1643 for concrete slabs.

B. Install vapor retarders continuously at locations as indicated on the drawings. Ensure there are no discontinuities in vapor retarder at seams and penetrations.

C. Install vapor retarders in largest practical widths. Membrane to be unrolled with the longest dimension parallel to the direction of the pour.

D. Ensure surface beneath vapor retarder is smooth with no sharp projections.

E. Join sections of vapor retarder and seal penetrations in vapor retarder with mastic

tape with a minimum 6-inch overlap. Ensure vapor retarder surfaces to receive mastic tape are clean and dry.

F. Immediately repair holes in vapor retarder with liquid mastic or vapor barrier section with mastic tape.

G. Seal around pipes and other penetrations in vapor retarder with pipe boots in accordance with manufacturer's instructions.

3.3 PROTECTION

A. Protect reinforced vapor retarders from damage until covered by wall finish.

B. Protect reinforced vapor retarders from damage during installation of reinforcing steel and utilities and during placement of granular materials or concrete slab.

C. Immediately repair damaged vapor retarder in accordance with manufacturer's instructions.

END OF SECTION