SECTION 07.25.00
WEATHER BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Water-Resistive Barrier: Under exterior wall cladding, over sheathing or other substrate; not air tight or vapor retardant.
B. Vapor Retarders: Materials to make exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls water vapor resistant and air tight.
C. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls.

1.02 RELATED REQUIREMENTS
A. Section 03.30.00 - Cast-in-Place Concrete: Vapor retarder under concrete slabs on grade.
B. Section 07.24.00 - Exterior Insulation and Finish Systems: Water-resistive barrier under exterior insulation.

1.03 DEFINITIONS
A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
B. Air Barrier: Air tight barrier made of material that is relatively air impermeable but water vapor permeable, both to the degree specified, with sealed seams and with sealed joints to adjacent surfaces. Note: For the purposes of this specification, vapor impermeable air barriers are classified as vapor retarders.
C. Vapor Retarder: Air tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
D. Water-Resistive Barrier: Water-shedding barrier made of material that is moisture resistant, to the degree specified, intended to be installed to shed water without sealed seams.

1.04 REFERENCE STANDARDS

1.05 SUBMITTALS
A. See Section 01.30.00 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide data on material characteristics.
C. Shop Drawings: Provide drawings of special joint conditions.
D. Manufacturer's Installation Instructions: Indicate preparation.
1.06 FIELD CONDITIONS
   A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES
   A. Water-Resistive Barrier: Provide on exterior walls under exterior cladding.
      1. Under siding, use fluid-applied coating.
   B. Air Barrier:
      1. On outside surface of sheathing of exterior walls use air barrier coating.
   C. Exterior Vapor Retarder:
      1. On outside surface of inside wythe of masonry cavity wall use vapor retarder coating.
      2. On outside surface of sheathing use vapor retarder coating.

2.02 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)
   A. Air Barrier Membrane:
      2. Acceptable Substrates: Stated by manufacturer as suitable for installation on visibly damp surfaces and concrete that has hardened but is not fully cured ("green" concrete) without requiring a primer.
      3. Adhesion to Paper and Glass Mat Faced Sheathing: Sufficient to ensure failure due to delamination of sheathing.
      4. Dry Film Thickness: 30 mils (0.030 inch), minimum.
      5. Air Permeance: 0.004 cubic feet per minute per square foot, maximum, when tested in accordance with ASTM E2178.
      6. Water Vapor Permeance: 5 perms, minimum, when tested in accordance with ASTM E96/E96M, Procedure B.
      7. Ultraviolet and Weathering Resistance: Approved in writing by manufacturer for minimum of 12 weather exposure.
      8. Elongation: 300 percent, minimum, when tested in accordance with ASTM D412.
      9. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
     10. Products:

2.03 ACCESSORIES
   A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
   C. Thinners and Cleaners: As recommended by material manufacturer.
PART 3 EXECUTION

3.01 EXAMINATION
   A. Verify that surfaces and conditions are ready to accept the work of this section.

3.02 PREPARATION
   A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
   B. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer's instructions.

3.03 INSTALLATION
   A. Install materials in accordance with manufacturer's instructions.
   B. Water-Resistive Barriers: Install continuous barrier over surfaces indicated, with sheets lapped to shed water but with seams not sealed.
   C. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
   D. Coatings:
      1. Prepare substrate in manner recommended by coating manufacturer; treat joints in substrate and between dissimilar materials as recommended by manufacturer.
      2. Use flashing to seal to adjacent construction and to bridge joints.
   E. Openings and Penetrations in Exterior Weather Barriers:
      1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
      2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with at least 4 inches wide; do not seal sill flange.
      3. At openings to be filled with non-flanged frames, seal weather barrier to all sides of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
      4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
      5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
      6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

3.04 FIELD QUALITY CONTROL
   A. Do not cover installed weather barriers until required inspections have been completed.
   B. Obtain approval of installation procedures by the weather barrier manufacturer based on a mock-up installed in place, prior to proceeding with remainder of installation.
   C. Take digital photographs of each portion of the installation prior to covering up.

3.05 PROTECTION
   A. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION