SECTION 07 26 00

UNDER SLAB VAPOR BARRIER

PART 1 – GENERAL

1.1 PURPOSE

A. This guideline is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. PSP is to apply the principles of this section such that the University of Texas at Arlington (UTA) may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be approved by UTA and may require justification through Life Cycle Cost (LCC) analysis and submitted to UTA for approval.

1.2 LESSONS LEARNED AND DESIGN CONSIDERATIONS

A. X

1.3 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.4 SUMMARY

A. This Section includes the following:
   1. Sheet materials for controlling vapor diffusion through concrete slabs-on-grade.

1.5 SUBMITTALS

A. See Division 01 for submittal procedures.
B. Written certification from the manufacturer that the materials and their application as noted in this Specification and on the Drawings is appropriate and approved for this project.
C. Product Data: Manufacturer’s product data, specifications, and installation instructions. Include vapor barrier manufacturer’s requirements for placement, seaming and pipe book installation.
D. Installer Certificates: Signed by manufacturers certifying that installers comply with requirements.
E. Submit evidence that Installer’s existing company has minimum of 5-years continuous experience in application of specified materials.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer (applicator) who is acceptable to manufacturer, who has completed applications similar in material and extent to that required for this Project, and whose work has resulted in construction with a record of successful in-service performance.
B. Source Limitations: Vapor Barrier and components to be from one source from a single manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and application.
B. Store materials in a clean dry location in accordance with manufacturer's written instructions to prevent deterioration from moisture or other detrimental effects.
C. Stack membrane on elevated wood platform to eliminate warping.
D. Protect materials during handling and application to prevent damage or contamination.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Comply with manufacturer's written recommendations for substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting materials performance. Do not apply on frozen ground.
B. Close areas to traffic during application and for time period after application recommended in writing by manufacturer.

1.9 COORDINATION

A. Coordinate placement of sheet vapor barrier with Division 03 sections.

B. Coordinate placement of sealer and hardener with Division 03 sections and with requirements of finish flooring products, including adhesives, specified in Division 09 Sections.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Sheet Vapor Barrier:
   1. Type: 15 mil polyolefin film meeting requirements of ASTM E 1745, Class A.
   2. Water Vapor Transmittance (After mandatory condition per ASTM E154 sections 8,11,12,13): Maximum perm rating of 0.01 as tested in accordance with ASTM E 1745 Section 7
   3. Strength: ASTM E 1745: Class A.

B. Acceptable Products:
   1. Subject to compliance with requirements, provide one of the following:
      a). Stego Wrap Vapor Barrier by Stego Industries, LLC, 15 mils.
      b). Zero-Perm Vapor Barrier by Alumiseal.
      c). Perminator by W.R. Meadows.
      d). Xtreme by Tex-Trude.
      e). Husky Yellow Guard.

C. Accessories:
   1. Bonding Agent: Manufacturer's approved or recommended vapor barrier bonding agent.
   2. Sealing and Seaming Tape: High density polyethylene tape a minimum of 4 inches in width, compatible with vapor barrier membrane, and manufactured by or recommended by vapor barrier membrane manufacturer. Tape for joints shall have at least the same permeability rating as the vapor barrier specified.
   3. Vapor Proofing Mastic: Manufacturer's approved or recommended vapor proofing mastic with the same permeability rating as the vapor barrier specified.
   4. Pipe Boot: Construct pipe boots from vapor barrier material and pressure sensitive tape in accordance with manufacturer's instructions.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive membrane. Notify Architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.2 PREPARATION

A. Level or tamp or roll aggregate, sand or granular base.

3.3 INSTALLATION

A. Vapor Barrier:
   1. Place, protect, and repair vapor barrier sheets according to ASTM E 1643 and manufacturer's written instructions.
   2. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete pour.
   3. Install vapor barrier without tears, voids, and holes. Lap ends and edges as recommended by manufacturer, but not less than 6 inches over adjacent sheets. Seal laps with tape.
   4. Turn up sheets at perimeter, at footings and vertical walls, and against penetrations, and seal joints with tape.
   5. Seal joints, tears, holes, perimeter, and penetrations through vapor with tape in accordance with manufacturer's recommendations.
   6. Point exposed edges with pointing mastic to prevent water from traveling under membrane.
   7. Adhere membrane to vertical surfaces with adhesive.

3.4 PROTECTION

A. Protect complete membrane from damage. Prior to pouring concrete, inspect membrane for punctures or damage and repair as required to maintain vapor barrier integrity.

END OF SECTION