ICC-ES Evaluation Report

ESR-1860

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DIVISION: 31 00 00—EARTHWORK
Section: 31 31 16—Termite Control

REPORT HOLDER:

TMA CORPORATION, PTY, LTD.
48 CENTURY ROAD
MALAGA, WESTERN AUSTRALIA 6090
AUSTRALIA
+61 (0)8 9249 3868
www.termimesh.com

EVALUATION SUBJECT:

TERMIMESH™ TERMITE CONTROL SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 *International Building Code*® (IBC)
- 2009 *International Residential Code*® (IRC)
- Other Codes (see Section 8.0)

Property evaluated:

Protection against termites

2.0 USES

The Termimesh™ Termite Control System is used to provide protection against subterranean termites.

3.0 DESCRIPTION

3.1 General:

The Termimesh™ Termite Control System is designed to stop subterranean termites from entering a building, by blocking any entrances through the foundation. The foundation entry points of a building include all construction and control joints, cavity walls below grade, retaining walls, service pipe penetrations through slabs, blockouts in concrete, and brick/block piers. The system consists of a stainless steel mesh, stainless steel clamps and Termiparge (a specialized bonding cement) or Termibond (a specialized epoxy resin). The stainless steel mesh provides a physical barrier with mesh holes small enough to prohibit the passage of a termite. The clamps and Termiparge or Termibond are used to close off any openings in the mesh around pipes and joints. The mesh is either cast into the concrete during the pour or bonded to concrete or masonry using the Termiparge specialized cement-based adhesive or Termibond specialized epoxy resin, which bonds the mesh to concrete or masonry as parging.

3.2 Materials:

3.2.1 Termimesh™: Marine grade stainless steel mesh of a grade not lower than 316 (AISI 31600) made from 0.18-millimeter-diameter wire with mesh openings of 0.66 mm by 0.45 mm. Termimesh is supplied in widths of 1200 mm and lengths of 30 m (47.24 inches by 100 feet).

3.2.2 Clamps: Stainless Steel 301.

3.2.3 Termiparge: Specialized bonding cement which bonds the mesh to concrete, masonry, or other termite-resistant substrates.

3.2.4 Epoxy Resins—Termibond: Specialized epoxy resins used for bonding of mesh to concrete, masonry, steel and galvanized or zinc alum-coated steel substrates.

4.0 INSTALLATION

4.1 General:

The Termimesh™ Termite Control System must be installed in accordance with the manufacturer's published installation instructions and this report. The system must be installed by installers trained and accredited by TMA Corporation, Pty, Ltd. (Refer to Section 4.3.)

Locations requiring protection from termites are described in Sections 2304.11.6 and 2603.8 of the IBC; and Sections R318.1(5), R318.3, and R318.4 of the IRC.

The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation.

If there are any conflicts between the manufacturer's instructions and this report, this report governs.

4.2 Typical Installation:

The Termimesh™ System can be installed under the slab, on ground, in cavity walls, on the outside perimeter of cavity walls, as a cold-joint installation between existing structures, over concrete masonry units and new slabs, and in timber post–supported structures. The mesh is joined by a 10- to 15-millimeter (0.39 to 0.59 inch) physical lap joint (two and a half times as shown in the TMA Corporation, Pty, Ltd., training manual). This joint can be strengthened by using a hot-glue gun every 500 to 1000 millimeters (19.69 to 39.37 inches) along the joint.

Sealing pipe penetrations through concrete slabs is achieved by star-cutting a hole, smaller than the pipe diameter, in the mesh and then stretching the mesh over the pipe to form a collar. The collar is secured by a stainless steel clamp to the pipe.

Shrinkage surface cracks in concrete slabs are not considered to be at risk from termite entry. However, the decision to protect cracks with mesh, Termiparge or Termibond is at the discretion of an accredited Termimesh supervisor. (Refer to Section 4.3.)

Typical details of installations are shown in Figure 1. Complete details for different construction methods are included in the manufacturer's installation instructions.

4.3 Accredited Installers:

Installation of the Termimesh™ Termite Control System must only be performed by accredited installers who have undergone extensive training on both how to install the system and understanding the habits of termites. The quality control program is administered by TMA Corporation, Pty, Ltd.

There are seven levels of installer accreditation, each of which is valid for two years and not subject to automatic reissuance. Installers can lose their accreditation or be downgraded depending on their field performance during the accreditation period. Throughout the two-year accreditation period, every installer is checked on a regular basis, usually every six weeks, by a quality control officer employed by TMA Corporation, Pty, Ltd. The quality control officer can lower the level of an installer's accreditation; or, in extreme circumstances, have the accreditation revoked.

5.0 CONDITIONS OF USE

The Termimesh™ Termite Control System described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The barrier system must be installed by installers trained and accredited by TMA Corporation, Pty, Ltd.

5.2 On the exterior of the building, the barrier system must be located 3 inches (76 mm) or more measured vertically from the ground, concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather. (Refer to Figures 2 and 5, Visual Inspection Zone).

5.3 The steel mesh must not be installed in contact with reinforcing steel or any dissimilar metals that will produce an electrolytic reaction.

5.4 The steel mesh must not be penetrated except by accredited installers.

5.5 When required by the applicable code, protection of wood and wood-based products against decay must be provided in accordance with the applicable code.

5.6 A TMA Corporation, Pty, Ltd., Protection Notice Label must be located in a conspicuous location on the structure, e.g., at the meter box or electrical circuit breaker box. The label must include the telephone number and address for TMA Corporation, Pty, Ltd., and the name of the accredited installer. The label must provide the following instructions:

- The Termimesh™ Termite Control System must be inspected three months after completion of the installation and once a year every year thereafter.
- Any utility installed in the building after the Termimesh™ Termite Control System is installed must enter the building above the barrier.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Termite Physical Barrier Systems (AC380), dated June 2011.

7.0 IDENTIFICATION

Each roll of Termimesh Termite Control System mesh, and each package of Termiparge, Temibond and stainless steel clamps covered by this report, must bear a label with the manufacturer's name (TMA Corporation, Pty, Ltd.) and address, the product name (Termimesh), and the ICC-ES evaluation report number (ESR-1860).

8.0 OTHER CODES

In addition to the codes referenced in Section 1.0, the products described in this report were evaluated for compliance with the requirements of the following earlier editions of the International Codes:

- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)

The Termimesh™ Termite Control System complies with, or is a suitable alternative to what is specified in, the 2006 IBC and 2006 IRC, just as described in Sections 2.0 through 7.0, except that Section 4.1 must be revised to read as follows:

Locations requiring protection from termites are described in Sections 2304.11.6 and 2603.8 of the 2006 IBC, and Sections R320.1(5), R320.4, and R320.5 of the 2006 IRC.

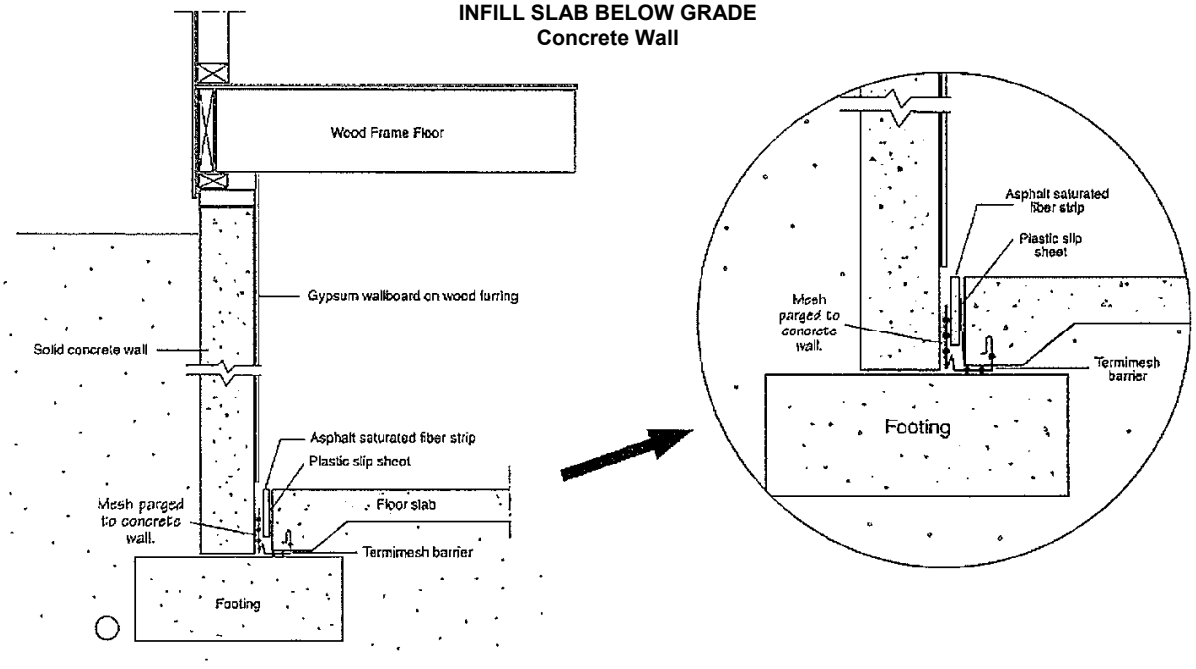


FIGURE 1—TYPICAL INSTALLATION DETAILS

INFILL SLAB BELOW GRADE
ICF Clad CMU Wall

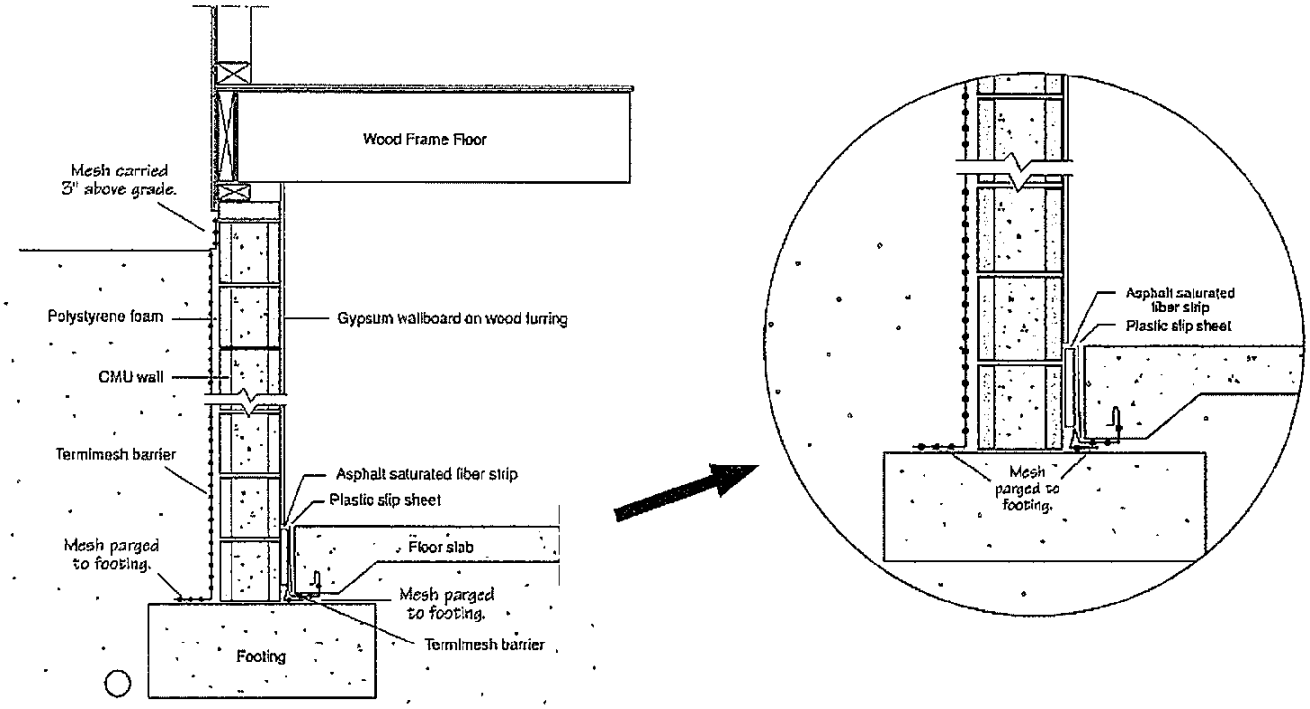


FIGURE 2

FRACTURED SLAB PROTECTION

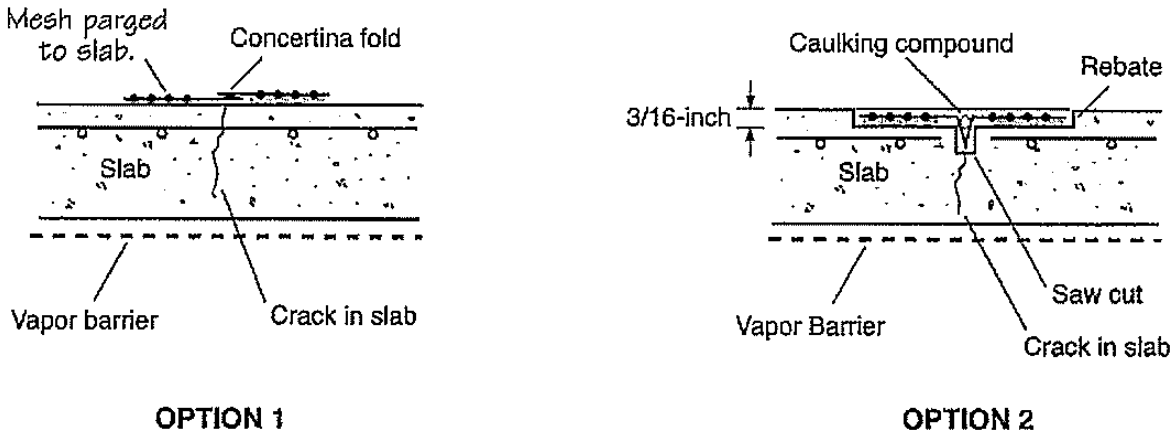
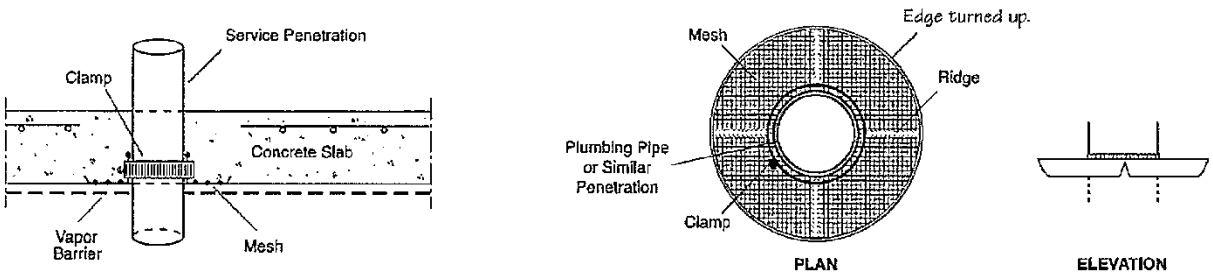


FIGURE 3

PENETRATION PROTECTION
Base of Slab—Pre-Pour

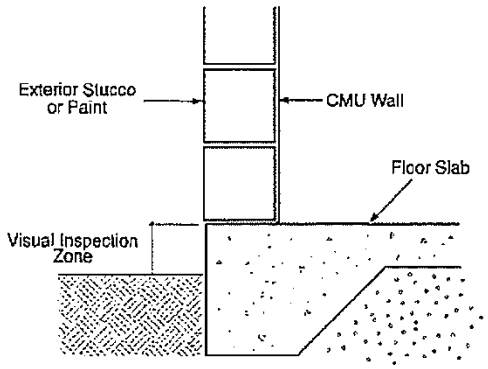


NOTE: Mesh is turned up at the outside edge to be embedded in concrete. The flange is installed such that it does not interfere with the vapor barrier.

FIGURE 4

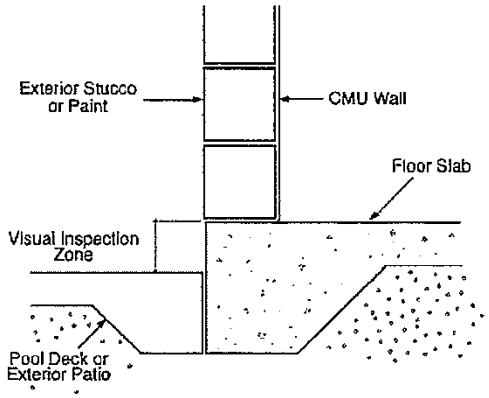
VISUAL INSPECTION ZONE
Monolithic Slab

Where the CMU wall is on a monolithic slab then there will be no requirement for an additional barrier provided that the visual inspection zone is sufficient to readily detect termites attempting to bridge it.



Exterior Lawn or Garden

Where the finished grade is soil, garden or lawn, then a 4-inch inspection zone is recommended due to the possible build-up of leaf, litter, etc.



Exterior Hard Surface

Where the finished grade is a hard surface such as a path or pool deck, then the visual inspection zone may be reduced to 3-inch.

Note that where the wall is clad with timber siding it is recommended to keep the base of the siding a minimum of 4 inches above the final grade to maintain a comprehensive inspection zone, whether the exterior surface is hard or soft.

FIGURE 5

ICF WALL PROTECTION (U.S.)
Monolithic Slab

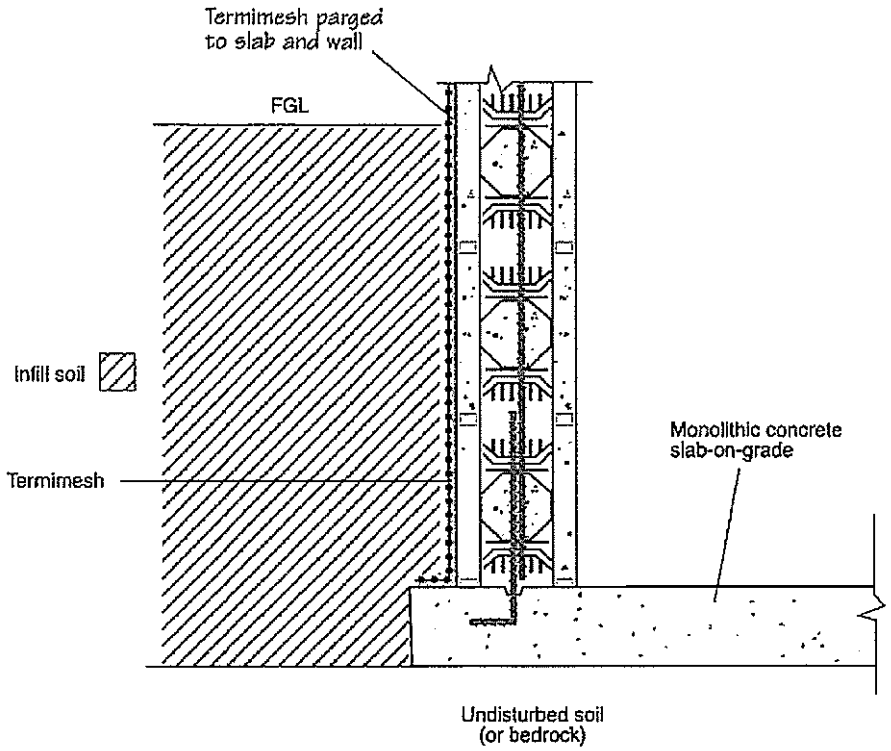
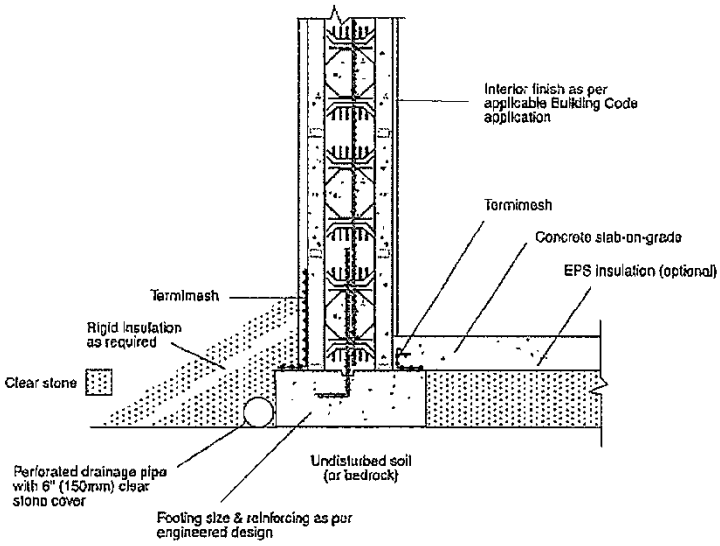
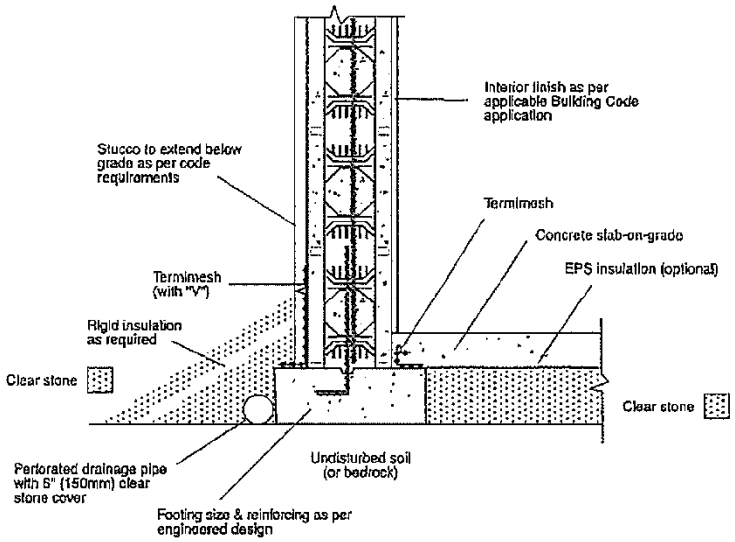


FIGURE 6

ICF WALL PROTECTION (U.S.)
Block Set on Footing



Method for thin external coating



Method for thick external render

FIGURE 7

INTERIOR CMU WALL
Infill Slabs

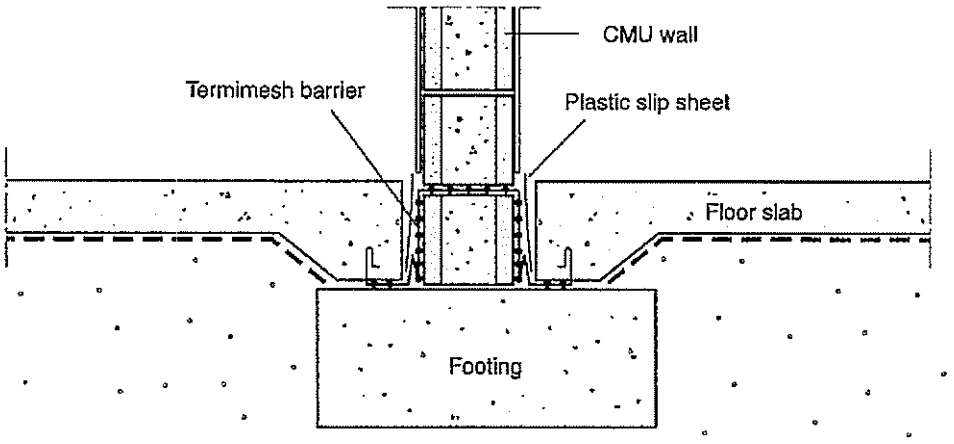
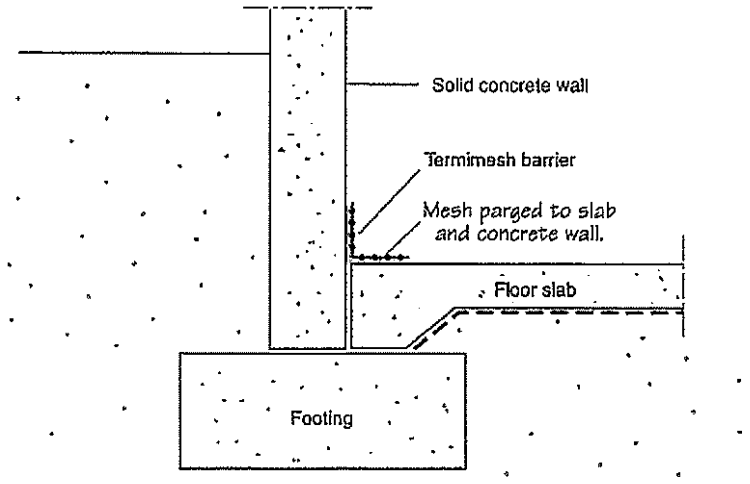


FIGURE 8

INFILL SLAB BELOW GRADE
Post-Pour



NOTE: Vertical construction joints in concrete wall to be protected.

FIGURE 9