Part Three. CONSTRUCTION PROTOCOLS

Now that you have a thorough understanding of the science and practical application of breathable walls, we present here in Part Three a condensation of the protocols presented in the previous chapters.

We start with a discussion of steps you can take to minimize the toxicity created in a home as building materials are assembled on the job site. This also safeguards the health of workers (chapter 16).

We then present protocols for each step of the building process, consistent with the sequence generally followed on the job site. We start with protocols for the slab and foundation (chapter 17), with the primary aim to allow for breathability while maintaining thermal performance. We present our recommended protocols for high water tables and radon and other soil gas mitigation. We present alternatives to steel rebar, to eliminate exposure to unwanted electric and magnetic fields. We also discuss ways to avoid mold in crawl spaces. We complete chapter 17 with our recommendations for finishing the inside surfaces of the foundation wall in ways that prevent mold.

The final chapter (chapter 18) contains specific protocols for all above-grade construction discussed in this manual. This includes a reprinting of our summary of the installation steps for low-density fiber-cement wall forms. We also present an alternative protocol, developed by George, for the infill of these wall forms that avoids Portland cement and rockwool inserts for low-rise buildings. We also provide protocols and resources for many of the materials discussed in Part Two, including autoclaved aerated concrete, magnesia-based sheeting and exterior and interior finishes. [This, and other information in this Part, will be expanded in the published edition. –Ed.] We also present George's alternative protocol for wood-frame construction, using wood studs, magnesia, clay, borax and infill insulation, either cotton or wet cellulose.