



We can present the following AIA approved one-hour continuing education courses at your facility. Each program is approximately 50 minutes with time allowed for discussion. Active participation of attendees is encouraged. Lunch is provided.

## **Clay Brick Programs – Acme Brick Company**

### **ABC103 ASTM Specifications for Brick and Mortar (1.0 LU-HSW) (1 hour)**

A thorough review of ASTM Specifications for brick and mortar, emphasizing important properties of each that contribute to the exceptional durability of brick masonry construction. Includes recent trends in manufacturing that reduce the environmental impact of brick masonry. Reviews mortar types and formulations recommended for maximum durability and resistance to water penetration.

- Learn the requirements of ASTM C 652 and C 216 specifications for clay brick
- Understand ASTM C 270 requirements for mortar
- Learn to specify the best mortars for brick masonry
- Learn how modern brick manufacturing continues to reduce energy required to produce and deliver quality clay brick

### **ABC106 Residential Brick Construction & Brick Veneer on Wood Studs (1LU-HSW) (1 hour)**

A detailed look at good residential brick construction techniques and why they are important as well as constructing brick veneer over wood studs. Topics include wood stud framing construction, air space, flashing and weeps, mixing and placing mortar, brick anchors, lintels and arches, support of brick, expansion joints, and cleaning. This program can help architects and builders improve construction quality and limit liability and call-backs.

- Learn proper grade to specify for wood studs by IRC code
- Learn stud spacing and bracing materials & methods
- Learn how braced wall lines should be constructed & spaced
- Recognize proper bricklaying techniques
- Know the importance of good mortar mixing and placing
- Understand how to properly drain the wall with flashing and weep systems
- Recognize the function of lintels and arches to span openings
- Know proper installation of brick anchors, expansion joints, lintels and other details

### **ABC107 Commercial Brick Workmanship (1LU-HSW) (1 hour)**

A good review of Inspection of brick masonry during construction is essential to ensure that construction conforms to the design. Key inspection items are shown, including proper flashing materials and installation, proper mixing and placing of mortar, joint tooling, brick anchors, and covering walls during construction. Cleaning and prevention of water-related staining are addressed, as well as cold and hot weather construction.

- Learn to recognize proper bricklaying techniques
- Know the importance of good mortar mixing and placing
- Understand how to properly drain the wall with flashing and weep systems
- Proper cleaning and minimizing efflorescence and moisture related stains

### **ABC109 Differential Movement and Expansion Joints in Brick Veneer (1 LU – HSW) (1 hour)**

An illustrated discussion of the construction and function of brick veneer expansion joints. Thermal and moisture responses of brick and other building materials can lead to differential movement. The difference between concrete masonry control joints and brick expansion joints is emphasized. Examples of cracks and other distress caused by incorrect expansion joint placement clearly illustrate the importance of proper joint placement. We conclude with practical guides and rules for where expansion joints should be placed in brick veneer.

- Learn how temperature and moisture changes cause brick and other materials to move at different rates
- Learn why we need expansion joints in brick veneer and control joints in other masonry
- Learn where to place expansion joints for effective crack control, while retaining aesthetic symmetry

### **ABC110 Brick Veneer with Steel Stud Backup (1.0 LU – HSW) (1 hour)**

A thorough discussion of the proper design and detailing of brick veneer with steel stud backup. Important information regarding deflection criteria, flashing and drainage, anchors, sheathing, and moisture control are included. Building code requirements for this wall system are also covered.

- Understand recommended maximum deflections for steel studs
- Learn code requirements for veneer anchors and screws
- Learn how to design the wall system for adequate drainage
- Learn code requirements to support vertical loads of brick on building frame

### **ABC112 Sustainable Brick Masonry (1.0 LU – HSW, Sustainable Content),(1.0 General Education Credit- USGBC) (1 hour)**

Brick is a material that has been used for thousands of years and is a natural fit for today's sustainable designs. Brick also looks ahead with surprisingly low embodied energy. Attendees will learn what features of brick fit in with sustainable design practices, including regional materials, very low construction waste, ease of recycling, zero emissions, and even considerable energy savings in a complete wall assembly.

- Learn how brick can fit in with sustainable design practices
- Learn how brick masonry can contribute to LEED points
- Learn about sustainability resources available from the brick and masonry industries
- Learn how brick manufacturers are reducing energy use and greenhouse gas emissions.
- Learn about changes in masonry due to increased stringency in energy code requirements
- Learn about changes in masonry due to reducing the carbon footprint

### **ABC114.0 Introduction to Thin Brick (1.0 LU – HSW) (1 hour)**

Today's building designers are rapidly increasing the use of adhered cladding systems and materials. Thin brick is becoming a popular adhered cladding material and as a result many brick manufacturers are beginning to produce more thin brick. This presentation is an introduction to thin brick, its' characteristics, installation methods and its' common uses.

- Define thin brick and its' different characteristics.
- Describe the different methods of producing thin brick.
- Describe the different installation methods for thin brick.
- Comparison of thin brick to face brick

## **Nano-Course**

### **ABC116.1 Managing Water in Wall Systems with Brick (0.5 LU – HSW) (30 minutes)**

Water penetration causes more damage to wall systems than any other factor. In this presentation we will learn to design wall systems with brick and other masonry veneers to build a redundant system to prevent water penetration.

- Learn how to build an effective air barrier
- Learn where air barriers fail and how to prevent those failures
- Understand the difference between drainage walls and "rain screen" walls and how they perform
- Learn how to build an effective water management with adhered veneer systems