

## BARTILE EXTRUDED CONCRETE ROOF TILES

**BARTILE ROOFS, INC.**  
725 NORTH 1000 WEST  
CENTERVILLE, UTAH 84014

### 1.0 SUBJECT

Bartile Extruded Concrete Roof Tiles.

### 2.0 DESCRIPTION

#### 2.1 General:

Bartile Extruded Concrete Roof Tiles are available in European, Mission "S" and Flat styles. Flat tiles are available in shake and slate designs. The tiles are 15 1/4 inches long by 10 1/2 inches wide and have 1 1/8 inch to 1 1/4 inch interlocking double tongue-and-groove side laps. The tiles also have anchor lugs at the bottom intended for installation over wood furring strips. The lugs are typically 1/2 inch deep, 1 1/2 inches wide and 5/8 inch thick. The tile thickness varies from 1/2 inch to 1 inch at the ribs. Accessory tiles in each style are available for rakes, ridges and hips.

The tiles are available in both standard weight and lightweight varieties for each style. They vary only in weight due to the lightweight tiles using crushed lightweight shale in place of sand.

The basic concrete mix for the tiles is three parts of white sand (crushed lightweight shale for lightweight tiles) to one part of portland cement with appropriate amounts of water, air-entraining agents and accelerators. Mineral oxide coloring is added to the mix design as desired. When installed with a standard 3-inch head lap, the following are the approximate installed weights:

DESCRIPTION	INSTALLED WEIGHT* (pounds per square foot)	
	Standard-weight Tiles	Lightweight Tiles
European	9.0	7.0
Mission "S"	9.0	7.0
Flat (Shake & Slate)	9.5	7.25

\*Includes underlayment and battens.

See Figure 1 for details.

#### 2.2 Installation:

On roof slopes less than 3:12, tiles are only considered as decorative and must be applied over an approved roof covering, subject to the local building official's approval.

**2.2.1 Standard-weight Tiles:** On roof slopes 3:12 to 24:12, the tiles are installed over a minimum 1/2-inch thick solid sheathing with one layer of Type 30 asphalt-saturated organic roofing felt placed with a minimum 3-inch head lap and 6-inch end lap. 1-inch by 2-inch nominal cedar or fir wood strips perpendicular to the eaves may be optionally

used between 4:12 and 6:12 slope. 1-inch by 2-inch nominal wood battens are laid parallel to the eaves and spaced maximum 12 1/2 inches on center. Battens are attached with 8 penny common corrosion-resistant nails spaced 24 inches on center. Nails must be of sufficient length to penetrate 1 inch into or through the sheathing thickness, whichever is less. A minimum 1/2-inch space is provided between the ends of battens every 4 feet to allow for water drainage. Tiles are nailed to battens with No. 11 gage corrosion-resistant roofing nails in accordance with Tables 15-D-1 and 15-D-2 of the 1997 *Uniform Building Code*™ (UBC). Nails must be of sufficient length to penetrate 3/4 inch into or through the thickness of the supporting member, whichever is less.

Ridge, hip and rake tiles are attached with 8 penny common corrosion-resistant nails. All tiles must have a minimum 3-inch head lap, and vertical edges must be interlocked and staggered from adjacent courses.

On slopes 3:12 to 24:12, 1-inch by 6-inch spaced sheathing, grade marked in accordance with Chapter 23 of the code and installed at a maximum 12 inches on center, may be used.

When installed on spaced sheathing, an underlayment recognized specifically for this type of use in an ICBO ES evaluation report must be installed with 6-inch side and head laps. Rake and coping tiles are fastened with two nails. See Tables 15-D-1 and 15-D-2 of the UBC for field and perimeter tile nailing schedule. Valley flashing consists of minimum No. 28 gauge corrosion-resistant metal extending at least 12 inches from the centerline each way. See Figure 2 for installation details.

**2.2.2 Lightweight Tiles:** Lightweight tiles are installed in the same manner as standard-weight tiles except that each tile is attached with roofing nails as specified in Table 15-D-2 of Chapter 15 of the UBC.

#### 2.3 Identification:

The shipping pallets have labels bearing the name "Bartile," the style, color of the tile, date of manufacture, installed weight and the evaluation report number (ICBO ES ER-3909). The lightweight tile labels bear the words LT. WT. Bartile.

### 3.0 EVIDENCE SUBMITTED

Test in accordance with the Acceptance Criteria for Clay and Concrete Roof Tiles (AC180), dated January 2002.

### 4.0 FINDINGS

That the Bartile Extruded Concrete Roof Tiles described in this report and applied over new construction are noncombustible roof coverings complying with the 1997 *Uniform Building Code*™, subject to the following conditions:

ES REPORTS™ are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICBO Evaluation Service, Inc., express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



- 4.1 The tiles are manufactured, identified and installed in accordance with this report and the manufacturer's instructions.
- 4.2 Underlayment must be used in all installations, and the maximum roof slope must not exceed 24 inches in 12 inches.

4.3 The tiles are manufactured at the Bartle Roofs, Inc., facility at Centerville, Utah.  
This report is subject to re-examination in two years.

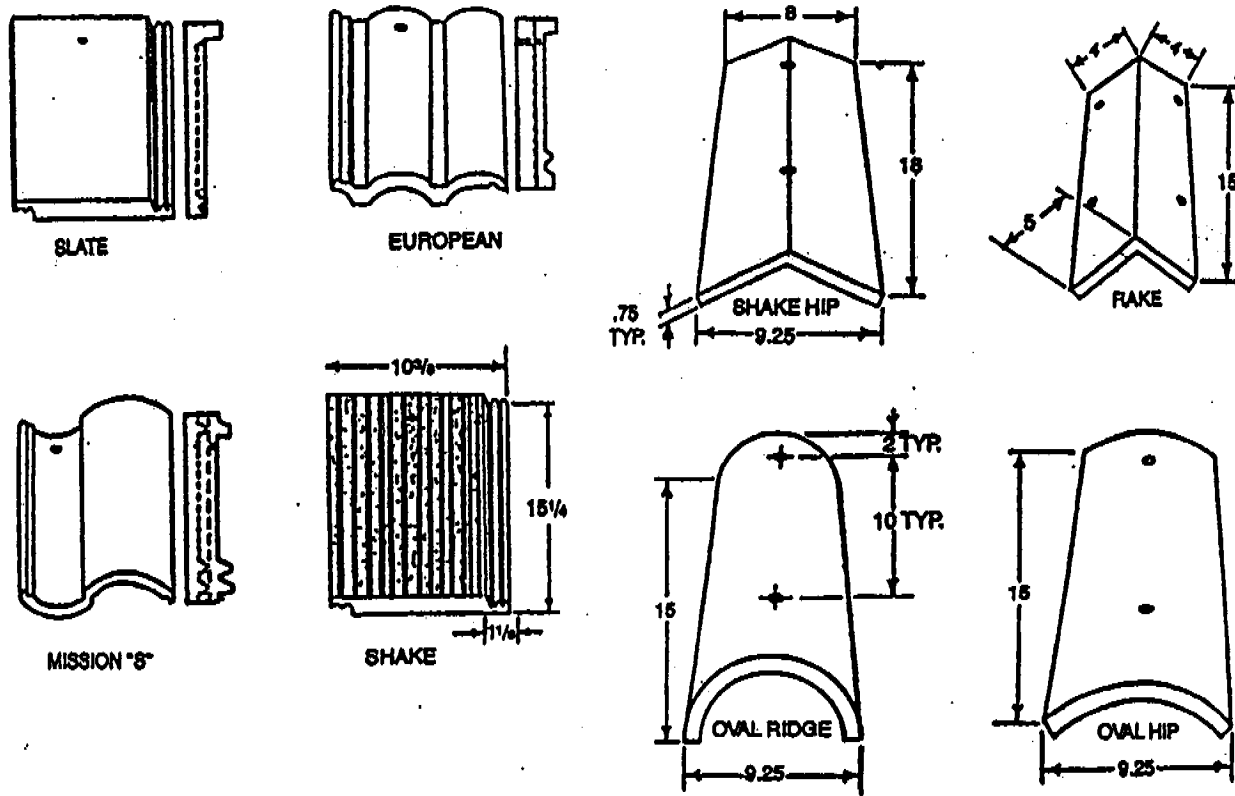


FIGURE 1

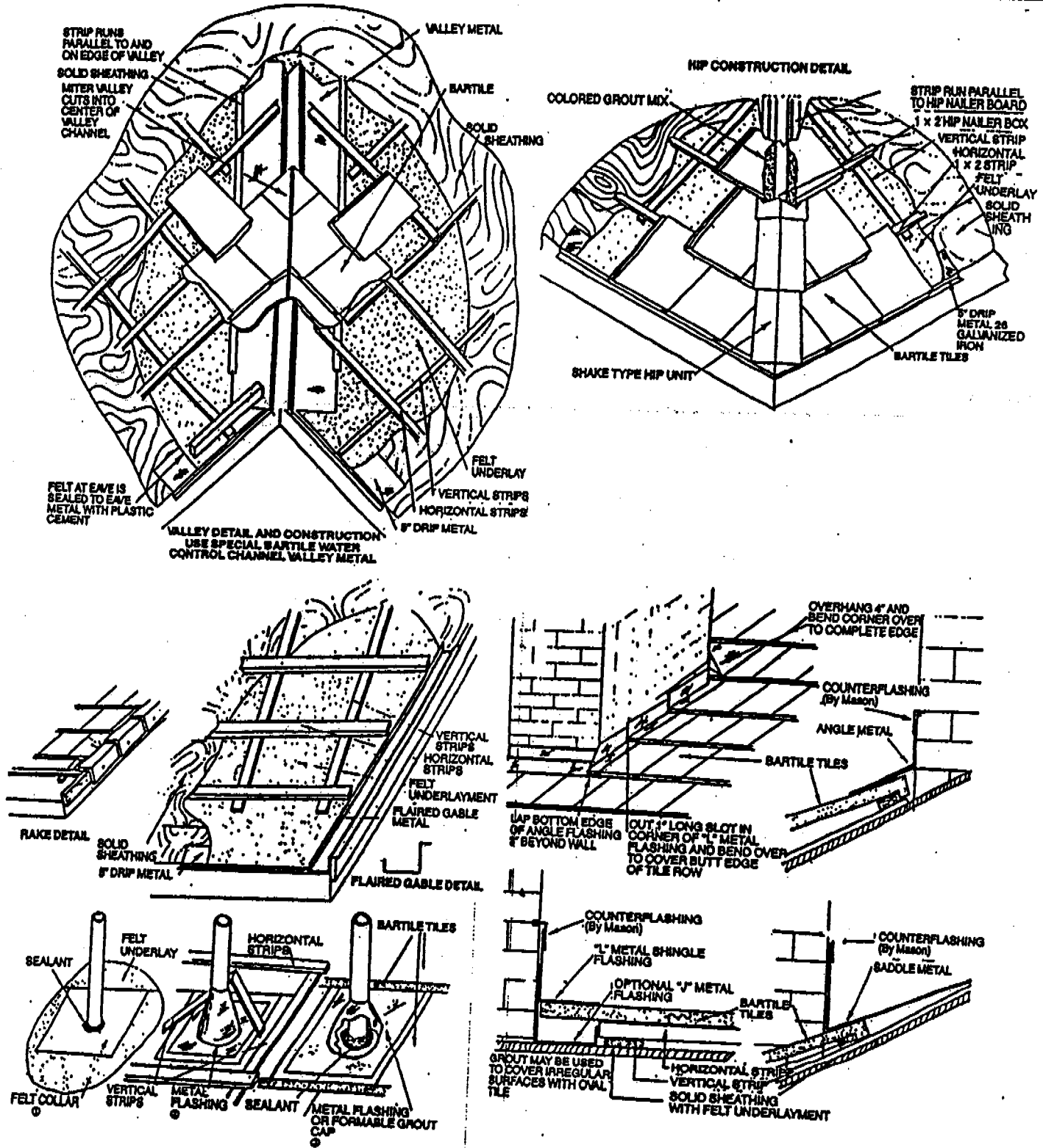


FIGURE 2