Welcome to the Forbes House Museum!

Building Up, Breaking Down: Challenges in Historic Preservation

The Forbes House was designed in the Greek Revival style by architect Isaiah Rogers in 1833. The plans cost $52.50. Captain Robert Bennet Forbes supervised the building of the house and saw to it that was constructed as soundly as a ship. Thick walls of wood sheathing are layered over brick. Unfortunately, the wooden construction makes it susceptible to decay.

In fact, all buildings begin to break down the minute they are assembled. Weathering occurs as decomposition (chemical breakdown) or disintegration (physical breakdown). Today we will explore several different types of building materials as they have been used in the Forbes House Museum and grounds.

Columns are typical Greek Revival elements. To the right are examples of the three main types of columns. Which styles are found adorning this museum? How many of each can you find? What are they made of?

The house’s foundation and front entrance are made from Quincy Granite. Granite is a type of dimension stone that also includes marble, sandstone and limestone. Quincy granite has been used in the construction of many local and national buildings and monuments. Why do you think granite is such a popular building material?

Brick!

Brick is a baked mixture of sand, clay and water. Where can you see bricks on the museum grounds? There are also bricks in places where they cannot be seen. Can you guess where?
Find this Foo Dog....

He shows many signs of weathering. See which ones you can identify:

**Disintegration** occurs when mechanical pressure cracks minerals in the rock. Signs of disintegration are flaking, cracking, chipping, flaking, parting and sheeting.

**Decomposition** occurs when breakdown occurs at the atomic level, changing and removing minerals. Signs of decomposition are pitting, oxidation (rusting-dark stain), hydrolysis (minerals turn to powdery clay or grainy salts) and biological effects (acids given off by lichen and moss).

In China, Foo Dogs are traditionally placed at entrances to ward off evil spirits.

Here the foo dogs are guarding the large bronze bell.

Look closely at the bell for signs of weathering.

**Bronze** is an alloy consisting primarily of copper and some tin. It turns green due to chemical reactions between the copper in that alloy and the atmosphere. The green is most often copper carbonate.

This coloring is called a Patina or Verdigris and is sometimes used intentionally (think about the Statue of Liberty).

Would this phenomenon be disintegration or decomposition? Circle your choice.

Unlike bronze, **copper** is a pure metal.

It was originally used in a very important part of the house. Can you guess where?

It was used on the roof! You can’t tell, but in the picture to the right, the roof was covered in copper, like the bottom of a ship.

**Compared to other roofing materials, copper is:**

- Durable - with regular care it can last over 50 years
- Resistant to thermal changes so it doesn’t deteriorate; highly fireproof
- Less likely to be affected by rain, hail or mildew

As you saw in the bronze bell, the process of corrosion also produces a patina in copper, predominantly green copper carbonate.

It is this patination that gives most historic roof coverings their distinctive color.