



Multi-Hazard Protection for Historic Home

Full Mitigation Best Practice Story

Napa County, California



Napa, CA – In 1998, Paul Faulk purchased a historic home in Napa. It was a slightly elevated house with a four-foot crawl space. When new flood maps were developed for the city, Mr. Faulk’s property was included in a Special Flood Hazard Area as designated by the National Flood Insurance Program. The threat to his home from inundation by the 100-year flood prompted Mr. Faulk to take steps to protect it.

Although his house had never flooded, Mr. Faulk decided to hire a contractor in December 2005 to elevate it an additional four feet. The contractor raised the house in 14-inch intervals, installing railroad tie cribs one level at a time until the structure was nine feet above the ground. A new concrete slab replaced the old deteriorated foundation and slab. The contractor engineered the first level framing to allow for open spaces for a new garage, and strengthened the structure to conform to City of Napa building codes for seismic hazard mitigation. All of the structural elements were connected in a continuous load path with ties, hangers, and foundation bolts.

On New Year’s Eve 2005, while Mr. Faulk’s house was still up on cribs, a sudden storm dropped five inches of rain on Napa County and caused severe flooding. Flood waters came into Mr. Faulk’s front yard, and nearby houses were inundated with water and debris. Fortunately for Mr. Faulk, his home elevation project had been completed enough to avoid significant flooding.

Costs for the elevation totaled about \$9,900, including elevation of the utilities. Additional expenses for the project included matching historical details such as siding, trim, and windows to the original house.

In less than four months, the newly elevated and seismically strengthened house was partially habitable. The owner was able to move back in before construction was finalized. “It’s been an amazing process,” exclaimed Mr. Faulk. “The contractor who performed the elevation has done an incredible job.”

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region IX**

State: **California**

County: **Napa County**

City/Community: **Napa**

Key Activity/Project Information

Sector: **Private**
Hazard Type: **Flooding**
Activity/Project Type: **Flood Control**
Structure Type: **Wood Frame**
Activity/Project Start Date: **12/2005**
Activity/Project End Date: **Ongoing**
Funding Source: **Homeowner**

Activity/Project Economic Analysis

Cost: **\$9,900.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **No**
Value Tested By Disaster? **Yes**
Tested By Federal Disaster #: **No Federal Disaster specified**
Year First Tested: **2005**
Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: <http://www.fema.gov/business/nfip/how.shtm>
Reference URL 2: <http://www.oes.ca.gov>

Main Points

No Main Points were entered.



Homeowner Paul Faulk.



The Faulk house elevated on cribs.



Elevated house with shear walls in Napa, California.



Construction detail.



Construction detail.



Construction detail.