FEMA

Built to Protect
Against Floods, Windstorms and Earthquakes

Columbia County, Oregon

Astoria, OR - In 2000, Randy Stemper, life-long resident of Astoria and owner of Astoria Builders Supply Co., decided to design a new building. The original owner built the first business structure in 1942, and since then the building had been damaged by flood and wind storms and had been repaired several times.

Stemper's family bought the business in 1961, and he purchased the business from his family in 1987. During the 1996 severe flooding/high wind storm, the old building, which had been elevated, again suffered significant damage and loss of inventory. Randy began doing research to see what could be done to reduce or eliminate damages to his business.

Stemper hired engineers to design a building that would protect his investment from damages and his employees from injuries resulting from floods, wind storms, and earthquakes. The storm drainage system was re-engineered, and the entire structure incorporates the best features of continuous load-bearing construction.

The building is anchored on pilings set 60 feet into the bedrock. The all-steel exterior is reinforced from the roof down to the floor and then secured to the pilings, and the roof sections were machined together so that there are no seams to catch the wind.

David Pearson, the curator of the Columbia River Maritime Museum in Astoria, said that "Randy worked very closely with the city planners in developing an exterior design that would enhance the city. This town has a great maritime history and keeping with this theme is very important for the community."

The Astoria Builders Supply Co. building was completed in 2001, and the construction was tested during the extreme high winds that hit Astoria in December 2007. The building withstood the storm with virtually no damage, saving thousands of dollars, and the business kept operating. The community benefited by having the supplies ready when they needed them.

"I have used this type of continuous load-bearing construction on other buildings, including my new home," stated Stemper, "and these techniques will be used on the new Astoria hospital."

According to Wolf Read, meteorological consultant for the Oregon Climate Service, "The Great Coastal Gale brought hurricane-force winds, with peak gusts of 85 miles per hour at the Astoria airport."

The December 2007 windstorm caused major damage to buildings in Astoria as well as in other communities along Oregon's northwest coast. The undamaged Astoria Builders Supply Co. is testament to the rewards of building "stronger and smarter."

Quick Facts

Year:
1996

Sector:
Private

Cost:
Amount Not Available

Primary Activity/Project:
Flood-proofing

Primary Funding:
Business Owner