Tacoma, Washington

Saint Joseph Hospital Seismic Evaluation

BergerABAM designed the curved-walled concrete nursing tower.

BergerABAM's seismic specialists have the ability to develop seismic upgrades for critical facilities that have very high functional significance. This is important to clients who have a need to protect critical industries or public facility functions.

The goal of St. Joseph Hospital is to continue operation after the occurrence of a major earthquake. BergerABAM evaluated the hospital's seismic vulnerability and provided criteria for anchoring equipment.

Staff members determined that the hospital's three structures compared favorably with the design requirements of the Uniform Building Code (UBC). Special focus was placed on the nursing tower with its unique structural configuration and the potential displacement demand placed on it during an earthquake. The nursing tower was designed in accordance with the 1967 edition of UBC. Current UBC requirements are significantly greater. BergerABAM's review compared the displacement capacity of the structure with the demands of both current code and a spectra of demands emulating a full range of moderate to great earthquakes. This review assisted staff to conclude that the seismic performance of the nursing tower was acceptable.

In addition, staff recommended that special attention be given to the displacement demands on essential services at the nursing tower base. BergerABAM developed a program to implement recommendations.

BergerABAM's forward-looking approach to seismic design enabled its 30-year-old design to have adequate performance under modern-day requirements.