'Earthquake engineer's dream' installed at UNR

Three 27-ton shake table tops were moved Tuesday into the University of Nevada, Reno's new Earthquake Engineering Laboratory, an expansion that mak the largest in the United States and second largest in the world.

"This facility is very exciting for us because it enables us to test things we haven't been able to test before," said David Sanders, a civil engineering profes

The shake table tops, called platens, are very large and strong surfaces onto which structures are attached and then shaken to determine their ability to with

"It gives us more versatility and more flexibility and allows us to test larger structures and more different configurations of structures," Sanders said.

"Now we not only can determine the capacity of different structures (to withstand an earthquake), we also can test the structures so buildings and bridges c he said.

Each one of the three tables can carry 50 tons of weight that can shake a structure forward and back just like a real earthquake, he said.

Envision one of Disney World's rides in a simulated world where you sit in a seat that whips you around.

"It's sort of like that, but with 50 tons of weight," Sanders said.

Massive hydraulic jacks are used to move the tables and are controlled by computers to simulate the earthquakes.

The three-story Earthquake Engineering Laboratory was specifically built to accommodate the shake tables so that they could be lined up in different shap structures during seismic events, Sanders said.

He said UNR's is one of only two facilities in the world that have four large shake tables. The other is in China.

"In terms of facilities around the world and in the United States, this is one of the best facilities for testing and simulating earthquakes, Sanders said.

The laboratory conducts research and tests new designs and materials, nationally and around the world, for government agencies and private industry seek and highways.

Ian Buckle, a civil engineering professor and director of the seismic laboratory, said the new Earthquake Engineering Laboratory has more than doubled th 20 feet taller than the UNR's existing Large-scale Structures Laboratory.

That will allow larger structures to be tested, which will and provide more reliable results of what the impact of an earthquake would be on a full-scale stru

"It is an earthquake engineer's dream." Buckle said.

Construction on the new laboratory began in November 2010. A formal dedication ceremony is scheduled on June 24 by invitation only.

The structure's $20 million price tag was funded by $12.1 million from the U.S. Department of Commerce and $3.1 million from the U.S. Department of E from donors and other sources.

Reno Gazette-Journal