

Project Profile



C E M C O L I G H T G A U G E S T E E L F R A M I N G

Project Name:
UCSD Shake Table Test

Project Location:
University of California
at San Diego

Construction Date:
Now

Completion Date:
June 2016

Project Director:
Dr. Tara Hutchinson,
P.E., PhD.

Framing Contractors:
SureBoard for Shear
SWS Panels and Truss
DPR Construction
Burch Construction
Rivante

Distributor:
L & W Supply

Structure:
6 Story CFS.

More Seismic and Fire Tests Conducted at UCSD's Shake Table

After a series of preliminary seismic tests on Monday June 13th at UCSD's Large High Performance Outdoor Shake Table, researchers led by Dr. Tara Hutchinson, P.E., PhD., looked forward to the subsequent tests which mimicked much larger seismic events from recent times. On Wednesday June 15th, a test set at the equivalent of the 1994 Northridge-Canoga Park earthquake in Southern California was conducted simulating a 6.7 magnitude on the Richter scale. Finally on Friday the 17th, researchers pulled out all of the stops and tested the still standing structure at 150% of the Northridge-Canoga Park earthquake, with stellar results. Aside from minor cracking of non-structural gypsum sheathing on the exterior non-shear sections, the 6-story structure maintained its structural integrity well beyond its designed capacity.

CEMCO's steel framing products and SureBoard® for Shear wall and ceiling panels were instrumental in the structures' ability to maintain its integrity after such violent movement. Able to withstand such seismic forces, these tests further proved the ability of cold-formed steel framing to provide a safer, more structurally sound, and economical solution to current wood framing systems for mid-rise buildings.

The following week provided the researchers plenty of time to conduct several post-earthquake fire tests on various sections of the structure to replicate conditions representing post-flashover scenarios. Led by Brian Meacham of Worcester Polytechnic Institute of Worcester, MA, the researchers distributed a series of fuel pans in various compartments, burn the liquid heptane fuel for 10-15 minutes, and achieve



upper gas layer temperatures of 1000 centigrade. Data collected from these tests will now be analyzed in conjunction with the seismic findings for a complete report in the upcoming year.

About CEMCO®

California Expanded Metal Products Co. (CEMCO®) is the premier manufacturer of cold-formed steel framing and metal lath products in the Western United States. Its steel-framing product segments include FAS™ head-of-wall products, ProX Header®, Pro X RO-Rough Opening framing system, Sure-Span® steel framing floor joist system, SureBoard® for shear-wall panels, ViperStud® interior stud framing system, metal lath and water management products along with its SFIA Code Certified steel framing products. Founded in 1974, CEMCO is the leader in quality, service, and product development, and offers one of the broadest product lines available in cold-formed steel framing used for both the commercial and residential construction markets.

