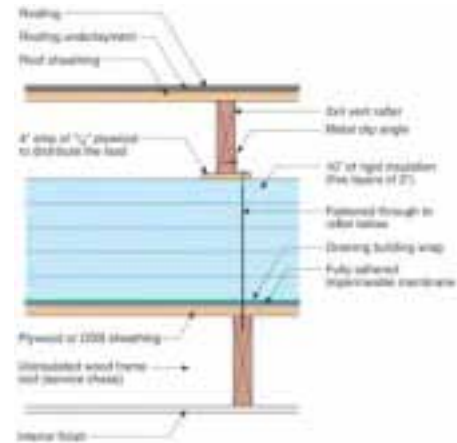


Joseph Lstiburek, Ph.D., P.Eng, ASHRAE Fellow

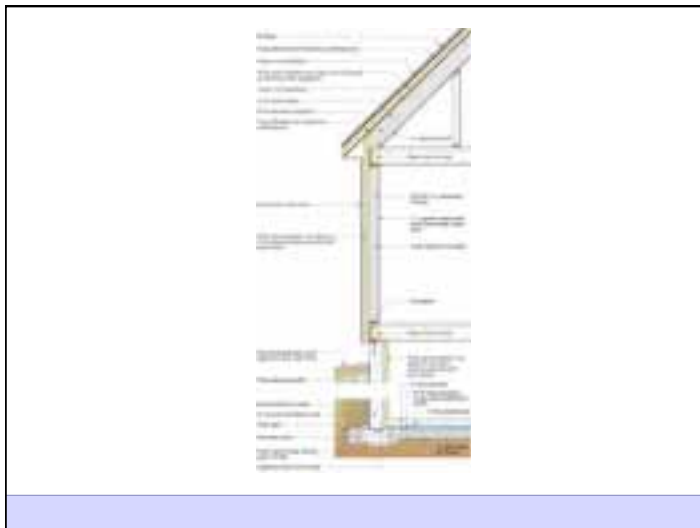
## Building Science Corporation

Extreme Homes for Extreme Climates  
New Residential Wall Systems  
IBS - Las Vegas, NV, Jan 2209

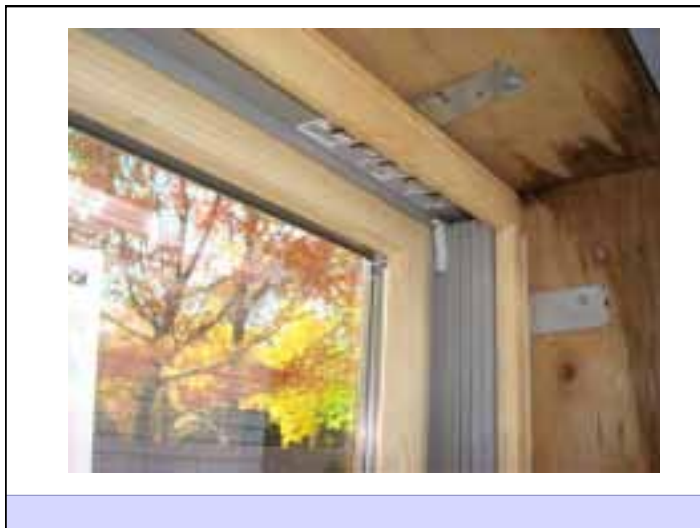
[www.buildingscience.com](http://www.buildingscience.com)









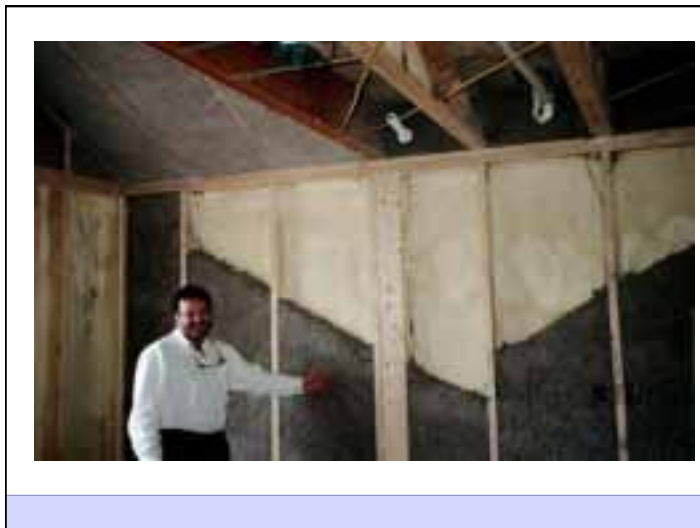




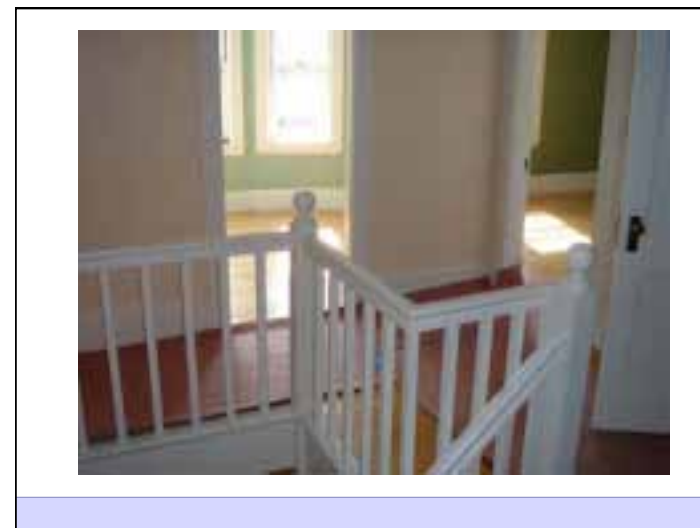
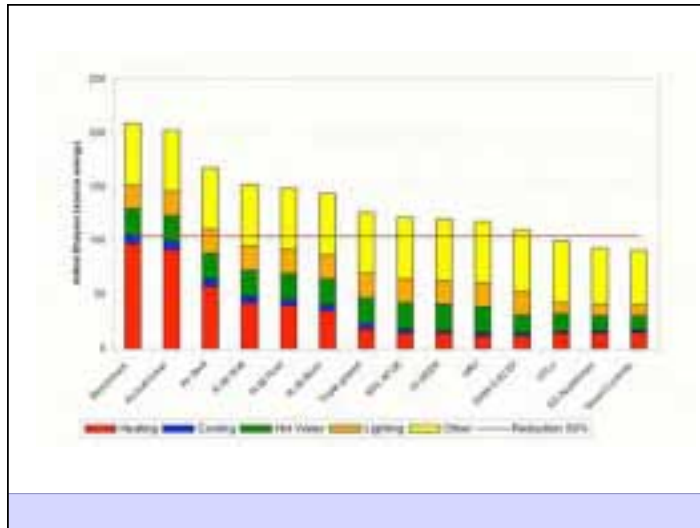






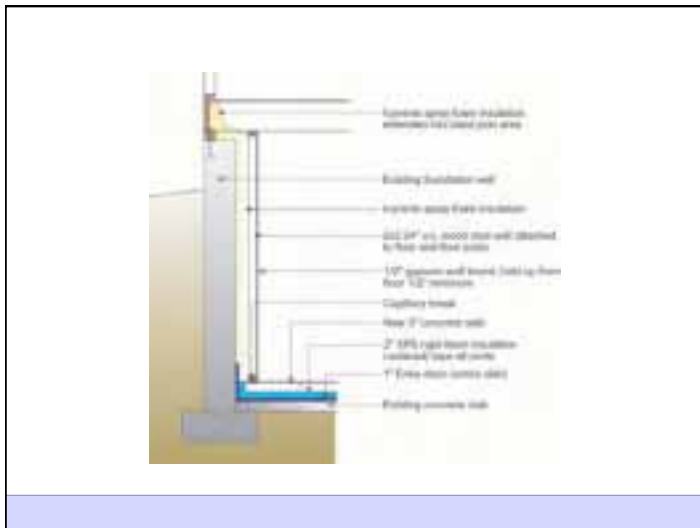








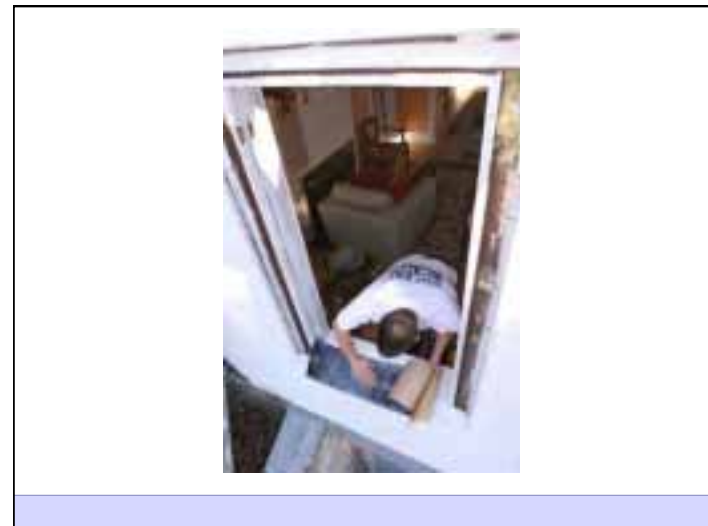
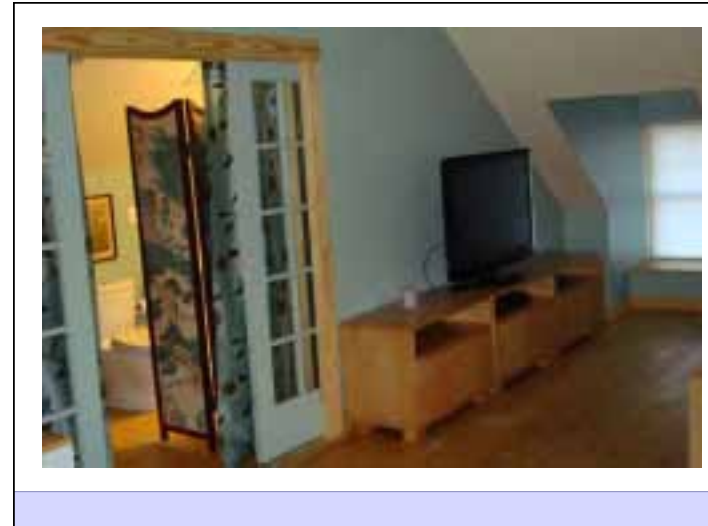


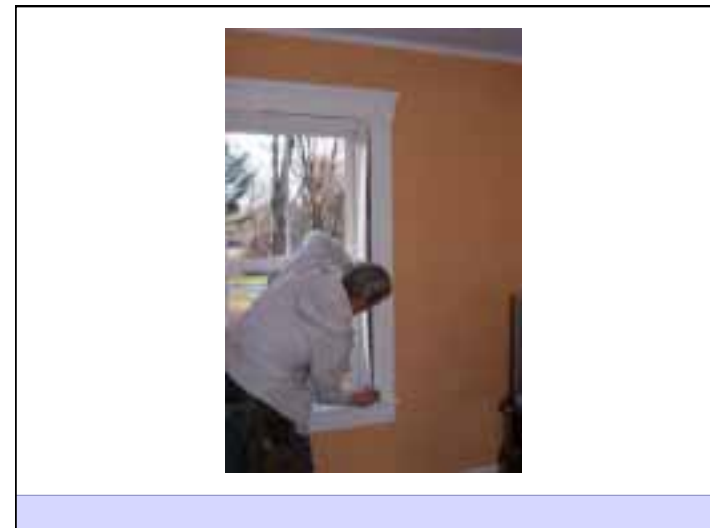
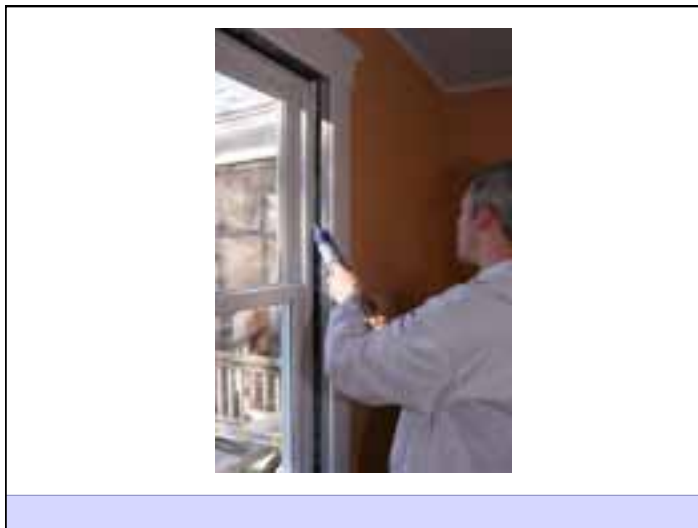


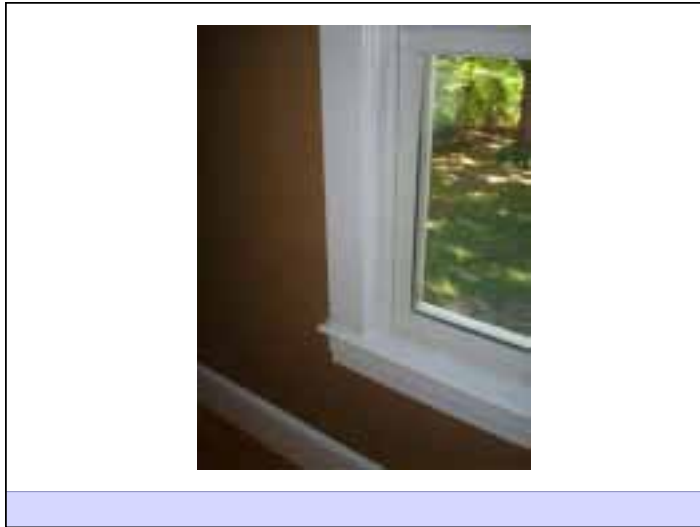




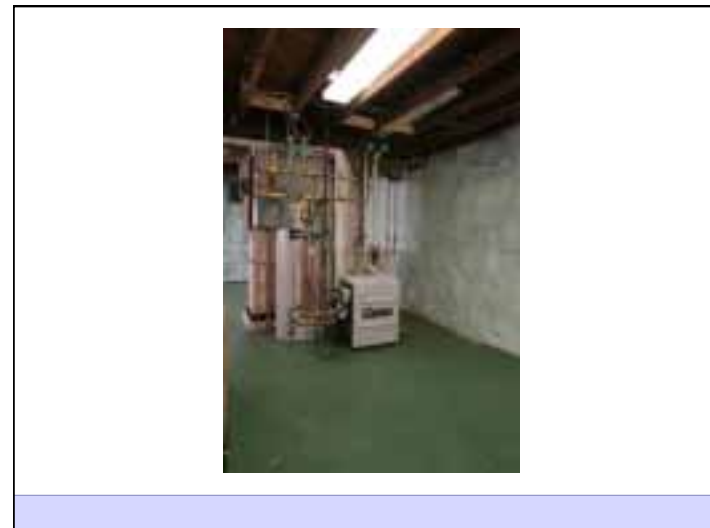
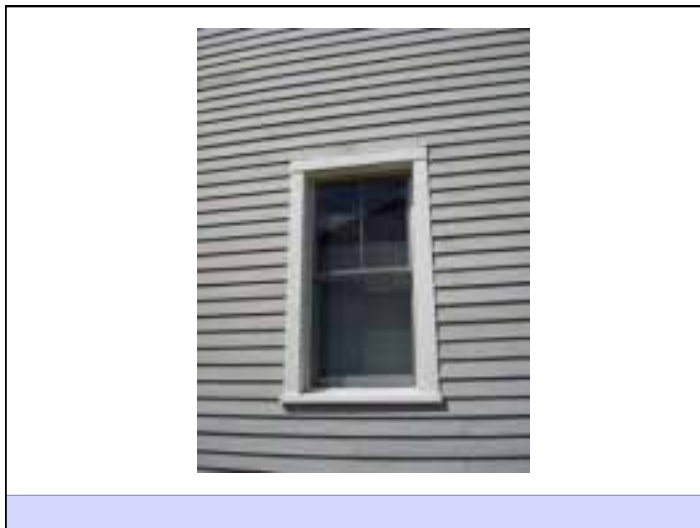




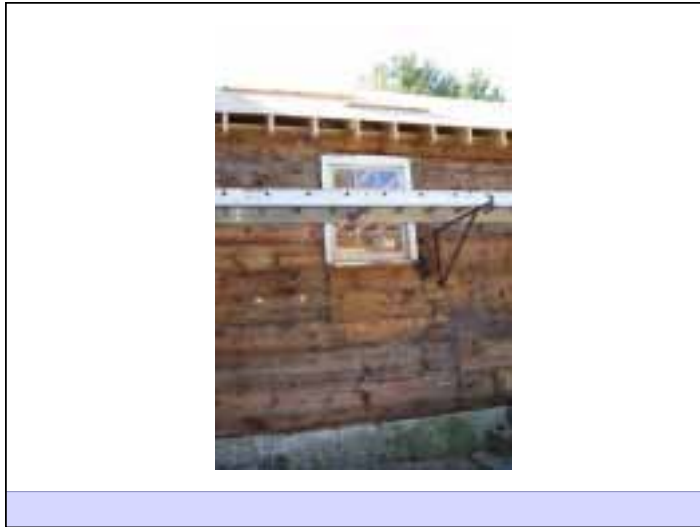


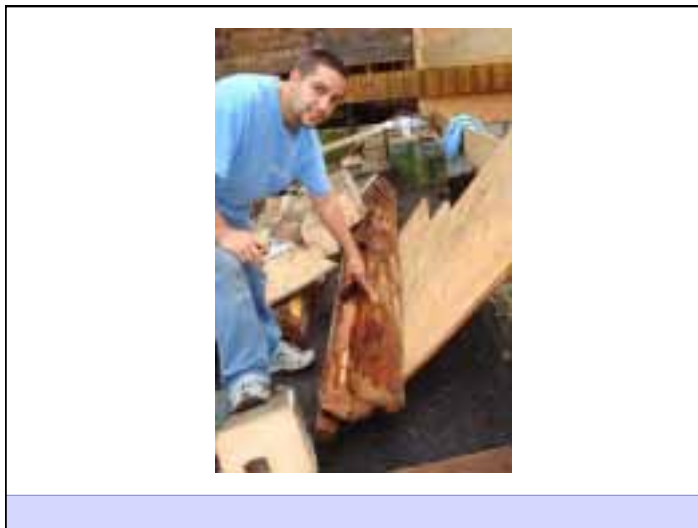






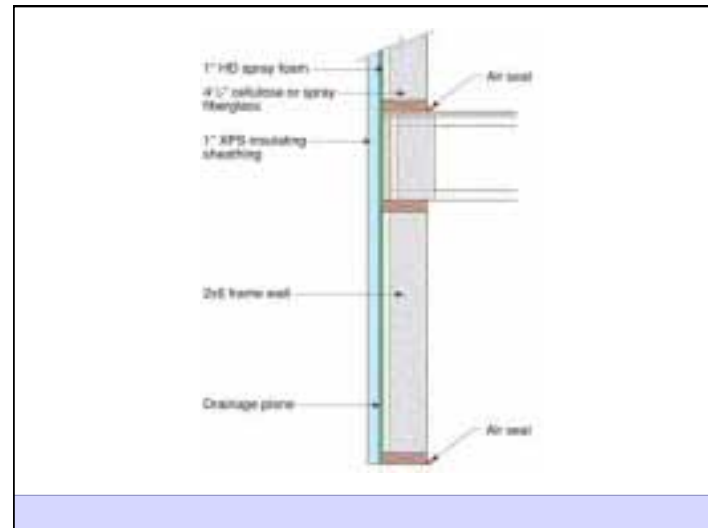
















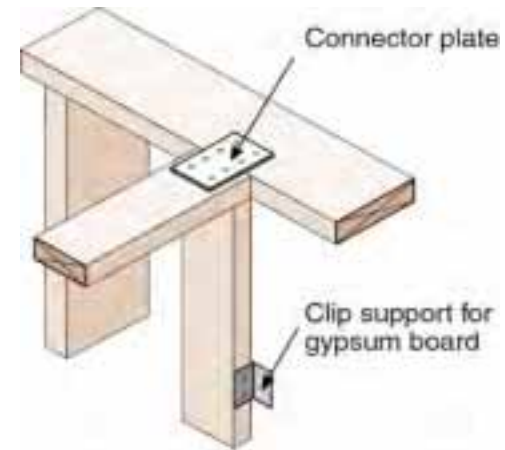
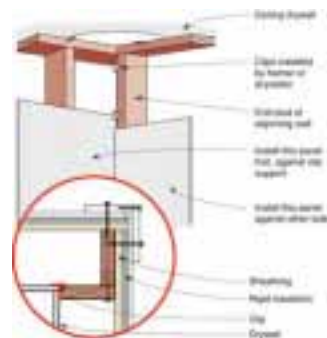
### Advanced Framing System

- Insulated headers
- No header necessary at non-bearing walls



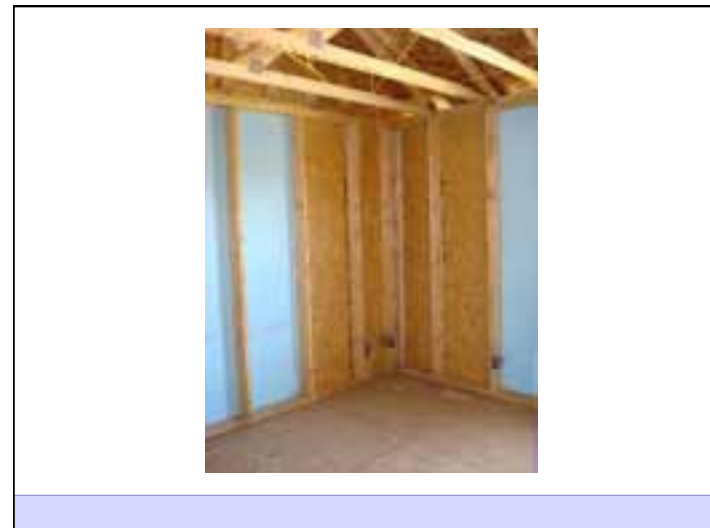
### Advanced Framing System

- Drywall clips allow for better installation with less drywall cracking



Extreme Homes for Extreme Climates: New Residential Wall Systems









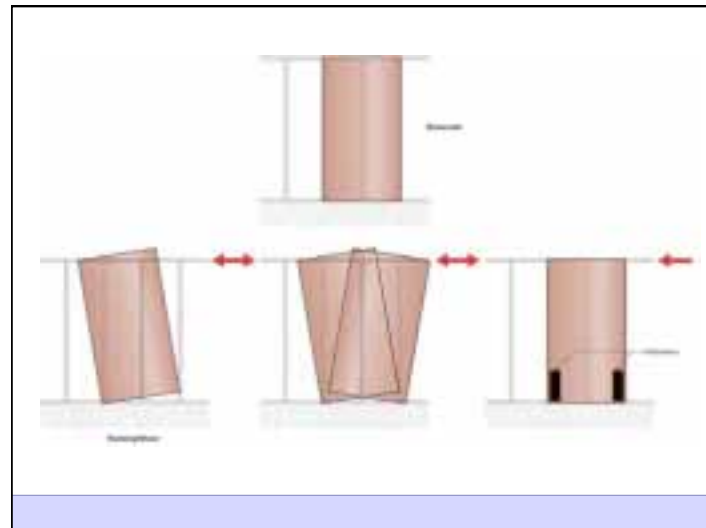
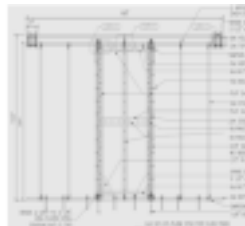
### Shear Panel



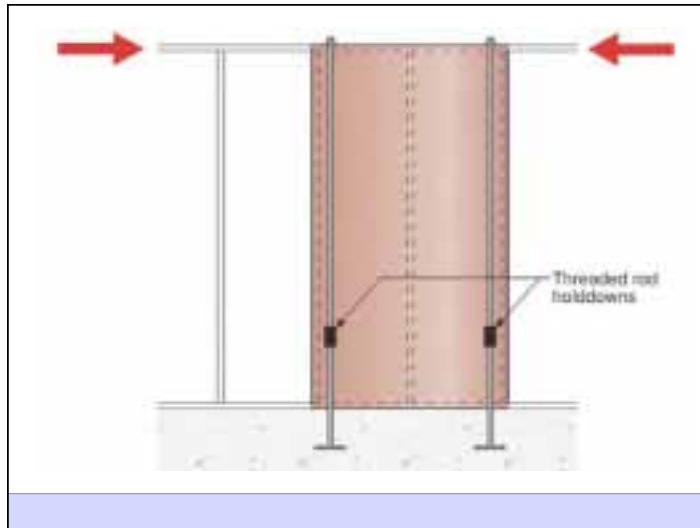
### Seismic Testing

•Work with CERL (the US Army research laboratory), and BSC to facilitate code approval of advanced framing techniques by the Division of the State Architect in California, and other earthquake and high wind loading locations.

•Full scale assemblies have been tested under the new dynamic seismic loading protocols developed after the Northridge earthquake. New non-proprietary shear panels are now available for use that allow for advanced envelope design





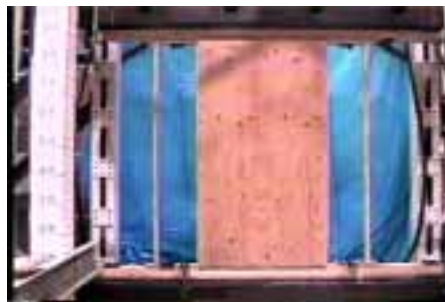


2 Story Aligned

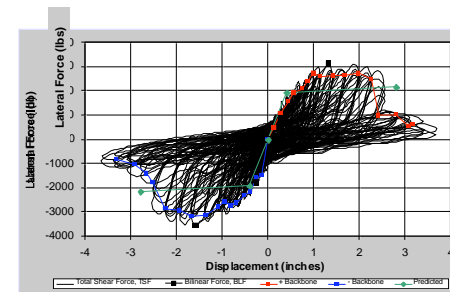


2x4 panel with plywood to establish baselines

Standard Plywood Panel



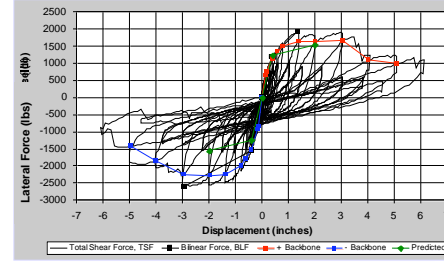
Standard Plywood Panel Performance



Standard OSB Panel



Standard OSB Panel Performance



Diagonal Strap Shear Panel CURE1



Diagonal Strap Shear Panel CURE1

