



## Impact of Moisture on Post-tensioned Rocking Walls

<https://research.thinkwood.com/en/permalink/catalogue2274>

Organization: TallWood Design Institute  
Material: CLT (Cross-Laminated Timber)  
Application: Walls  
Topic: Moisture  
Keywords: Seismic  
Moisture  
Rocking Walls  
Research Status: In Progress  
Notes: Project contact is Andre Barbosa.

### Summary:

Resilient structures are buildings designed not only to protect life safety in a seismic event but also to preserve the structural integrity of the major components of the buildings so that they can be reoccupied quickly and at minimal cost. An example is a CLT rocking wall system, utilizing post-tensioned cables and energy dissipating-connectors, which is being used for the first time in North America in OSU's new Peavy Hall. CLT rocking walls borrow from concepts used in concrete and steel structures that were later adapted to LVL building systems in New Zealand. This project will examine the impacts of wetting at the base of the wall on the structural capacity and cyclic performance of the system. Identical rocking wall systems will undergo structural testing, with one being subjected to simulated moisture intrusion that may occur during construction. The findings will provide important information that can be later implemented in design and construction guidelines.