



Advanced Topics in Seismic Analysis and Design of Mid-Rise Wood-Frame Structures

<https://research.thinkwood.com/en/permalink/catalogue1773>

Author: Ni, Chun
Popovski, Marjan
Wang, Jasmine
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Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: Light Frame (Lumber+Panels)

Application: Wood Building Systems

Topic: Design and Systems

Keywords: Mid-Rise
Dynamic Analysis
Deflection
Diaphragm
National Building Code of Canada
Capacity-Based Design

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 5343-5351

Abstract:

The following topics in the field of seismic analysis and design of mid-rise (5- and 6-storey) wood-frame buildings are included in this paper: Determination of the building period, linear dynamic analysis of wood-frame structures, deflections of stacked multi-storey shearwalls, diaphragm classification, capacity-based design for woodframe...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650094> ↗



An Approach to CLT Diaphragm Modeling for Seismic Design with Application to a U.S. High Rise Project

<https://research.thinkwood.com/en/permalink/catalogue1671>

Author: Breneman, Scott
McDonnell, Eric
Zimmerman, Reid

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Material: CLT (Cross-Laminated Timber)

Application: Floors
Wood Building Systems

Topic: Seismic
Design and Systems

Keywords: US
Diaphragm
Model
High-Rise

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 3844-3852

Abstract:

A candidate CLT diaphragm analysis model approach is presented and evaluated as an engineering design tool motivated by the needs of seismic design in the United States. The modeling approach consists of explicitly modeling CLT panels as discrete orthotropic shell elements with connections between panels and connections from panels to...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1649389>



An Approach to CLT Diaphragm Modeling for Seismic Design with Application to a U.S. High-Rise Project

<https://research.thinkwood.com/en/permalink/catalogue1710>

Author: Breneman, Scott
McDonnell, Eric
Zimmerman, Reid

Organization: WoodWorks

Year of Publication: 2017

Country of Publication: United States

Format: Report

Material: CLT (Cross-Laminated Timber)

Application: Wood Building Systems
Floors

Topic: Design and Systems
Seismic

Keywords: US
Model
Diaphragm
High-Rise

Language: English

Research Status: Complete

Online Access: Free

Resource Link

<http://www.woodworks.org/wp-content/uploads/Approach-to-CLT-Diaphragm-Modeling-for-Seismic-WoodWorks-Jan-2017.pdf>



Comparison of the Seismic Performance of Different Hybrid Timber-Steel Frame Configurations

<https://research.thinkwood.com/en/permalink/catalogue1775>

Author: Alberto Marin, Jose He, Minjuan

Year of Publication: 2016

Country of Publication: Austria

Format: Conference Paper

Application: Hybrid Building Systems
Shear Walls

Topic: Seismic
Design and Systems

Keywords: Finite Element Model
Timber-Steel Hybrid
Deformation
Lateral Loading
Abaqus
Displacement
Inter-Story Drift
Diaphragm

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 22-25, 2016, Vienna, Austria
p. 5401-5408

Abstract:

This paper presents a finite element modeling case study of three different designs of hybrid timber-steel 6-story buildings. One of the buildings is composed by steel frames and timber diaphragms while the other two cases consist of the initial design with timber shear walls added in different dispositions, one with outer walls and the other...

Online Access: Free

Resource Link

<http://repositum.tuwien.ac.at/obvutwoa/content/pageview/1650102>



Seismic Design of Floor Diaphragms in Post-Tensioned Timber Buildings

<https://research.thinkwood.com/en/permalink/catalogue507>

Author: Moroder, Daniel
Sarti, Francesco
Palermo, Alessandro
Pampanin, Stefano
Buchanan, Andrew

Year of Publication: 2014

Country of Publication: Canada

Format: Conference Paper

Material: LVL (Laminated Veneer Lumber)

Application: Walls
Floors

Topic: Design and Systems
Seismic

Keywords: Post-Tensioned
Frame Elongation
Rocking
Diaphragm
Lateral Load Resisting System

Language: English

Conference: World Conference on Timber Engineering

Research Status: Complete

Notes: August 10-14, 2014, Quebec City, Canada

Abstract:

Seismic damage to floor diaphragms because of displacement incompatibilities are a point of concern in many structures. This paper studies the behaviour of timber diaphragms subjected to frame elongation and rocking of walls in post-tensioned timber buildings.

Online Access: Free

Resource Link

http://sched.ws/hosted_files/wcte2014/68/ABS426_Moroder_web.pdf