



## Vertical Movement in Wood Platform Frame Structures: Design and Detailing Solutions

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### Summary:

Most buildings are designed to accommodate a certain range of movement. In design, it is important for designers to identify locations where potential differential movement could affect structural integrity and serviceability, predict the amount of differential movement and develop proper detailing to accommodate it. To allow non-structural materials to be appropriately constructed, estimate of anticipated differential movement should be provided in the design drawings.

Simply specifying wood materials with lower MC at time of delivery does not guarantee that the wood will not get wet on construction sites and will deliver lower shrinkage amounts as anticipated. It is therefore important to ensure that wood does not experience unexpected wetting during storage, transportation and construction. Good construction sequencing also plays an important role in reducing wetting, the consequent wood shrinkage and other moisture-related issues.

Existing documents such as the APEGBC Technical and Practice Bulletin on 5- and 6-Storey Wood Frame Residential Building Projects, the Best Practice Guide published by the Canadian Mortgage and Housing Corporation (CMHC), the Building Enclosure Design Guide – Wood Frame Multi-Unit Residential Buildings published by the BC Housing- Homeowner Protection Office (HPO) provide general design guidance on how to reduce and accommodate differential movement in platform frame construction.

Online Access: Free

### Resource Link

<http://cwc.ca/wp-content/uploads/publications-Design-and-Detailing-Solutions.pdf>