

**EFFECT OF LATERAL LAOD DUE TO WIND AND  
SEIMIC LOADING TO TALL BUILDING IN  
MALAYSIA**

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**B. Eng (Hons) (Civil)  
UNIVERSITI TEKNOLOGI MARA  
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LOADING TO TALL BUILDING IN MALAYSIA**

By

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Report is submitted as  
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## DECLARATION

I Siti Nor Marlina Che Hamipah , 2003479752 confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.

( \_\_\_\_\_ )

8<sup>th</sup> of April 2007

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Thank you.

## ABSTRACT

Malaysia region is one of the areas with low seismic hazard, but with high consequence. Although, the active seismic sources that may affect to Malaysia are located more than 300 km away, they have generated numerous earthquakes that shook high-rise buildings to a perceptible level, and the number of felt events is increasing in the recent years due to rapid constructions of the high-rise structures. This study assesses the effect of a high rise building in Malaysia on earthquake generated from Sumatra. Earthquake loading is a result of the dynamic response of the building to the shaking of the ground. As we know, the lateral load is one of the major parts that cause of design high rise building. The structures under lateral load will predict movement by lateral deflection. This study also introduces the analysis of the seismic load in the form of equivalent static lateral force according to Uniform Building Code (UBC 1997) and the analysis of the wind load according to British Standard (BS 6399: 1995) to achieve the objective of the study. The wall frame structures were selected and four models of the structures were created with the different height of the building. STAAD Pro. a structural analysis software were purposed to find out the lateral deflection of the structures due to seismic load for all models. The accuracy of the lateral deflection results from STAAD Pro. predicted by comparison with the approximate theory of wall frame. At the end of this study, it is found that there is only minor effect due to seismic load in Malaysia and wind loading is being regarded as critical for tall building in Malaysia