

Thesis Title	The Construction Cost Analysis of Building Designed to Resist Wind Load and Earthquake Forces
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Abstract

This thesis deals with the comparative study of construction cost of building structures designed to resist the wind load and earthquake force according to the present ministerial regulations on seismic resistant design in Thailand. The studies are categorized in 2 cases, the structural models resisted wind load with equal and unequal column sizes. The flat plate reinforced concrete structures with the height of 10, 15, and 20 stories and the aspect ratios of 1:1, 2:1, and 3:1 were used. The lateral resisting system was ductile moment – resisting frame.

The results indicated that the construction costs of structures designed to resist the earthquake force were in the range of 9 – 19 percent higher than the ones designed to resist the wind load. The effect due to the increase of the structure heights with the same aspect ratios tended to increase the construction cost. The cost tended to increase with aspect ratio when the height of structure are the same.

Keywords : Flat Plate / Earthquake Force / Wind Force / Equivalent Static / Aspect Ratio
Construction Cost