

## Performance of Staggered Wall Buildings Subjected to Low to Medium Earthquake Loads

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**Abstract :** In this study seismic performance of typical reinforced concrete staggered wall system structures was evaluated through nonlinear static and incremental dynamic analyses. To this end, and 15-story SWS structures were designed and were analyzed to obtain their nonlinear force-displacement relationships. The analysis results showed that the 5-story SWS structures failed due to yielding of columns and walls located in the lower stories, whereas in the 15-story structures plastic hinges were more widely distributed throughout the stories.

**Keywords :** staggered wall systems, reinforced concrete, seismic performance

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