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A TOOL TO PREPARE A DATABASE FOR REINFORCED CONCRETE BUILDINGS IN SEISMIC RISK REGIONS

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Abstract

In Turkey, most of the building stock is composed of reinforced concrete buildings. As a developing country located in seismic zone, Turkey faces the risk of casualties and property loss depending on poor quality of material, poor labour and lack of building control mechanism in existing buildings. Therefore, especially after August 17, 1999 earthquake, the need for investigation of earthquake resistance of existing reinforced concrete building stock that are vulnerable to earthquake and identification of buildings with high earthquake risk had been emerged. The objective of this paper is to introduce a tool to prepare a database for assessment of seismic vulnerability of existing building stock in seismic risk regions. The tool consists of general building properties, damages resulting from building deficiencies and decision on strengthening studies. The use of building database form provided in this study has been illustrated by five sample buildings in Golcuk/Turkey. This tool can be used to monitor and strengthening studies and to prepare a database earthquake occurs in seismic risk regions. This study provides a practical contribution to the studies in urban scale in order to increase earthquake resistance of reinforced concrete buildings.

Key words: damages; database; earthquake; reinforced concrete building

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