

ANALYTICAL MODELING OF REINFORCED CONCRETE BRIDGE COLUMNS INCLUDING VARIABLE AXIAL LOADS

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This project studies the Pivot Hysteresis Model, an analytical model that can be used for nonlinear time-history analysis of reinforced concrete bridge columns subject to significant earthquake loads. The first of two phases of this project verifies that the model was added correctly to Version 9 of the general purpose finite element program, SAP2000. The second phase focuses on modifying the Pivot Model to allow for random variation in axial loading which can be caused by vertical ground accelerations during an earthquake. The first phase and preliminary steps of the second phase are described in this paper.