

Appendix B

Time vs. Lateral Displacement for Wall Models Subjected to Dynamic Loading

Data for time versus lateral displacement for dynamically loaded models was observed for each of the wall models. The graphs presented in this chapter were developed with the intent to determine how a flexible foundation effects the response of a shear wall as the load is applied. The graphs show that generally the displacement decreases as the joist stiffness increases. The graphs also show that there is a greater disparity in the displacements of the different joists as time increases.

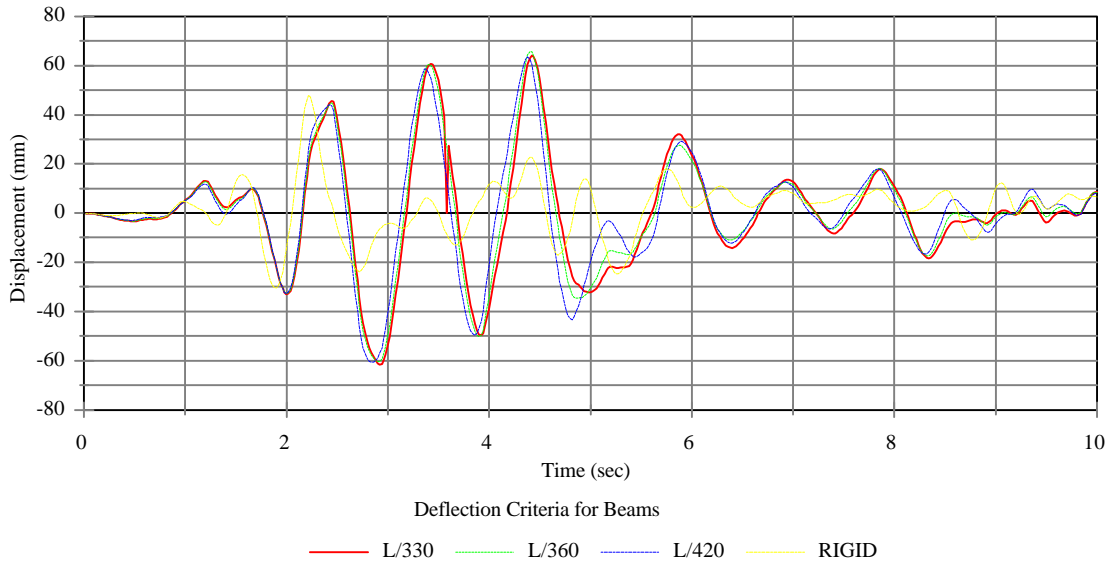


Figure B.1: Time Versus Displacement Curve for Walls Connected with 12.7 mm (0.5 in) Diameter Anchor Bolts

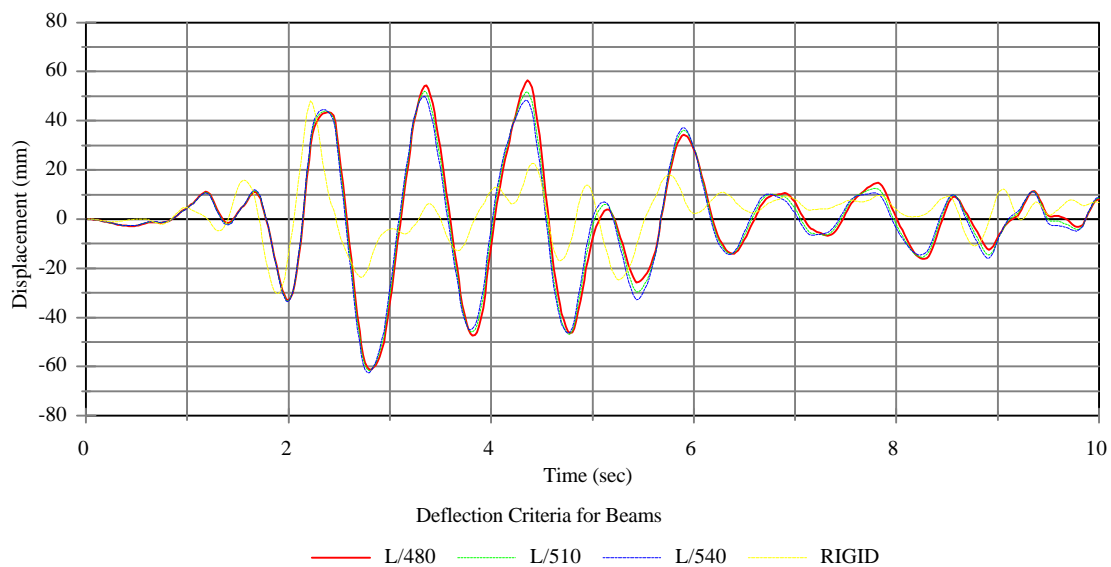


Figure B.2: Time Versus Displacement Curve for Walls Connected with 12.7 mm (0.5 in) Diameter Anchor Bolts

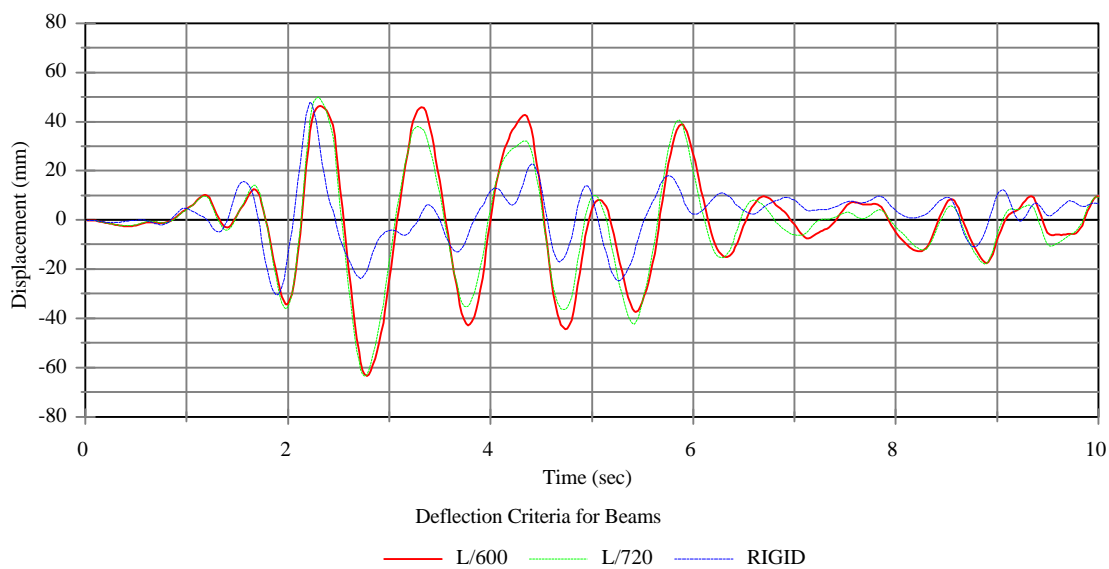


Figure B.3: Time Versus Displacement Curve for Walls Connected with 12.7 mm (0.5 in) Diameter Anchor Bolts

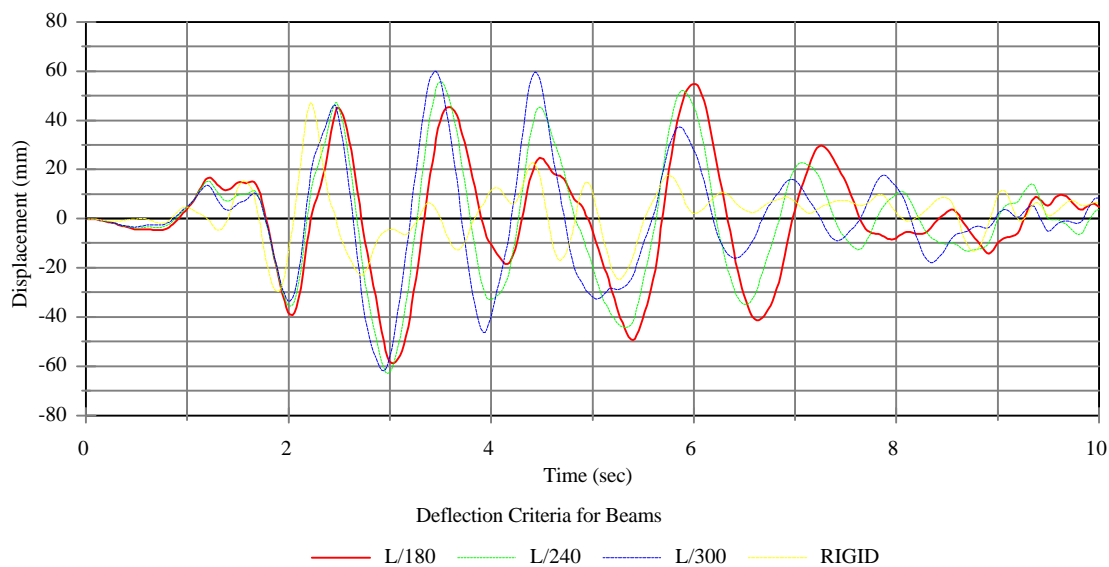


Figure B.4: Time Versus Displacement Curve for Walls Connected with 25.4 mm (1 in) Diameter Anchor Bolts

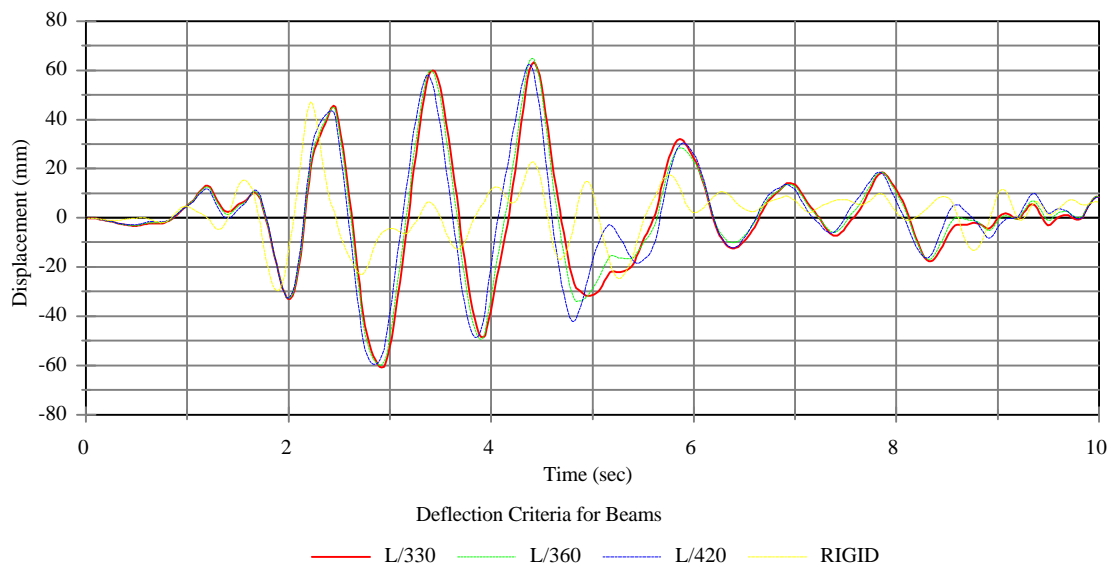


Figure B.5: Time Versus Displacement Curve for Walls Connected with 25.4 mm (1 in) Diameter Anchor Bolts

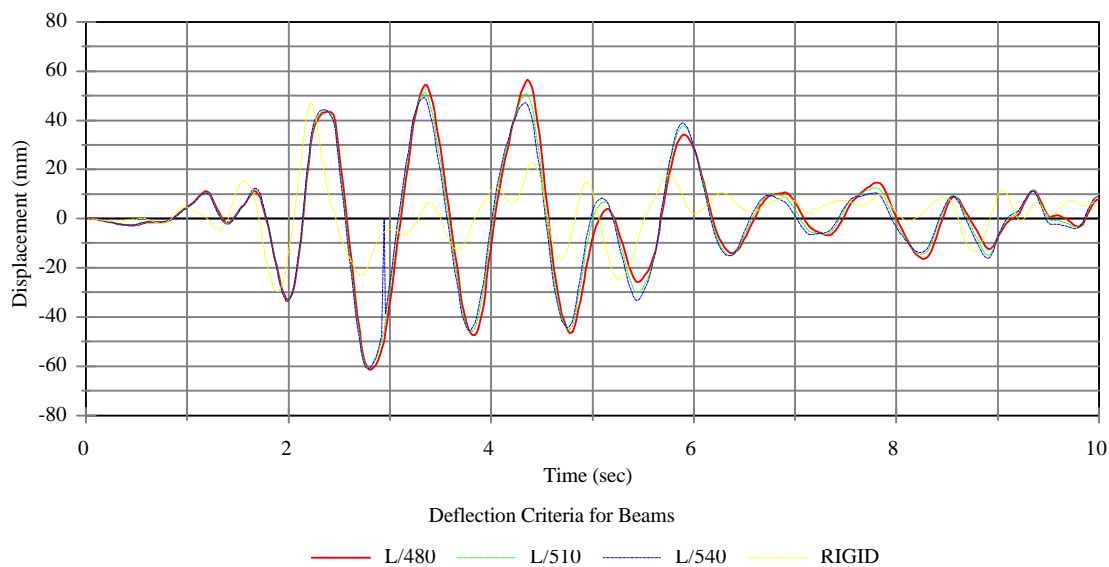


Figure B.6: Time Versus Displacement Curve for Walls Connected with 25.4 mm (1 in) Diameter Anchor Bolts

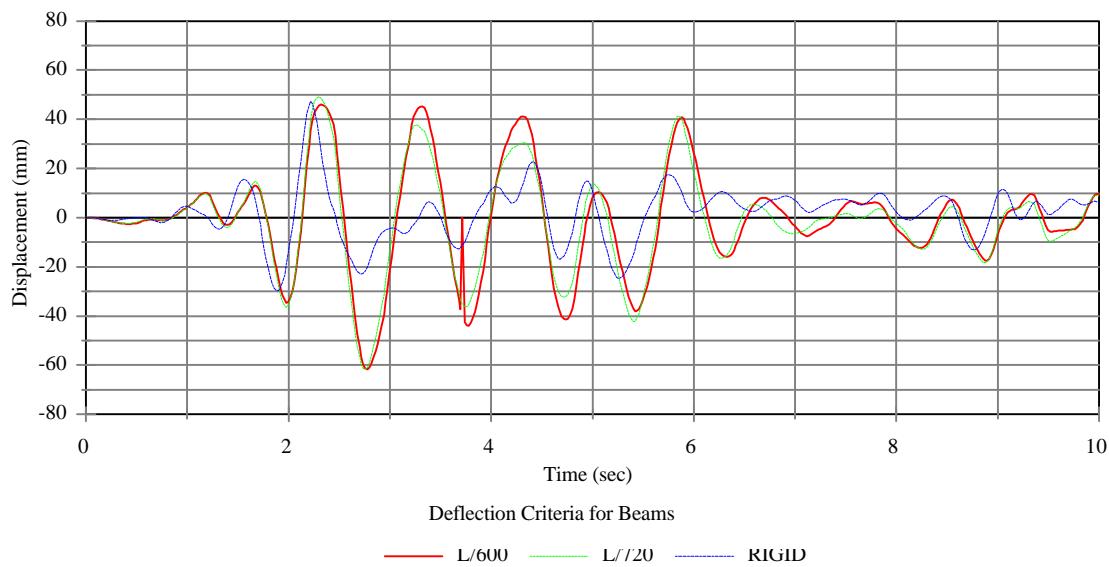


Figure B.7: Time Versus Displacement Curve for Walls Connected with 25.4 mm (1 in) Diameter Anchor Bolts

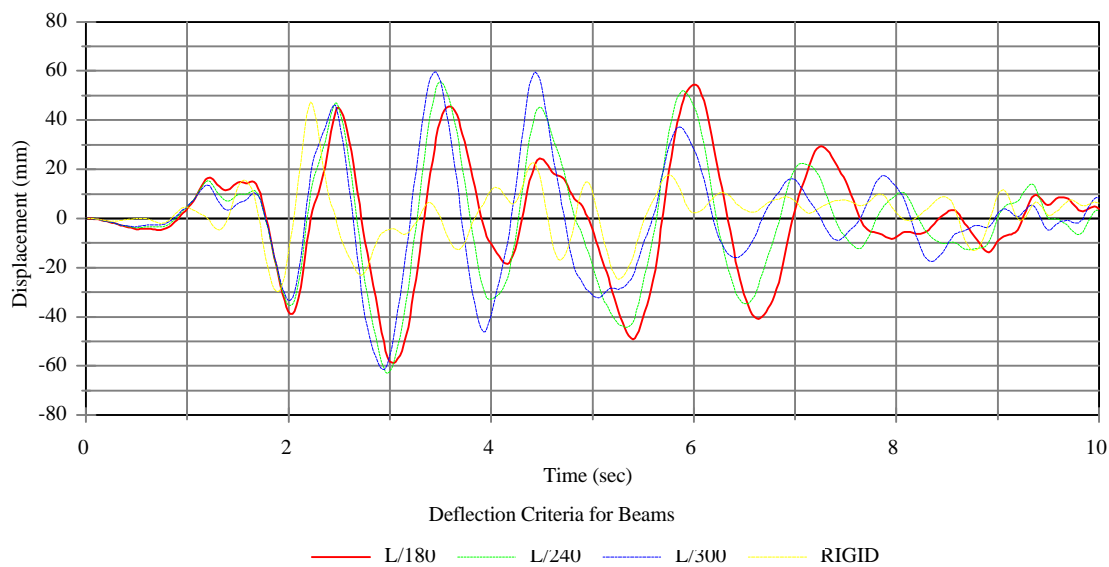


Figure B.8: Time Versus Displacement Curve for Walls Connected with a Rigid Anchorage Connection

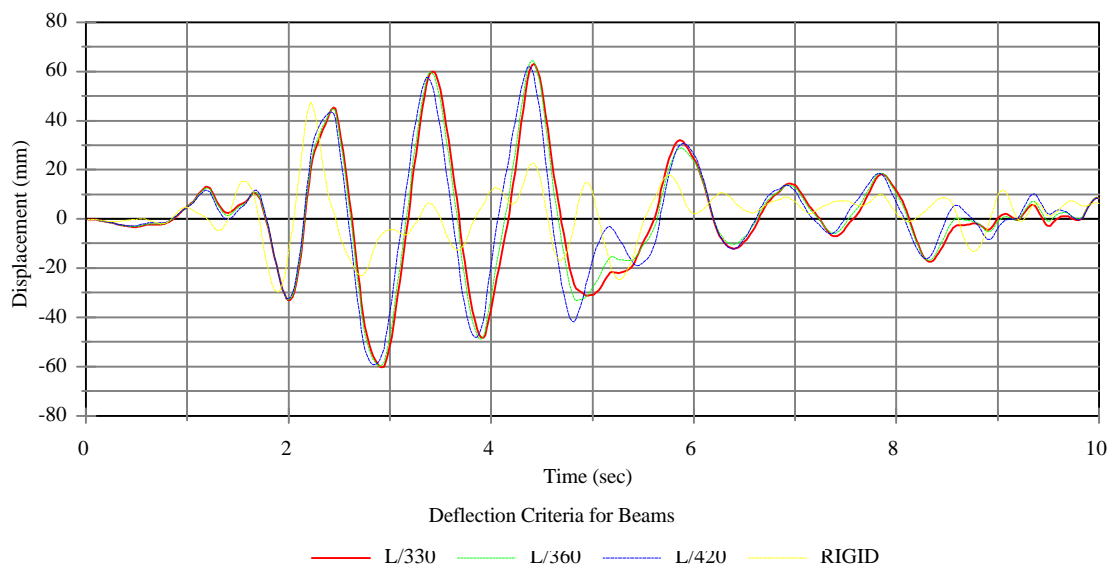


Figure B.9: Time Versus Displacement Curve for Walls Connected with a Rigid Anchorage Connection

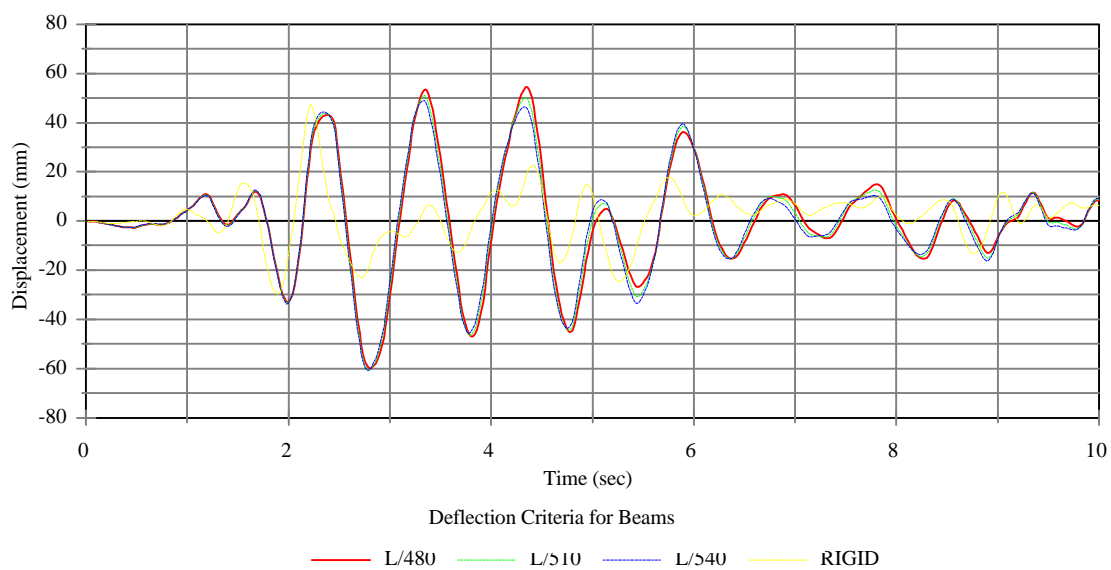


Figure B.10: Time Versus Displacement Curve for Walls Connected with a Rigid Anchorage Connection

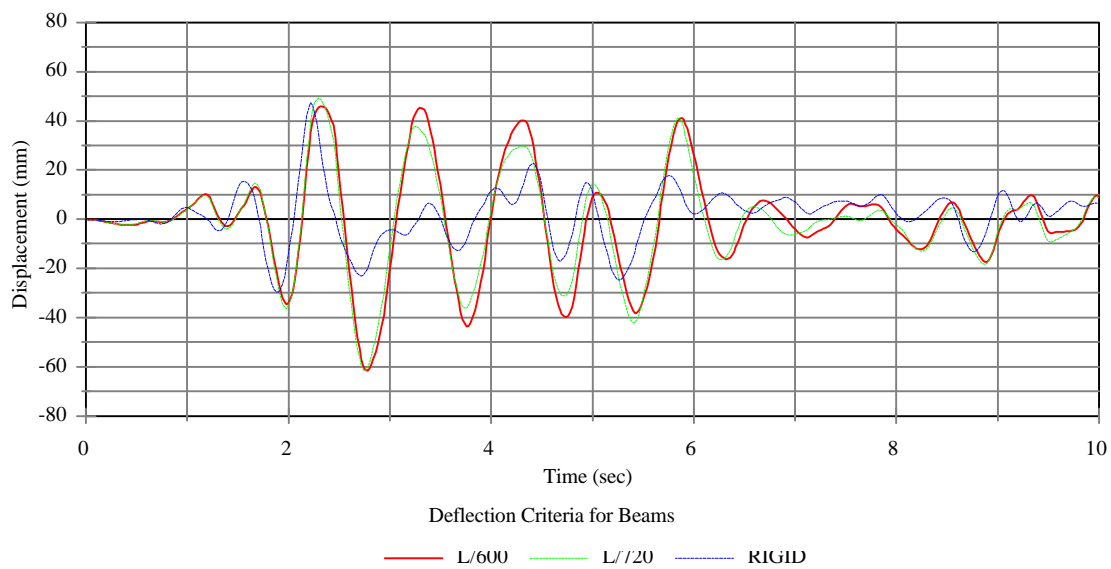


Figure B.11: Time Versus Displacement Curve for Walls Connected with a Rigid Anchorage Connection

Vita

Joseph D. Gates was born August 26, 1974 in Richlands, Virginia. He graduated from Tazewell High School, in Tazewell Virginia, in the spring of 1992. The author began his collegiate studies at Bluefield State College in Bluefield West Virginia, where he earned a Bachelor's of Science Degree in Civil Engineering Technology and a Bachelor's of Science Degree in Architectural Engineering Technology. The author then continued his quest for knowledge at Virginia Tech, beginning the pursuit of a master's degree in the fall of 1995. While attending Virginia Tech the author passed the Engineer-in-Training Examination. Research performed for the completion of the master's degree involved utilizing an existing finite-element program, WALSEIZ, and modifying it with the objective of determining the effect of a flexible foundation on the response of a typical shear wall.