



Towers Crescent Building B
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Technical Assignment 3

Lateral System Analysis and Confirmation Design

Executive Summary:

Towers Crescent Building B is a nine story mixed use office/retail building located in Vienna Virginia. This 123 foot tall building is a steel moment frame structure with a steel composite floor system, which resists gravity loads. Also, steel braced frames are in place to resist lateral loads.

The purpose of this assignment is to perform an analysis of the lateral system for Towers Crescent Building B and to confirm that the existing structure is adequately designed. Analysis of the lateral system was performed in ETABS.

When considering lateral drift, the structure was well over designed for both the N – S and E – W directions. Seismic did still control in both directions for overall shear and individual story shear.

A check was made of a story frame on the 6th floor of Building B. This was a spot check for the strength of the structure. It was confirmed that the design of the structure to resist lateral loading was successful, as all beams in the frame were adequately designed to resist the loads.