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Structural Option
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S&T Bank
Corporate Headquarters
Indiana, PA

Executive Summary

Construction of S&T Bank Headquarters began in June 2005 and is projected to be completed by August 2006. The building is 4 stories above ground rising to almost 60 feet with a one-story basement underground. Primarily the building is a corporate office for S&T Bank employees, however there is also a bank branch on the first floor.

The following report is meant to describe the building's lateral resisting system and the effects lateral loads have on different aspects of the design. The existing lateral resisting system is a moment connection frame. Frame stiffness was used to distribute lateral loads according to highest stiffness. Once the lateral loads were determined, they were used to perform checks on torsional effects, over-turning moments, building and story drift, as well as member strengths.

All of the checks passed design criteria. One discrepancy occurred in checking the strength of a column. The column that exists is strong enough, however it could be downsized by one size. It may be that live loads may not have been reduced (as was done in this analysis) or since a W12x79 is a common shape found in the building and therefore more economical to order that shape.