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## Senior Thesis Proposal

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### **Executive Summary**

This report is a proposal for a redesign of the College of Business Administration building that is being built on the Northern Arizona University campus. This four story classroom building with mechanical mezzanine is located in Flagstaff Arizona. It is to become the new home for the College of Business Administration (CBA) as well as become the focal point of a growing campus. The CBA has been designed to attract students and faculty with its eye catching architectural features as well as its state of the art technology systems.

This report is intended to serve as a proposal for what is to happen with this project next semester. Included is a description of the College of Business Administration building focusing on the structure. Also clearly explained, are the codes, standards, and the loads that will be used throughout this thesis project.

The focus for this thesis project will be a total redesign of the CBA. The original design of the CBA used precast concrete. This system was proven to be adequate and a good fit for this building. However, it was also shown that there may be other systems that could be as efficient or even more efficient. There were two systems that were chosen to be used in the redesign of the CBA. The first will be a design utilizing structural steel with a floor system of composite steel and concrete. The second will use cast in place concrete with a post-tensioned slab floor system. The alternative designs will be compared to the original to see if which system is the most efficient for the CBA.