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Structural
MK Parfitt
Office Building*
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All renderings courtesy of Dreyfus Property Group and KRJDA

Thesis Proposal

Executive Summary

The design of the office building is not what needs fixed, but rather the problems presented in the design limitations need to be addressed. There is a strict height limitation imposed on the site, this affects the possibility of increasing structural floor depth. The existing system utilizes post-tensioned cables to meet the design requirements. The purpose of this report is to propose a solution that meets the same design requirements. After the alternative design is created and analyzed it will be evaluated to see how well it deals with the problems that it was intended to. The solution will only then be compared to the existing system to determine overall usefulness.

Proposed are three systems. A waffle slab or Filigree slab concrete system. Then a composite steel deck system, and lastly a one-way concrete pan joist system. Each solution will require a unique application method. A sample method of deployment is broken down and then quantified on a timetable.

Three possible breadth work categories are chosen depending on the final selection of a new floor and frame system. In all cases, construction management will play a vital role in the success of the new system. Additionally and somewhat related to that is LEED impact. For the one-way pan joist system, architectural concerns will be considered due to the addition of columns to the plan.

*Building location withheld at owners request