

Executive Summary

The senior thesis project consists a technical analysis on the New York University Concourse Project. As part of the Architectural Engineering curriculum at Pennsylvania State University, the yearlong thesis analyzed the lighting and electrical systems for four spaces. In addition, two breadth topics in the field of architecture and mechanical systems were investigated. Furthermore, to fulfill the requirements of the Master of Architecture Engineering degree, a master depth study in daylighting was evaluated.

The New York University Concourse Projects involves the renovation of Tisch, Shimkin, and the Kaufman Center. Of the three buildings, Tisch Hall was the main focus of study. The lighting in-depth study was guided by the recommendations from the IESNA Handbook and ASHRAE Standard 90.1. The overall design concept addresses the four areas of consideration formulated from interviews with NYU students. The four objectives are: strengthening the pride of New York University, cognitive health, way-finding/orientation, and physical health. The four redesigned spaces accommodated the four considerations.

The electrical depth addressed adjustments in the electrical system based on the new lighting design. Further studies in overcurrent protective device, photovoltaic system feasibility, and backup generator design were conducted.

The two breadth studies involved the construction of a water harvest system and outdoor seating system for the plaza. In terms of the master depth study, a daylighting analysis was performed in the lobby of Tisch Hall.