Abstract: Beginning in early 2021, and having an expected completion year of 2024, United Health Services (UHS) Wilson Hospital, located in Binghamton, NY is undergoing a major revitalization. The main change the student team is concerned with is the relocation of the main entrance from Harrison Street to Baldwin Street. Relocating the main entrance will completely change the overall flow of patients and visitors throughout the hospital. With the main entrance being changed to Baldwin Street, the routes taken by non-emergent patients and visitors to get to their final destination will be modified. The team’s ultimate goal is to identify the most efficient routes patients and visitors should take. This was done by analyzing the current blueprints, visitor statistics, daily usage, redesign plans, and previously completed transformation plans. By analyzing all data in Microsoft Excel and Simio, the team was able to identify bottlenecks within the system. The main two sources of backup were found at the Visitor Management (registration) desks and the Towers Elevators, two of the most used resources within the hospital. The team was able to create alternative models, and suggest possible improvement plans to UHS Wilson to reduce these bottlenecks.