



1.0 EXECUTIVE SUMMARY

Presented in my senior thesis report, is an in depth analysis of the Baltimore Washington Medical Center- Women's Center and Inpatient Tower Project in Glen Burnie, MD. The report provides information about the project's background, which provides a description of the architecture and engineering systems involved with the building. An overview of the construction process is also documented in the report. This includes a description of the project team, the owner, existing conditions and site logistics, and an analysis of the project's budget and schedule.

Provided within the report is a background of the project along with an investigation of three topic areas. The report documents the findings from a critical issue research topic relating to the project as well as two technical analyses that focus on some aspect of the building. The breakdown of the report includes project background, construction overview, a critical industry issue (technical analysis #1), and two technical analyses.

The critical industry issue looks at developing a process for comparing two systems using 4D Modeling. The process was used to compare both of the technical analyses, which included a comparison of two façade systems and two structural systems. The 4D Model compared the schedule durations and sequences for the two systems for each technical analysis. The process and results were documented in the report.

The second technical analysis addressed an area of the structural system that was designed differently from the rest of the structure. This area of the building has a different design due to the existing mechanical room that exists below this area. In the analysis, an alternative system is chosen for this area of the structure. The study includes a structural design of the system along with a comparison of the two systems' cost estimates, schedule durations and sequences, and the constructability.

The third technical analysis focuses on the façade system for the building. The original design for the façade was replaced with an alternative system during the value engineering phase of the project. For this analysis, the original design is being compared to the value-engineered solution. The investigation of the two systems deals with a comparison of the thermal quality, structural impact of the systems, initial and life cycle costs, schedule durations and sequencing, and constructability.