

Baltimore Washington Medical Center

Women's Center and Inpatient Tower *Glen Burnie, MD*



Thesis Proposal





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Executive Summary

The Thesis Proposal addresses the various technical areas that I have proposed to research and analyze in more detail. The following report gives a brief summary of the four topics that I plan to focus on for my thesis project. For each analysis, a brief description is provided about the topic and how it relates to the Women's Center and Inpatient Tower. Along with the issues that I have identified, there is also a stated goal for the analysis, techniques for how I plan to develop this topic, and the results that I expect from the analysis. The Weight Matrix at the end of this report shows the breakdown of how I plan to investigate each of these issues.

The first technical analysis looks at developing a guide about BIM that can be accessible to anyone within the building industry. The research will focus on basic definitions of BIM, the benefits of BIM, and case studies that have incorporated BIM. The guide is intended to assist people with the beginning stages of incorporating BIM into projects.

The second technical analysis focuses on using an alternative structural system for the area above the existing mechanical room. The proposed change for this area of the building is to replace the precast concrete panel flooring with a composite metal decking and concrete slab flooring system. The analysis will look at the structural design, the cost impact of the change, and the schedule impacts.

The third technical analysis looks at using mechanical interstitial spaces to house the air-handling units. The change includes creating spaces for these air-handling units, redesigning the units and ductwork, and looking at the difference with plenum space. For this analysis, the cost impact for the spaces will also be determined.

The fourth technical analysis concentrates on using an alternate façade system for the building. The proposed idea is to look at replacing the EIFS Panels with the original design using GFRC Panels. The analysis will focus on the quality of the two systems along with the cost comparison of the two systems.



Thesis Breadths

The Thesis Proposal addresses the two breadths that I have proposed to research and analyze in more detail. A brief description is provided for each breadth that I plan to analyze for my thesis project on the Women's Center and Inpatient Tower.

Structural Breadth

The first breadth is to use an alternative structural system for the area above the existing mechanical room. The proposed change for this area of the building is to replace the precast concrete panel flooring with composite metal decking and concrete slab flooring system. The breadth will focus on redesigning the structural flooring system for this area.

Building Enclosure Breadth

The second breadth is to use an alternate façade system for the building. The proposed idea is to look at replacing the EIFS Panels with the original design using GFRC Panels. The breadth will look at the quality of the system to protect against weathering and also the architectural appearance of the GFRC Panels.