

EXECUTIVE SUMMARY

The Emily Couric Clinical Cancer Center in Charlottesville, VA is a 154,000 SF building owned by the University of Virginia. It is being constructed to combine existing cancer services into one building. It is scheduled for 2 years and to end within the budget of \$74 million. There were a few topics that were of interest to be studied and analyzed in this thesis.

The first analysis will be of the topic of using BIM technologies for façade construction. BIM was not implemented on this project at all. Not many people have been using BIM for the façade and it would be interesting to see how BIM can be used for façade construction. If people are using it for façade construction, in what ways is it being used and how do people wish it could be used?

The second analysis is of incorporating solar panels into the façade. Typically, solar panels are put on the roof and out of sight or they are put in fields away from the building. What kind of solar panels exist that can be designed into the façade? The Emily Couric Clinical Cancer Center has a large curtain wall on the South side of the building and it would be interesting if solar panels could be incorporated into the curtain wall without blocking the view. If there are technologies that can be incorporated into the curtain wall, are they economical? What would the payback period be and is it actually beneficial to be incorporated into the façade? All of these questions will be answered and discussed in great detail later in this paper.

The final analysis will be analyzed in the most detail. It is an analysis of the option of prefabricating the brick façade on the cancer center. It seems like a logical analysis because the majority of the façade is either brick or curtain wall so why not look into the possibilities? The prefabrication of the brick façade is not only a construction management depth but also a mechanical breadth. The impact on the budget, schedule, site logistic, and mechanical system will be analyzed. Also being discussed is the decision as to whether or not the prefabricated façade is actually beneficial or just a waste of money to decrease the schedule.

All of these analyses are discussed in more detail with a conclusion as to whether the results are worth implementing on the project or if it was a good idea not to implement them. Some of the are beneficial and others are not as beneficial. Nonetheless, all of the analysis were beneficial to my education and have taught me a lot about these topics that I can use in the industry.