A. Executive Summary:

This report contains four analyses conducted on the 5th and 6th Floor Fit-Out projects as well as the Cardiac Elevator Addition to the Lancaster General Hospital, Lancaster PA. Included in each analysis is the problem statement, the goal of the research, methods/tools used and the expected outcome.

Commissioning

The emphasis of this report will be on the first section which contains the research of the effectiveness of commissioning of fit-out type projects. The further focus of this topic will be in the healthcare/hospital construction field. This analysis will attempt to determine the effectiveness of commissioning of fit-out type projects were new and existing MEP systems are utilized and to assist design professional and construction companies to deliver a successful project.

ICRA

The second section of this report contains a breadth analysis of MEP systems used on projects requiring Infection Control Risk Assessment procedures. In the section such issues as completing tie in to existing systems through ICRA partitions without compromising the protection provided by the partitions. Systems that work the best in these situations will be identified through this research.

Pre-Cast Vs. Cast-In-Place Elevator Shaft

The third section of this report contains my second breadth analysis into the structural system used for the cardiac elevator addition. The current structural system utilizes a steel frame with cast in place concrete on composite metal decking. The system that is proposed in this section is a pre cast floor system to reduce the over all schedule and the duration that the tower crane being on site.

Weight Matrix

The weight matrix attached to this report shows the distribution of how I plan to apply my effort to the analyses proposed in this report during the spring semester.