

SUMMARY AND CONCLUSIONS

After performing research in several different key areas associated with the renovation of Constitution Center, several outcomes have transpired. First, going into detail about the project brought an understanding on why the owner, David Nassif Association decided to renovate the existing Department of Transportation building. Additionally, outlining and the project teams and the basic systems of the project increased the knowledge of construction. Furthermore, doing an evaluation of the project costs allowed one to see where the majority of the cash is going and if there are any ways to value engineer the systems without hindering the overall design.

After completing the research on chilled beams, it is recommended that a multi-service chilled beam be used in Constitution Center. The reason for this recommendation is because it has been proven that both the construction costs and schedules can be reduced with the additional of multi-service chilled beams. Additionally, it was learned that if there is a full time staff member on site assisting with commissioning it is easier to stay organized in order to meet the requirements. Also, it reiterated that communication is the key to having commissioning successfully be completed.

After performing the parking garage waffle slab analysis, it was determined that the current way that CRS is repairing the parking garage waffle slab is the most efficient. The cost would be much more to do the proposed two-way reinforced concrete system because they would have to do demolition work on the entire garage, not just sections with bad concrete and rebar. Additionally, the cost would increase due to formwork needed to properly place the concrete. Although the schedule mentioned above has the work being completed before the repairs that are currently taking place, the schedule does not take into account the demolition. Overall, it is suggested that the renovations of the parking garage waffle slab be performed the same way as planned.

It was learned that the productivity of the curtain wall installation was slightly under the estimated productivity. However, in order to get back on schedule there are several areas they could accelerate in. First, as long as the deliveries could be pushed ahead, they have the opportunity to work on weekends in order to put in 16-20 additional hours of installation. If these types of shifts are use, then the site will more than likely be less congested and quieter. Also, if possible, Enclos could bring in double the manpower in order to have two (or more) crews installing the panels. However, with this option, there will be a need for more tools and equipment. Overall, there were several factors that played a part in reducing the productivity, if Enclos feels it is necessary, there are areas where they can accelerate the installation if necessary.

Overall, by conducting the research on safety requirements, it was determined that each site will have to conduct their own safety plan. However, OSHA has special programs in order to assist project teams with the safety requirements.