

EXECUTIVE SUMMARY:

The Charles Pankow Foundation Design Competition challenges students to address the design, integration and construction issues that must be considered for a high performance, 30 story high-rise located in San Francisco, California. Our team plans on enhancing the quality, efficiency, and value of large building construction through our innovative construction methods, structural considerations, and building system designs. Collaboration, communication, and design methods are the key components to achieving these goals.

350 Mission is designed to be a near net zero high-rise building. Our team has created our own definition of net zero by combining multiple different definitions. *Please refer to the Integration Report for our team's definitions, goals and results.*

The goal of our team's innovative construction members is to construct a near net zero high-rise building that addresses safety, project delivery, project planning, budgeting, and scheduling through building information modeling. This goal is achieved through the architectural design and integration amongst the structural, mechanical, electrical, and construction disciplines.

The construction delivery method which will be utilized for 350 Mission will be a Design – Building delivery method. This approach is believed to be the best option for this project. An organizational chart along with further explanations has been provided in the project delivery method of this report. In this section, constructability concerns and challenges our team will need to overcome for this project are addressed.

Our innovative construction team's number one priority is the safety of the construction workers and the public. It is our innovative construction member's goal to provide and injury free site. To ensure the safety of the public and construction workers, safety plans, and strategies have been provided in the safety section of this report.

The project planning section of this report addresses the overall construction process. This section will be emphasized on the demolition, dewatering/slurry wall, excavation, superstructure and enclosure phases along with the waste management plan. The demolition phase will address the demolition of the existing building and the asbestos abatement plan of this project. The dewatering and slurry wall phase discusses the strategies which will be taken for excavating 55 feet in an area with a high water table. Three 3 Dimensional site logistics plans have been provided for each of the different phases of construction. Lastly, a waste management plan has been created to explain the removal and recycling process for this project.

An overall construction schedule was completed to determine how long 350 Mission will take to be constructed. Construction will begin February 2014 and conclude July 2017 for total schedule of 29 months. A breakdown of the schedule is provided in this section as well as in the appendix. Calculations for the durations are also available in the appendix.

A detailed estimate and general conditions estimate was completed to determine the estimate cost of 350 Mission. The estimate for this project is \$137,594,704 and \$10,500,566 for the general conditions estimate making the total cost to be \$148,095,270. Breakdowns of these costs are provided in this section as well as in the appendix.

Building Information Modeling will be used on this project to help with the coordination between the disciplines. A Four Dimensional (4D) model will help contractors understand the phasing and sequencing of the project. This model will also be used for Three Dimensional (3D) coordination amongst the disciplines and site management. 4D modeling and 3D coordination are the key components that lead to prefabrication which will be discussed in this section.

Through the collaboration amongst structural, mechanical, electrical and construction disciplines, our innovative construction team's goal to construct a near net zero high-rise building will be achievable.