



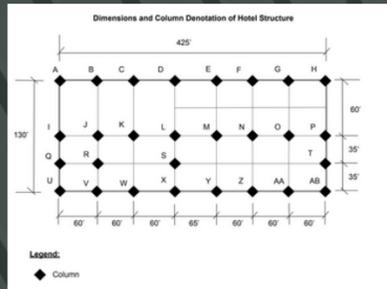
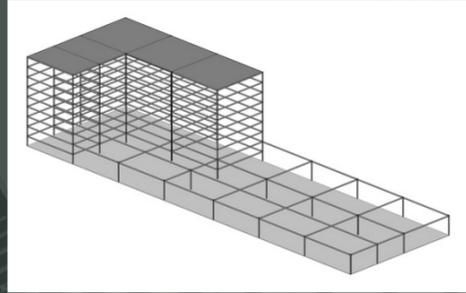
# SDSU MISSION VALLEY HIGH-RISE HOTEL

## PHEBBZ LLC.



### Structural

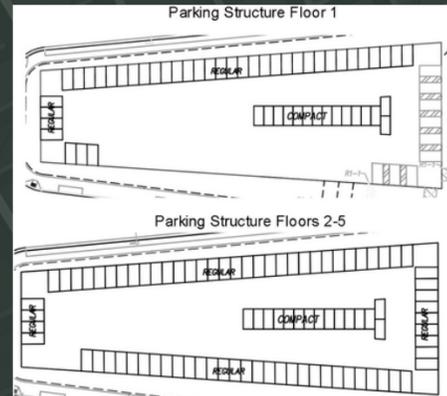
The PHEBBZ team split the structural aspects of this project into two parts. The first part is the hotel structure consisting of a steel frame and composite slab flooring. To design for the necessary requirements of this structure it was important for the team to create an integrative and compact structure. Using a steel frame with an open concept, the team was able to create a floor plan that would adequately meet the square footage requirements needed for the hotel. The nine story tower of the hotel will have 10 foot ceilings and span approximately 13,000 square feet. The 2,100 square foot lobby will comprise a section of the first two floors of the hotel tower to create 20 foot high ceilings. These 20 foot high ceilings will continue and lead to the 40,000 square foot conference area. The design of the individual steel components will be based off of dead and live load requirements denoted in the ASCE Standards 7-16. The columns and beams used in each floor will be constant throughout that floor plan to make construction more simple.



The second part of this project is the parking structure. This structure will be made of reinforced concrete and have a total of approximately 150,000 square feet of space within the structure. The five stories of the parking structure will be approximately 12 feet tall, resulting in the top of the structure reaching almost 50 feet above ground level. The dead and live load estimates required for this structure are noted in the ASCE Standards 7-16. The size of this structure is to accommodate for the necessary minimum parking requirements put forth by the City of San Diego.

### Parking Lot Design

The parking structure consists of 5 levels. For instance, there are 63 parking spaces in level one including 9 ADA parking spaces, and 89 parking spaces in levels two through five. Additionally, the dimensions of parking spaces vary based on their types. For example, the “Regular” parking spaces are 9ft by 18ft, while the “Compact” parking spaces are 8ft by 16ft. Furthermore, stairways are located in each corner of the structure to ease the users’ transitions from one level to the next. All dimensions are chosen based on the ADA requirements and standards to accommodate all parking structure users.



### The Team



Zain Hana  
Geotechnical



John Esho  
PM / Site Civil



Joahan Press  
Structural



Ranya Zina  
Transportation



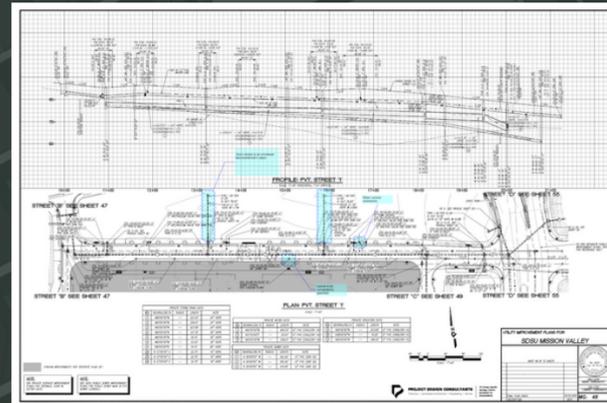
Jessica Brents  
Water / Environmental



Lara Butrus  
Construction

### Water & Sewer

The as-builts that were given for the site supplied sufficient grading and storm water infrastructure. Due to the placement of the storm water drainage system it only needs to be modified to catch at the edge of the property. Storm water infrastructure not utilized will be abandoned in place and capped off with cement. The sewer lateral will connect to the Maintenance Hole pictured and the water service will also be connected at the location pictured.



### Project Background

Previously known as either Qualcomm Stadium or SDCCU Stadium, has now been purchased by SDSU to construct a new football stadium, with various accompanying structures such as a hotel, campus extension, residential development, retail / restaurant destinations, and as well as a River Park. For this specific project, a complete hotel infrastructure from the ground up has been tasked. Including a 55,000 square foot first floor divided between a 2,000 square foot lobby and a 40,000 square foot conference area. As for the tower that is to be placed above, there will be 8 floors with each accommodating 13,000 square feet.



### Foundation Design

With all multi story structures, designing the piles and foundation will be a crucial element that will support all live and dead loads that make up this hotel and parking structure. To start this process, a thorough analysis of this site would be needed to include important aspects such as soil classification, how the soil is layered, and how far to and into the bedrock we are from the ground surface. Starting with the hotel structure, there will be a total of 19 piles under the hotel that would be connected to the columns that were formed by the structure engineer for this project. In contrast to the hotel that had included a pile design, the parking structure will utilize a bathtub design as its foundation core.

