



The Las Vegas High Roller: the world's largest observation wheel

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Summary

The Vegas High Roller is the world's tallest observation wheel, with a maximum height above ground of 167,6m. It also is the largest, based upon passenger numbers, being able to carry 28 cabins of 40 people – 1120 in total. The paper describes the structural design features, the drivers for the design and the analysis performed by the structural engineering team. The paper should be read with the companion papers [1] and [2]

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1. Introduction

The Vegas High Roller is a new attraction on the famous Las Vegas Strip. It forms the focal point of the Linq project by Caesar's Entertainment. This project brings together retail, dining and entertainment, alongside the attraction of the world's largest observation wheel. The project was conceived in 2009 and construction started in early 2012. Structural work of the wheel was completed in late 2013. After a period of commissioning, the wheel opened in March 2014.

1.1 Drivers for the project

The owner of the project, Caesar's Entertainment, desired an iconic attraction for the central portion of Las Vegas Boulevard, also known as the Strip. In this area, there are some of the highest numbers of tourists in the US.

Track records of previous observation wheels have shown strong economic returns in locations with a high number of tourists. Many previous observation wheels, such as the London Eye, and Singapore Flyer, have also been adjacent to water, where views are less obstructed. In this case, the location of the wheel is close to a number of buildings, and in fact, the density of the buildings and



Figure 1 - Photo of wheel December 2013