

Graybar Helps Keep Tables Turning Atop Space Needle

Built in 1962, the Space Needle has become the symbol of Seattle and one of the most recognizable structures in the world at 605 feet tall. Today, the Space Needle features an observation deck, gift shop and a rotating restaurant at the top. The restaurant, named SkyCity, serves approximately 1,200 meals a day and closes to visitors for only two short periods every year.

"SkyCity restaurant is the best way to see Seattle," said Space Needle Chief Engineer J Taylor. "The rotation of the restaurant gives our customers a 360 degree view of the city as well as Mt. Rainier to the south and the Olympic Mountains to the north. It's our job to make sure the Space Needle is ready to accommodate guests on a daily basis."

But over the years, even one of the tallest and most impressive structures in the world occasionally needs an upgrade.

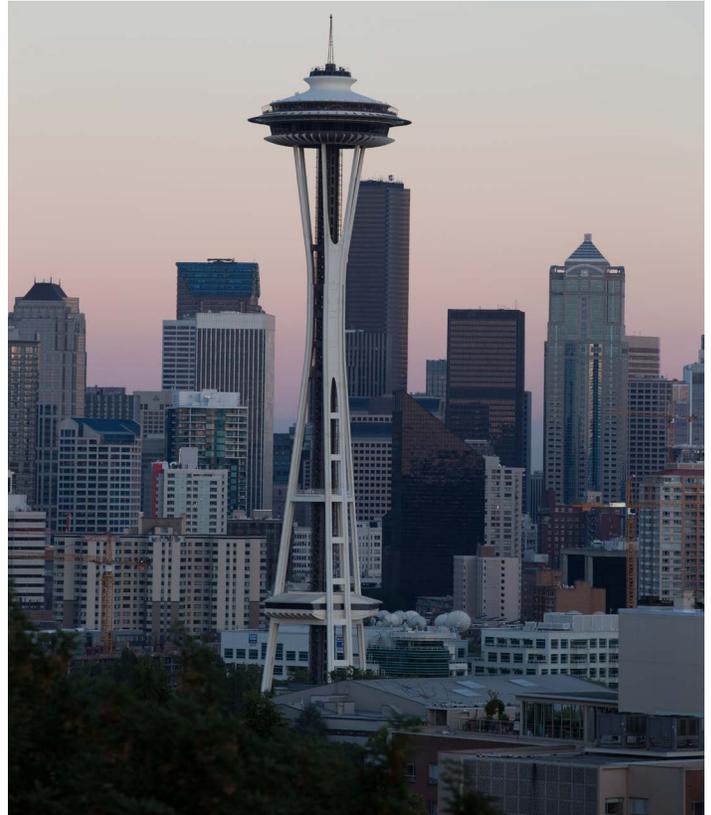
"Due to outdated technology and normal wear and tear on the rotation of the restaurant, it was time to make some enhancements," said Taylor. "But we needed to find a supplier that was up for this challenge."

Graybar's History with the Space Needle

The Space Needle was originally constructed for the 1962 World's Fair in Seattle. Graybar's history with this landmark dates back to its original construction when the Seattle district provided lighting conduit and fittings to get the Space Needle and the fairgrounds ready for the "Century 21 Exposition."

The Vital Link in the Supply Chain

As one of the nation's leading distributors of electrical and communications products, supply chain management and logistics services, Graybar works to its customers' advantage by connecting them with a broad range of solutions and products and in some cases local training classes.



In February 2012, Graybar Senior Applications Engineer Charlie Hiatt held a variable-frequency drive (VFD) application and troubleshooting class for local customers at Graybar's Seattle Branch.

"We do it all the time," said Charlie. "It's a great way to interact with customers and showcase our technical knowledge as well as our strategic supplier relationships."

Attending this particular training session was the engineering team of the Space Needle. "I sent a few members of my team to the training," said Taylor, who has 11 engineers that work to keep the Space Needle in pristine condition. "They were impressed with Graybar's knowledge of industrial applications. So we worked with them to develop a plan and the right team to move the project forward."

In addition to Hiatt, the team included Graybar Customer Service Representative Dan Creech and Industrial Sales Representative Michael Kovaly. This team collaborated with Ron Hansen and Dean Shull of Anderson Electric Controls as the systems integrator, along with Ryan Walden and Jay Cortel of Schneider Electric.

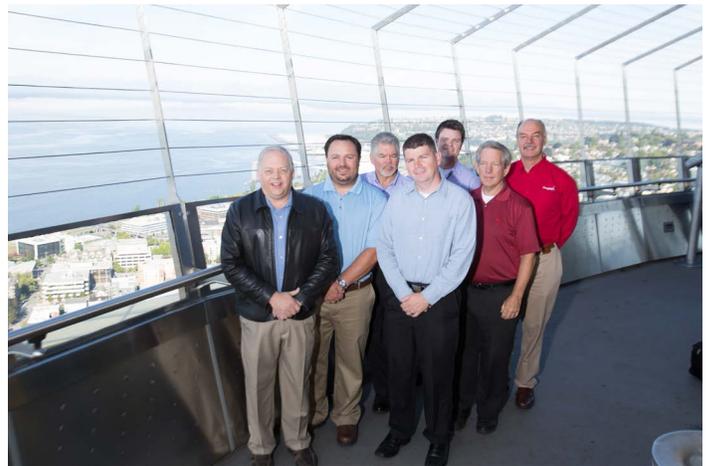
The team's goal was simple: to eliminate any noise or rotation issues at SkyCity restaurant while working with the Space Needle's unique needs and time constraints for improvements. It was a high-profile project without any room for error.

"The Space Needle is one of America's most recognizable and beloved structures," said Kovaly. "Any mistakes or delays in the project would be front-page news. The pressure was on for this project to be a success."

The Graybar team had a combination of electrical and mechanical issues to rectify for SkyCity restaurant to rotate more smoothly and quietly.

The major problem was that the two existing drives were fighting to share the load – one was lagging and the other leading. The two gear boxes were constantly adjusting according to inputs from the motors, which caused both the noise and roughness during the rotation.

The team determined that the best solution was to upsize the motors, drop motor revolutions per minute (RPM) and reduce the reduction ratio with the new gearboxes. So they recommended Schneider Electric drives as well as various automation and control products to the Space Needle engineering staff. The new motors were equipped with encoders feeding the drives in a master/slave configuration. Along with this, all new controls were installed, including a wireless control system. Schneider Electric also provided engineering and software support, both at the integrator and jobsite facilities.



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Space Needle Chief Engineer J Taylor

Working to Customers' Advantage

The installation of the new components, mechanical and electrical adjustments and the testing of the new system was successfully completed in the short, four-day period that the restaurant was scheduled to be closed in January 2013.

"Everything was a success," said Taylor who also oversees Chihuly Garden and Glass at Seattle Center. "The project was completed on time and the restaurant is better than ever thanks to these enhancements. Graybar exceeded our expectations. We look forward to working with Graybar on future projects."

Graybar Electric Company Inc., a FORTUNE 500 corporation and one of the largest employee-owned companies in North America, is a leader in the distribution of high quality electrical, communications and networking products, and specializes in related supply chain management and logistics services. Through its network of nearly 240 North American distribution facilities, Graybar stocks and sells products from thousands of manufacturers, serving as the vital link to hundreds of thousands of customers.

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