

MSG Sphere at the Venetian

Las Vegas

Case Study



Custom access solution to maintain the world's largest LED screen

MSG Sphere at The Venetian is a unique 110-metre-tall sphere-shaped music and entertainment arena currently under construction near the Venetian Resort in Las Vegas, Nevada. When complete, the venue will hold an audience of 17,500. Designed by architecture firm Populous, the building will feature the world's largest LED screen at 19,000 by 13,500 pixels, alongside an exosphere constructed from LED light panels, making it visible from several kilometres away. The \$1.8 billion project is expected to be complete in 2023, after which Madison Square Garden Entertainment will host technology-forward concerts and events.

The client was looking for an access solution to assist in the long-term maintenance of the external LED light panels from within the structure itself. With the structure more than 150 metres wide, these screens span more than three football fields in size. Manntech, as the pioneers in custom, German engineered facade access systems, were able to offer a custom solution to meet the unique requirements.

Working to overcome the challenge of achieving full coverage of the LED light panels and exterior of the venue, Manntech were required to develop a system that enabled close contact with the LEDs while navigating the 2700 tonne steel roof and 170-tonne steel compression ring that are used to create the unique spherical shape of the building. To resolve this issue, Manntech delivered a Type 6 building maintenance unit that features an articulating arm to achieve a close position to the LED lights of two feet.

During the project, a requirement for an Automatic Positioning System was also identified by the client. Manntech was able to add this feature to enable the operator to choose a facade location and be guided by the system to that position.

Overall, the building access solution is being developed to meet the clients' needs and requirements, considering the structural and aesthetic requirements while meeting local industry standards.

Facts and Figures

Completion:
2023

Commencement:
2019

Building Height:
110 metres

Number of BMUs:
1

Outreach:
35.7 metres

Structure Type:
Commercial

For more information

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