



O'CONNELL
ELECTRIC COMPANY

SYRACUSE UNIVERSITY STADIUM



NECA PROJECT EXCELLENCE AWARDS 2021
Category: Commercial/Institutional

SYRACUSE UNIVERSITY STADIUM RENOVATIONS

Customer: Syracuse University

Electrical Value: \$7,200,000

Location: Syracuse, NY

Date Complete: 2020

After years of careful planning and hundreds of community stakeholder meetings, Syracuse University kicked off its historic, \$118 million stadium renovation project in the summer of 2019.

Home of the Syracuse Orange, the Dome opened its doors in 1980 to host Syracuse University's football, basketball, and lacrosse programs as well as outside events including concerts, Monster Jam, and much more.

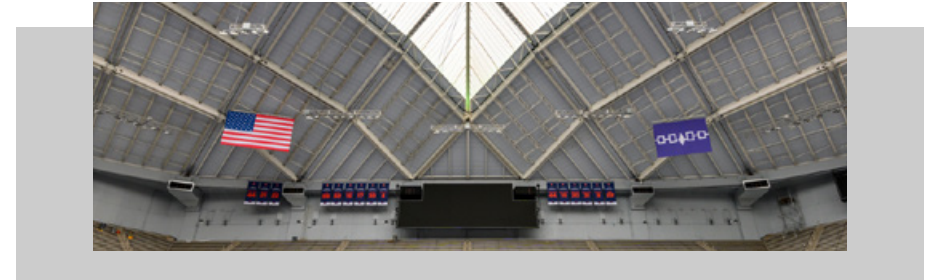
O'Connell Electric is proud to have continued our long-term relationship with Syracuse University by providing electrical services for this ambitious project which included installing a permanent roof, a vertically hung scoreboard, air conditioning, state-of-the-art sound and lighting systems, wireless internet and other amenities to provide an unforgettable experience to its athletes and nearly 50,000 cheering fans. We also completed additional smaller renovations to visitors locker rooms, concession stands and new restrooms as well as a full renovation of the fire alarm system for the stadium.

Eight-million-pounds of steel was used to construct the new roof, nearly 4,000 tons, and nearly three acres of fabric was used for the center portion. It is designed to hold 7,700 tons of snow during New York's chilling, upstate winter months.

Up to 280 trade workers worked on the project site during the busiest days of the project, with a steady average of 100 workers daily with all trades including 30 electricians.

This iconic addition to the Syracuse skyline was completed on schedule in time for the football home-opener despite challenges due to the coronavirus pandemic.

O'Connell completed 27,850 man-hours on site, working around the clock with multiple 10-12-hour shifts. The project was completed with zero safety incidents or mishaps.



STATE-OF-THE-ART SOUND AND LIGHTING

The Stadium's new LED lighting systems will allow the building to light up, or darken, in an instant providing the opportunity to provide an arena atmosphere unlike any other facility in the country. The school can now do pre-game basketball videos and light shows in a darkened venue. While many of their ACC rivals get fans excited for a game with a light show and music, none will be able to offer the experience in front of 50,000 fans.

O'Connell had not previously completed a project of this type - indoor sports lighting while concurrently replacing a massive roof structure. While we've completed similar sports lighting projects with exterior light clusters mounted on poles, this was much different. For the Stadium, we had to develop a truss system to fasten the interior theatrical light clusters. To complicate things further, we had to attach the truss system to a roof structure designed and built to move laterally a minimum of thirty inches in either direction with any snow load, wind, or rain events.

The lighting truss is mounted to the permanent roof structure through a cabling system, achieving minimal fixture movement. We designed all wire basket and cable tray systems to connect the lighting power, controls for each light fixture back to a lighting controller, and speaker clusters throughout the stadium and all power wiring systems to the center hung scoreboard. In an effort to be proactive, we pre-assembled the theatrical light fixtures onto the light truss system in sections off site and transported them to the Stadium early to minimize any delay in the construction schedule.

To really make things challenging, after the project had already started, the original owner-specified lighting systems supplier backed out of their contract leaving us to scramble for a solution. Fortunately, Musco, a leader in the commercial lighting industry, was able to step in, and working with O'Connell, hit our fixture deadline on time and within budget for SU to play their football home opener against Georgia Tech and then Clemson.





THE LARGEST SCOREBOARD IN COLLEGE SPORTS

Hanging from the new roof is the **largest center-hung scoreboard in college sports** and one of the largest in the country, an amenity that will help provide fans a shared experience. Built by Daktronics, the sides of the scoreboard are **62 1/2-feet wide and 20 feet tall**, with concave corners that are 10 feet wide and 20 feet tall. There's also a six-foot ribbon board that runs around the bottom on the inside.

The scoreboard is actually a series of smaller panels connected together. When Daktronics designed the system, they relied heavily on O'Connell to design build all of the voltage requirements, wiring, conduit, data requirements and the installation strategy. It was a very unique and complex design build that turned out to be very successful due to the collaborative environment between the supplier, our union electricians, the GC and Syracuse University.

The scoreboard weighs 160,000 pounds and covers just over 7,000 square feet.

PERSEVERING COVID-19

When Covid-19 disrupted the entire country, in reality, our IBEW union electricians only shut down for about a week. Deemed essential, we were back at it in no time with Covid safety protocols in full effect. The company immediately implemented a task force to take action in protecting our workers and the livelihood of our organization. We utilized standard mask protection, daily temperature readings, sanitizing practices, and social distancing. We rented additional crane baskets to achieve social distancing requirements; above and beyond our original bid estimates on rentals.

During the pandemic, in order to maintain the schedule, we were forced to utilize 2nd and 3rd shift scheduling of our workforce to install light fixtures, power to control cabinets, and to execute wire and cable pulling activities.

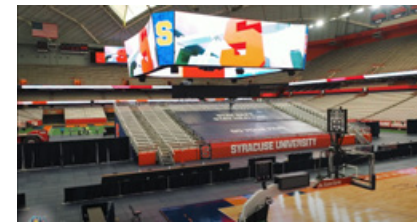
THE LARGEST CRANE IN THE COUNTRY

Kicking off the project required a very comprehensive plan and multi-contractor collaboration just to prep the project site for the arrival and installation of a **580-foot tall, 2-million-pound crane**. JK Tobin Construction leveled a hill. Lagging walls were created and soldier piles were installed 30 feet deep. During the excavation process, an old electrical duct bank was uncovered sitting in the midst of where the crane pad was to be placed, requiring O'Connell to install a new duct bank to run electricity to the surrounding campus buildings. Murnane Building Contractors poured about 30 yards of concrete to encase the new duct bank which then allowed The Hayner Hoyt Corporation, the project's General Contractor, to move forward with the crane pad.

The parallel walls were bolted together with steel rods encased in hard protective plastic tubes to create necessary tension and stability before being backfilled with six feet of compacted stone.

All of this before the crane could start to be delivered on campus! At the time of the project, the assembled crane was one of the largest in the country. A creative SU student named the crane Walt and created an Instagram account for it that garnered thousands of followers and plenty of attention.

Click the link below to watch a video testimonial of how the audio system was designed and installed with the help of several contractors, including O'Connell Electric.



[SU Stadium - Audio Visual Video](#)

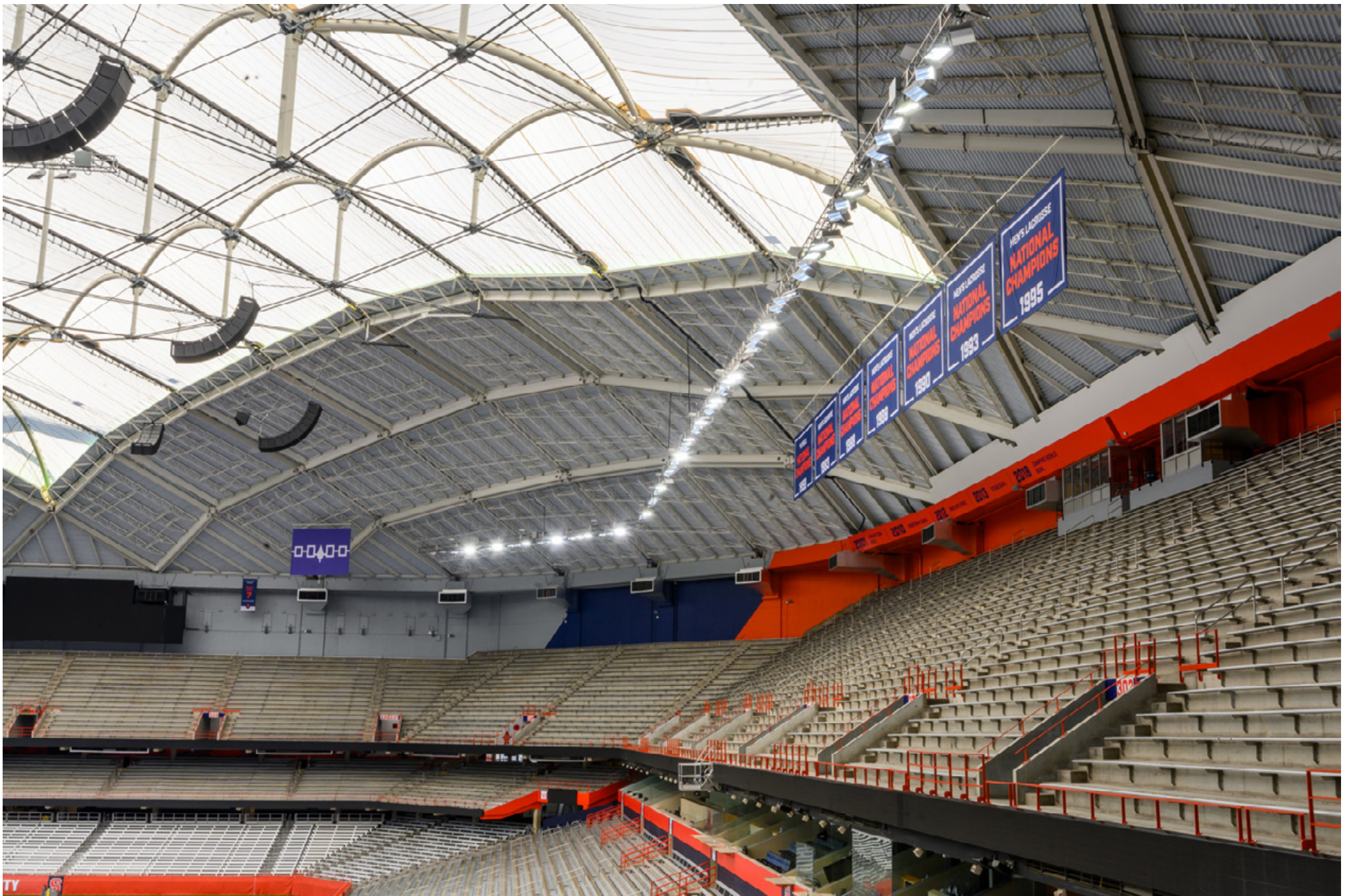
“The sheer attitude and dedication of our crew on site is what got us through 2020 safely and still on schedule. I can't say enough about how impressive our teamwork was at the stadium.

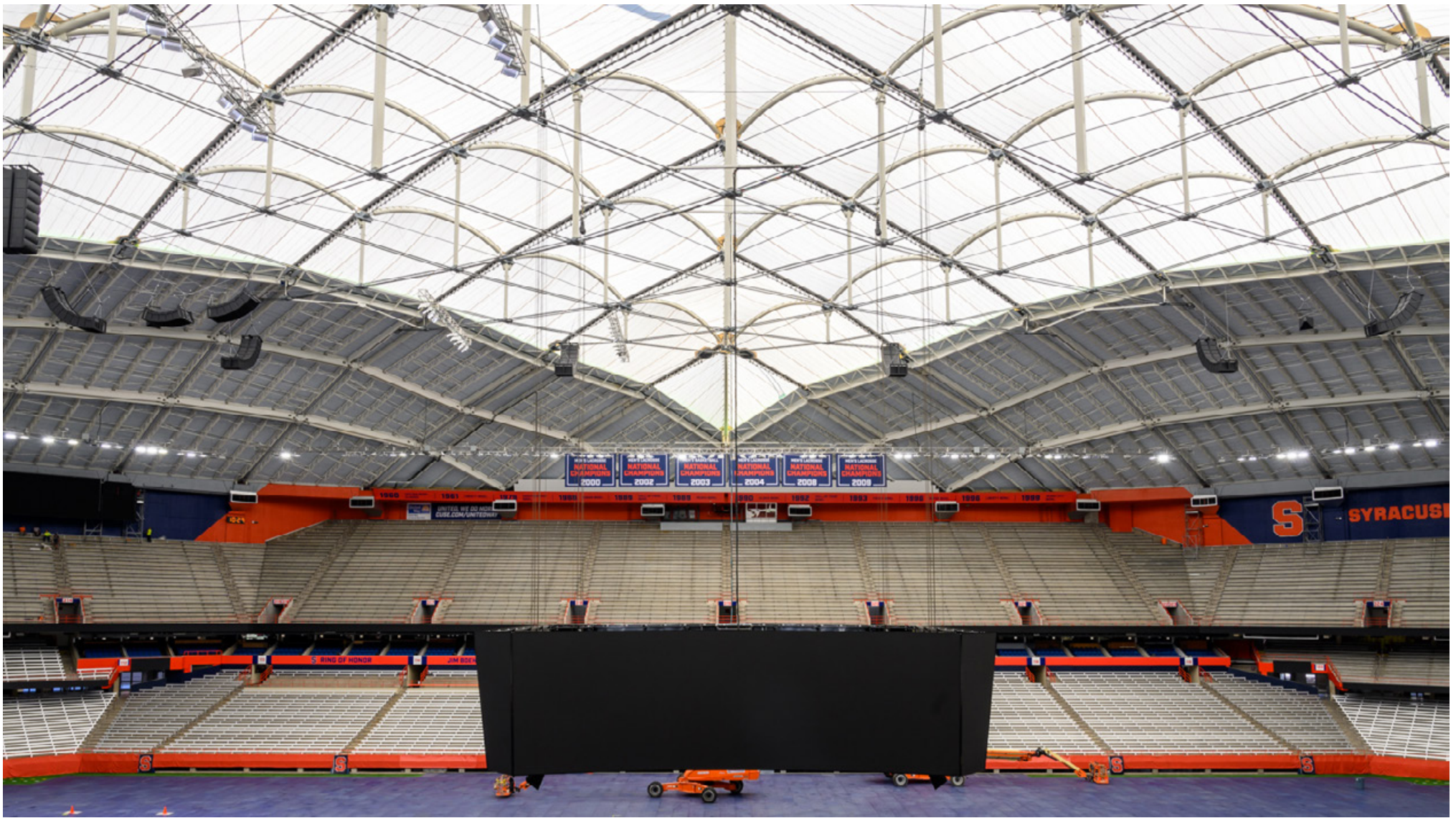
Don Coon,
Vice President, Syracuse Operations

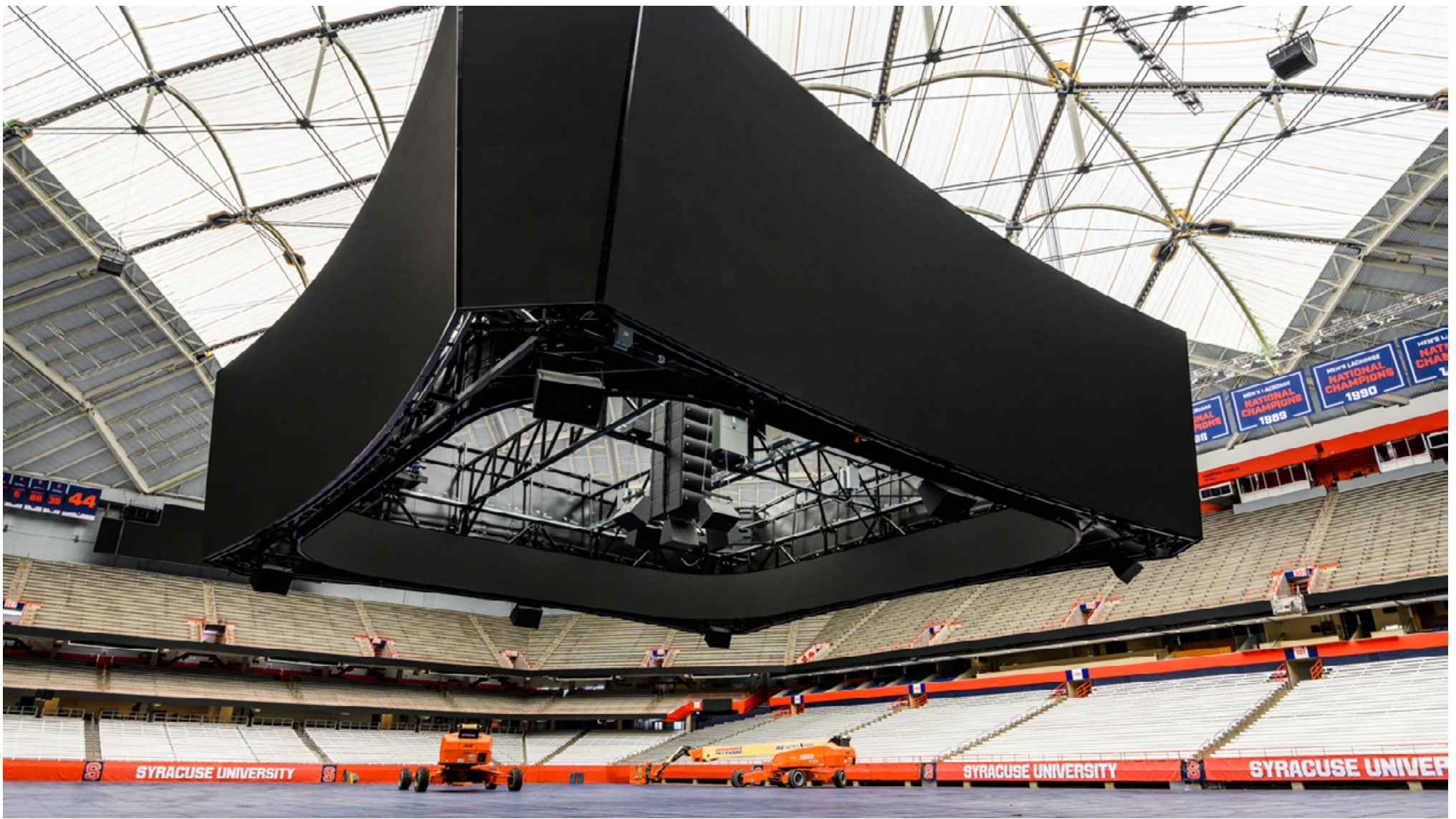












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