GLASS & METAL ALLIANCE

WELLS FARGO CENTER | PHILADELPHIA, PA

New glass transforms one of the world's busiest arenas.

By: Amanda Gibney Weko

CASE STUDY

GMA Glazier

Paul Rabinowitz Glass Co., Inc.
Philadelphia, Pa.

Team

Owner: Comcast Spectacor | Phila.
Owner's Rep: JLL | Philadelphia
GC: Structuretone | Philadelphia
Architect: SCI Architects | New York

Scope

New curtainwall; decorative glass concession fronts; glass ADA guardrails; bathroom mirrors

Completion

October 2018

Rabinowitz Glass added the new upper band of curtain wall; photos © Joe Garvin except where noted

INTRODUCTION

Sports fans are well-acquainted with the Wells Fargo Center, one of the world's busiest sports and entertainment arenas. The Philadelphia Flyers of the National Hockey League, Philadelphia 76ers of the National Basketball Association, Philadelphia Soul of the Arena Football League, and Philadelphia Wings of the National Lacrosse League all call the building home. The Wells Fargo Center also plays host to countless concerts and special events each year.

Opened in 1996, the Wells Fargo Center marked its 20th anniversary with a $250 million multi-year renovation. Owner Comcast Spectacor embarked on the ambitious project to transform the suite and mezzanine levels, add open-concept spaces, and provide refreshed patron amenities. SCI Architects of New York, N.Y., was engaged to design the renovations. GMA member contractor Paul Rabinowitz Glass Co., Inc. of Philadelphia, Pa., performed the glazing scope through two phases of work from 2016-2018.

NEW CURTAIN WALL

The extensive glazing scope began on the building exterior, where two new runs of curtain wall were cut into the existing north and south façades to offer expansive views of the Philadelphia skyline. The new glass runs parallel to existing glazing, and the vertical mullions in both old and new sections needed to line up. Straightforward in concept, in actuality, this alignment was challenged by the building's geometry. The Wells Fargo Center is slightly conical, with framing that angles outward. All of the vertical mullions are segmented or angled toward the middle.

According to Rabinowitz Glass Project Manager Derek Erfurt, the building underwent a 3D laser scan before his team used AutoCAD and Rhino modeling software to understand the complex geometry. "We have some excellent drafters who were able to do intense 3D modeling of the system," Erfurt explained. "They drew all of the curtain wall in 3D, which added a layer of difficulty to the fabrication process."

CURTAIN WALL CHALLENGES

Cutting a new run of curtain wall into an existing building presented additional challenges. Selective demolition was required to understand the interior structure and determine how the new curtain wall could be anchored to the building. The original glass type was unavailable, so selective color matching was required to ensure the new and existing curtain wall glass would match. J.E. Berkowitz provided the final selection, installed within YKK's YCW 750 SSG curtain wall system.

"One of the biggest challenges during window construction was maintaining temperature and humidity inside the building, especially after ice went down for hockey season in September," explained Construction Project Manager Geoff Brock of Structuretone. "Before the existing metal panels were removed, we built temporary walls with tarps just inside the building, so that work could progress on the exterior without impacting interior conditioning."

CONCESSIONS

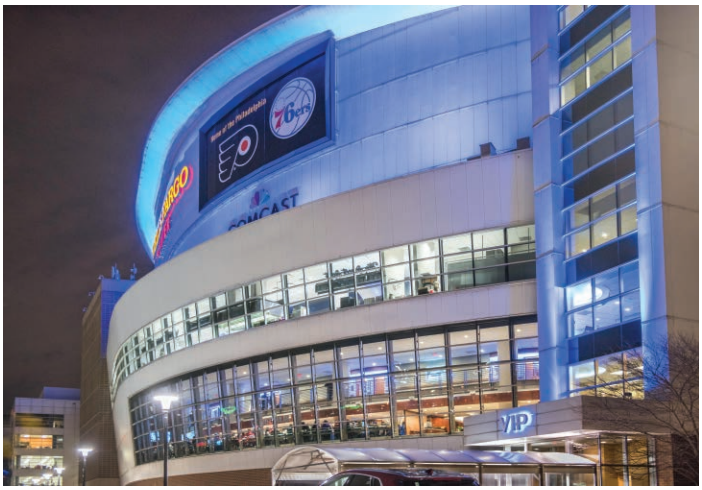
In addition to the new curtain wall, Rabinowitz Glass installed decorative glass fronts on all of the concession stands on Levels 5 and 6. The white back-painted glass was ordered from Canada, with all pieces ordered based on "hold sizes." According to Erfurt, the tight schedule meant the millwork for the 20+ concession stands wouldn't be available until just before the glass needed to be installed. This prevented simply measuring and ordering. Instead, all glass was ordered based on the millwork shop drawings. "It was almost like putting a puzzle together," he said. "Little to no tolerance with the glass meant they had to have the millwork pieces perfect. Overall, it was successful."

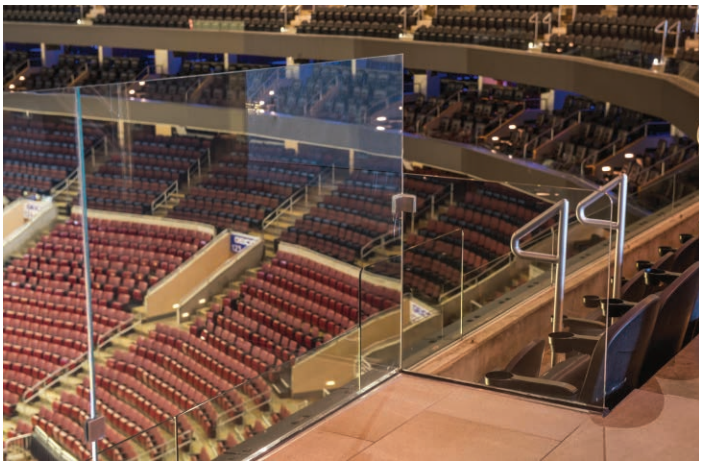
GUARDRAILS & MORE

New glass guardrails were installed at each of the ADA platforms that accommodate wheelchair seating throughout the arena. Rabinowitz Glass used heavy aluminum base with tempered laminated glass railings. Installation was phased over the summer months when numerous concerts took place, ensuring better viewing spots were completed sooner. New bathroom mirrors rounded out the comprehensive glazing project.

BEAT THE BUZZER

Just as athletes can't change their game clock, the project team was driven by the inflexible basketball and hockey schedules. "You couldn't just push back the home opener of the Flyers," Erfurt said with a laugh. Construction manager, Structuretone, and all of the trades cooperated and all work was completed on schedule for a dramatically refreshed venue.





Top to bottom: new curtain wall being cut into the facade (photo courtesy of Rabinowitz Glass); after curtain wall installation; interior showing skyline views and new concessions; new ADA guardrail glass