

# ALLIANZ FIELD LIGHTS UP MINNESOTA

The soccer-specific Allianz Field stadium is the first Allianz project for North America. Feature writer, Steve Traiman, gets insight from ownership & architect.



Allianz Field night view with dramatic colored LED lighting  
All images courtesy of Minnesota United FC

When **Minnesota United Football Club** hosted the **New York Football Club** on April 13, a sellout crowd of 19,796 saw the home team play out an exciting 3-3 draw in the opening game at **Allianz Field**.

Fans and teams had nothing but praise for the new pitch and many amenities.

It was the culmination of a four-year dream since October 2015, when team owners announced that the new stadium would be built on the former 34-acre Saint Paul bus barn site.

The stadium is designed to seat approximately 19,400, expandable to over 24,000 in the future. It is privately financed for about \$250 million, paid for by a partnership composed of Minnesota-based families and business

leaders -- the first stadium in Minnesota without a direct public subsidy.

In November 2015, Kansas City-based **Populous** was hired to design the stadium and in December, **Mortensen Construction** came aboard as part of the stadium construction team.

Mortensen built **U.S. Bank Stadium** for the **NFL Minnesota Vikings** (see *P5&AM*, 2015 Q4 issue) and worked with Populous on three other Twin Cities' sports facilities: **Target Field**, **TCF Bank Stadium** and **Xcel Energy Center**.

Other key project team partners include structural engineer **Walter P Moore** and MEP engineer **ME Engineers**.

According to Club CEO Chris Wright, the 346,000 ft<sup>2</sup> facility features safe standing space in a dedicated

Supporters Section, 25 suites, 38 semi-private loge boxes, and four club rooms.

The stadium has a translucent PTFE laminate mesh skin and features LED lighting technology similar to Allianz Arena in Munich, which allows the stadium to change colours in response to different events and activities.

The stadium will feature modern amenities and advanced technology, and is specifically designed to positively address sustainability while minimizing environmental impact and energy usage.

## KEY PARTNERSHIPS

In July 2017, **Allianz Life Insurance Company of North America**, a member

VENUE IN  
FOCUS  
ALLIANZ FIELD



Opening day fans line up at Hungry Loon, typical concourse concession stand.



Opening day sellout of 19,796 saw dramatic 3-3 draw with NYC FC.



of the **Allianz Group**, and Minnesota United FC announced a multi-year naming rights sponsorship agreement.

*"We are very happy to welcome Allianz Field to our global family of stadiums,"* said Jean-Marc Pailhol, Head of Group Market Management and Distribution at Allianz SE. *"Allianz Life is the leading provider of retirement and protection solutions in the U.S. and this stadium partnership, our first in North America, provides us with a great opportunity to share our passion for soccer and reinforce our commitment to the community."*

Allianz Field joins seven other Allianz-sponsored football stadiums located in some of the most dynamic cities around the world. Included are pitches in Munich, Germany; London,

England; Sydney, Australia; Sao Paulo, Brazil; Nice, France; Turin, Italy; and Vienna, Austria.

In another key partnership, the Club last April announced a 10-year partnership with Fargo, ND-based **Bell Bank** that included naming Bell a gate sponsor in the southwest corner of Allianz Field.

In return, the bank will provide a \$1,000 check to a player each match of the 2019 season to be donated to a charity of the player's choice. In announcing the partnership, Bell donated \$10,000 to goalkeeper Matt Lampson for his LampStrong Foundation charity, which supports cancer patients.

In addition to welcoming fans for 17 Minnesota United regular season home games in 2019, Allianz Field will also

host Group D of the **2019 Concacaf Gold Cup**, including the **U.S. Men's National Team**, on June 18, and the annual Tommie-Johnnie Division III football game on October 19 – the first-ever American football game played at the new stadium.

### KEY STADIUM FEATURES

Eric Durkee, the Club's Senior Director, Public Relations, highlighted some of the key stadium features for *PS&AM*.

For celebrations, pre-match, post-match and throughout the week, Allianz Field will lend itself to soccer fans and all Minnesotans.

The stadium is designed to revitalise a 34-acre site -- including a 1.5-acre green space to the north of the stadium -- to >>

« bring a touch of nature to the Midway area. Allianz Field is designed to be bird-safe, with energy efficient and sustainable features.

Fan sections will be covered by a 360-degree canopy that will serve two purposes: to keep the noise of the crowd contained within Allianz Field and to protect fans from the elements throughout a match.

Approximately 87% of the crowd will be protected from inclement weather by the canopy.

Like Target Field, home of the **MLB Minnesota Twins**, Allianz Field will use a hydronic field heating system to keep the grass in optimal shape even during early spring and cold late-fall matches.

The comprehensive climate control system for the grass includes an advanced drainage system that will harness and re-use stormwater, minimising discharge.

Allianz Field is being built with fans as the top priority. As such, every seat in the stadium will provide excellent sight lines to all the action on the pitch. The closest seat will be 17 feet away from the pitch, while the farthest seat from the sideline will be just 125 feet away—providing one of the most intimate settings in all of professional sports.

The steep rake (33.4 degrees in the upper bowl and 34.75 degrees in the Supporters Section) will put fans right on top of the action.

LED lighting outside Allianz Field will allow it to change colours, light intensity and patterning to reflect the festivities inside as well as shift to represent initiatives and ideas of the club.

The elegant “flow” design concept will dazzle soccer fans and Minnesotans alike as it simultaneously blends in and stands out in a reinvigorated Midway neighbourhood.

## HI-TECH

Among other tech innovations, a new Distributed Antenna System (DAS) will let everyone never miss a call or never miss a moment of action. Allianz Field will allow fans to follow along online and post their favourite moments of the match flawlessly on social media platforms.

Transportation is another bonus for the new stadium. Whether walking, driving, biking or taking public transportation, getting to Allianz Field is easy and convenient.

Centrally located on a major light rail and bus rapid transit lines as well as highway access, fans can arrive from anywhere with ease.

Early in 2018, the Club opened a new Experience Centre in 2,100m<sup>2</sup> of repurposed office space to showcase the various features and amenities at Allianz Field. It allowed fans to see the stadium plans up close, with an interactive gallery detailing the team’s story and future.

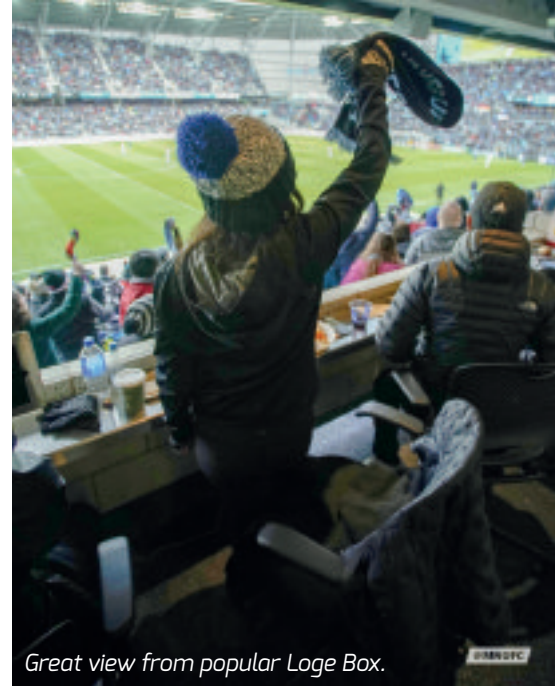
Features also included 3D seat-selection technology, a photo booth and a 3D hologram display. Season ticket holders were contacted to set up appointments, with brisk sales reported.

At that time, CEO Wright said: *“We’re excited to give our fans a first taste of Allianz Field through the Experience Center and show them how powerful the new stadium will be.”*

## ESSENCE OF MINNESOTA

Populous senior principal and Allianz Field project architect Bruce Miller told *PS&AM*: *“The architecture of the building is intended to capture the essence of the upper Midwest and specifically the great State of Minnesota.”*

*“The architecture draws inspiration from the great bodies of water in*



Great view from popular Loge Box.

*the State of Minnesota including the Mississippi River and the thousands of lakes throughout the State and the incredible night skies of Minnesota and the glowing aurora borealis.*

*“We have enjoyed an incredible working relationship with Bill McGuire, the managing partner and all of the Minnesota United Football Club staff to make the building the most intimate and intimidating soccer specific stadium in North America.”*

Miller highlighted a “Wonderwall” Supporters Section at the back of the

## ME ENGINEERS HELPS DEVELOP DRAMATIC NEW ALLIANZ FIELD EXTERIOR COLOUR-CHANGING LIGHTING

Looking at Allianz Field it’s hard to ignore the more than 6,100 linear feet of LEDs illuminating the stadium’s exterior facade.

Headed by David Riffel, ME Engineer’s project manager, the firm’s architectural lighting design team, illum, working closely with the owner, architect, structural engineer and general contractor, created an unparalleled identity for the new home of Minnesota United FC.

Inspired by the Northern Lights—the elusive light show sometimes visible in the Minnesota night sky—the stadium’s exterior PTFE skin system is backlit with over 1,600 colour-changing lights mounted to the building’s interior structure.

The skin system allows the colour of the stadium to change. The exterior lighting can replicate the team’s colours or be customised for holidays, top matches, or other special events.

The exterior lighting can also be synchronised with the field and interior club lighting to create dynamic game-day effects.

Because of the unique nature of the skin system, the team developed a series of large- and small-scale mock-ups of the facade lighting.

During the review process the team noticed unexpected shadows cast along the skin. With the addition of custom shields, they eliminated the shadows and optimised a filtered view of the LED lights.

The mock-ups were also used to determine the exact aiming angle of the lighting fixtures.

With its unique, translucent skin and illuminated exterior, Allianz Field provides a stellar fan experience.

## WALTER P MOORE HELPS CREATE UNIQUE PROTECTIVE ALLIANZ FIELD EXTERIOR SKIN

Allianz Field demonstrates the power of an integrated structural and enclosure engineering team while bringing a new material to stadium design, noted Justin Barton, Walter P Moore Project Manager, along with David Landis, Principal in Charge.

Minnesota United FC and Populous set clear goals: an exterior skin that would protect fans from inclement weather but have translucency so energy generated on the pitch pulsated outside the stadium.

Walter P Moore, working with St. Gobain, developed a new fabric to meet those requirements.

A cross-weave of fiberglass yarns gives the material its strength and holds the gray color -- giving Allianz Field its distinctive sheen. The fiberglass weave is laminated with a clear polytetrafluoroethylene (PTFE) that makes the material weather-tight and allows twice the amount of light transmission compared to traditional PTFE coated membranes.

Large diameter, round, hollow-structural steel pipes served as a backbone to support the fabric. These shapes, dubbed "driver pipes," drove the undulating skin geometry.

In concert with Populous, Walter P Moore digitally controlled the driver pipe geometry, evaluated fabric stresses and adjusted the driver pipes in order to not overstress the fabric while maintaining the design and minimising the backup steel required to meet the project budget.

The resulting loads on the driver pipes were coupled with the main stadium model to optimise the overall structural system.

The final product is an iconic, world-class stadium design.

upper deck on the East Side offering safe standing for 2,800 fans, with a steep 34-degree pitch.

The West Side offers Field Club seats, with fans sitting next to the home club sideline. Just off the main concourse are VIP Directors' Boxes, and outdoor Loge Boxes. One level up, the Stadium Club for about 1,000 members runs the length of the pitch.

Two large Party Suites are on the south end, while mini Suites are paired with exclusive The Upper 90 Club on the north end.

Allianz Field's skeleton is wrapped in woven fiberglass laminated with PTFE, manufactured by French specialist **Saint Gobain**.

It's reflective and bright in the sun, and transparent in the shade. At night, LED Lighting outside allows the building to change colours, light intensity and patterning to reflect specific activities inside.

"Overall," Miller emphasised, "I have to give credit to our entire project team that provided the vital teamwork that brought the very tight construction schedule to completion on time and on budget."

*"We have set very high standards of design for the building and I believe that Allianz Field truly will deliver an unprecedented game day experience for the fans and players alike."*

Summing up, Chris Wright, chief executive of Minnesota United, emphasised: "Allianz Field is going to bring our fans together around the world's game like never before. They'll be closer to the action and enjoy top-of-the-line accommodations in a state-of-the-art stadium built for soccer." ■

### ALLIANZ FIELD

#### Project Team and Fact File

|                           |   |
|---------------------------|---|
| Location                  | St. Paul, Minnesota                             |
| Opening Date              | April 2019                                      |
| Construction Cost         | \$250 Million                                   |
| Owner                     | Minnesota United FC                             |
| Operator                  | Minnesota United FC                             |
| Capacity                  | 19,400  |
| Architect                 | Populous  |
| General Contractor        | Mortenson Construction                          |
| Structural Engineers      | Walter P Moore                                  |
| Services (MEP) Engineer   | ME Engineers                                    |
| Civil Engineers           | Loucks  |
| Electronics// Videoboards | WJHW/Daktronics                                 |
| Landscape Architect       | Populous  |
| F&B Concessionaire        | Delaware North                                  |
| Major Tenants             | MLS Minnesota United FC; 2019 CONCACAF Gold Cup |

#### Amenities

Seating design includes future expansion to 24,000-plus with 25 suites, 38 semi-private loge boxes and four club spaces including 1,000-seat Stadium Club, Field Club & exclusive Upper 90 Club. It has a translucent PTFE laminate mesh skin and features LED lighting technology similar to Allianz Arena in Munich, which allows the stadium to change colours in response to different events and activities. It will feature modern amenities and advanced technology, specifically designed to positively address sustainability while minimising environmental impact and energy usage.



Safe-standing "Wonderwall" supporters section.