

Architectural Significance in Metal Buildings: An Educational Series

ST. DAVID'S PERFORMANCE CENTER

AUSTIN FC SOCCER CLUB

Austin, TX



Created in coordination with Gensler and Harvey | Harvey-Cleary

Photo courtesy of Gensler



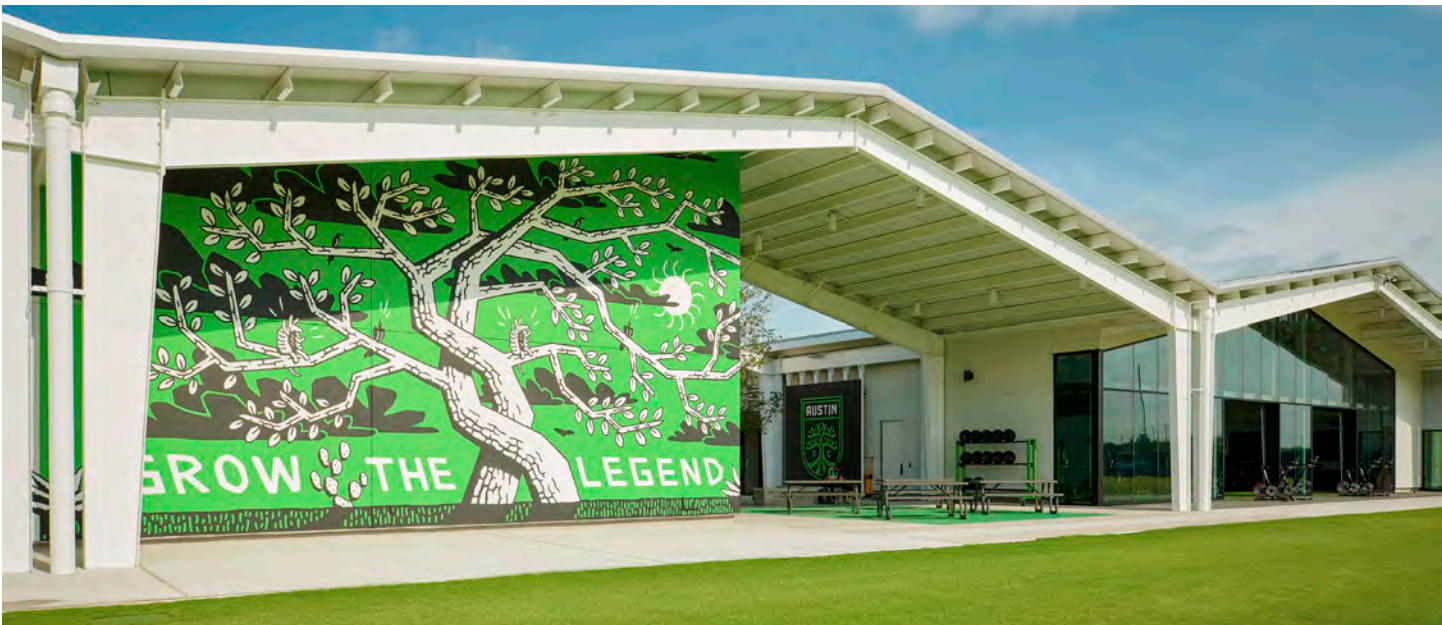


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PROJECT DETAILS

Building: St. David's Performance Center

Location: Austin, Texas

Building Owner and Manager: Austin FC

Size: 37,500 square feet, including breezeway

Site: 23 acres

Building Construction Budget: \$12 million

Completion: April 2021

Architecture, Interiors and Brand Design: Gensler

General Contractor: Harvey | Harvey-Cleary

Structural Engineer of Record: Walter P. Moore

Mechanical/Electrical Engineering: Henderson Engineers

Civil Engineering: Garza + CBD

Site/Landscape Design: TBG Partners

Electrical Systems/Site Lighting: Weifield Group

Low Voltage Systems: Lee Technology

Audiovisual Systems: Ford AV

Metal Building Manufacturer/Erector: Red Dot Buildings

Integrated Metal Roof Panels: All Weather Insulated Panels

Concrete: BCS Concrete Structures

Exterior Walls, Windows, and Doors: Exposed-fastener, Kynar-finished metal wall panels by Kovach; windows by Floydco, Inc.; doors and hardware by Hull Supply; stucco by Prime Wall Systems, LLC; overhead doors by Texas Overhead Door; mural by Will Hatch Crosby.

Awards: ENR Texas & Louisiana Chapter's 2022 Best Projects - Award of Merit, Sports/Entertainment category; Associated Builders & Contractors Central Texas Chapter's 2021 Excellence in Construction Awards - Eagle Award, Specialty Contractor (Electrical) – Commercial category.



PROJECT DESCRIPTION

Located in North Austin, TX, St. David's Performance Center is the practice facility for Austin FC, a Major League Soccer (MLS) team, as well as its youth academy.

Austin FC and youth players train at St. David's Performance Center year-round, where they have access to high-performance training and conditioning, nutrition and physiotherapy experts as well as state-of-the-art technologies that range from advanced cardio and physio equipment to recovery rooms with cold-water plunge pools, cryotherapy machines, hyperbaric chambers and an underwater treadmill.



Rendering courtesy of Gensler



In addition to being the official training facility for Austin FC, St. David's Performance Center supports the Austin FC Academy, a training organization serving youth soccer players ages 12 to 17. The Austin FC Academy building houses a locker room with showers and restrooms, a weight room, a training room and a classroom. Spaces in the professional athletes' training center include soccer operations offices, team meeting rooms, a commercial kitchen, a dining room and players' lounge, a media room, locker rooms with showers and restrooms and conditioning, massage and health exam and medical treatment rooms.

Just over five miles from Austin FC's Q2 Stadium, the 37,500-square-foot, single-story performance center is part of a 23-acre sports campus privately developed by Two Oak Ventures, LLC, the parent company for Austin FC, and Karlin Real Estate. It serves as the anchor amenity for the larger 300-acre Parmer Innovation Center, which includes (1):

- Four full-size fields
- One half-size field
- A community field with seating for 1,000 spectators

History

Officially announced as an MLS club in January of 2019, Austin FC is the first professional sports franchise for the City of Austin. Its founding owner, Precourt Sports Ventures, was later renamed Two Oak Ventures, LLC, and expanded so the ownership group could include local celebrities and businesspeople, such as actor Matthew McConaughey, Managing Partner & Founder of Pixiu Investments Eduardo Margain, former Dell Technology executive Marius Hass, and energy entrepreneur Bryan Sheffield. (2)

In September 2019, ground was broken for a \$260 million, 20,500-seat stadium at McKalla Place, which was later named Q2 Stadium after the Austin-based digital solutions company, Q2 Holdings, Inc., purchased naming rights. (3, 4)

Two months later, Austin FC announced plans to build a "training home" for its first-team players and members of the Club's Academy. (5) Austin FC's leaders emphasized that the completed building and its surrounding site should provide world-class facilities, expertise, equipment and amenities that supported the health, wellbeing and development of all players and staff.

This vision dovetailed with a nationwide trend toward athletic training programs shifting away from focusing almost exclusively on physical health to using a more



holistic approach. (6) This includes conditioning, injury prevention and treatment, recovery and rehabilitation programs. The addition of St. David's Healthcare as Austin FC's official healthcare and training sponsor—and naming rights partner—underscored the Club's commitment to optimizing the players' total performance throughout their careers. St. David's Healthcare provides on-site health and wellness services for players and personnel at the performance center in concert with full-time training staff who are under contract with Austin FC.

Community Engagement

In recent years, the MLS has emphasized the importance of local ownership and engagement of the community for franchise success. The City of Austin's public leaders and business owners embraced this philosophy and have shown tremendous civic pride and support for their hometown MLS football club.

At the official launch event, Austin's then Mayor Steve Adler predicted the team and its facilities would "bring together all kinds of people from all over Austin." (7) To this end, Austin FC's owners have found creative ways to express the city's culture and connect with its business community, residents and visitors, such as:



Photo courtesy of Gensler

- Selecting “bright verde” (green) as the team’s signature color to express Austin’s vibrancy and creative energy.
- Including two intertwined trees in Austin FC’s logo to convey the interconnectedness of the City and the Club while referencing the 500-year-old “Treaty Oak” under which Stephen F. Austin signed a treaty with local Native Americans. (8)
- Collaborating with the creative community of Austin to establish the ATXFC Artist Initiative and integrate the work of local artists into the Club’s identity. The mural on the exterior of St. David’s Performance Center, which features the intertwined trees in the Austin FC crest, was completed by Will Hatch Crosby, a local artist, illustrator and muralist. (9)
- Providing building tenants in the Parmer Innovation Center and members of the Austin community with opportunities to watch Austin FC Academy games in a 1,000-seat stadium, enjoy strolling and dining near the 11-acre Parmer Pond or participate in a pick-up game on the public soccer field.
- Featuring locally popular food at “The Pitch,” a community sports, entertainment and food hospitality venue adjacent to the stadium. (10)

“Budget is one reason we periodically use metal buildings; and because the architects have less to design and coordinate, we can devote time to other parts of the project.”

— Kristin Byrd, Design Director
Architect and Senior Associate, Gensler

- Founding an Academy that runs the Center of Excellence program to provide training for the most talented young soccer players from throughout Central Texas.

“We are very fortunate to have the St. David’s Performance Center,” said John Forst, facilities coordinator for Austin FC. “It has already assisted our teams in bringing home some hardware (trophies and awards). We have nothing but good things to say about the building we call home.”

Planning & Design Priorities

Gensler's experience designing Q2 Stadium led to its Sports Practice Group participating in the early planning discussions for Austin FC's sports campus. According to Kristin Byrd, AIA, lead designer and architect for St. David's Performance Center, Gensler's scope of work ultimately included full building and site design—from programming to architecture, interiors, graphics and branding. This presented Byrd and her team with the opportunity to holistically approach the design of the performance center and its related outdoor amenities.

"As with all the training facilities we design, performance is top of mind," Byrd explained. "It's not just about the performance of the players and athletes, but also the entire staff and organization. It is important that every member of this team can function at their highest level and that everything we design—both functionally and aesthetically—supports that mission."

Key elements of Gensler's strategy for achieving this overarching planning and design priority included (11):

- **Creating a culture of well-being by addressing how design can enrich the body and mind.** St. David's Performance Center features clerestories and floor-to-ceiling windows that draw natural light deep into the buildings' interiors. Access to natural light has been shown to have a positive impact on human health by boosting vitamin D levels, enhancing focus and productivity, improving sleep and contributing to psychological wellbeing. (12)
- **Connecting trainers and players.** Since proper form, alignment and habits are essential for injury prevention, Gensler's design features open column-free spaces, window-lined training areas and transparent glass interior windows and doors that allow training staff to monitor the activities and progress of players in strength and conditioning, practice or therapy spaces.



Photo courtesy of Gensler

- **Connecting indoor and outdoor spaces.** The adjoined structures, outbuildings and site provide a variety of opportunities for social connection and collaboration, interaction with nature and physical activity while also offering quiet spaces and resources for respite and restoration. Retractable overhead doors that run the full length of the weight room can be raised to provide direct access to the adjacent practice field and surrounding landscape while bringing fresh air into the building.
- **Using materials and branding to inspire all building occupants and visitors.** Austin FC's signature colors of "bright verde," and black and white, (13) as well as the intertwined trees in its logo, are used creatively throughout the building's interiors and exterior. A grand-scale mural on the exterior of the Academy building features the twin oaks with the team's motto: "Grow the Legend." This is a particularly appropriate message for the structure where the next generation of soccer players are training. There is also an opening in the roof over the breezeway that will allow the two oak trees planted beneath it to grow to their full height over time.

"The best benefit that our metal building structure provides for us is the open floor plan. In a sport like soccer, teamwork is paramount to on-field success. This floor plan creates the perfect opportunity for teamwide exercises and promotes frequent face-to-face contact across all departments that utilize the space."

— John Forst, Facilities Coordinator
Austin FC

Architect's Statement

In an article published in the September 2022 issue of *Sports Business Journal*, Byrd pointed out how a training facility's design can have more of an impact on a professional sports team than the high-profile stadiums that are well-known by fans and the media. "When you're creating this home-away-from-home environment for all the staff and players," she said, "you [can] not only impact their day-to-day activities but also enhance their ability to perform as individuals and as a team." (14)

While some characteristics of metal building systems were well-suited for achieving Gensler's architectural vision for St. David's Performance Center, accomplishing the team's highly innovative, award-winning design using this technology also presented challenges that required close collaboration between all project team members.

"The architecture of the metal building lends itself to [including] clerestories for natural light," Byrd said. "The pitched roof of the metal building structure allows for greater ceiling heights, which made the spaces feel more open. Each bay of St. David's Performance Center houses a different programmatic function and that helped lend an organizational structure to the planning process."

Forst expanded on Byrd's comments by directly relating the openness offered by the metal building to players' performance: "The best benefit that our metal building structure provides for us is the open floor plan," he said. "In a sport like soccer, teamwork is paramount to on-field success. This floor plan creates the perfect opportunity for teamwide exercises and promotes frequent face-to-face contact across all departments that utilize the space."

Forst also noted that the natural light that enters almost every room "creates a more 'homey' feeling and invites the players and staff to spend more time in the space."

Still, a major challenge Byrd said Gensler's architects faced was determining how "to create customization beneath the metal building." Several aspects of the architectural design they developed were atypical for metal buildings, including the use of multiple structures stacked next to each other and the diverse range of exterior wall treatments.

PROJECT CHALLENGES, GOALS & OBJECTIVES



Photo courtesy of Gensler

According to Byrd, the three key factors that drove the decision to use metal building systems were budget, schedule and context. Combining the architectural vision with these practical considerations resulted in the following project objectives:

Create a Cost-Effective and Architecturally Interesting Structure

“Budget is one reason we periodically use metal buildings,” Byrd said, “and because the architects have less to design and coordinate, we can devote time to other parts of the project.” This gave Gensler’s team time to develop a highly creative design and to collaborate with the metal building subcontractor to make sure that the unusual aspects of this design could be efficiently and effectively achieved.

“Gensler’s decision to stack five buildings side-by-side was unique,” said Darrell Geisendorff, vice president of sales for Red Dot Buildings. “We worked closely with the architects on the conceptual drawings, footprint and layout and coordinated our efforts with other project team

members through the general contractor. The gables were all lined up, so there was a lot of coordination needed to work out how the valley gutters between the [roof forms] would work.”

Kyle Marrou, senior project manager for Harvey | Harvey-Cleary, agreed that locating a common gutter between the metal buildings required extra attention to detail. “As the general contractor for this project, we managed all the construction from site work through building completion,” he said. “Our concerns were that the gutters located between the different buildings would be subject to differential expansion and create a risk for leaks within the building due to movement. We spent a lot of time making sure this was done correctly.”

“This training facility features a variety of exterior finishes that Gensler did a great job of flowing together while still delivering an economical building,” Geisendorff added. “The walls were provided by a different subcontractor, and these were either glass or stud up to the spandrels. So, our focus was on close coordination to determine where we needed

to put steel to support the walls and, ultimately, we used a different wall make-up that is not traditional for metal buildings. All of our walls were created using spandrels, not girts, so that vertical metal studs could be attached to them. We wound up dropping quite a few steel columns and steel beams in behind the glass to support the floor-to-ceiling windows." Steel tubes installed along the top of the glass curtain walls provide support and carry the structural load rather than deflecting it downward and onto the storefront windows.

Geisendorff noted that the opening in the roof over the patio, the clerestories and the facade that opens up to the outdoors also required close coordination with other design and construction team members.

Meet an Ambitious Schedule

The 2021 start date for Austin FC's first season as an MLS club drove the project schedule, which was both ambitious and complex. For example, the natural turf had to be laid on the pitches before building construction began. Here, the use of a custom-engineered metal building superstructure and roof helped to streamline construction activities. The metal building components could be delivered to the site on a just-in-time basis, which helped to reduce the amount of traffic to and through the site and keep the materials staging area to a minimum. And, since these components were fabricated and finished before they arrived at the site, they could be rapidly assembled, optimizing the use of on-site labor.

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Red Dot Buildings

"You can go from anchor bolts sticking out of a foundation to, in this case, a steel structure and roof being erected in a matter of seven weeks," said Chris Barrett, general manager of construction for Red Dot. "That's a lot quicker than many of the standard building methods." This meant that, despite the labor shortages and escalating costs that arose during the project period, St. David's Performance Center was completed on time and on budget. (15)

Consider Context

According to Byrd, Gensler was inspired to use metal building typology based on the warehouses and agricultural buildings that have been re-purposed for other uses throughout the City of Austin and in the surrounding areas, such as breweries, restaurants and retail stores. Gensler's designers had used metal building systems to house concessions along the main concourse at Q2 Stadium, so this provided an indirect aesthetic connection to St. David's Performance Center.

"Given the common vernacular in Austin of old warehouse and farm buildings," she said, "we decided to bank the metal building structures together to create an interesting roof form that remains contextual."



Photo courtesy of Red Dot Buildings

RELEVANCE FOR STUDENTS

The architects, general contractor and metal building manufacturer for St. David's Performance Center all stressed the importance of close collaboration, clear communication and the need to assemble core members of the project team early in the planning process.

"It is helpful if the design team can communicate the overall design intent and any special building features, so everyone can understand the broader vision for the project and work toward a common goal," Byrd said. "It is also important to understand what, if any, limitations there are related to using metal building systems and how these may impact the overall design."

Geisendorff, Marrou and Barrett concurred.

"We exist in the complex design and high-tempo worlds, so we especially appreciated how the architects included us in some of the design coordination meetings rather than giving us a set of plans and telling us: 'Okay, here you go, make this work,'" Geisendorff said. "Gensler used much more of a team approach to test their design ideas and understand if they could work. We were pleased that Gensler's architects chose a metal building and impressed by how they designed a good-looking, award-winning building that shows off the steel structure and metal details. While some architects may assume metal buildings have to be low-rise, utilitarian structures that are primarily used to accomplish large clear spans, there are a lot of interesting looks you can achieve with creativity and ingenuity."

Barrett added: "Any time you have a complex building design, you are going to encounter challenges in the field and this project was no exception—especially since it had to be completed within such a tight timeframe. It's up to the subcontractors and general contractor to ensure that, at the end of the process, you have built something everyone can be proud of. Architects can contribute to this by understanding how the different subcontractors will be completing their parts of a project and anticipating what their needs will be. When we review plans, it's also important for us to ask the architects questions so we can understand their vision and let them know where reality meets that vision."

"One of my biggest takeaways on this project comes down to small dimensional control and understanding the product you are working with," Marrou said. "Little details can get overlooked and we need everyone—from the design team down to the suppliers—to pay close attention to these. Fortunately, the flexibility of the metal building system allowed us to work through our concerns fairly quickly and still achieve the desired results of the architect."



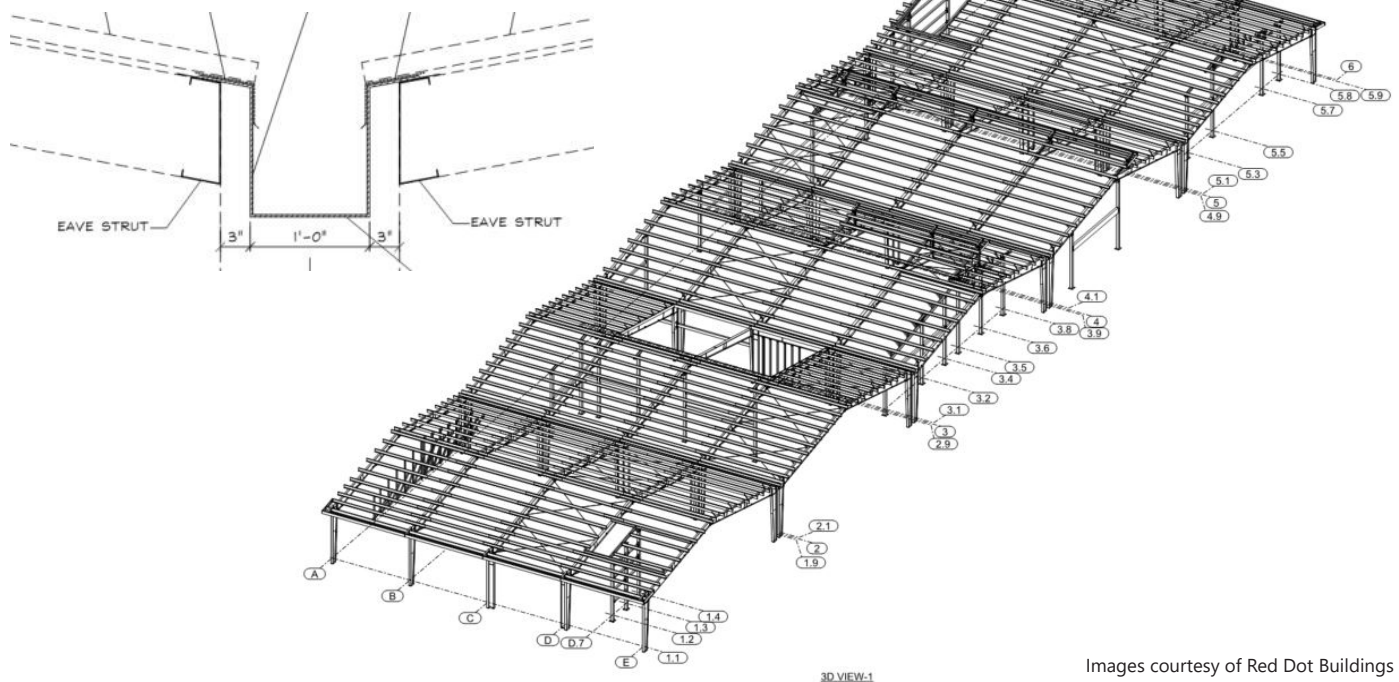
Photo courtesy of Red Dot Buildings

"When we review plans, it's important for us to ask the architects questions so we can understand their vision and let them know where reality meets that vision."

— Chris Barrett, General Manager of Construction
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Practical Application

1. Kristin Byrd, AIA, Gensler's lead designer and architect for the St. David's Performance Center, said that a design priority was to "create customization beneath a metal building."
 - a. What aspects of the architectural design for this sports facility were customized?
 - b. What unique challenges did Gensler's innovative design present in relation to the use of metal building systems?
 - c. How did the project team address these?
2. "Bright Verde" (or bright green) is Austin FC's signature color. While it was primarily chosen to convey vibrancy and growth, "green" in the building industry is associated with sustainable design.
 - a. What "green" features were consciously included in the center's design?
 - b. In what ways does using metal building systems contribute to the sustainable qualities of this facility – from "cradle to grave?" (16)
 - c. What additional opportunities for integrating sustainability into the design, construction and operations of this sports facility merit consideration? For example, early sketches show solar panels mounted to the roofs of four of the structures.
3. Austin has a humid subtropical climate, which is characterized by long, hot summers; short, mild winters; and warm spring and fall transition periods. How would you address the impact of these climatic conditions on the use of metal building systems for St. David's Performance Center? (17,18)
4. What characteristics make St. David's Performance Center an "atypical" metal building?
 - a. Have these characteristics inspired you to explore creative new ways to integrate metal building technology into the design of other building types?
 - b. If so, how?
 - c. What additional research would you need to complete to determine if your most innovative concepts could be achieved?
 - d. Which building industry professionals--beyond other architects--would you need to collaborate with from the early planning phases onward to make sure your vision "meets reality?"
5. According to Kristin Byrd, Gensler allocated a portion of the site to provide space for expanding the academy and adding a women's training building in the future. In what ways does using metal building systems facilitate future expansion plans such as these?



RESOURCES/RELATED READING

Related Reading

- [Austin FC's Description of St. David's Performance Center](#)
- [MBMA Retail & Wholesale Case Study](#)
- [MBMA Sports & Fitness Case Study](#)

Video Resources

Over 50 videos highlighting metal building architecture, engineering, design and application can be accessed at www.youtube.com/mbmamedia. We recommend you begin your educational process with the following programs:

- [How It's Made: Metal Building Innovations Are Revolutionizing Low-Rise Commercial Construction](#)
- [How It's Built: Metal Building Construction Raises the Bar for Low-Rise Commercial Structures](#)
- [An Introduction to Metal Building Systems](#)
- [Metal Building Systems 101](#)

Additional Videos

Videos that showcase the St. David's Performance Center can be found here:

- [Austin FC Training Facility // St. David's Performance Center Construction Progress July 2020](#)
- [Austin FC Training Facility // St. David's Performance Center Construction Progress February 2021](#)
- [Matthew McConaughey on the Language of Soccer, His MLS Club Austin FC](#)
- [St. David's Performance Center Tour with Claudio Reyna](#)
- [St. David's HealthCare Partners With Austin FC](#)

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