

# **Sustainability and the St. Thomas Arena**

## **St. Thomas' Commitment to Sustainability**

The University of St. Thomas has been a frontrunner among universities in implementing sustainable practices. St. Thomas has achieved a 51% reduction in carbon emissions since 2007 and is working toward its long-stated goal of carbon neutrality by 2035.

St. Thomas is ranked in the Top 50 Green Colleges by the Princeton Review's 2024 Guide to Green Colleges. These top 50 colleges and universities, selected from a review of over 680 higher education institutions, "share superb sustainability practices, a strong foundation in sustainability education, and a healthy quality of life for students on campus," according to the guide. In addition, St. Thomas earned a STARS GOLD rating in recognition of its sustainability achievements from the Association for the Advancement of Sustainability in Higher Education (AASHE) in 2024. STARS, the Sustainability Tracking, Assessment & Rating System, is a widely recognized framework for publicly reporting comprehensive information related to a college or university's sustainability performance. St. Thomas has also been recognized for leadership in green building design by the U.S. Green Building Council (USGBC) through a 2021 USGBC Regional Leadership Award.

Principles of sustainability have been a key priority in the development of the Lee and Penny Anderson Arena. As such, St. Thomas is mitigating potential environmental impacts associated with the arena's construction.

## **Sustainable Design Features and LEED Goals**

St. Thomas's sustainability goals include obtaining LEED (Leadership in Energy and Environmental Design) silver standards for all new buildings over 25,000 square feet. The development of the arena, strategically located on the South Campus, is designed with sustainability and energy efficiency in mind. The arena is targeting LEED Silver certification at a minimum. This involves incorporating sustainable materials and high-performance systems aimed at energy conservation including HVAC systems that optimize energy performance, advanced energy metering, enhanced refrigeration management indoor/outdoor water use reduction, sustainable material selections and enhanced indoor air quality strategies.

The location on campus offers opportunities for alternative transportation to events, a better utilization of built space, and the creation of new green space. The location reduces the

need for vehicular traffic by allowing on and off-campus students and neighbors to walk to events. As the event management plan is developed, incorporating ways to incentivize the use of transit will be a priority. In addition, ride-share options will be included as a strategy, as will the use of off-site shuttles for events that are predicted to be at-capacity. The arena is also supported by extensive bicycle storage facilities and pedestrian-friendly pathways.

The majority of the footprint for the new arena includes taking down three very energy-inefficient buildings and eliminating surface parking lots. In addition, the space between the arena and Schoenecker center will include an expanded green quad, enhancing the outside space.

### **Energy Conserving Design**

The arena's design features an Energy Use Intensity (EUI) of about 90 kbtu/sf, which is well below the national median for arenas of its size and highlights St. Thomas's commitment to exceeding industry standards for greenhouse gas reduction. St. Thomas's commitment to maximizing energy through the building design will be shown through:

- Energy efficient lighting
- Energy efficient building envelope
- Low-flow indoor plumbing fixtures
- High-efficiency boilers for domestic hot water
- Lower carbon structure and materials selection through incorporation of products with recycled content and/or sustainable manufacturing methods
- Low GWP refrigerants for cooling system
- Air curtains at all loading dock doors to reduce infiltration
- High solar reflectance roof membrane to reduce cooling loads
- Natural materials that are locally sourced
- Connection to south campus utility loop provides for lower campus-wide chilled water and steam energy use

### **Stormwater Management and Ecological Enhancement**

The arena project includes a sophisticated stormwater management system designed to mitigate the increased runoff from an additional 0.75 acres of impervious surface. Using enhanced filtration media, the system not only slows the runoff but improves the quality of water entering the local watershed, thereby protecting the ecology of the Grotto area and the Mississippi River.

Currently, stormwater runoff drains to either an existing storm sewer pipe that discharges directly into the Grotto or to an existing storm sewer tunnel that discharges directly to the Mississippi River. This existing stormwater discharge does not have any stormwater management controls (unfiltered water with an uncontrolled runoff rate). The proposed site conditions will drain to those same existing storm sewer pipes. However, the majority of that water will now be filtered through a manufactured treatment device using enhanced filtration media and released at a slower, more consistent flow rate from the retention system, which will help prevent downstream erosion concerns of the embankments, help boost the ecology of the Grotto area and improve water quality draining to the Mississippi River.



*Flowers throughout campus form the Pollinator Path. The Pollinator Path is a series of gardens, some planted to attract pollinators and some planted for aesthetic purposes. These gardens allow students, faculty, staff and visitors to study pollinator activity and learn how to support declining pollinator populations.*

### **Landscaping and Biodiversity Initiatives**

The landscaping plan for the arena extends beyond aesthetic enhancement to include ecological benefits. By planting native species and expanding St. Thomas's existing pollinator pathways, the university will support local biodiversity and contribute to essential habitat. Moreover, strategic planting near the Mississippi River bluff and campus areas will serve to enhance public enjoyment and environmental value. Oak saplings that have been growing since trees were taken down before the Schoenecker Center was built have been growing in the School of Engineering and will be replanted on campus. Initial plans to remove 76 trees were amended after hearing concerns from some community members and prompted the university to revise its approach. The current plan includes removing 69 trees and planting 73 new ones.

The landscaping will include planting new trees near the Mississippi River bluff, within the south campus quadrangle, within the northeast plaza at the terminus of Grand Ave, and along the south façade to help screen and/or enhance portions of the project for public enjoyment.

### **Ensuring Compliance and Promoting Long-Term Sustainability**

The project complies with all necessary environmental permits, including the National Pollutant Discharge Elimination System (NPDES) and the Capitol Region Watershed District (CRWD), ensuring that construction proceeds without harmful impacts on the environment. This compliance is reflective of St. Thomas's holistic approach to sustainable development, ensuring that the arena not only meets but sets new standards for environmental responsibility.

### **Erosion and Sediment Control**

A National Pollutant Discharge Elimination System (NPDES) Permit was required for the project and was received based on the Stormwater Pollution Prevention Plan (SWPPP) developed with the approved site plans. A Capitol Region Watershed District (CRWD) Permit for erosion and sediment control was required for the project and was received based on the approved site plans. Both the NPDES & CRWD Permits are requirements for final site plan approval and the commencement of construction. Both were received and submitted to the site plan file.

### **Public Access and Utility**

Although primarily serving the St. Thomas community, the arena will also be accessible to the public, fostering a shared resource environment. This complies with Policy LU-20 from the City's Comprehensive Plan, which advocates for the joint use of private and public spaces. By allowing community groups access to the arena, St. Thomas enhances its utility and serves a broader demographic, thereby maximizing its investment in sustainability.