

# THE UNIVERSITY OF KANSAS

Ambler Student Recreation & Fitness Center Energy Savings:

**\$130,000**  
(5 year payback)

Parking Structure Utility Saving

**\$50,000**

## IMPROVEMENT DETAILS

- Independent 3rd party M&V services for \$25m performance contract
- Retro-commissioning of student fitness center
- Commissioned \$10m Bioscience and Technology Business Center (Phase II)
- Designed energy efficient LED lighting improvements to parking garages to replace MH and HPS lighting

☎ 800.424.9144

🌐 [www.willdan.com](http://www.willdan.com)



## GOALS AND CHALLENGES

Willdan has a continuing trusted partnership with the University of Kansas to provide engineering services to meet a variety of facility and energy-related needs following two other ESCO performance contracts that proved to be unsuccessful.



In order to protect the energy-saving interests of the university, a **\$25 million performance contract was completed in 2011** and was in need of a 3rd party to provide measurement and verification (M&V) services to protect the university's investments against energy-saving pitfalls.

Additionally, the university had ongoing concerns about existing and planned buildings and structures. The **Ambler Student Recreation and Fitness Center** was constructed in 2003 with an addition constructed in 2008. Although the building design incorporated energy efficient HVAC systems, utility expenditures were extremely high compared to similar facilities. In 2013 the university began a Phase II building project – the \$10 million **Bioscience Technology and Business Center (BTBC)**, a 28,000 square foot expansion to provide additional office and lab space – and asked Willdan to assist as commissioning agent. Finally, the university wished to replace metal halide and high pressure sodium lighting with energy efficient LED lighting at the **Allen Field House and Mississippi Street parking garages**.

*Continued on back*



## SOLUTIONS AND OUTCOME

Willdan was able to assist the university across the spectrum of its energy efficiency needs. Utilizing IMPVP Option C: Whole Meter protocol, Willdan provides energy modeling, calculates savings for various ECMs and changes to campus facilities, and reviews ESCO proposed adjustments as part of our 3rd party M&V services for the university's existing performance contract.

Willdan was contracted to provide retro-commissioning services for the fitness center to improve comfort and energy efficiency while reducing operating costs. Willdan focused on HVAC system operation and identified operational changes and low-cost energy conservation opportunities for implementation.

During the design and construction phases of the BTBC Phase II expansion Willdan contracted as commissioning agent, commissioning HVAC air and waterside systems, laboratory controls, normal and emergency power, lighting and lighting controls, domestic hot water systems, and a reverse osmosis water system. Finally, Willdan designed approximately \$350,000 in lighting improvements to the university's parking structures, replacing metal halide and high pressure sodium lighting with more energy efficient LED lighting.

## CONTACT:

 800.000.000

 [www.willdan.com](http://www.willdan.com)

