



KANSAS STATE UNIVERSITY



Customer Profile:

Established in 1863, Kansas State University (K-State) was one of America's first land-grant colleges. It is a member of the Big 12 Conference and recently experienced record-high enrollment of 23,588 students.

K-State's Jardine apartment complex was originally constructed in 1957 and served as married student housing. Nearly 50 years later, the university embarked on a 10-year redevelopment project so that the complex could better meet the changing needs of the university and its students. Today, Jardine is a perfect fit for all types of students, from traditional undergraduates to families.

The Jardine redevelopment project has included the construction of 14 new buildings to provide a wide menu of housing options. The new complex includes 700 apartments and is home to nearly 1,400 residents. The complex's Jardine Marketplace accommodates several foodservice retail operations including Quick Cats convenience store, CornerStone Coffee and Bakery, and the soon-to-be-completed J.P.'s sports lounge with supporting kitchen. The department is contemplating adding a full-service restaurant in the future.



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“With the Jardine project, we were looking long term. We have a lot of Hobart equipment at K-State, and it has lasted for years. We selected Hobart for the Jardine complex because we knew it was durable and would last.”

**> Melissa Schrader, instructor/assistant unit director
Kansas State University**

Challenge:

The Jardine complex occupies 54 acres on one corner of the K-State campus and is several blocks from the nearest dining facility, restaurant or coffee shop. When redeveloping the complex, the university’s housing and dining services management wanted to include several foodservice operations to serve those living there.

In addition, the project’s design and construction timeline coincided with a directive issued by Kansas Governor Kathleen Sebelius, which outlined several energy-saving initiatives for all state agencies to follow. This directive, which signaled a shift toward more sustainable construction in Kansas, lent immediacy toward K-State’s ability to design more sustainable buildings. As a result, the Jardine redevelopment project offered a perfect opportunity to include sustainable building practices and equipment and to learn more about the LEED-certification process.

Solution:

Objectives:

- Maximize foodservice-related sustainability measures—including water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality—and innovation in design credits to achieve LEED certification.
- Select foodservice equipment to conserve more energy than the energy conservation standards established by LEED.
- Reduce water used in food production and related sanitation to the greatest extent possible by conscientiously selecting water-efficient equipment.





“When we set out to purchase equipment for the Jardine complex, we looked at performance; would the equipment do what we needed it to do operationally. We wanted to incorporate kitchen equipment that could contribute to our LEED credits, but we weren’t just picking it based on energy efficiency alone.”

> Melissa Schrader

Products Involved:

- **Hobart’s ENERGY STAR® rated LXi undercounter warewasher** is designed to address operators’ needs for sanitation while incorporating technological advancements that help foodservice managers comply with health regulations. The LXi uses only 0.74 gallons of water per rack, the lowest in the industry for an NSF-Rated, two-minute-cycle machine.
- **Hobart’s AM Select (AM15) door-type high-temp warewasher** is one of the most durable, reliable and efficient warewashers available. It is NSF Certified for heavily soiled pots and pans and ENERGY STAR qualified for its energy- and water-saving advantages and can save operations up to \$1,400 a year in energy and water costs compared to the AM14.
- **Traulsen’s ENERGY STAR qualified R&A Series glass-front and solid-front freezers** use an INTELA-TRAUL® microprocessor for precise temperature control and the TempAssure airflow system, which maintains consistent air temperature by keeping airflow regulated to withstand harsh kitchen environments.
- **Traulsen Undercounter Refrigerators**, which also are ENERGY STAR qualified, use INTELA-TRAUL technology to maintain interior temperatures from 34 degrees Fahrenheit to 38 degrees Fahrenheit no matter how hot it gets in the kitchen. These precise readings are NAFEM Data Protocol-compliant, letting users capture a complete record for HACCP compliance.





“Hobart foodservice equipment helped K-State earn two LEED credits related to conserving resources. One point was in the Energy and Atmosphere category for the use of ENERGY STAR qualified equipment and the other point was for reduction of process water use.”

> Ann Sawyer, project manager
LEED consultant, GreenIdeas

Actions Taken:

- The university installed two Hobart LXi Undercounter Warewashers in the CornerStone Coffee and Bakery and J.P.'s sports lounge as well as one Hobart AM Select Door-Type Warewasher, two Traulsen Freezers and a Traulsen Undercounter Refrigerator in the supporting kitchen.
- K-State also installed ENERGY STAR qualified equipment including fryers, griddles, steam cookers, hot-food holding cabinets, ovens and ice machines in Jardine Marketplace's kitchen.
- K-State installed energy-efficient heating and ventilation systems and lighting throughout the building.
- The university used several recycled materials during construction. These materials consisted of recycled bricks from the original Jardine apartments; glass and wood flooring from roof decking recycled from a hospital in Topeka, Kan.; and wood flooring from a North Carolina shoe factory built in 1849.
- The university established recycling and composting programs to reduce waste. K-State uses high-recycled-content cups for coffee and serves cold drinks in compostable cups made from biodegradable products. The university also composts coffee grounds for use on the university farm but plans to increase its compost program once it opens J.P.'s sports lounge.
- The university purchased a large cherry wood bar from the Kansas Museum of History, which the museum once featured in a Prohibition exhibit. Recycling the bar kept it out of the waste stream and eliminated the need for the university to purchase a new bar.
- Jardine Marketplace's meeting room was furnished with historical dining sets from prominent K-State faculty and staff, which it purchased from estate sales.





“When looking at how equipment affects LEED credits, you have to look at the big picture. No one piece of equipment is going to get you LEED credits. It’s about picking equipment that works together to meet your sustainability goals.”

> Melissa Schrader

Results:

- **Attained LEED Gold designation.** K-State is on track to receive Gold designation from the U.S. Green Building Council (USGBC) once commissioning is complete. Jardine is on tap to be the first dining facility in the Big 12 Conference to be Commercial Interiors LEED Gold.
- **Maximized the use of ENERGY STAR rated equipment.** Eighty-six percent of the ENERGY STAR eligible equipment and appliances in the Jardine apartment complex is ENERGY STAR rated.
- **Saved 552,669 gallons of water.** Using water-efficient kitchen equipment, K-State saved 552,669 gallons of water, far exceeding the USGBC’s requirement to reduce regulated water usage by 10 percent.
- **Maximized process water reduction credits.** K-State received one point for reducing water use by 20 percent and an additional point for reducing water use by 30 percent. The university received all possible process water reduction points.
- **Received energy performance credit.** K-State received one point (EA Credit 1.4) for using at least 70 percent ENERGY STAR qualified equipment.
- **Created atmosphere efficiency and comfort.** The university installed separate HVAC and lighting controls in the Quick Cats convenience store, CornerStone Coffee and Bakery and J.P.’s sports lounge and supporting kitchen. This approach ensures each environment is ideal for the employees working in each area.
- **Saved energy with an efficient hood.** K-State installed a kitchen exhaust hood with a variable-speed fan that uses a laser to sense heat and then increases or decreases the airflow as needed. Air curtains on the hood’s perimeter help keep heat under the hood instead of diffusing into the kitchen.
- **Divert construction waste.** K-State diverted 86 percent of construction waste from entering the landfill.





Hobart is the world leader in commercial food equipment and service for the food service and grocery industries.

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