

HARVEY COUNTY, KANSAS

Central Plant and HVAC Systems Upgrade LED Lighting Upgrade

Project Value:

\$3,639,841

Annual Energy Savings:

\$74,823

Annual Maintenance Savings:

\$36,669



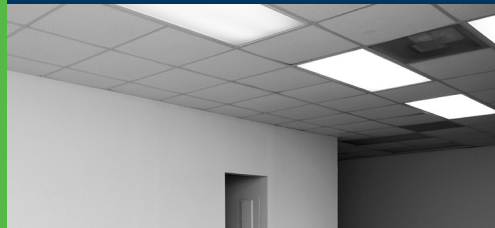
GOALS AND CHALLENGES

The Harvey County Courthouse, constructed 50 years prior, was plagued by comfort and maintenance problems. The original HVAC system allowed limited temperature control and required near-constant oversight from County maintenance staff. The windows were aesthetically unattractive and largely non-functional. Outdated lighting and plumbing fixtures – combined with high utility rates – led to excessive utility costs.

IMPROVEMENT DETAILS

Courthouse Improvements:

- Designed and installed new geothermal heat pump system
- Upgraded windows and doors
- New drop ceilings throughout Courthouse
- All new lighting fixtures



County Law Enforcement Improvement:

- Upgraded entire heating plant

Detention Center Improvement:

- HVAC economizer

Complete lighting and plumbing retrofits throughout all three County facilities

Installed HVAC controls at all three facilities

SOLUTIONS AND OUTCOME

At the Courthouse, Willdan designed a new geothermal heat pump system to provide unmatched comfort to building occupants, while operating in a very energy-efficient fashion. New drop ceilings and lighting were installed throughout the courthouse. New windows and doors throughout the building further improved both the comfort and aesthetics.

A new heating plant replaced 50-year-old equipment at the adjacent Law Enforcement Center and a redesign of the HVAC equipment at the Detention Center eliminated long-standing maintenance challenges in the facility.

High-efficiency lighting and low-flow water fixtures, coupled with a comprehensive HVAC control system, further reduced utility costs and led to tremendous utility-cost reduction.

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