

County Jail Plumbing Overhaul Saves Water & Energy

Situation

The Rutherford County Jail was built in 1987 and needed a waterworks retrofit. Most equipment was water and energy inefficient. Some had been damaged by inmates or by extended usage.

Inmates in correctional facilities often consume a lot of water. Sometime they use plumbing fixtures to flood their cells, communicate with other inmates, dispose of contraband, & smuggle items between cells.

Project Scope

AQUA provided a turnkey solution which included engineering, M&V, installation, materials, delivery, project management, offsite disposal, system commissioning, written project reporting, as-built database, project coordination, and scheduling.

The 460 inmate cells were networked with BACNet 2-way controls for toilets, showers, and faucets. The server set-up rules limited the amount of flushes per day per toilet and runtimes per sink or shower operated by each cell. These cells are monitored and can only be overridden from guard station terminals.

The O-Zone Laundry System also produced large energy savings. The hot water load was reduced by 75% while disinfecting the laundry became more effective.

ECM plumbing projects extended to most secure and non-secure areas of the facility including Administration, Booking, Housing, Laundry, Kitchen, Medical, & Exercise areas.

Rutherford County Jail

Industry:

Corrections

Location:

Murfreesboro, TN



Project Goals:

Comprehensive water and safety retrofit

Operational Benefits:

Improved inmate control and facility uptime

Water & Energy Savings:

>\$100,000 annually

Upgraded Systems

- Water Closets
- Penal Valve Control Systems
- Faucets & Aerators
- Ozone Laundry Efficiency
- Dishwashing equipment

