

Racine County Law Enforcement Center Replacement Security Systems Racine, Wisconsin

Project Description:

This project consisted of replacing worn out and obsolete control systems with new touch screen programmable logic controllers (PLC's). This existing facility housed administrative offices and jail facilities operated by the Racine County Sheriff's Department, as well as Court Facilities. The facility control and monitoring systems operated from a Central Control Room on the first floor of the building, in addition to a number of local control points in the inmate housing modules and other parts of the facility. The Central Control Room operated all security-control functions utilizing a network of data-gathering panels located throughout the facility to control and monitor the secured doors, intercoms, and CCTV cameras. The D-Wing addition to the facility was controlled via an independent control system that required redesign in order to provide an integrated operating interface for the security system.

The length of the project was approximately 24 months from design to completion of construction. It was successfully completed, with owner directed changes, on time and within the owner's budget.

ACSI's Responsibilities:

Racine County engaged the architectural firms known as the DLR Group and ACSI to design the systems to allow for sequential replacement of the existing security control system; upgrade and replace the existing CCTV system; and replace the existing intercom system and speakers. To support the necessary changes in equipment, ACSI coordinated the architectural and electrical revisions as required with the architect. Some local control room functions were operated by separate control panels, which were not scheduled for replacement. Thus, proper coordination of the system interfaces between the remaining equipment and the Central Control Room was necessary. The door control system was integrated with the intercom and closed circuit television systems. The scope of work under this contract included:



- Removing the existing Honeywell door control system, including the central processing equipment and operator's controls, data-gathering panels and communications wiring.
- Furnishing and installing a new control system consisting of redundant programmable logic controllers, remote input/output modules, touch screen displays, and related equipment and wiring. Interfacing this system to existing field devices such as door position switches, electric door locks, duress alarms, etc. The existing communications raceways and data-gathering panel enclosures were reutilized.
- Removing and replacing the existing CCTV system, including cameras, switching equipment, cables and monitors. The existing raceways and camera enclosures were reutilized.
- Removing and replacing portions of the intercom system, including the Central Control Room master station, switching equipment and designated intercom stations.
- Removing the existing door-control console serving the D-wing of the building and interfacing it to the new door control, CCTV and intercom systems.
- Repairing or replacing existing door position switches.
- Providing additional door controls, intercom stations, cameras, and other devices and interfacing these items to the replacement control electronics, intercom and CCTV systems.