



Installation: **Farm Credit Services of the Mountain Plains, Greeley, Colorado**

Circon Integrator: **Commercial Systems Integrators, Fort Collins, Colorado**

Building Type: **Financial Institution**

Physical Description: **1 building – 3 stories**

Duration of Project: **October 1999 – April 2000**

THE CLIENT

Farm Credit Services, an agricultural lender, had been operating out of four smaller locations along the Front Range of Colorado and sought to consolidate these banking operations under a single roof. The new three-story facility houses 55 employees and provides both office and retail banking facilities for the bank's operations.

THE CHALLENGE

- *Energy demand limiting was important for controlling costs and providing payback*
- *Reliable HVAC and lighting control was their primary objective*
- *Security issues were paramount because of the need for employee after hours access*
- *System had to accommodate disabled employees and customers*
- *Strong desire to have a state-of-the-art facility*

In each of Farm Credit's previous buildings, temperature and air quality control had been problematic and the new consolidated headquarters had to overcome these problems. Initial plans to simply ensure a comfortable and well-maintained building were expanded by the possibility of an integrated and open architecture building automation system. In addition, security was an issue and needed to be part of the overall solution.

THE SOLUTION

- *Energy conservation achieved through monitoring systems that automatically shut off equipment when facility reaches peak energy levels*
- *Circon controllers integrate building's individual applications – HVAC, lighting, security and access into one easily managed system*
- *Card access system identifies employees and adjusts workstation lighting and temperature based on individual preferences*
- *System is tied directly to Diebold security panel to provide an advanced level of security*
- *Building automation system is currently managed for the client but can be accessed and controlled via easy to use in house system management*
- *Unlimited capability for future control function expansion allows Farm Credit Services to update or expand the system, including adding new facilities to the building automation system network*

There was a strong desire to have a system that operates at peak efficiency by integrating HVAC, lighting and card access controls. An intuitive card access system turns on the workspace lights and sets the temperature based on individual employee needs, and will automatically open the door for disabled employees. The ease of use and customization has exceeded the client's expectations.

"What we really appreciate is that it's pretty seamless. The system takes over a lot of the tasks that people used to do, and it allows us to easily make changes, to adapt as necessary."

Gary Pope, Assistant Vice President Operations, Farm Credit Service

THE DETAILS

HVAC AND LIGHTING CONTROLS

- *Extremely efficient energy consumption*
- *Fully integrated HVAC, lighting, and card access system*
- *Unsurpassed levels of staff and customer comfort*

When an employee swipes his / her card at a reader-head the system identifies who they are and which door they are using to access the building. The system will immediately use that information to turn on the entrance and work area lights. Circon controllers and third party devices are used to control the environment in various zones for increased energy efficiency and comfort. The Circon Power Management Controller provides peak demand limiting functionality. This results in significant energy savings which contribute to the payback of the system.

SECURITY

- *Employee after hours facility access*
- *12 independent access zones managed through a single source*
- *Circon System integrates with Diebold Security panel*
- *Code and card combination required to arm/disarm system for greater security*
- *Unique 24 inch card readers designed for employee convenience*

The Diebold security panel is hardwired into the overall building automation system (BAS), providing a guaranteed failsafe – the keypad card reader confirmation is used to arm/disarm the security system. Using the keypad and card access controller to arm or disarm the system provides an added layer of security.

There are 12 card access zones within the building. The card access controllers are configured to determine which zones the user is authorized to enter. The access zoning is concurrent with the lighting, security and HVAC applications.

SYSTEM MANAGEMENT

- *Single user interface to the entire building automation system*
- *Customizable user access privileges*
- *Easy to operate for all types of users including non-technical staff*
- *Simple transition to in-house building automation system management*
- *Site Management Controller intelligently handles all alarms*
- *Diagnostics, troubleshooting and repairs occur before building occupants are aware of problem*

Circon's building management software provides the building supervisor total monitoring control, the ability to view real time information and to change operating schedules on all subsystems. The simple text based user interface will allow the client to easily manage the building automation system in-house in the future.

SYSTEM COMPONENTS

CONTROLLERS AND SOFTWARE

Circon Programmable HVAC Controllers
Circon Terminal Unit VAV Controllers
Circon Card Access Controllers
Circon Low Voltage Lighting Controllers
Circon Power Management Controllers
Circon LON Integrated Node Connectors
Circon Site Management Controller
Circon System Integrator Software

MECHANICAL SYSTEMS

Carrier Rooftop Units
Leviton Lighting Motion Detector
BAPI Sensors
Belimo Air Controls
Mamac Sensors and Pressure Transducers
GE Lighting Controls
Water Leak Detection
Liebert Computer Room Unit Monitoring

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