

IDAHO STATE INSURANCE FUND

BOISE, ID, USA

ADMINISTRATION

INTEGRATED TEMPERATURE CONTROL

The Idaho State Insurance Fund facility is a 8,361 m² (89,989 ft²) office building with two storeys above grade and one storey below grade, which required integrated control of all HVAC systems with the ability to provide text alarms related to server room and equipment failures.

PROJECT DETAILS

Reliable Controls Authorized Dealer, Control Sentries of Idaho LLC, completed this retrofit project for the Idaho State Insurance Fund. The networked hardware in this project includes, but is not limited to, multiple MACH-ProCom and MACH-ProSys controllers tied into the client's V-LAN. The mechanical equipment installed includes 110- and 60-ton carrier chillers, eight boilers, two 40,000 CFM build-up air handlers with chilled water coils, in-row chilled water cooling units, 97 fan-powered, single duct VAV units, eighteen exhaust fans, two sump pumps, and two ejector pumps.

This project is unique due to the incorporation of the in-row server room coolers coupled to the chilled water system. The system uses a 60-ton, digital scroll air cooled chiller to provide server room cooling while the building is occupied or OAT is above 55 °F. Heat rejection from the server room is handled through custom AHU economizer control and logic to provide for free cooling below 55 °F OAT.

A challenge that was confronted was the elaborate control sequence required for staging the chillers up and down to prevent overheating of the server room equipment, as well as multiple fail safe alarm conditions.

The project generated energy savings at approximately 20,000–30,000 kWh per month, and effectively integrated all HVAC systems with the ability to provide text alarms related to issues.

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PROJECT TYPE:

Retrofit

TOTAL AREA:

8,361 m² (89,989 ft²)

INSTALLATION TYPE:

Boiler, Chiller, Heatpump, VAV,
Power Monitoring

EQUIPMENT INSTALLED:

2 MACH-ProCom™, 2 MACH-ProSys™,
1 MACH-ProPoint™, 1 MACH2™,
3 MACH2™ Expansion Cards,
97 MACH-Air™, 4 MACH-Zone™,
1 MACH1™, 1 MACH-ProZone™

NETWORK:

EIA-485, Ethernet, LAN

INTEGRATION:

BACnet®, Modbus, Proprietary Gateway

TOTAL SYSTEM POINTS:

3000+ points

RELIABLE CONTROLS[®] DEALER:

Control Sentries of Idaho LLC

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