nerej
CELEBRATING 55 YEARS

# Integrated Design Group completes $5 million renovation project of data center for state of Maine

January 31, 2013 - Northern New England

According to Integrated Design Group, (ID), an architectural, engineering and planning firm focused on data center design, design and construction has been completed for the state of Maine data center. This facility will serve as the primary data center for the state, providing the majority of their data storage requirements.

As a fully integrated design firm, ID provided architectural and MEP/FP design services for the 3,000 s/f standalone data center located in a 6,000 s/f building on the state capital campus. The $5 million renovation project required a near complete demolition of the interior space. Originally constructed for general office use, extensive structural reinforcement for the building's upper level was required in order to convert the existing space into a data center.

The design and construction of the data center were fast-tracked, completed in six months from start of design through commissioning and integrated system testing. The effort required the ID project team to work closely with the general contractor, PC Construction, in order to meet critical milestones throughout.

A major design challenge was to provide the data center with sufficient capacity despite significant space limitations. Originally a credit union, the structure is made up of irregular perimeter angles. As a way to work with the odd building shape and to conserve space, in-row refrigerant cooling units were selected as the primary source of data center cooling.

The mechanical design included an exterior chilled water glycol system for heat removal, with integral water economizer capability, which allows the data center to take advantage of the many available hours of Augusta's cool climate. The economizer allows the chiller plant to operate at partial capacity or be turned completely off during colder times of the day. Annual energy savings for the economizer should exceed six figures with a payback in less than one year.

The electrical system was designed to be concurrently maintainable throughout with redundant feeds to IT equipment and UPS/generator backup. A new primary utility feed from the existing campus power loop and transformer were included. The renovation also included new sprinkler and gas suppression fire protection systems.

"Integrated Design Group's deep knowledge of modern cooling methodologies, coupled with their expertise in data center design, made them the best choice for this project," said David Schoenherr,

project manager, state of Maine Bureau of General Services. "PC Construction was responsible for ensuring the highest quality of construction and technology for this state data center, and with ID's design, we were able to deliver on both aspects."

Other project team members included: PC Construction, contractor/CM/CA; RRC Engineering, structural engineer and Vanasse Hangen Brustlin, Inc., civil engineer.