**NYU Langone Medical Center**

**New York, New York**

*Enhancing design for more comfortable operations*

**THE CHALLENGE**:

After working for the New York University Langone Medical Center in the past, the hospital reached out to Fulcrum to respond to numerous comfort complaints and pressurization concerns in the Department of Dermatopathogy.

Another engineering company had designed a retrofit of the systems to handle the internal heat loads of the space. A technical commissioning company reviewed the installation and said they could not do anything to resolve the issues. Fulcrum was contracted to review the systems and provide retro-commissioning services to determine the cause of the problems and develop a corrective action implementation plan.

Fulcrum evaluated the systems and foundunstable temperature conditions, insufficient flow tracking, inadequate cooling, and improper space pressurization. From there, the firm pinpointed several installation deficiencies, existing base building issues and control-related issues that threatened the facility’s safety.

Those issues included the following:

* Closed base building fire dampers and damaged volume dampers;
* Incorrect lab exhaust box wiring;
* Improperly sized and installed control sensors (such as flow stations and pressure transmitters) that caused incorrect readings to the lab tracking systems; and
* Improperly programmed controlled sequences, which caused insufficient response and control methodologies.

**THE FULCRUM SOLUTION:**

Fulcrum reprogrammed the control system by recalibrating all sensors, replacing inadequately sized transmitters and wiring controller outputs.

The crew also reviewed the base building systems that service this space as well as adjacent spaces of different hospital programs. The base air-handling units and exhaust systems were reset to new parameters to allow for adequate control and stability.

Next, Fulcrum trained the operations team to understand, troubleshoot and respond to the Lab Tracking Control System. This ensured the hospital team could quickly respond to any issues that needed immediate attention.

**THE RESULTS:**

In addition to equipping the on-site team to better maintain the system, Fulcrum focused on program design intent. Removing supplemental cooling units maintained the pressurization of the suite, which reduced occupant complaints.

The medical center has changed its design philosophy when it is upgrading existing facilities especially when they are connected to existing building services. This will allow for retro-commissioning if needed in the future.