

Category: 2 – Meeting the Challenges of a Difficult Job – Specialty Contractor

Contractor: LONG Building Technologies

Project Name: Evans Army Community Hospital

LONG overhauls outdated building automation system at Evans Army Community Hospital

2014 ACE Awards Submission

When working in a hospital, the “pardon our dust” signs just don’t cut it and small spaces with tight schedules are the norm. Of course, for the LONG Building Technologies team, this wasn’t just any hospital. The fact that the 600 bed Evans Army Community Hospital on Fort Carson in Colorado Springs serves U.S. soldiers, their families and veterans added a certain level of importance to the rigorous project requirements. Not only did the LONG team have to provide an effective solution to the hospital’s outdated building automation system, but it also had to deliver it with zero disruption to the system, hospital schedules or patients making it a unique experience and test of skills.

While it was out with the old, obsolete building automation system and in with a state-of-the-art Schneider Electric I/A Series DDC system, scheduling and coordination with the team were key before diving into the project. Several months went into the preparation involving not only the LONG team, the general contractor, JJ Kirlin Special Projects and the building owner, but also hospital administration and staff in charge of patient and operating room schedules. Each detail of the process was meticulously shared and planned out with all parties to ensure flexibility, accuracy and efficiency.

Ten hour shifts were pushed back to evening and overnight hours from 4 p.m. to 2 a.m. in order to work around the hospital’s busy daytime hours including procedures in the facility’s eight operating rooms. Once the last procedure wrapped for the day, LONG went in and replaced the operating room air handler controls one at a time to avoid taking them all offline at once. The team also had to work quickly and efficiently as the room in construction not only had to be back up and operational by the next morning for the first scheduled procedure, it also had to be in pristine condition as if nobody had ever been there.

In fact, the dust created by such a project had to be completely contained in the construction environment to maintain the air quality and comfort for patients and employees. To remedy this issue, containment tents with HEPA vacuums were set up in occupied spaces above ceilings. Workers then sacrificed their own comfort to get the job done correctly by carrying out the project on ladders within these small, 3 by 5 foot isolated areas. Often times, LONG would set up three to four of these containment tents down a hallway just to push and pull replacement cabling through the ceiling to avoid the release of any particles.

While the team had to adjust schedules and methods to complete the job without disturbing the balance in the facility, it also had to think of innovative ways to keep the large hospital 100 percent functional while replacing the outdated system. Air handlers that served general rooms, clinics and patient rooms had to be operational at all times even during the changeover, so the team built temporary control panels that kept the system running while it gutted, rebuilt and installed the new control panels.

Temporary communication cabling was also utilized when replacing controllers. The team ran a temporary network from the control panel to all controllers, installed the new JACE controllers, then pulled the temporary network, keeping everything in working order at all times. About 1,000 controllers were replaced throughout the hospital for this project and Automation technicians averaged 12 to 15 replacements per night.

Throughout this intense process of minimizing all kinds of disruption from the physical to environmental, safety always came first not only for the soldiers and their families, but hospital staff and the LONG team as well. JJ Kirlin Special Projects' Accident Prevention Plan was followed during the project and included weekly and monthly safety checklists as well as a weekly PreTask Planner, which keeps safety a top of mind issue by encouraging workers to think of ways to avoid or mitigate risks and hazards associated with particular tasks. Weekly Toolbox Talks also allowed for safety discussions based on specific tasks for the week and gave workers the opportunity to speak face-to-face with the general contractor about any concerns, questions or recommendations about jobsite safety. More than 9,700 working hours were logged for this project with no lost time and zero recordable injuries.

LONG finished the project under budget and ahead of schedule, completing the design and implementation in 15 months instead of the projected 18 months all without disruption to patients, schedules or the system. This military hospital's building automation system is now

modernized, completely scalable, expandable, web enabled and operator friendly for greater control and convenience as well as comfort for soldiers and their families. The facilities management team at the hospital was pleased with the upgrades the team provided as well as the care and flexibility that went into adhering to the hospital's scheduling and standards. LONG was proud and honored to provide this service to those bravely serving our country.









