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UNC Wilmington re-Keys for higher security

For 10 consecutive years, the University of North Carolina Wilmington (UNCW) has been ranked among the top 10 public universities in the South by U.S. News & World Report, in recognition of its small-college commitment to excellence in undergraduate teaching, combined with a research university's opportunities for student involvement in faculty scholarship. Founded as two-year Wilmington College in 1947, it became a four-year institution and a member of the UNC system in the 1960's, and now offers comprehensive undergraduate and master's programs as well as several highly selective doctoral programs. With a student body of nearly 12,000 in several locations, UNCW's main campus is located on approximately 600 acres.

The UNCW Physical Plant department maintains about 125 buildings, according to J. Lynn Medlin, a 28-year veteran of college facility maintenance who supervises the university's carpentry, locksmithing and painting.

UNCW Human Resources

Tightening key control

As the traditional security system at UNCW expanded with campus growth, it became more difficult for key control to keep pace. Concerns that the existing key system was running out of key changes, coupled with the loss of several grand master keys, led to a program of re-keying all campus buildings with a system offering greater security. A subsequent review of other security measures pinpointed situations where electronic access control and wireless technology could bring security to a higher level. To manage these challenges, administrators turned to Allegion's patent-protected keyway system that prevents unauthorized duplication. The keyway design incorporates a patented undercut groove, milled into the right side of the key blade.
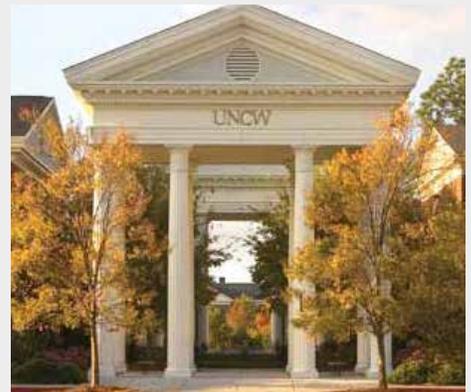
UNCW has since adopted a ten-year plan to convert all existing university-owned residential, academic and facilities buildings as they are renovated. The initial phase of the project includes 12,000 cores, and as new buildings are constructed, they are specified with the upgraded keyways. As project manager for the conversion, Medlin was impressed with the manufacturer's commitment to maintaining hardware reliability and control of security. For this initiative, Allegion worked with UNCW's architects and Medlin's team to develop an overall specification guide to control hardware quality and application uniformity. Medlin cites examples where substitution with lesser grades of exit devices and other products led to poor performance and replacement of the under-performing hardware at added cost. Based on previous success with exit devices, door closers and related hardware made by the manufacturer, he was confident he would get both the product quality and support he needed.

Additional security upgrades

In addition to the new key system, UNCW is enhancing other security measures. Electronic access controls are being installed on exterior doors where it is necessary to have a higher level of control. In most cases, these are operated by magnetic stripe cards, but can be activated by a PIN code or a combination of card and PIN. Typically, the devices are applied as exterior trim on doors with electronic exit devices, which then function as request-to-exit switches. The exterior units also incorporate a mechanical key override.

In residence halls, front doors generally are monitored by an attendant on duty at a reception desk. Delayed exit devices are used on other doors to provide emergency egress while maintaining a normally secure configuration. To discourage unauthorized use of these doors, the devices sound an alarm and remain locked for 15 seconds when activated, after which they release; if the fire alarm system is activated, however, the devices release immediately.

While many end-users worry about costs associated with access control, UNCW has implemented the wireless system without taxing its budget. The use of wireless access control, particularly on existing buildings, eliminates hardwiring of networked card readers, door position switches and request-to-exit switches, which reduces costs significantly, speeds up installation and maintains building aesthetics by avoiding the need to run wires that can't be concealed.

Wireless locks can transmit real-time data within a 200- foot radius to the access control system. To ensure its effectiveness, Medlin tested the strength of the signal between the lockset and the wireless panel, enabling him to properly locate the panel being installed.

At the outset, UNCW ordered 60 exit devices with wireless capability to support $170 million for active construction projects. The campus master plan approved in 2006 maps out future development to accommodate the needs of a growing student body, including construction of five to seven new residence halls in the near future.

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