At the new Tanimura and Antle Family Memorial Library, located on California State University, Monterey Bay (CSUMB) campus, a variety of door hardware solutions provides security for the building’s contents and occupants as well as a high degree of flexibility for its users.

The building was designed by EHDD Architecture, of San Francisco and features a central three-story axial atrium between two distinct wings: a collections wing and an office wing. The design saved significantly on construction costs, as only the collections wing required the added expense of reinforced floors to bear the weight of the book stacks. The collections wing houses book stacks in the center of the floor and study spaces around the perimeter. This arrangement, along with a delicate external louver system, protects the books from harmful UV rays and provides the students with study spaces bathed in daylight. In addition to housing the librarians’ office and library staff spaces, the office wing provides space for a unique combination of student services that include writing, tutoring and mentoring programs. The atrium provides a great place to study by connecting students to promote collaborative learning and connecting the building to the academic campus.

**Securing the contents**

While the library was designed to provide an open and effective environment that supports and enriches student life, it also needed to be secure without being inconvenient.
James Conway, Inspector of Record for the University, explains that the main entrance doors unlock automatically at 8:00 am and re-lock at 12:00 midnight. After-hours card access is available to authorized individuals. Conway notes, “The University ID card acts as a proximity card for access. There is also a touch pad for ADA access at any time, but for access before or after normal hours, the user needs a card. The pad alone won’t work for anyone without a card.”

Doors on the opposite end of the building open at 7:00 am to provide access to a series of classrooms, which seat from 40 to 200 people. Interior doors between the lobby on that end of the building and the main library area remain locked until 8:00 am however. When the library is in operation, students must pass through scanners when they leave, which ensures that books are properly checked out.

Schlage SFIC key system is used throughout the building to simplify re-keying when necessary. Main entrance doors incorporate Von Duprin concealed vertical rod exit devices that enhance security when locked, yet allow safe egress. Door position monitors ensure that entrance doors are securely closed, while Von Duprin alarmed exit devices on emergency stairwell doors direct people to leave through the main exits under normal conditions and prevent theft of materials. Selected pairs of doors include secure keyed removable mullions that allow larger objects to be moved in and out.

**Protecting and serving the users**
The library building features smoke evacuation windows designed to protect occupants in case of a fire. Conway says that, because smoke is the most dangerous element of the fire, in this type of building construction, the building includes four atrium exhaust fans that remove smoke when activated by the atrium smoke control system. To provide replacement air, 50 percent of the windows on the first floor and 25 percent of the windows on the second and third floors incorporate door closers and Schlage electromagnetic locks that release when an alarm is activated. The closers are installed so they cause the windows to open and allow fresh air to enter.

Another protection is the seismic design of the structure. Expansion joints between floors incorporate Teflon pads and allow motion in multiple directions.

The building design concentrates the noisier functions on the lower floors, while the furniture arrangements and program functions encourage quieter individual study on the upper floors. Raised access floors throughout the building, other than the central terrazzo area, allow flexibility in locating data, electrical and wireless connections. They also double as an air plenum to provide an energy-efficient mechanical system and improved indoor air quality. Daylighting strategies shape the form of the building and reduce energy usage while also providing greater connection to the outdoors.

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