

Restricting access while improving accessibility

Access control systems have become commonplace in every type of commercial facility, from healthcare to health spas. They are renowned for being convenient, easy to maintain, increasingly affordable and highly effective at restricting unauthorized access. However, it's important to be aware of some of the ways in which these systems can also impair the authorized access of the elderly and people with disabilities.

Working with hardware and security experts can help mitigate many of these issues, but some are not currently addressed by the codes. By being aware of these particular challenges and including appropriate access control solutions as part of the system design, integrators can play a vital role in creating a space that balances the safety, security and convenience of *all* occupants.

Where to begin

Although access control systems are typically standard on new construction, they are still frequently overlooked during the initial design process, as are the openings on which they will be installed. The later in the process issues like access control and accessibility are addressed, the more likely they are to create problems because they directly impact door specifications and, ultimately, how an opening must be constructed in order to comply with the relevant fire and life safety codes.

Access control should be planned for after the initial architectural plans and building layout is complete. "Ideally, access control planning should occur in conjunction with the hardware design," says Derek Ommert, PSP, Safety and Security Consultant at Allegion.

To ensure this happens, all the relevant experts should be in the planning process—including integrators. The hardware consultant, the security consultant, IT and possibly an electrical engineer should also be involved.



“By relying on industry subject matter experts early in the process, the reliability of access control is better able to be considered for the environment for which it’s planned,” says Ommert. As an example, he points to a hospital setting where access control considerations must accommodate the quiet, patient environment in addition to the facility’s unique life safety and security needs. Consulting with experts in these issues will go a long way towards ensuring a satisfactory outcome.

Ensuring accessibility

Once a team is assembled, be sure to emphasize the importance of ensuring accessibility as a guiding principle for the planning process. Below are some common issues to be aware of as plans are being made:

- Operable hardware that is “easy to grasp with one hand and does not require tight grasping, pinching or twisting of the wrist to operate,” must be mounted within the allowable range—The 2010 ADA operable force requirements state that door and gate hardware must operate with 5 pounds of force, maximum.
- Standby Power for Automatic Operators is required for automatic doors if the proper maneuvering clearance isn’t provided. However, automatic operators on fire-rated doors are required to be deactivated upon fire alarm. Therefore, an automatic operator with standby power should not be used on a fire-rated door to overcome maneuvering clearance problems because it will not be functional when the fire alarm is sounding.
- The 2002 edition of ANSI/BHMA A156.19 introduced a requirement for power-assist and low-energy-power-operated doors to be activated by a ‘knowing act,’ such as a push-plate actuator or an access control device like a card reader, keypad or keyswitch.
- Stepping into the field of a motion sensor is not considered a knowing act. If automatic operation via a motion sensor is desired, automatic doors must comply with the standard for full power operators. This means that even though the door may have a low-energy operator, it has to meet the same requirements as a full-power operator, including the safety sensors or control mats and guide rails.



- Maneuvering Clearance for Recessed Doors must be provided when there is an obstruction within 18 inches of the latch side of a door that projects more than eight inches beyond the face of the door. Without this clearance, a person using a wheelchair may not be able to open a door that is recessed in an alcove. A frame with a large jamb depth (approximately 10 inches or more) can create the same situation.

Although access control products must comply with the same code requirements as mechanical hardware, architects and security consultants should also take into account some of the accessibility concerns that may not be addressed by codes. For instance, there are several types of readers and credentials that are difficult, if not impossible, for people with certain disabilities to operate. A keypad that requires a high degree of manual dexterity to enter a code will prove far more challenging than a proximity reader. Be sure to consider whether the use of potential products will be appropriate for occupants of ages and abilities before making any decisions.



An ounce of prevention

Another benefit of bringing together stakeholders early is that it helps eliminate many of the unpleasant surprises that can lead to delays and dissatisfaction. “One of the biggest surprises is the length of time it takes to incorporate access control into design,” says Ommert. “That surprise usually comes when access control is treated as an afterthought—an add-on, after the design has been finalized.” When access control is added later in the construction process, it often results in additional circuits extra raceways, and power and conduit layout changes. “This often leads to change orders—and more time and money,” he says.

Planning for access control early on also ensures the access control system will not only be appropriate for the current needs of that facility, but flexible enough to adapt to future changes. Because today’s systems frequently extend access control into parking garages, warehouses, storage units and other areas, plans must also take into account the potential needs of the system outside the main building. Failure to incorporate access control into the design phase can result in situations such as an owner wanting access control on a walkway that connects a building and a parking garage, but the design of the walkway limits what’s possible from an access control standpoint because of egress requirements dictated by building codes.

Taking the time to consult with all the relevant stakeholders and properly incorporate access control into the design process will help avoid many of the costly mistakes and frustrations that occur when it is overlooked.

If you want an Allegion integrator sales rep to assist your client, contact us today [online](#) or by calling 888-758-9823.

About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 8,000 people and sells products in more than 120 countries across the world. Allegion comprises more than 25 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. For more, visit www.allegion.com.