

E61-24

IBC: SECTION 202 (New), 1010.2.15 (New), 1010.2.15.1 (New), 1010.2.15.2 (New), 1010.2.15.3 (New); IFC: SECTION 202 (New), 1010.2.15 (New), 1010.2.15.1 (New), 1010.2.15.2 (New), 1010.2.15.3 (New)

Proponents: John Woestman, Kellen Company, Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com); Jeff Grove, Chair, Building Code Action Committee (BCAC) (bcac@iccsafe.org); Jeff O'Neil, Chair, Committee on Healthcare (ahc@iccsafe.org)

2024 International Building Code

Add new definition as follows:

CONTROL VESTIBULE.

A space with doors in series that are interlocked such that when one door is open other doors are restricted from opening.

Add new text as follows:

1010.2.15 Control Vestibule. Control vestibules shall be permitted in the means of egress for security, environmental control, or clinical needs in:

1. Groups F, H-3, H-4, H-5, I-1, I-2, and S where the occupant load of the room or space served by the control vestibule is less than 50.
2. Groups B and M where the occupant load of the room or space served by the control vestibule is 10 or less.

1010.2.15.1 Protection. Control vestibules shall be permitted where the building complies with either of the following:

1. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
2. An approved automatic smoke detection system in accordance with Section 907 is installed in the room or space served by the control vestibule.

1010.2.15.2 Egress path. The egress path from any point shall not pass through more than one control vestibule.

1010.2.15.3 Interlocking door operation. Where doors in the means of egress are configured as a control vestibule, the control vestibule door interlocking system shall provide for egress. The control vestibule shall comply with all of the following:

1. An approved override switch shall be provided on the egress side of each door of the control vestibule which unlocks the interlocked electric lock of that door.
 - 1.1. Each override switch shall be located within 48 inches (1219 mm) of the door and 40 inches minimum to 48 inches maximum (1016 mm to 1219 mm) above the floor.
 - 1.2. Signage shall be provided with instructions on the use of the interlock override switch.
 - 1.3. When operated, the override switch shall result in direct interruption of power to the interlocked electric lock — independent of other electronics — and the interlocked electric lock shall remain unlocked for not less than 30 seconds.

Exception: Where the control vestibule is designed to impede occupant egress for security reasons, the override switches for the door interlocks shall be permitted to be moved to approved alternate locations.

2. Upon activation of the automatic sprinkler system or automatic smoke detection system the interlock function of the doors of the control vestibule shall deactivate.
3. Upon loss of power to the interlock function of the doors, the interlock function of the door locking system of the control vestibule shall deactivate.

4. Where a control vestibule serves a room or space equipped with an *emergency alarm system for hazardous materials*, the interlock function of the doors shall deactivate when such *emergency alarm system* is activated.
5. The doors of the control vestibule shall be self-closing.
6. The doors of the control vestibule shall swing in the direction of egress travel.
Exception: Power-operated doors in accordance with Section 1010.3.2.
7. The electro-mechanical or electromagnetic locking devices shall be listed in accordance with either UL 294 or UL 1034.

2024 International Fire Code

Add new definition as follows:

CONTROL VESTIBULE. A space with doors in series that are interlocked such that when one door is open other doors are restricted from opening.

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1. Groups F, H-3, H-4, H-5, I-1, I-2, and S where the occupant load of the room or space served by the control vestibule is less than 50.
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1. Interlocking door operation. Where doors in the means of egress are configured as a control vestibule, the control vestibule door interlocking system shall provide for egress. The control vestibule shall comply with all of the following:
 - 1.1. Each override switch shall be located within 48 inches (1219 mm) of the door and 40 inches minimum to 48 inches maximum (1016 mm to 1219 mm) above the floor.
 - 1.2. Signage shall be provided with instructions on the use of the interlock override switch.
 - 1.3. When operated, the override switch shall result in direct interruption of power to the interlocked electric lock — independent of other electronics — and the interlocked electric lock shall remain unlocked for not less than 30 seconds.

Exception: Where the control vestibule is designed to impede occupant egress for security reasons, the override switches for the door interlocks shall be permitted to be moved to approved alternate locations.

2. Upon activation of the automatic sprinkler system or automatic smoke detection system the interlock function of the doors of the control vestibule shall deactivate.
3. Upon loss of power to the interlock function of the doors, the interlock function of the door locking system of the control vestibule shall deactivate.

4. Where a control vestibule serves a room or space equipped with an emergency alarm system for hazardous materials, the interlock function of the doors shall deactivate when such emergency alarm system is activated.

5. The doors of the control vestibule shall be self-closing.

6. The doors of the control vestibule shall swing in the direction of egress travel.

Exception: Power-operated doors in accordance with Section 1010.3.2.

7. The electro-mechanical or electromagnetic locking devices shall be listed in accordance with either UL 294 or UL 1034.

Reason: Control vestibules are being incorporated in the means of egress in a variety of occupancies. A control vestibule has doors in series which are interlocked such that when one door of a control vestibule is open, the other door in series in the control vestibule is temporarily prevented from being opened.

The IBC is currently silent regarding requirements and guidance for control vestibules. This proposal does not require installation of control vestibules, but offers requirements (guidance) for where control vestibules are incorporated in the means of egress.

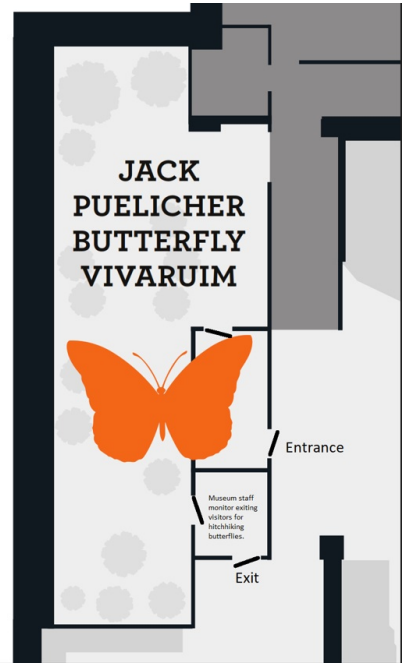
This proposal addresses egress related requirements for control vestibules. Control vestibules which provide security or access control on the ingress side of doors into a building or into a space within a building are more common than control vestibules on the egress side of doors in the means of egress from a space or from a building. Requirements for the access-side of control vestibules is typically outside the scope of the IBC. Thus access-side control vestibules are not regulated or prohibited by the IBC provided all requirements for egress are complied with. This proposal addresses control vestibules in the means of egress with egress-side requirements.

Control vestibules must provide for egress. Together, the definition and proposed requirements provide for egress where control vestibules are installed.

The occupancy groups and maximum occupant loads in this proposal (in 1010.2.15) are the result of discussions and votes during the Committee Action Hearing and Public Comment Hearing of the 2021 ICC code development cycle. And the result of subsequent suggestions and recommendations by stakeholders.

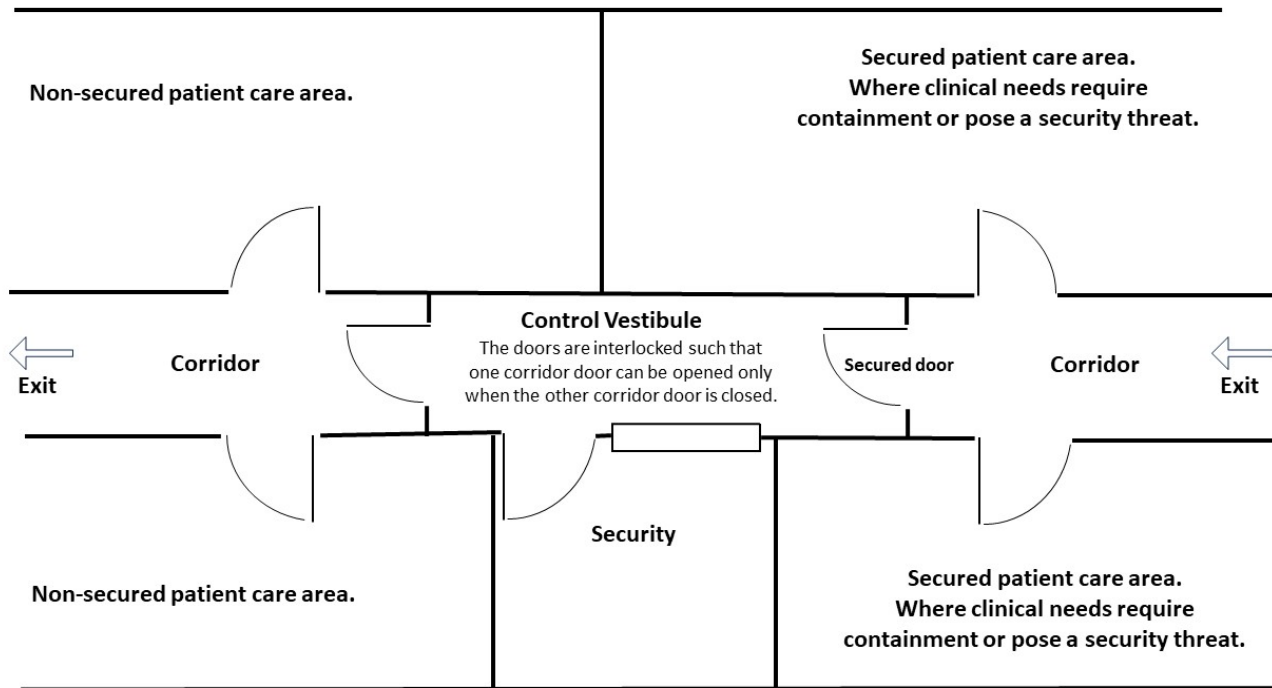
Control vestibules are most commonly configured as a space with two doors in series. But, some control vestibules are configured with more than one inner door and / or more than one outer door. For example, where a control vestibule is required to help keep clean rooms clean, there may be inner doors from more than one clean room opening into the control vestibule, and one outer door for leaving the control vestibule in the direction of egress. Control vestibules are different than sallyports, which are defined in the IBC and permitted in Group I-3 occupancies. Group I-3 includes correction centers, detention centers, jails, prisons, and similar uses. A sallyport is a security vestibule which prevents unobstructed passage. A control vestibule is intended to allow unobstructed passage but prevents more than one door of doors in series to be open at the same time.

The provisions of this proposal have been discussed, debated, and revised during the most recent ICC code development cycles, and the provisions have been further refined via feedback and comments from many stakeholders.



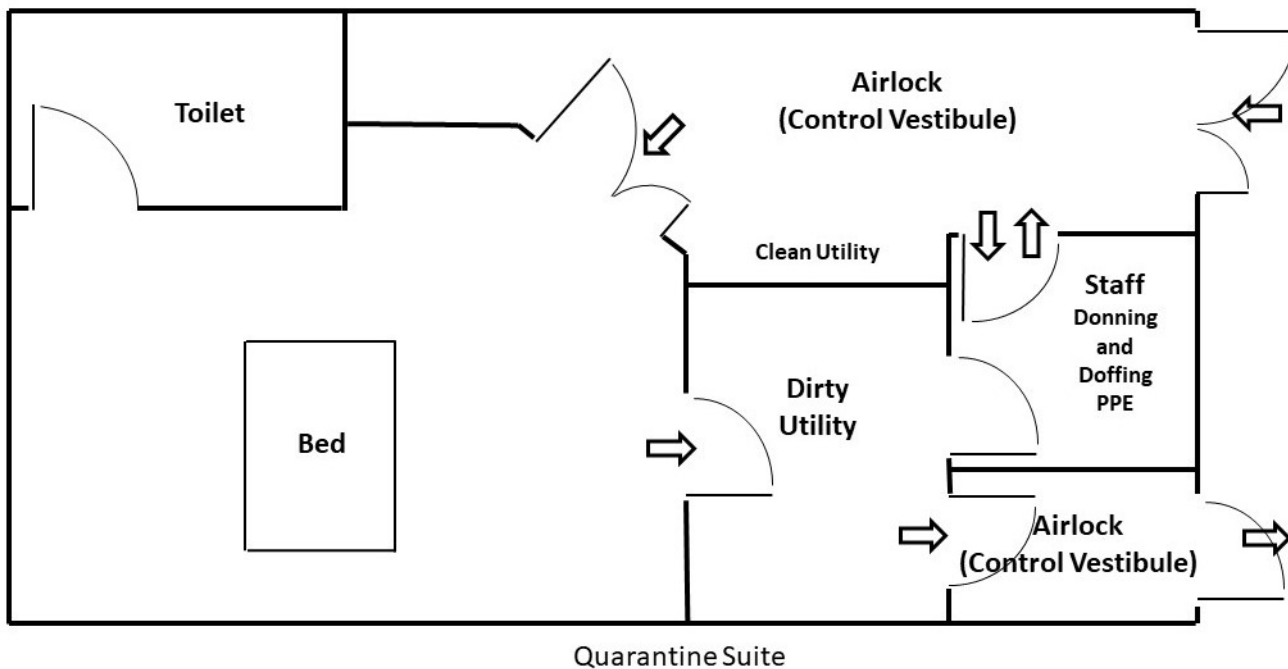
Milwaukee Public Museum Butterfly Vivarium

This picture and floor layout of the butterfly vivarium at the Milwaukee (Wisc.) Public Museum illustrate a potential application of a control vestibule. The vestibule and doors for one-way passage into the butterfly vivarium are currently configured as an “on your honor” control vestibule. The sign on the inner door advises visitors to the vivarium to wait for the outer door to close before opening the second door to enter. With electrical locks on the two doors, and with related controls, this space could be configured as a control vestibule. This proposal addresses requirements of control vestibules from an egress perspective, but not from an ingress perspective. In this butterfly vivarium example, the code’s requirements affect how the control vestibule would be configured to ensure egress. The one-way out vestibule on the exit side of this vivarium (see the floor plan) is also an “on your honor” control vestibule. A museum staff person is stationed inside the exit vestibule tasked with ensuring butterflies do not escape with visitors, and with ensuring in each of these two vestibules that both doors in the vestibule are not open at the same time. Installing electrical interlocks and controls on the doors of these vestibules to create control vestibules would relieve the staff person from carefully watching the doors and enable the staff person to interact more with the visitors.



A control vestibule may be used in healthcare applications to prevent patients in the secured patient care area from making a successful “run for it” when the secured door is opened.

This is an example of an application of a control vestibule in the corridor between secured and non-secured patient care areas in a healthcare setting. The secured patient care area is for patients with clinical needs that require containment or pose a security threat.



In healthcare, where it’s critical to manage airflow into and out of the patient treatment space, quarantine suites may be configured with airlocks with interlocked doors (i.e. control vestibules). The airlock doors in the sketch would be configured such that only one door (or one pair of doors) in the airlock could be open at a time.

This proposal is submitted by the ICC Building Code Action Committee (BCAC) and ICC Committee for Healthcare (CHC).

BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2023 the BCAC has held several virtual meetings open to any interested party. In

addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the BCAC website at [BCAC webpage](#).

The Committee on Healthcare (CHC) was established by the ICC Board of Directors in 2011 to pursue opportunities to study and develop effective and efficient provisions for Hospital, Nursing Homes, Assisted Living and Ambulatory Care Facilities. This committee was formed in cooperation with the American Society for Healthcare Engineering (ASHE). In July of 2017, the ICC Board made CHC a standing committee. In 2023 the CHC has held several virtual meetings open to any interested party. In addition, there were numerous virtual Working Group meetings for the current code development cycle, which included members of the committee as well as interested parties. Related documents and reports are posted on the CHC website at [CHC webpage](#).

Cost Impact: The change proposal is editorial in nature or a clarification and has no cost impact on the cost of construction

Justification for no cost impact:

The IBC is currently silent regarding control vestibules, and control vestibules are not proposed to be required.

Today, where control vestibules are optionally constructed, alternative means and methods are typically used for code compliance.