

On an active construction jobsite, perimeter access control must balance two priorities: preventing unauthorized entry and ensuring rapid, unimpeded evacuation during emergencies. Choosing and configuring fail-safe versus fail-secure hardware is the key decision that balances security and site safety.



1. Defining Fail-Safe vs. Fail-Secure

	Fail-Safe (Power-to-Lock)	Fail-Secure (Power-to-Unlock)
Power Loss State	Unlocked / Free-Spin / Disengaged	Locked / Secured
Primary Goal	Life Safety & Free Egress	Perimeter & Asset Security
Operating Logic	Requires power to stay locked. Removing power releases the barrier.	Requires power to unlock. Removing power keeps the barrier locked.
Risk on Power Loss	Perimeter becomes open / unsecured.	Occupants can be trapped without manual overrides.



Fail-Safe Mechanism: When power drops or a fire alarm relay trips, the lock de-energizes so arms can spin freely or collapse.



Fail-Secure Mechanism: Power is only applied to unlock during a valid scan. If power fails or cables are cut, the turnstile remains locked.

MANUAL OVERRIDE



Manual override keys can be inserted into the roof to manually override the turnstile during emergencies or maintenance.

2. Construction Site Mechanics: Dual-Direction Rules



Recommended jobsite configuration: Entry = Fail-Secure | Exit = Fail-Safe / Free-Exit

3. Recommended Egress Strategies for Construction Sites



Adjacent Emergency Gate

Do not rely on turnstile lanes as the only emergency exit route. Install a side-hinged pedestrian gate next to the turnstile bank with interior panic hardware.



Fire Alarm / Emergency Relays

Connect the turnstile controller to the site alarm system so an alarm or power disconnect automatically drops or unlocks the barrier without manual intervention.



ADA, Tools & PPE

Provide an adjacent gate with at least 32 inches of clear width for wheelchair users, stretchers, and workers carrying tools or materials.



Backup Power & Manual Override

Use a UPS / battery backup to ride through outages and maintain card logging. Establish a manual key override protocol for emergencies or equipment damage.



CHECKLIST FOR SITE MANAGERS

- ☐ Entry is set to Fail-Secure; Exit is set to Fail-Safe / Mechanical Free-Exit.
- ☐ An adjacent outward-swinging gate with panic hardware is installed next to the turnstile bank.
- ☐ Fire alarm / emergency panic buttons drop or unlock turnstile arms automatically.
- ☐ Exit routes are clearly illuminated and marked with compliant EXIT signage.
- ☐ Emergency roll-call software and readers continue operating on battery backup during power loss.

