

# Building Security: Basic Design Strategies

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Revised February 2007

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## SUMMARY

Randall I. Atlas, PhD, AIA, CPP, explains how to combine organizational, mechanical, and natural features to support the security functions of access control, surveillance, and territorial reinforcement.

## INTRINSIC SECURITY DESIGN

Traditional security designs typically block access to assets by employing fortress-like or bunker-like designs with reinforced concrete walls, high-security locks, alarms, and similar features. While warranted in some situations, this approach tends to overlook opportunities offered by intrinsic or “natural” access control and surveillance strategies. With appropriate site and architectural design, natural strategies can offer results as effective as “mechanical” hardening and surveillance.

## ACCESS CONTROL

Access control is a consideration at all entrances and exits to a site or building, at internal access points to restricted or controlled areas, and at natural or artificial features—such as trees, ledges, skylights, balconies, windows, or utility tunnels—that could be used to gain access to a property. Organizational methods of access control include employment of security guards. Mechanical strategies include the use of locks, card key systems, protective window grilles or force-resistant glazing, and tamper-resistant door and window operating hardware. For high-security areas, walls, floors, or doors may be reinforced with materials that are difficult to penetrate. Natural access control strategies rely on clear spatial definition and circulation patterns as well as layered security zoning concepts.

## SURVEILLANCE STRATEGIES

Organizational surveillance strategies include the use of assigned police or guard patrols, or they might rely on the heightened awareness of

individuals with a vested interest in protecting the assets—for example, members of a neighborhood watch in a residential or business community, or receptionists or information station employees who

already work at points of access or surveillance. Natural measures include placing windows in locations that have a broad view of the property, providing ample glazing in entrance doors, planting low-height shrubs and high-canopy trees, and elevating entrances, balconies, and porches above street level.

## DEFINING TERRITORY

Defining territorial boundaries clearly can alert potential offenders that they do not belong in a space and are at risk of being seen, identified, and reported. Clear boundaries also contribute to a sense of ownership among legitimate users and encourage them to protect their turf. The design and layout of many site and architectural elements such as landscaping, fences, walls, windows, doors, lighting, and walking surfaces can influence the behavior of both legitimate and unlawful users of a space.

## ABOUT THE CONTRIBUTOR

Randall I. Atlas, PhD, AIA, CPP, president of Counter Terror Design Inc., is a nationally recognized trainer and author on crime prevention through environmental design (CPTED) for the National Crime Prevention Institute, ASIS International, and the AIA. He is a consultant to the U.S. Department of Housing and Urban Development and has conducted numerous CPTED surveys. He has contributed to the *Protection of Assets Manual* and is a regular contributor to *Access Control & Security Systems*, *Security Technology & Design*, and *Security Management* magazines.

## RESOURCES

### More Best Practices

The following AIA Best Practices provide additional information related to this topic:

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|----------|--|
| 09.03.01 | Becoming a Certified Protection Professional             |
| 11.10.01 | Understanding Human Behavior Leads to Safer Environments |
| 11.10.06 | Vulnerability Analysis and Security Assessment           |

### For More Information on This Topic

See also “Security Evaluation and Planning,” by Marco A. Monsalve and James R. Sutton, *The Architect’s Handbook of Professional Practice Update 2003*.

See also the 14th edition of the *Handbook*, which can be ordered from the AIA Bookstore by calling 800-242-3837 (option 4) or by email at [bookstore@aia.org](mailto:bookstore@aia.org).



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### Key Terms

- Building performance
- Use design
- Security