



# CPTED GUIDELINES



Safety by Design:  
Creating a Safer  
Environment In Virginia



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## Virginia Chapter American Planning Association

February 9, 2005

Virginia Crime Prevention Association  
1405 Westover Hills Boulevard  
Suite 6  
Richmond, Virginia 23225

Dear CPTED Leadership,

The Virginia Chapter of the American Planning Association would like to commend the work of the Virginia Crime Prevention Association on their document entitled *CPTED Guidelines – Safety by Design: Creating a Safer Environment in Virginia*. The Chapter hopes that local planners can use the three interrelated principles of Natural Surveillance, Natural Access Control, and Territoriality as guidelines for promoting safer design within their communities. The need for planners to shape a strong community vision has never been greater. This document fills a much needed element in the picture of greater planning principles professionals must take under consideration as they work in their communities.

The mission of the Virginia Chapter is to promote planning as the foundation for effectively addressing the physical, economic and social changes taking place in Virginia. VAPA is committed to promote awareness about planning's many benefits, through effective leadership in order to enhance our practice throughout the Commonwealth. VAPA's membership is comprised of over 1,300 practicing professionals from the public and private sector, as well as academics and students. If there are ways CPTED and VAPA may work together in the future to make our joint missions succeed, we would welcome the opportunity.

Thank you for allowing the Chapter to review this additional tool that planners, citizens, police personnel, and design professionals can use to create safer environments. We all benefit from healthy communities.

Sincerely,  
Denise M. Harris, AICP  
President  
VAPA



COMMONWEALTH of VIRGINIA  
DEPARTMENT OF  
HOUSING AND COMMUNITY DEVELOPMENT  
Division of Community Development

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January 24, 2005

Virginia Main Street, a program of the Department of Housing & Community Development, is pleased to recommend *Safety by Design: Creating a Safer Environment in Virginia* to advocates, planners and communities involved in downtown revitalization.

Using the concepts and application of the principles of Crime Prevention Through Environmental Design (CPTED), we can effectively discourage crime and, in the process, bring back the beauty and economic viability of our older commercial areas. People are drawn to areas of beauty where they feel safe and comfortable and, as a result, treat such areas with greater respect. CPTED provides attractive and feasible solutions that historic downtowns can implement with both small and large-scale projects and is an excellent tool to help plan the appropriate revitalization of Virginia's commercial districts.

*Safety by Design: Creating a Safer Environment in Virginia* should be the first source a community turns to when interested in incorporating CPTED concepts into streetscaping and site design projects for historic downtowns. It has been a pleasure partnering with the Virginia CPTED Committee and the Virginia Crime Prevention Association and reviewing this document.

A handwritten signature in black ink that reads 'Amy Yarcich'.

Amy Yarcich, Program Manager  
Virginia Main Street Program

*Partners for Better Communities*



*www.dhcd.virginia.gov*

# Crime Prevention Through Environmental Design: *Planning Today for a Safer Virginia*

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## Introduction

We constantly respond to our environment, whether we are aware of it or not. Our responses can help us interact safely in our communities. Effective design of the environment helps us feel safer and reduces opportunities for criminal acts to occur.

Crime Prevention Through Environmental Design or CPTED (pronounced “sep-ted”), is based upon the belief that: “... *the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life.*”

Crime Prevention is defined as the anticipation, recognition and appraisal of a crime risk and the initiation of some action to remove or reduce it. CPTED takes crime prevention one step further by studying the site design and working with planners, engineers, landscape designers, landscape architects, arborists, and end users/owners, among others, and public development agencies in an attempt to create safer designs in new and existing developments.

The following guidelines were prepared by the Virginia CPTED Committee and the Virginia Crime Prevention Association (VCPA) to be used as a tool for planners and design professionals to build quality development with the idea of reducing opportunity for crime to occur. CPTED reviews are becoming standard practice in the planning process throughout many localities across Virginia. Currently over 12 jurisdictions in Virginia apply CPTED in the review of site plans.

Design professionals have always integrated into their work resistance to natural threats such as fire, earthquakes, floods and harsh weather. In recent years, design professionals have begun to recognize crime as a man-made hazard that can be resisted through quality design.

### ***Disclaimer:***

- This document is a guide providing techniques and strategies. In a few areas this guide may conflict with the Uniform Statewide Building Code (USBC) in some occupancy types, and the USBC will always be the prevailing document.
- While our recommendations do not guarantee a crime-free environment, it is our experience that the application of the concepts of CPTED will reduce the opportunity for crime to occur and will enhance the quality of life.
- Local and state ordinances - *Please refer to the proper county, city or town agencies before implementing any recommendations to assure conformance with county, city, town and state codes.*

### Using this document

This document is designed to help design professionals, police personnel, and anyone involved in or concerned with development of a site or area. The concepts and strategies are discussed and illustrations are provided for various applications of CPTED measures in a variety of developments.

The concepts and strategies of CPTED can be applied in both existing and new development. Ideally, CPTED concepts and strategies should be applied during the design phase to more fully benefit from the applications, as well as avoid costly changes later.

**NOTE: The application of CPTED concepts and strategies is site specific.**

## Understanding CPTED

CPTED and the concepts of safe design have had several significant influences over the years. As early as the 1960's, Jane Jacobs discussed the interaction of the physical environment with its inhabitants and how important this is in the life and vitality of a street or neighborhood in The Death and Life of Great American Cities. She wrote "the basis for community security is a strong sense of social cohesion and a feeling of control over one's home turf."

In 1969, architect and urban planner Oscar Newman coined the expression "defensible space" when he began his study on public housing and its layout, in association with residents' perception of safety and their victimization. His focus was on a person's feeling of ownership or lack thereof (territoriality), and this relationship with criminal activity. He also emphasized the need to consider the "context" of a use or building type. As referenced in his 1973 book, Defensible Space, page 102, on context he states, "The introduction of a large grouping of new buildings of distinctive height and texture into an existing urban fabric singles out these buildings for particular attention. If this distinctive image is also negative, the project will be stigmatized and its residents castigated and victimized." Some of his work since then has related to the design, layout and use of residential streets as a deterrent to crime.

C. Ray Jeffery, a criminologist from Florida State University, coined the term "CPTED" and studied the relationship between the physical environment and incidence of crime. In 1971, he authored Crime Prevention Through Environmental Design. Studies were undertaken where inmates were interviewed as to why they chose a certain location for the crime that was committed, and what the influencing factors, if any, were to that environment.

In 1982, James Wilson and George Kelling wrote "Broken Windows". The concept of broken windows is one where in no matter what type of neighborhood, if a building is left with a broken window, graffiti, trash, etc., long enough, disorder and decline of the building or area surrounding it will spread.

" The first thing to understand is that the public peace... is not kept primarily by the police, as necessary as police are. It is kept by an intricate, almost unconscious network of voluntary controls and standards among the people themselves.... No amount of police can enforce civilization where the normal, casual enforcement of it has broken down".  
- Jane Jacobs, The Death and Life of Great American Cities

In 1994, the Commonwealth of Virginia took a step towards broadening the responsibility for addressing *crime* from just law enforcement agencies and amended the Zoning Enabling Legislation Zoning § 15.2-2283 to include the following:

"Zoning ordinances shall be for the general purpose of promoting the health, safety or general welfare of the public and of further accomplishing the objectives of such ordinances of § 15.2-2200. To these ends, such ordinances shall be designed to give reasonable consideration to each of the following purposes where applicable: (i.) to provide for adequate light, air, convenience of access, and safety from fire, flood, crime and other dangers; (ii) to reduce or prevent congestion in the public streets; (iii) to facilitate the creation of a convenient, attractive and harmonious community; ..."



## CPTED Principles

Three *interrelated* principles make up the CPTED concepts and strategies: Natural Surveillance, Natural Access Control, and Territoriality.

### **NATURAL SURVEILLANCE**

Natural Surveillance is the placement of physical features, activities and people in a way that maximizes visibility.

This design concept is directed towards keeping intruders under observation, and therefore less likely to commit criminal acts. This will have a reverse affect where most people feel safer when they can see and be seen.

Natural surveillance utilizes design features to increase the visibility of a property or a building. Features that maximize the visibility of people, parking areas and building entrances include unobstructed doors and windows, pedestrian-friendly sidewalks and streets, front porches and appropriate nighttime lighting.

### **NATURAL ACCESS CONTROL**

Natural Access Control is the physical guidance of people coming and going from a space by the judicious placement of entrances, exits, fencing, landscaping and lighting.

This design concept is directed primarily at decreasing the opportunity for criminal activity by denying access to crime targets and creating a perception of risk for offenders. People are physically guided through a space by the strategic design of streets, sidewalks, building entrances, landscaping and gateways. Design elements are also useful tools to clearly indicate public routes and discourage access to private areas.

Natural access control also utilizes physical and mechanical means of controlling access through locks, alarm systems, signs, etc.

### **TERRITORIALTY**

Territoriality is the use of physical attributes that express ownership such as fences, signage, landscaping, lighting, pavement designs, etc.

This design concept also creates or extends a sphere of influence. People take more interest in something they own or when they feel intrinsically involved. Therefore, the environment should be designed to clearly delineate private spaces.

Users are encouraged to develop a sense of territorial control, while potential offenders, perceiving this control, are discouraged. This concept includes features that define property lines and distinguish between private and public spaces. This can be accomplished by such measures as landscape plantings, pavement designs, gateway treatments, appropriate signage and “open” fences.



In addition to creating areas of *Activity Support*, properly designed and maintained spaces also establish *Territoriality*, as shown at these shops in Henrico County, Virginia.



## CPTED Principles - continued



The above photo depicts a new community in Henrico County, VA, where many CPTED principles are in place. The landscaping in this photo is very young and should mature where *Natural Surveillance* opportunities will not be lost, and where *Territoriality* and ownership will be apparent.



Ownership and pride are apparent in this downtown street. A visitor to the area would know that this community takes pride in its city.

Other ways of involving CPTED principles in a project is by using a three-step review process:

- **Designation:** What is the intended use of the area? What behavior is allowed?
- **Definition:** Are there physical limitations to the area or site? Are borders between the area and public spaces defined? Is it clear which activities are allowed where?
- **Design:** Does the physical environment safely and efficiently support the intended use?

Other issues that should be addressed when considering a site design or use in an area include:



A bench has been placed in a corner of the building where the drop off area is for library books in Chesterfield County, VA. This is an example of unassigned space.

**CONTEXT:** All CPTED recommendations must be viewed in relation to how the built or natural environment is used. What cultural definitions do the users bring to the space? If we design a space that does not address the way the intended users will use the space the intended users may bypass security measures. Context (Image and Milieu) is every bit as important to CPTED as are the other core principles.

**DESIGN CONFLICT:** Occurs when two incompatible activities are located next to one another and are forced to compete for the same space. Example: Sidewalks for elderly housing that take residents past teenage recreation areas may cause elderly residents to feel intimidated by the rough play they see, even though no direct threat is intended.

**UNASSIGNED SPACE:** Occurs when a site is built with spaces that have no assigned purpose and no one to exercise control over them. Such space lacks environmental cues that suggest how the space is to be used or who should control it. Example: A vacant lot in a downtown area may become the territory for local youth and be used in an undesired way.

## CPTED Principles – continued

**CRIME GENERATORS:** Locations that have a propensity to generate crime in the surrounding area. Example: Establishments that serve alcohol can be crime and public disorder generators if they lack strict controls for the sale and use of alcohol.



Example of a hollow core door and a keyed doorknob.

**TARGET HARDENING:** A basic tool for providing safety and security. It involves making targets resistant to criminal attack through the installation of locks, alarms or lighting. (see Appendix for Target Hardening Section)

### Safety Checklist

- How well is an area maintained? Is it clean?
- Can you tell that people care about the area?
- Can you see into businesses, onto a property? Can they see you?
- Do you feel safe walking by yourself?
- What makes you feel safe or unsafe about the area?
- Is there lighting in the area? Are you able to identify someone from 50 feet?



Use of glass in the design of the workout room in an apartment complex in Virginia Beach, VA allows for visibility to and from the hallway and child playroom.



Outdoor café/dining areas provide Activity Support and additional 'eyes on the street' as shown on this street in Bristol, VA. Awnings and potted plants also show *Territoriality* and ownership.

# CPTED Design Strategies

## SINGLE FAMILY RESIDENCES

Residential areas are the heart of a community. Our homes are the center of our lives, where we should feel most safe. And, while we may have multiple choices when it comes to walking through a certain part of town or using public transportation, we have few choices when it comes to the streets where we live.

The guiding principle here is “know thy neighbor.” Streets and homes should be designed to encourage interaction between neighbors. Good examples include front porches, sidewalks and property lines that are defined simply by low shrubbery rather than high fences.



This design in Richmond, VA encourages interaction of neighbors due to the front porches. *Natural Surveillance* opportunities have been created, and the change in elevation between the porch and sidewalk defines public and private space change.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Fully illuminate all doorways that open to the outside.
- The front door should be at least partially visible from the street.
- Install windows on all sides of the house to provide for full visibility of the property.
- Provide appropriate illumination to sidewalks and all areas of the yard.
- The driveway should be visible from either the front or back door and at least one window.
- Select and install appropriate landscaping that will allow unobstructed views of vulnerable doors and windows from the street and other properties.
- SEE LANDSCAPE AND LIGHTING section.

#### **NATURAL ACCESS CONTROL**

- Use walkways and landscaping to direct visitors to the proper entrance and away from private areas.
- Install shrubbery to control access to a private area. Fences may also be used to control access, but allow for surveillance opportunities as the type of fence is considered.



This lot in Henrico County, VA is showing *Territoriality* by defining the property lines. *Access Control* is also in place while allowing for *Natural Surveillance* to occur into and out of the rear yard.

- Install sidewalks along the street to provide a safe location for pedestrians, while clearly defining public and semi-public areas. Sidewalks help to guide people.
- SEE TARGET HARDENING section.

#### **TERRITORIALITY**

- Use front stoops or porches to create a transitional area between the street and the home.
- Define property lines and private areas with plantings, pavement treatments, or fences.
- Make the street address clearly visible from the street, (at least 3 inches high and reflective at night).
- Promote neighborhood watch programs.

## SINGLE FAMILY RESIDENCES – Design Strategies continued

### ACTIVITY SUPPORT

- Locate playgrounds, picnic areas or natural common areas in the center or front of a neighborhood to offer surveillance opportunities to these areas and a feeling of ownership.
- Encourage block parties, etc. to create more activity around the street and home.

### MAINTENANCE

- Maintain clear sightlines around the home by pruning vegetation. (See Landscaping Section)
- Keep the lawn cut and edged, indicating clearly that someone cares about this area.
- Use exterior lighting at night and keep it in working order.
- Keep litter and trash picked up and the yard neat and free of items that might attract theft.
- The house, garage and storage buildings should be kept in good repair.



This single family home in Virginia Beach, VA has all of the strategies in place – *Natural Surveillance, Natural Access Control and Territoriality.*



This neighborhood in Henrico County, VA has implemented a number of CPTED strategies. Can you identify them?

## MULTI-FAMILY RESIDENCES

Multi-family homes, to include townhomes, duplexes, tri-plexes and apartment complexes, all pose similar problems as single-family structures, although the number of dwellings and residents can compound these problems.



*Territoriality* is in place on this street in Chesterfield County, VA where the sidewalk and curb separate the private space of the homes from the street.

Public areas such as shared hallways, elevators, laundry rooms and parking areas can be a design challenge and CPTED concepts and strategies need to be considered as the complex or site is being planned.

Multi-family buildings do not necessarily mean multiple problems. There is a certain amount of truth to the old saying, "There's safety in numbers."

Management may need to create opportunities for neighbors to get to know one another. When neighbors take responsibility for themselves and each other, multi-family dwellings may be safer places to live.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Design buildings so that the exterior doors are visible to the street or neighbors.
- Use good lighting at all doors that open to the outside.
- Provide good illumination in hallways.
- Install windows on all four sides of buildings to allow for good visibility.
- Consider assigning parking spaces to residents. Locate spaces closest to the residents' unit as possible to offer observation to and from the home.
- Designate visitor parking.
- Make parking areas visible from windows and doors.
- Adequately illuminate parking areas and pedestrian walkways.
- Position recreation areas - pools, tennis courts, clubhouses and playgrounds, to be visible from as many of the units as possible, centrally located within the property and not directly next to parking lots or streets.
- Screen or conceal dumpsters, but avoid creating blind spots and hiding places.
- Build elevators and stairwells in locations that are clearly visible from doors and windows.
- Locate buildings so that the windows and doors of one unit are visible from another (although not directly opposite).
- Construct elevators and stairwells to be open and well-lit, not enclosed behind solid walls.
- Use open railings and open risers whenever possible.
- SEE LANDSCAPE AND LIGHTING section.



The stairwell risers in this apartment complex in Henrico County, VA are not open and create a hiding place underneath. Lights also need to be on 24 hours a day in the corridor.

**Crime Prevention Through  
Environmental Design**

## MULTI-FAMILY RESIDENCES – Design Strategies continued

### NATURAL ACCESS CONTROL

- Keep balcony railings and patio enclosures less than 42 inches high.
- Define entrances to the site and each parking lot with landscaping, architectural design or symbolic gateways.
- Discourage loitering by non-residents and enforce occupancy provisions.
- Use devices that automatically lock upon closing on common building entrances.
- Allow no more than four apartments to share the same entrance (individual entrances are recommended).
- Centrally locate elevators and stairwells where many users may observe them.
- When the design has apartment entrances off of internal corridors, limit the access into the corridors to one point.
- Addresses should be located on both the front and rear of a unit's entrance.
- SEE TARGET HARDENING section.



Two examples of railings are used on a porch in an apartment complex in Henrico County, VA. The top example offers visibility and helps control access.

### TERRITORIALITY

- Define property lines. Consider perennials, slow growing (“dwarf”) varieties of shrubs, decorative fencing, etc.
- Encourage the design that offers individual entrances into units from the exterior. The entrances should each have stoops and an overhang to promote a sense of ownership.



This fence shows public and semi-private areas, controls access, and offers visibility from a Henrico County, VA street.

- Accentuate building entrances with architectural elements, lighting and landscaping.
- Clearly identify all buildings and residential units using street numbers that are a minimum of 3 inches high and well-lit at night.
- Where possible, locate individually locking mailboxes next to the appropriate units.

### ACTIVITY SUPPORT

- Locate clubhouses, pools, playgrounds, picnic areas, and other amenities in a central location to encourage use and promote safety for the user.
- Promote Neighborhood Watch or programs similar for rental communities.

### MAINTENANCE

- Maintain all common areas to very high standards, including entrances, esplanades and rights of way.
- Prune trees and shrubs back from windows, doors and walkways.
- Use and maintain exterior lighting.
- Strictly enforce rules regarding junk vehicles and inappropriate outdoor storage. Disregarding these issues will make a site appear uncared for and gives one a sense of disorder.



## NEIGHBORHOODS

Often, the safety measures taken in residential communities, such as high fences and video-monitored gates, can have a negative effect on residents. The presence of security devices sometimes implies a need for them. CPTED guidelines, when applied to neighborhoods, can create a safer environment without the use of more common, intimidating methods.

For instance, streets designed with gateways, roundabouts, speed humps and other “traffic calming” devices establish territory and discourage speeding and cut-through traffic. By keeping public areas observable, you are telling potential offenders that they should think twice before committing a crime. These measures are simple, inexpensive to implement, and will have a much more positive effect on residents than gates and bars.

### TIPS

- Good lighting is in place when one has the ability to identify a face from 50 feet away.
- All locks should be a deadbolt with a minimum 1-inch throw.
- Install screws that are, at minimum, 3 inches long in the strike plate.

### DESIGN STRATEGIES:

#### NATURAL SURVEILLANCE

- Avoid landscaping that might create blind spots or hiding places.
- Centrally locate open green spaces and recreational areas, so that they are visible from nearby homes and streets.
- Use pedestrian scale street lighting that is glare-free, in high pedestrian traffic areas to help people recognize potential threats at night.
- SEE LANDSCAPE AND LIGHTING section.

#### NATURAL ACCESS CONTROL

- Limit access without completely disconnecting the subdivision from adjacent subdivisions.
- Design streets to discourage cut-through or high-speed traffic.
- Install paving treatments, plantings and architectural design features, such as columned gateways, to guide visitors to desired entrances and away from private areas.
- Install walkways in locations safe for pedestrians, and keep them un-obscured.
- SEE TARGET HARDENING section.



A fence and sidewalk provide *Territoriality* and *Access Control* into a neighborhood in Henrico County, VA.

The fence also provides opportunities for *Natural Surveillance* due to its open design. The sidewalk and the painted crosswalk on the road guide residents and provide a safe pedestrian area. *Territoriality* is also in place with the ‘entrance features’ and landscaping.

#### TERRITORIALITY

- Design lots, streets and homes to encourage interaction between neighbors.
- Accentuate entrances by creating a ‘gateway’ effect. This may be done with the subdivision name, different paving materials, and changes in street elevation and architectural and landscape design.
- Clearly identify homes with street address numbers that are a minimum of 3 inches high and reflective at night.
- Define property lines. Use fencing, landscaping, gates, etc. to define property lines, distinguish between public and private property, direct pedestrian traffic to only desired points of access, etc.
- Promote Neighborhood Watch programs in your community.

## NEIGHBORHOODS - Design Strategies continued

### ACTIVITY SUPPORT

Provide playgrounds, community centers, open space, tennis courts, etc. in the neighborhood. These areas should be centrally located within the neighborhood.

### MAINTENANCE

- Maintain all common areas to very high standards, including entrances, esplanades and rights of ways.
- Use low maintenance or maintenance-free building products in your construction.
- Use low maintenance plants and shrubbery in your landscape design.
- Maintain a healthy and attractive landscape. Prune trees and shrubs to promote Natural Surveillance. Keep grass cut and eliminate weeds.
- Consider using long life bulbs for home applications to minimize frequently burned out exterior lighting.
- Install dusk to dawn sensors on lighting fixtures. Remember: lighting is the least expensive crime prevention method.
- Remove inoperable vehicles, trash, and debris regularly.
- Enforce deed restrictions and covenants in addition to all local and state codes.



The entrance into this Henrico County, VA neighborhood is celebrated with landscaping, signage, sidewalks, etc.



Here is another view of the above neighborhood within Henrico County, VA. Can you identify the CPTED strategies in place?

## PUBLIC BUILDINGS

Public facilities such as libraries, government buildings, churches, fire stations, etc., present a unique challenge. Safety and security are concerns at these locations, but few desire the installation of *visible* high security measures that would deter from a customer service oriented look or feel to the site.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Designate a main entrance point into the facility that is easily observable from both inside the building and the parking area or roadway.
- Designate a main area to secure bike racks that is easily observed from a normally occupied area of the building.
- Avoid landscaping that might create blind spots or hiding spaces.
- Secure all out buildings and locate them in areas that are easily observed.
- Provide uniform lighting without glare for scheduled nighttime activities and to permit good observation by neighbors and patrol units during non-business hours.
- Interior offices should offer surveillance opportunities into the corridors.
- SEE LANDSCAPING AND LIGHTING section.



A raised tree canopy, in combination with low growing landscaping and the placement of windows provide for clear sight lines from the building to the parking lot of this library in Henrico County, VA. This allows for *Natural Surveillance* of the site by customers and passing motorists.

#### **NATURAL ACCESS CONTROL**

- Locate the site so all areas can be observed during off-business hours to detect unauthorized activities whenever possible.
- Limit access to only one controlled entrance into the facility that is easily observable from inside and out.
- Lock unused areas off from the public. Employee only areas should be locked so that the public can't gain entry without assistance.
- Secure bike racks so they can't serve as a climbing aid.
- Define the property using fencing, landscaping or a type of open design barrier to control access.
- Provide signs indicating where a person is in relation to the rest of the property. Signs should also direct a visitor to the main entrance.

- SEE TARGET HARDENING section.

#### **TERRIORTIALITY**

- Locate the main entrance so it is easily identified when approaching the building.
- Locate the office near the main entrance with plenty of usable glass to allow observation of entrance doors as well as the visitor parking areas.
- Locate signs on and around the premises stating No Trespassing, etc.
- Use signage or pavement markings to identify traffic patterns, employee and visitor parking areas, entrances, etc.

## PUBLIC BUILDINGS – Design Strategies continued

### ACTIVITY SUPPORT

- Encourage the Neighborhood Watch in the surrounding neighborhoods to 'own' the public facility by reporting any suspicious activity to the Police or Sheriff's Department after hours.
- Use of buildings after hours by a civic group, neighborhood watch, etc. will offer additional activity support.

### MAINTENANCE

- Maintain all lighting fixtures.
- Frequently empty trash receptacles.
- Keep the grounds clean and well maintained.
- Keep lines of sight open by maintaining landscaping.
- Eliminate graffiti as soon as it appears.



This security/receptionist desk at the entrance to the administration offices for Henrico County, VA offers an informal form of *Access Control*. Visitors to the complex can only enter the Administration Building at this point; all other entry doors have card readers in place.

### Crime Prevention Through Environmental Design

The unique design of this fire station in Staunton, VA employs *Territoriality*. Pride and ownership are evident in its appearance.



## SCHOOLS

Our schools have been the focus of a great deal of study and scrutiny the last few years. Add-ons such as cameras, metal detectors, auxiliary locks and assigned police personnel have done little to solve the long-term security issues. A poorly designed school will be hard to secure, no matter what devices are employed. On the other hand, simple design changes and modifications can serve to enhance security devices or limit the need for expensive and maintenance/manpower intensive measures.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Designate a main entrance point into the facility that is easily observable from both inside the building and the parking area or roadway.



The design of this school in Virginia Beach, VA makes it obvious where the main entrance is. *Natural Surveillance* opportunities are in place from the parking lot and adjacent residential street. The line of shrubs delineates *Territoriality* and along with the sidewalk, defines what is public space and what is semi-public space.

- Designate a main area to secure bike racks that is easily observed from a normally occupied area of the building.
- Avoid landscaping that might create blind spots or hiding spaces.
- Secure all out buildings and locate them in areas that are easily observed.
- Provide uniform lighting without glare for scheduled nighttime activities and to permit good observation by neighbors and patrol units during non-business hours.
- Interior offices should offer surveillance opportunities into the corridors.
- Design hallways to be easily observed with very few offsets.
- Locate visual panels in all

classrooms to allow teachers to observe the hallway with minimal visual distractions to the seated students.

- Design open access to restrooms with no need for a hallway door or modify existing doors so they are locked in the open position.
- SEE LANDSCAPING AND LIGHTING section.

#### **NATURAL ACCESS CONTROL**

- Locate the site so all areas can be observed during off-school/business hours to detect unauthorized activities whenever possible.
- Limit access to only one controlled entrance into the school that is easily observable from the main office during the school day.
- Eliminate or design covered walkways to restrict access to the roof and avoid other structures (such as door overhangs, fences or landscaping) that may provide roof access.
- Arrange student lockers to allow casual observation, with plenty of room between rows and no dead ends.
- Provide two-way communication throughout the building.
- SEE TARGET HARDENING section.

## SCHOOLS – Design Strategies continued

### TERRITORIALITY

- Position the main entrance so it is easily identified when approaching the building.
- The office should be near the main entrance with plenty of usable glass to allow observation of entrance doors as well as the visitor parking areas.
- Secure the parking area when the school is not in use.
- Signs should be located in the parking lot and at all entrances stating all visitors must check in at the office. The signs should also direct visitors to the main entrance of the school.
- Locate signs on and around the premises stating Drug Free Zone and No Trespassing.
- Use pavement markings to identify traffic patterns and faculty, student and visitor parking areas.
- Require maintenance personnel, contract workers, etc. to wear uniforms and/or photo-id badges plainly visible.

### MAINTENANCE

- Maintain all lighting fixtures.
- Frequently empty trash receptacles.
- Keep the grounds clean and well maintained.
- Keep lines of sight open by maintaining landscaping.



This is example of an older school in Henrico County, VA that is well maintained.

The bus loop in front of the school is clearly visible from the adjacent street and school office. Lighting has been installed under the canopy, as well as along the bus loop.

## PARKS, TRAILS and OPEN SPACES

Parks, trails and open spaces provide a number of design challenges for personal safety, as they are typically large and used by a variety of people. Direct observation is not always possible or even desired in natural settings. Often, there is a conflict between safety principles and preserving the naturalness and desired seclusion of the resource.



Both walkers and pedestrians use this trail in Seattle, Washington. The yellow line is a symbolic barrier that separates pedestrian traffic from the cyclists.

Greenways are a key part of the green infrastructure that helps to assure a high quality of life for all communities. These areas are selected for protection and conservation because combined together in an integrated system these areas support natural systems that help keep the air and water clean.

An additional benefit of greenways is the opportunity for citizens to spend time outside and have alternative ways to go places within the community. The challenge for such systems is the perception of safety, both for potential users and for adjacent property owners. **As more people use them, the safer they become.**

Some of the key ways to assure safety are through clear signage, hardened surfaces and proper delineation of the corridor. Several of the most successful greenways are rail to trail corridors in Virginia. The W & OD trail from Washington, DC to Purcellville, the Virginia Creeper Trail from Abington through Damascus to White Top and the New River Park that goes from the Galax and Fries area to Pulaski. The trails have been accepted and they have become key economic generators for the areas they go through.

When designing for safety in these areas, the focus should be on pathways, parking areas, trailheads, restrooms, areas of concentrated activity and most especially isolated areas.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Locate parking lots, picnic areas, trailheads and facilities used at night near streets and other activity centers so they are easily observable by police patrols and other park users. Cluster compatible activities to avoid conflict and to increase social observation.
- Locate children's areas and public restrooms near staffed areas to make observation of these areas easier.
- Positioning some bike trails and walking paths near areas of park activity or at places where parks meet commercial or residential uses, or pairing them with active streets can make users more observable by others.
- Recognize that some park areas cannot be observed or made safe during night hours.
- If parks are used at night, provide good lighting for areas that can be safely used at night.



Clear sight lines are in place to the path, shelter and play areas of this Henrico County, VA park.

## PARKS, TRAILS and OPEN SPACES – Design Strategies continued

- Position benches in areas where intended users will be able to provide Natural Surveillance and demonstrate territoriality. Benches offer periodic resting for trail and open space users.
- Trees will make users feel more comfortable while watching the area around them.

### NATURAL ACCESS CONTROL

- Gate off vehicular entrances when parks are closed.
- Provide clearly visible entries to park buildings. Light them if used at night.
- Provide a clear distance of at least 10 feet between the trails and wood-lines to offer sight lines and distance from potential attacks.
- Provide a clear separation between regional trails and private property. The separation should permit leaving the trail in an emergency.
- If a particularly attractive portion of the trail is isolated, making its users vulnerable, create and clearly mark an alternate, observable path that gives users a choice for safer mobility.
- Clearly mark the hours the park or trail is open to the public. Well-placed entrance signs or gates should be used to notify the public and to control access into the park or area.



This stretch along the oceanfront in Virginia Beach, VA has many uses. Pedestrians can use the boardwalk. Benches are positioned in landscaped areas, and a bike path runs parallel to the open green space and boardwalk. Pedestrian crosswalks are striped across the bike path throughout and are clearly marked. The yellow line separates opposing bicycle traffic.

### TERRITORIALITY

- When people see certain facilities they receive certain cues as to which uses are appropriate. Providing children's play areas encourages family use of a park.
- Clearly define paths between parking lots and other facilities.
- Erect maps to provide a sense of where one is and where one can go. These maps should

clearly identify trail names, distances to facilities, emergency phones, and the characteristics of trails, e.g., "this is an isolated walking trail."

- Post park rules at access or gathering points in the park. Rules give the ability to designate acceptable uses and discourage unacceptable uses of the park.
- Trails should also have signs with trail names, directional signs to areas of public activity and even mile markers to help orient users. Trails need to be marked for use, such as biking or walking.

### ACTIVITY SUPPORT

- Encourage planned activities in passive recreation areas and parks, i.e. senior walking groups at specific times each day; elementary school trips, etc. Add programs in areas and at times when the



Open space areas will be used in a variety of ways, especially if located in central areas to parking and other activities within the park as in this example in Henrico County, VA.

space is not busy or typically used.



## PARKS, TRAILS and OPEN SPACES – Design Strategies continued

- Avoid conflicts in design and intended use. For example, illuminating a park that closes at sunset may encourage illegal and unintended use.

### MAINTENANCE

- Prune trees and shrubs to keep paths open and to eliminate the potential for areas of entrapment and concealment.
- Design parks to make maintenance easier by locating an adequate number of trash receptacles in areas where people congregate and by using durable, vandal-resistant materials.
- Provide prompt removal of trash, graffiti and invasive landscaping species.
- If park benches are planned, choose benches that have seat dividers to discourage long-term usage, such as sleeping or skateboarding.



This is a bench style that eliminates or discourages sleeping.



This is a trail entrance at a park in Henrico County, VA. The entrance is off of a main road that runs through the park.



Photo of a trail at James River State Park in Gladstone, VA. Courtesy of the Virginia Department of Conservation and Recreation web page.

## OFFICE BUILDINGS

Office buildings that house multiple tenants can pose a different challenge than those buildings in which only one tenant/business operation is located. Controlling access and knowing who belongs or doesn't belong in a multiple tenant office building is very hard. Often the common areas like the hallways and restrooms become a dead space if no one takes ownership and tries to observe the flow of pedestrian traffic through these areas.

As office buildings grow in size and pedestrian and vehicle traffic increases, safety becomes an extremely important issue. Regardless of the size of the structure being built, it can be safe and secure. For instance, all tenants should show photo identification upon entering. Metal grills with letter-sized slits should cover mail slots. Steel, anti-ram barricades should secure garages, loading areas and entrances.



The use of glass allows for *Natural Surveillance* opportunities of the parking lot by employees in this office building in Virginia Beach, VA. The well-maintained landscaping shows ownership and pride, providing *Territoriality*.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Position restrooms to be observable from nearby offices.
- Design interior windows and doors to provide visibility into hallways by office staff or visitors in waiting areas.



This is an interior view of the above office building. From this teller position, an employee has a direct line of sight of the entrance into the bank. The windows allow for *Natural Surveillance* opportunities into the parking lot located in front of the building.

- Install and use effective lighting at all exterior doors, common areas and hallways.
- Keep dumpsters visible and avoid creating blind spots or hiding places, or place them in secured corrals or garages.
- Design windows and exterior doors so that they are visible from the street or by neighboring buildings.
- Place parking lots where they are visible from the building.
- Do not obstruct views from windows.
- Avoid creating hiding places in alleys, storage yards, loading docks, etc
- Design stairwells to be more open and locate them in more central locations within the building to make the stairwells safer. Avoid, whenever possible, locating stairwells at the ends of corridors/hallways, with a door that does not offer visibility into or out of the area, nor opportunity for someone to be heard.
- Alarm exterior stairwell doors as emergency exit(s) only or equip the doors with a card access system or some other similar system to control access.
- The doors leading into the corridors from the stairwells should have a small-reinforced window to provide visibility into the stairwell prior to entry.
- SEE LANDSCAPING AND LIGHTING section.

## OFFICE BUILDINGS – Design Standards continued

### NATURAL ACCESS CONTROL

- Clearly define public entrances with architectural elements, lighting, landscaping, paving and/or signs.
- Reduce the number of public access points to those that are watched by guards, receptionists, nearby tenants or passing traffic.
- Require employees to wear photo-id badges identifying which company they are employed with.
- Remove the exterior door hardware from doors not intended as entrances. This will deny access into the building at these entrances.
- SEE TARGET HARDENING section.

### TERRITORIALITY

- Define perimeters with landscaping or fencing.
- Design fences to maintain visibility from the street.
- Differentiate exterior private areas from public areas.
- Position security or reception areas at the main entrance, if not at all entrances.

### ACTIVITY SUPPORT

- Most buildings are smoke free environments. Locate the smoker's area where the employee will be the safest, but also offer 'eyes on the street' for parking lots and other sensitive areas of the site.
- Locate accessory activities such as picnic tables, fountains and other gathering areas where they are easily observable.

### MAINTENANCE

- Keep all exterior areas neat and clean.
- Maintain all plantings.



The bollards placed at the entrance to this office building in Henrico County, VA provide *Natural Access Control* because they guide you toward the building's entrance. There are no signs to indicate this is the building's entrance. However, the combination of a walkway, landscaping, and bollards guide visitors to the entrance. *Natural Surveillance* is also in place with the clear sight lines of this area.



This stairwell is located in the hub of activities within the student commons building of Virginia Commonwealth University in Richmond, VA.

## COMMERCIAL USES

For a community to remain healthy its local businesses must flourish. For businesses to do well, they must be safe places to frequent. Strip shopping centers, individual commercial buildings, downtown areas, restaurants, drive-through facilities and automatic teller machines, all pose concerns for criminal activity.

The trend for many years was to separate land uses. It was thought that to mix commercial and residential uses within the same building or site was not proper planning or design. However, many communities are seeing a change in this philosophy and are going back to the “downtown or main street” design that was used to develop many of our cities and towns across Virginia.

Many communities have made changes in zoning ordinances that allow and sometimes encourage, mixed use development. It is essential that CPTED guidelines be followed when building or remodeling a commercial property and especially when revitalizing our downtown areas – no matter how small or large. Ideas such as keeping customers and employees in view of each other can make customers feel safe and secure.

### **DESIGN STRATEGIES:** *CONVENIENCE STORES, GAS STATIONS and other retail uses*

#### **NATURAL SURVEILLANCE**

- The windows should not be tinted, especially at the entrance to the stores, to allow for surveillance opportunities both from within and from outside the building.
- Advertisements or displays should not be located in or around the windows. If advertisements must be used, they should be small in size and located along the top of the windows.
- Consider using convex mirrors to allow employees to monitor blind spots and unmonitored areas located inside the building.
- The shelving should be limited to a MAXIMUM height of no more than 42 inches, with no stacking of tall items on the top shelf. This will help with visibility throughout the store for staff and customers.
- If pay phones are located on the exterior of the property, the phones need to be away from the building, along the street, with clear site lines from the cashier area. The phones should be outgoing calls only.

- SEE LANDSCAPING AND LIGHTING section.

#### **NATURAL ACCESS CONTROL**

- Provide some type of physical security on all exterior doors.
- The access for deliveries and customers into the building should be limited. Side and rear doors should not be unlocked or propped open for any reason.
- Post hours of operation in visible locations for customer safety.
- SEE TARGET HARDENING section.



The businesses along this roadway in Virginia Beach, VA have shown ownership by planting landscaping along the roadway, but have maintained it to still offer visibility into and out of the site. Activities in the parking lot and at the businesses can be observed by passers-by.



This convenience store in Henrico County, VA offers visibility to and from the roadway. The clerk is able to observe the store interior and exterior from the cashier area. Signs and displays do not block visibility into the store.

## CONVENIENCE STORES, GAS STATIONS and other retail uses - Design Standards continued

### TERRITORIALITY

- Use signs or bollards to define the property or entrances.
- Set the site off from adjoining properties by utilizing different pavement markings, awnings, signs, landscaping materials, etc.

### ACTIVITY SUPPORT

- Do not create areas where loitering can easily begin. Move pay phones away from the building edge, along the roadway, whenever possible to give the clerk clear sight lines to the phones.
- Form a business watch group or join the nearest Neighborhood Watch group.
- Use garbage cans that do not provide large flat surfaces to discourage loitering.

### MAINTENANCE

- Maintain the site. Pick up trash, eliminate graffiti as soon as it appears, and do not stack boxes, pallets, etc. in the exterior, but dispose of properly.
- Maintain the landscaping and lighting. Cursory checks should be made to make sure the lights are working.



The interior layout of this convenience store in Virginia Beach, VA offers surveillance opportunities. A security camera system is also in place.



*Access Control, Natural Surveillance, Territoriality and other concepts are in place at this convenience store in Henrico County, VA. The fence limits how and where you enter the site, while providing surveillance opportunities and defining the property lines.*

Metal roll down doors have been installed at this convenience store in Richmond, VA. *Access Control* is in place, but the measures do not give a customer a welcoming feeling. The site is also not well maintained, which can also discourage legitimate customers and *Natural Surveillance* is very limited.



## COMMERCIAL USES: RESTAURANTS - Design Strategies continued

### NATURAL SURVEILLANCE

- The windows should not be tinted, especially at the entrance to the stores, to allow for surveillance opportunities both from within and from outside the building.
- Advertisements and/or displays should not be located in and around the windows. If advertisements must be used, keep them small in size and locate them along the top of the windows.
- Consider using convex mirrors to allow employees to monitor blind spots and unmonitored areas inside the building.
- If pay phones are located on the exterior of the property, the phones need to be away from the building, along the street, with clear site lines from the cashier area. The phones should be outgoing calls only.
- SEE LANDSCAPING AND LIGHTING section.

### NATURAL ACCESS CONTROL

- Provide access control on all exterior doors.
- Limit access that deliveries and customers have into the building. Side and rear doors should not be unlocked or propped open for any reason.
- Post hours of operation in visible locations for customer safety.
- SEE TARGET HARDENING section.

### TERRITORIALITY

- Fencing or landscaping should be used to define the dining area and limit access points.
- Use signs or bollards to define the property or entrances.
- Set the site off from adjoining properties by utilizing different pavement markings, awnings, signs, landscaping materials, etc.

### ACTIVITY SUPPORT

Outdoor dining areas provide additional visibility and surveillance opportunities and serve as activity support if the location is maximized on the site.



The outdoor dining provides surveillance opportunities at this fast food business in Henrico County, VA. The variety of décor indicates ownership and makes this a more pleasing environment.



A café in Clifton Forge, VA utilizes landscaping, awnings and flags to draw more attention to it, while also allowing for visibility into and out of the building.

### MAINTENANCE

- Maintain the site. Pick up trash, eliminate graffiti as soon as it appears, and do not stack boxes, pallets, etc. in the exterior, but dispose of properly.
- Maintain the landscaping and lighting. Cursory checks should be made to make sure the lights are working.

## COMMERCIAL USES: *SHOPPING CENTERS and DOWNTOWNS*

To include downtown areas, commercial storefronts and strip shopping centers.

### DESIGN STRATEGIES:

#### NATURAL SURVEILLANCE

- The windows should not be tinted, especially at the entrance to the stores, to allow for surveillance opportunities both from within and from outside the building.
- Advertisements and/or displays should not be located in and around the windows. If advertisements must be used, keep them small in size and locate them along the top of the windows.
- Consider using convex mirrors to allow employees to monitor blind spots and unmonitored areas inside the building.
- Shelving should be limited to a **MAXIMUM** height of no more than 42 inches. Do not stack tall items on the top shelf. This will help with visibility throughout the store for staff and customers.
- If pay phones are located on the exterior of the property, the phones need to be away from the building, along the street, with clear site lines from the cashier area. The phones should be outgoing calls only.
- Design loading areas to avoid creating hiding places for people and merchandise.
- Maintain clear visibility from the store to the street, sidewalk, parking areas and passing vehicles.
- Position parking areas to be clearly visible from the building or street. Place all entrances under visual surveillance, monitored electronically if necessary.
- SEE LANDSCAPING AND LIGHTING section.

#### NATURAL ACCESS CONTROL

- Locate checkout counters at the front of the store, clearly visible from the outside. When positioned near the main entrance, employees can better watch activities.
- Clearly mark public paths. Make private areas harder for non-employees to access.
- Use signs to direct patrons to parking and entrances.
- Prevent easy access to the roof or fire escape from the ground.
- If rear parking must be provided for customers, also provide a rear access to shops. Utilize this opening in the building by locating windows on the sides and locating outdoor dining



This is an example of a shopping center in Virginia Beach, VA with all the CPTED strategies in place.

areas here for more 'eyes on the street'.

- Post hours of operation in visible locations for customer safety.
- SEE TARGET HARDENING section.

#### TERRITORIALITY

- Mark property boundaries, where possible, with hedges, low fences or gates.
- Make private areas distinguishable from public areas.
- Identify shops from the rear by placing the numeric address on the doors.
- Install awnings above doors and windows.
- Fencing or landscaping should be used to define the dining area and limit access points.

- Use signs or bollards to define the property or entrances.
- Set the site off from adjoining properties by utilizing different pavement markings, awnings, signs, landscaping materials, etc.

## SHOPPING CENTERS and DOWNTOWNS - Design Strategies continued

### ACTIVITY SUPPORT

- Locate activities in areas where visibility and activity is maximized such as restrooms, pay phones, seating areas, etc.
- Avoid shifts and situations where only one employee is present.

### MAINTENANCE

- Keep buildings and walkways clean and repaired.
- Maintain parking areas to a high standard without potholes or trash.
- Remove faded posters, broken signs and worn displays.
- Keep plantings in good condition.



This sitting area offers activity support in this strip shopping center in Virginia Beach, VA for both the parking lot and businesses. Additional landscaping may be needed to utilize this area in the summer.

## Crime Prevention Through Environmental Design



Downtowns and 'main streets' in many areas throughout Virginia have revitalization efforts underway. Downtown Clifton Forge, VA is working to revitalize its downtown. The above photo shows a plaza area surrounded by three streets and the adjacent storefront businesses. During summer months the plaza hosts various events for the town. Surveillance opportunities are in place from the buildings that face the plaza.



**COMMERCIAL USES: DRIVE-THROUGH LANES and AUTOMATIC TELLER MACHINES (ATM)**

These are often hidden from view. Those using them will certainly be carrying cash. Emphasis should be placed on visibility when designing drive-through areas.

**DESIGN STRATEGIES:**

**NATURAL SURVEILLANCE**

- Locate ATMs near roadways and main intersections.
- Locate the ordering station for a restaurant within sight of the interior, street or parking lot.
- Lighting should be in place and should be uniform around the ATM, drive through window and the queuing lane.
- Avoid fencing, landscaping and walls that might provide hiding places for criminals.
- SEE LANDSCAPE AND LIGHTING section.



Users of this ATM in Virginia Beach, VA have opportunities to view around them. No hiding places have been created with landscaping or other buildings. The surrounding area can also see this area and what is going on.

**NATURAL ACCESS CONTROL**

- Limit the access around an ATM or a drive-through area. Install wrought or mock iron fencing that will control access from the rear of an ATM, while still providing surveillance opportunities.
- Locate bank ATM's in the first drive-through window to offer safety for both the bank employee as well as the user.

**TERRITORIALITY**

Use lighting that does not blind the customer but displays the ATM and property ownership.

**ACTIVITY SUPPORT**

Locate the ATM in very visible areas of the site.



This is an example of a walk-up ATM in Chesterfield County, VA that is enclosed. Surveillance opportunities are in place for views both into and out of the space.

**MAINTENANCE**

- Keep buildings and walkways clean and repaired.
- Maintain parking areas to a high standard without potholes or trash.
- Remove faded posters, broken signs, receipts and old envelopes.
- Keep plantings in good condition.



The ATM at this credit union in Henrico County, VA has been located in the first drive-through aisle. This design provides safety for the customer and employee. The customer can remain in the safety of his or her vehicle, and the employee can make deposits and withdrawals from a secure area inside the bank.

## COMMERCIAL USES: *SHOPPING MALLS*

Shopping malls often provide a gathering area in suburban communities and this can be a mixed blessing. On one hand, they perform the important function of town centers. On the other hand, a mall can serve as an attraction for criminal activity.

While shopping malls continually grow in size and popularity, they also may become a haven for undesirable users and contribute to a growing number of parking-lot crimes. It is now more important than ever that re-modelers and designers implement CPTED principles.

There is also a trend towards outdoor malls, versus the traditional enclosed mall. The outdoor mall designs often try to reflect a 'main street' or 'downtown' design, but are typically located in the suburbs.

### DESIGN STRATEGIES:

#### NATURAL SURVEILLANCE

- Position restroom entrances to be visible from main pedestrian areas, but away from outside exits and pay telephones.
- Use baffle-type restroom entrances—no doors to hinder surveillance. They should be well-lit.
- Illuminate parking areas to increase visibility and eliminate shadows.
- Design parking garages so that all levels, including staircases, are visible from the street or ground floor.
- Avoid creating dead-end alleys or blind spots in loading areas.
- Equip garages with high-quality lighting and paint that is light in color to help reflect the light that is in place.
- Use perpendicular parking in front of stores, rather than parallel, to allow greater visibility between cars.
- Place water-retention areas in locations visible from the building or street – they should be visual amenities, not hedged or fenced, if possible.
- Avoid exterior walls devoid of windows.
- SEE LANDSCAPING AND LIGHTING section.

#### NATURAL ACCESS CONTROL

- Clearly mark public entrances with landscape, architecture and graphics/signs.
- Designate sidewalks and public areas with special paving or landscaping.
- Use landscaping to divide the parking areas into smaller lots.
- Separate loading zones with designated delivery hours from public parking areas.
- Do not allow access to roof tops from within or from adjacent structures, such as parking garages.
- In corridors that are used for deliveries, the rear doors into the tenant spaces should remain locked. These doors should be equipped with wide-angle peepholes.
- SEE TARGET HARDENING section.



Above is an example of an outdoor shopping mall in Henrico County, VA.

## COMMERCIAL USES: *SHOPPING MALLS* - Design Strategies continued

### TERRITORIALITY

- Define property perimeters with landscaping, decorative fencing, gates and signs.
- Use signs that clearly identify the interior businesses and place signs marking public entry points.

### ACTIVITY SUPPORT

- Parking should be available close to the stores for employees who work in the evening hours.
- Business associations should work together to promote shopper and business safety and the appearance of safety.
- Encourage programs like the morning walkers who provide additional natural surveillance before shops open

### MAINTENANCE

- Keep buildings and walkways clean and repaired.
- Maintain parking areas to a high standard with no potholes, trash or graffiti.
- Install attractive displays in windows of vacant stores to avoid creating an “abandoned” image.



MacArthur Mall in Norfolk, VA offers numerous examples of CPTED strategies. Elevators are open to the interior of the mall, offering *Natural Surveillance*. Sitting areas have been placed throughout the mall. The design offers views throughout the mall, no matter which floor you are on.



Above is another view of interior in MacArthur Mall.

## INDUSTRIAL

Today, a number of businesses are open 24/7, especially industrial type uses. This poses a unique concern as the design in a number of industrial sites focuses more on the issue of work safety within the job site, than on safety from crime in the exterior or interior.

Industrial areas are often located in isolated areas, with poor illumination, and seldom any surveillance. Add to this isolation, areas like loading docks, service entrances, blind alleys and expansive parking areas – and you have the potential for an unsafe environment.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Illuminate and define all entrances so that they are visible to the public and patrol vehicles.
- Make parking areas visible to patrol cars, pedestrians, parking attendants and building personnel.
- Position parking attendants for maximum visibility of property.
- Design the reception area to have a view of parking areas, especially visitors parking.
- Use walls only where necessary and, if used, make them high enough to prevent circumvention.
- Avoid creating hiding places in alleys, storage yards, loading docks, etc.
- SEE LANDSCAPING AND LIGHTING section.

#### **NATURAL ACCESS CONTROL**

- Avoid dead-end driveways and street designs to increase surveillance opportunities from passing traffic and patrols.
- Use easily securable site entrances. Install entrance controls to employee parking areas - fence, gate or attendant.
- Assign parking by shifts and provide late-night workers with close-in spaces.
- Restrict direct pedestrian and vehicular access to railroad tracks.
- Plan storage yards for vehicular or visual access by patrol cars.
- Restrict access to roofs by way of dumpsters, loading docks stacked items, ladders, etc.



A security gate at this site in Virginia Beach, VA controls access into the facility.

- Limit number of building entrances and monitor them.
- Use a separate, well-marked, monitored entrance for deliveries.
- Have the employee entrance close to employee parking and work stations.
- Keep nighttime parking separate from service areas.
- Restrict access between different areas internally and externally.
- Provide access to both the front and back of the site so that the grounds can be patrolled.



Fencing has been provided around the loading area in this warehouse in Henrico County, VA. Lighting is also in place.

## INDUSTRIAL: Design Strategies continued

- Use separate docks for shipping and receiving.
- SEE TARGET HARDENENING section.

### TERRITORIALITY

- Create a well-defined entrance or gateway with plantings, fences, gates, etc.
- Limit deliveries to daylight hours only, if possible.
- Define vehicle entrances with different paving materials and signage.
- Separate employee parking from shipping and receiving areas.

### ACTIVITY SUPPORT

Schedule operating hours to coincide with those of neighboring businesses.

### MAINTENANCE

- Keep all exterior areas neat and clean.
- Keep all plantings looking well managed.



Access into loading dock areas like this one in Chesterfield County, VA should be controlled, with deliveries, pick-ups scheduled in advance.



Keep the exterior doors into the building locked at all times. Use a doorbell to notify employees of deliveries. The exterior area of the loading dock should be visible through the door as this business in Henrico County, VA shows.

## PARKING GARAGES/STRUCTURES

Studies show that in both urban and suburban environments, parking structures are problematic. These structures isolate people. Some garages or structures are not only poorly designed – with many blind spots and hiding areas – but also poorly maintained.

CPTED guidelines can do much in the way of improving structure safety without tremendous cost. With the simple addition of high- intensity lighting, for example, a parking garage or structure can quickly become a much safer area.

### **DESIGN STRATEGIES:**

#### **NATURAL SURVEILLANCE**

- Replace solid barrier walls with stretched cable railings for maximum visibility. Use see-through materials for the car walls whenever possible.
- Fully illuminate all parking areas and driving lanes.
- The design of the deck should be open, which will allow:
  - Natural light into the deck area.
  - The ability to be heard throughout the deck and surrounding area.
  - The elimination of hiding places.
  - Design stairwells to be open - where you can see into and out of the stairwell as well as having the ability to see from one landing to the next from within the stairwell.
- Other characteristics which should be in place include:
  - CCTV.
  - Emergency phones on every level.
  - Light fixtures located where you get in and out of your car versus where you drive.
  - The fixtures should not be flush against the ceiling, but should hang down at least to the crossbeam to provide as much light spread as possible.
  - Adequate signage throughout the deck directing you where to go and indicating where you are.
- Use less concrete to allow for natural light to enter and give the deck a feeling of openness.
- Monitor all elevators with cameras and microphones.
- Dyed concrete (white) can be used to increase reflectivity and improve light levels at night.
- SEE LANDSCAPING AND LIGHTING section.



The parking garage at MacArthur Mall in Norfolk, VA has cut out areas in the concrete wall separators. This allows light to pass through, provides visibility to various sections of the garage and allows sound to travel. Emergency phones are also available and the garage is very well lit.

#### **NATURAL ACCESS CONTROL**

- Use attendants, or cameras and sound monitors. Indicate their presence with signs.
- Position all pedestrian entrances next to vehicle entrances, but design the entrances to clearly define and separate each area to avoid potential vehicle/pedestrian conflicts.
- Construct stairwells to be visible, without solid walls.
- Place elevators close to main entrances, with the entire interiors in view when the elevator doors are open.
- Limit access to no more than two designated and monitored entrances.
- Allow no unmonitored access to adjacent buildings without direct visual contact.

## PARKING GARAGES/STRUCTURES – Design Strategies continued

- Differentiate between public and private parking spaces.
- SEE TARGET HARDENING section.

### TERRITORIALITY

- Create a well-defined entrance or gateway with plantings, fences, gates, etc
- Define property perimeters with landscaping, decorative fencing, gates and signs.
- Use signs that clearly identify where you are and how to get to other businesses within the complex.
- Place signs marking public entry points.

### ACTIVITY SUPPORT

- Set hours of use to reflect those of local businesses, with secure closing during non-use hours.
- Provide valet parking, especially at hospitals.
- In garages that are less active, consider cooperative relationships with other businesses that will utilize the upper decks and bring more legitimate users to the facility.

### MAINTENANCE

- Keep all surfaces clean and light in color to reflect light. Use white paint, if necessary, particularly if underground.
- Carefully maintain all lighting and surveillance equipment.



This parking deck in Henrico County, VA is very open and visible. Using less concrete adds to the open feeling within the deck. Surveillance is possible to the stairwell and elevators with glass walls in place.



The parking garage in MacArthur Mall in Norfolk, VA was designed with CPTED strategies in mind. This stairwell is open, well lit and very visible. It is used as a design feature by its location and layout.

## LIGHTING

Lighting and landscaping are important elements in any site design. Many localities require separate landscaping and lighting plans to be approved for new and existing development. It is important to compare the lighting and landscaping plans for conflicts.

Whether a single house, or an industrial complex, appropriate lighting techniques should be used. Good lighting will help people feel more comfortable with their surroundings. It should provide clear paths for movement and highlight entryways without creating harsh effects or shadowy hiding places.

Lighting is one of the most economical and effective forms of crime prevention available.



Alternate landscape and light islands within parking areas to prevent trees from growing up into the light fixtures. The above fixture is an example of a shoebox light fixture found in Chesterfield County, VA.

### **DESIGN STRATEGIES:**

- Provide lighting systems that make pedestrians more visible to motorists and can illuminate other vehicles and objects that should be avoided.
- Locate lighting systems for homes and businesses along walkways to permit pedestrians to see risks involved with walking at night.
- Illumination should fall throughout the parking area, along the walkway, along the building edge and building entrances.
- Provide lighting systems that will enhance the ability to observe surroundings.
- Provide lighting systems that minimize glare, shadow, light pollution and light trespass.
- Provide lighting that is even, uniform and does not produce dark areas or sharp contrasts for concealment.
- When creating uniform lighting consider the type of fixture, the height of the poles, the direction the light needs to go and the spacing of the fixtures.
- The lamps used throughout the site should be the same. Whether Metal Halide, High Pressure Sodium or another type of light is used, the emphasis is to have the same color of light throughout the site. This will provide good color rendition, help with visibility and reduce contrasts.
- Routine maintenance of the lights is necessary. A program should be implemented to review the lights regularly to determine if any have burnt out or been broken and need replacing.
- A program should be established to relamp the complex, also known as group relamping. This will better ensure the proper use of the light bulb, as well as reducing cost when lights need to be replaced one at a time and each individual visit has to be paid for.
- Globes should be cleaned to ensure full illumination from the light.
- A program should be established for trimming and maintaining tree canopies and other plant materials at and around the light poles, wallpacks, etc.



Separate trees from light poles for effective lighting in a parking lot. In this example in Chesterfield County, VA, the light is only illuminating the tree canopy.



## LIGHTING – Design Standards continued

### Residential application:

- Keep your porch lights on at night!
- Install dusk to dawn sensors on porch lights.
- Install motion sensor lights along the sides of a home to illuminate areas with poor surveillance.

### Multi-Family Residential application:

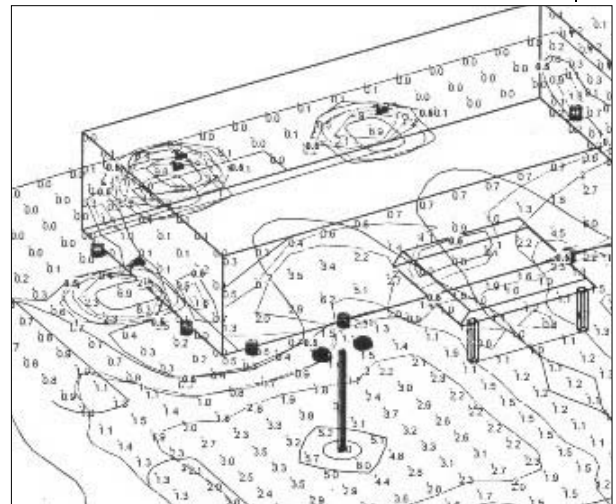
- Use the same type of lamp throughout the complex. Whether Metal Halide, High Pressure Sodium, incandescent or another type of light is used, the emphasis is to have the same color of light throughout the site. This will provide good color rendition, help with visibility and reduce contrasts.
- Note that most porch lights are incandescent bulbs, which are white in color. If High Pressure Sodium bulbs are installed in the other fixtures, which are yellow-orange in color, this will not provide good color rendition, but actually create contrasts.
- Parking lot lighting should be at a *minimum-maintained level* of 1.0 foot-candles or 10 lux. This lighting should also spill over to the front, side and rear yards of the units whenever applicable.
- Wire the porch lights to come on at dusk and turn off at dawn automatically. This will aid tremendously to the amount of light in the front and rear of the units.
- Using compact fluorescent lamps in small fixtures will help generate more light at lower electricity and maintenance costs.
- Install light poles versus attached light fixtures (i.e. wallpacks) to increase the light level.
- The light fixture should be one that puts the light down on the ground, versus horizontally and up in the air. Many of the decorative light fixtures put the light everywhere but where you want it, which is on the ground.
- If decorative fixtures are used, install the type of fixture where the bulb is in the top of the 'globe'. This will place the light down and avoid glare because you don't actually see the bulb. (see below left photo)



This post-top example has the bulb in the top of the fixture. The white bulb you see is for decorative purposes only. This design eliminates glare and directs the light towards the ground.



Another design of a post-top fixture is pictured here.



This is an example of a 3-D lighting plan with point-to-point foot-candle levels

## LANDSCAPING

Landscapes can be particularly useful, as stated in the landscape ordinances of many communities, because properly designed and maintained, they "... facilitate the creation of a convenient, attractive and harmonious community; to conserve and protect natural resources, including air and water quality; to enhance property values; to preserve the unique character of an area; and to encourage the appropriate use of land."

Landscapes can work for CPTED by supporting the core components: Natural Surveillance, Natural Access Control and Territoriality. In order to create a landscape that aids in CPTED, it is critical to select appropriate plants and landscape materials, install them in fitting locations and stick to rigorous maintenance. Plants that "fit" in a landscape will be able to reach maturity and provide the maximum environmental benefits to the local community. Landscape materials, like stone, water, benches, gravel, fences, concrete, brick, bike racks, earth, lighting and plant materials, need to be selected to suit the space, the activities intended for the space and for the long term benefits each provides in creating a safe and aesthetically pleasing environment.

Landscaping is used to control the direction of movement both visually and physically. Landscaping and screening (to include walls, fences, etc.) is often required to buffer and protect the homeowner. Safety and security need to also be considered and addressed in every development. One goal may be to deny access to an area while providing opportunities for surveillance.

### **DESIGN STRATEGIES:**

- Planting and selection of landscape materials should be such that sight lines remain open and clear and places of concealment are not fostered.
- Keep shrubs trimmed to a maximum of 3 feet, or at least below windowsills, when safety is an issue.
- Tree canopies should have a natural growth height of at least 4 feet from the ground when located around entrances, parking areas, walkways, etc.
- Elevate tree canopies to a height that provides adequate Natural Surveillance. If young trees



Above is an example in Henrico County, VA where an 'overlay district' requires a continuous hedge. What visibility to the business and parking lot is being allowed?

- are 'limbed up' too soon, it shortens their life and makes them more prone to failure.
- Choose plants that will naturally grow to the desired form or height to reduce maintenance, etc.
- If graffiti is a known problem in the area, specify thorny landscape plants as a natural barrier to deter unwanted entry.
- Specify vines or planted wall coverings to deter graffiti. Avoid blank spaces, which may be an invitation to graffiti vandals.
- Provide landscape and fencing that do not create hiding places for

criminals.

- Consider creative solutions to fencing schemes that work aesthetically and functionally, while providing visibility to and from a site.
- Use lighting in the landscaping, both for security and aesthetics.

## CONCLUSION

The strategies in Crime Prevention Through Environmental Design can go a long way in making a community safer.

It is not considered possible to make a building or area crime-proof. The recommendations included in this booklet should, however, reduce the probability of crime if the CPTED strategies and concepts are properly applied and maintained. There may be instances where information in this document conflicts with local building and fire codes. In such cases, the building codes and fire codes should be adhered to.

CPTED strategies can be applied in both existing and new development. The concepts should be applied during the design phase to avoid potential costly changes later.

NOTE: The application of CPTED strategies and concepts is site specific.

## **Appendix A:**

### **Law, Regulation and Policy Supporting CPTED**

## **CPTED Law, Regulation and Policy**

### **I. CPTED Related Laws - Virginia**

- A. Zoning Enabling Regulations §15.2-2283
- B. School Safety §22.1-279.8
- C. Landlord Tenant Act § 55-248.13:1
- D. Comprehensive Plans –
  - 1) Prince William County, Virginia, 2003 Community Design Plan
  - 2) Henrico County, Virginia
    - a. Land Use Plan 2010
    - b. Parks, Recreation and Open Space Plan 2015
  - 3) City of Roanoke, Virginia, Vision 2001-2020
  - 4) Virginia Beach, Virginia Comp Plan Policy Document, Dec. 2003
  - 5) Montgomery County, Virginia, 2025
- E. Site Plan Review Committee (Hampton, Virginia – 2003)
- F. Standard Site Plan Requirements (Arlington County, Virginia – 2004)

### **II. CPTED Ordinances**

- A. CPTED Ordinance (Broward County, Florida – 1996)
- B. CPTED Ordinance (Seatac, Washington – 2002)

### **III. CPTED Regulations**

Late Night Retail Workers Crime Protections (Washington Department of Labor and Industries)

### **IV. CPTED Initiatives**

- A. Safer by Design – Governor’s Crime Prevention Plan (Virginia – 1994)
- B. Safe Communities Program (Phoenix, Arizona - 1995)
- C. Neighborhood Parks (Collier County, Florida – 2003)
- D. Transportation Goal (Ogden, Utah – 2002)
- E. Comprehensive Parks & Recreation System Plan Update (Boise, Idaho – 2004)

### **V. CPTED and Accreditation**

- A. Commission on Accreditation for Law Enforcement Agencies (1994)
- B. National Advisory Committee on Criminal Justice Standards and Goals (1978)

### **VI. CPTED Bid Requirements**

Recreation (Los Angeles, California – 2003)

### **VII. CPTED Planner Job Description’s**

- A. Henrico County – County Planner III – Crime Prevention Through Environmental Design position
- B. Chesterfield County – Police Planner

### **VIII. CPTED in Premises Liability**

## **I. CPTED Related Laws - Virginia**

### **A. Zoning Enabling Legislation (Virginia)**

Code of Virginia: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+15.2-2283>

§ 15.2-2283. Purpose of zoning ordinances

Zoning ordinances shall be for the general purpose of promoting the health, safety or general welfare of the public and of further accomplishing the objectives of § 15.2-2200. To these ends, such ordinances shall be designed to give reasonable consideration to each of the following purposes, where applicable: (i) to provide for adequate light, air, convenience of access, and safety from fire, flood, **crime** and other dangers; (ii) to reduce or prevent congestion in the public streets; (iii) to facilitate the creation of a convenient, attractive and harmonious community; (iv) to facilitate the provision of adequate police and fire protection, disaster evacuation, civil defense, transportation, water, sewerage, flood protection, schools, parks, forests, playgrounds, recreational facilities, airports and other public requirements; ...”

(Code 1950, §§ 15-821, 15-968.3; 1962, c.407, § 15.1-489; 1966, c.344; 1968, c.407; 1975, c.641; 1976, c. 642; 1980, c. 321; 1983, c.439; 1988, c.439; 1989, cc. 447, 449; 1990, cc. 19, 169, 384; 1992, c. 812; 1993, cc. 758, 884; 1997, c. 587.)

### **B. School Safety (Virginia)**

Code of Virginia: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+22.1-279.8>

#### **§ 22.1-279.8. School safety audits and school crisis and emergency management plans required.**

A. For the purposes of this section, unless the context requires otherwise:

"School crisis and emergency management plan" means the essential procedures, operations, and assignments required to prevent, manage, and respond to a critical event or emergency, including natural disasters involving fire, flood, tornadoes, or other severe weather; loss or disruption of power, water, communications or shelter; bus or other accidents; medical emergencies; student or staff member deaths; explosions; bomb threats; gun, knife or other weapons threats; spills or exposures to hazardous substances; the presence of unauthorized persons or trespassers; the loss, disappearance or kidnapping of a student; hostage situations; violence on school property or at school activities; incidents involving acts of terrorism; and other incidents posing a serious threat of harm to students, personnel, or facilities.

"School safety audit" means a written assessment of the safety conditions in each public school to (i) identify and, if necessary, develop solutions for physical safety concerns, including building security issues and (ii) identify and evaluate any patterns of student safety concerns occurring on school property or at school-sponsored events. Solutions and responses shall include recommendations for structural adjustments, changes in school safety procedures, and revisions to the school board's standards for student conduct.

B. The Superintendent of Public Instruction shall develop a list of items to be reviewed and evaluated in the school safety audits required by this section. Each local school board shall require all schools under its supervisory control to annually conduct school safety audits as defined in this section and consistent with such list.

The results of such school safety audits shall be made public within 90 days of completion. The local school board shall retain authority to withhold or limit the release of any security plans and specific vulnerability assessment components as provided in § 2.2-3705. Each school shall maintain a copy of the school safety audit, which may exclude such security plans and vulnerability assessment components, within the office of the school principal and shall make a copy of such report available for review upon written request.

Each school shall submit a copy of its school safety audit to the relevant school division superintendent. The division superintendent shall collate and submit all such school safety audits to the Virginia Center for School Safety.

**School Safety (Virginia) continued**

C. The school board may establish a school safety audit committee to consist of representatives of parents, teachers, local law-enforcement agencies, judicial and public safety personnel, and the community at large. The school safety audit committee shall evaluate, in accordance with the directions of the local school board, the safety of each school and submit a plan for improving school safety at a public meeting of the local school board.

D. Each school board shall ensure that every school that it supervises shall develop a written school crisis and emergency management plan, consistent with the definition provided in this section. The Department of Education and the Virginia Center for School Safety shall provide technical assistance to the school divisions of the Commonwealth in the development of the school crisis and emergency management plans.

Upon consultation with local school boards, division superintendents, the Virginia Center for School Safety, and the Coordinator of Emergency Management, the Board of Education shall develop, and may revise as it deems necessary, a model school crisis and emergency management plan for the purpose of assisting the public schools in Virginia in developing viable, effective crisis and emergency management plans. Such model shall set forth recommended effective procedures and means by which parents can contact the relevant school or school division regarding the location and safety of their school children and by which school officials may contact parents, with parental approval, during a critical event or emergency.

**C. Landlord Tenant Act**

Code of Virginia: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+55-248.13C1>

**§ 55-248.13:1 Landlord to provide locks and peepholes.**

The governing body of any county, city or town may require by ordinance that any landlord who rents five or more dwelling units in any one building shall install:

1. Dead-bolt locks which meet the requirements of the Uniform Statewide Building Code (§36-97 et seq.) for new multi-family construction and peepholes in any exterior swinging entrance door to any such unit; however, any door having a glass panel shall not require a peephole.
2. Manufacturer's locks which meet the requirements of the Uniform Statewide Building Code and removable metal pins or charlie bars in accordance with the Uniform Statewide Building Code on exterior sliding glass doors located in a building at any level or levels designated in the ordinance.
3. Locking devices which meet the requirements of the Uniform Statewide Building Code on all exterior windows.

Any ordinance adopted pursuant to this section shall further provide that any landlord subject to the ordinance shall have a reasonable time as determined by the governing body in which to comply with the requirements of the ordinance.

**D. Comprehensive Plans**

**1) Community Design Plan (Prince William County, Virginia - 2003)**

Prince William County web page link for the Comprehensive Plan is as follows:

[www.pwcgov.org/default.aspx?topic=040035000950000868](http://www.pwcgov.org/default.aspx?topic=040035000950000868) Community Design Plan (June 24, 2003)

DES-POLICY 2: Encourage site, building, and landscape designs that result in the creation of safe and accessible pedestrian circulation and community open space.

**ACTION STRATEGIES:**

1. Encourage the location of public open spaces and facilities in new developments close to active uses – commercial, community services, employment and schools.

**Community Design Plan (Prince William County, Virginia)** *continued*

2. Encourage the provision of pedestrian links between and among commercial properties, community facilities, and nearby residential neighborhoods.
3. Encourage the clear delineation of pedestrian ways in commercial parking lots and other thoroughfares for public use – through the use of landscaping, lighting, signage, contrasting pavement, pavement marking, or other innovative treatments.
4. Encourage the provision of wider-than-required sidewalks in non-residential areas with high levels of pedestrian activity.
5. Incorporate the *Crime Prevention through Environmental Design (CPTED)* principles of the Prince William County Police Department and be responsive to homeland security issues in site and building designs, to increase user safety and security.

**2) Henrico County, Virginia** [www.co.henrico.va.us/planning/landuse/2010goals.pdf](http://www.co.henrico.va.us/planning/landuse/2010goals.pdf)

a. Land Use Plan 2010

Residential Goals:

Goal VIII. To address public safety through environmental design and enhanced public awareness of crime and crime prevention techniques.

Objective E: Encourage safe and adequate housing for people of all economic levels.

Objective J: Encourage the public to take individual and collective actions to protect themselves and their property from crime.

Policy W: Encourage design alternatives that reduce the crime problem in residential areas.

b. 2015 Parks, Recreation and Open Space Plan

*Section: Design for User Safety and Compatibility*

“Park users’ perceptions of safety or lack of safety may have a direct impact on the parks throughout the county as well as the recreation programs. The County should identify and address real and perceived safety concerns in the parks.

The design alone will not guarantee a safe environment. Maintenance, proper scheduling of recreation activities and community involvement are also necessary components of a safe park facility. The viability of a park system is determinant on the use of its facilities by county residents. The perception of safety in Henrico County parks is an integral part of the Division of Recreation and Parks’ success.”

Goal - Ensure that the built and natural environments within park facilities contribute to a sense of safety among users, and that park facilities are designed to be compatible with surrounding neighborhoods.

Objectives and Strategies:

1. Incorporate the concepts and strategies of CPTED in existing and proposed park facilities as feasible and desirable. (See Strategies a-b)
2. Adopt practices that encourage safety on an ongoing basis. (See Strategies a-g)
3. Adopt design measures and management practices that help parks and recreation facilities fit into the surrounding community. (See Strategies a-d)
4. Continue to maintain parks to a high level of cleanliness and attractiveness in order to encourage use and good stewardship among users and neighbors. (See Strategies a-b)



**3) City of Roanoke, Virginia Vision 2001-2020** [www.roanokeva.gov/vision/policies](http://www.roanokeva.gov/vision/policies)

Policies and Actions. Public Services: Police, Fire/EMS, Solid Waste Management, Code Enforcement

Policies:

PS P1. Community Policing. Roanoke will continue its community policing approach to strengthen close interaction and mutual cooperation between police, residents, businesses and community groups.

PS P2. Public safety services.

PS P3. Fire and EMS services.

PS P4. Code administration. The City will continuously review development and building codes and their administration to ensure appropriate regulations and review processes that encourage quality development and protection of the public's health, welfare and safety.

Actions:

Public Safety

PS A1. Develop strategies that strengthen community-policing (i.e. COPE) efforts between the police department, residents, businesses and community groups.

PS A3. Revise zoning ordinance to integrate Crime Prevention Through Environmental Design in the development review process.

**4) Comprehensive Plan, Policy Document - Virginia Beach, Virginia  
December 2, 2003** <http://www.vbgov.com/dept/planning/plans/complan/>

Introduction and General Strategy

Five Building Blocks –

5. Healthy Neighborhoods: All residents' want attractive, crime free neighborhoods, and we should strive in the design of them to promote safety and security as well as function and visual appeal. This includes access to neighborhood parks.

Strategic Growth Areas (suburban to urban transformation)

Detailed Human-scale Design, Fifth Principle of Five: Part of what is required for compact, mixed-use developments to become acceptable patterns of development within communities is the creation or re-creations of well-designed urban areas that are safe, attractive and convenient. It is important for these areas to be built at a 'human scale,' especially as people experience activity along the streets, sidewalks and public spaces. For example, the sounds from outdoor cafes, people gathering around fountains in public plazas and aromas from local coffee shops and bakeries all combine to create a sense of interest, excitement and social interaction. .... Urban streetscapes are designed with special paving, landscaping, lighting and other features that create an interesting and inviting environment. When designed and built with quality in mind, these physical elements galvanize to foster a positive sense of urban place, ....

Other urban design considerations relate to massing of buildings, orientation of buildings to the street, on-street and structured parking, street furniture, presence of windows, doors, porches and other architectural elements and the effective use of landscape and signage.

Primary Residential Area Principle 3 – Neighborhood Traffic

Employ land use and roadway design techniques that discourage cut-through traffic within residential neighborhoods. Often called "traffic calming" strategies, these techniques include assessing the neighborhood traffic condition and, if warranted, providing greater police enforcement, limiting direct

**Comprehensive Plan, Policy Document - Virginia Beach, Virginia** *continued*

access to neighborhoods from adjoining roadways, adding traffic circles, narrowing street widths in certain areas and the use of other methods to reduce traffic volume and speed.

Housing and Neighborhood Plan –

Neighborhood Issues

Community Safety: The basic foundation of a good neighborhood is safety. Safety from crime drives many of our decisions about where to live. Therefore, a continuing emphasis on protection from and proactive intervention against crime by the police is a critical foundation of good neighborhoods. In addition, utilization of design and development guidelines that improve safety and help protect people and property, such as the Crime Prevention Through Environmental Design philosophy and its program strategies, is promoted.

Appendix

*Design Standards for Parking Structures*

Security Features: Proper security is an important aspect of operating a parking structure. A safe, secure environment must be provided for patrons, employees and vehicles. Adequate security measures should be an integral part of the design.

The overall design of the structure should be such that it provides for easy surveillance from the street. The proper placement and design of windows, lighting, and landscaping increases the ability for police and others to observe intruders and maximizes the potential to deter crime.

- A. Lighting: A higher light level improves security and is an important passive technique for preventing crime. Parking structures should be designed to provide high light levels throughout all areas. Lighting should be uniform throughout the structure so that dark hiding places are not created. The recommended light level for a parking structure is a uniformly distributed 10 footcandles. Light colored ceilings and upper walls are also recommended to increase light. Extra light should be considered in pedestrian areas such as stairs, elevator lobbies, entrances, exits, and ramps. In addition, lighting should be designed so that parkers are not shocked by great contrasts in light levels between the outside and inside of the structure.
- B. Elevators: Elevators should be located along the exterior periphery of the building, preferably on a street side and oriented so that the elevator lobby is visible from the street from each level. The back of the elevator cab and shaft should be made of glass or other similar transparent material that will allow maximum surveillance from the exterior.
- C. Stairways: As with elevators, stairways should be located along the exterior periphery of the building, preferably on a street side and oriented so that the stairway is visible from the street at each level. Glass or a similar transparent material should be used to allow visibility.
- D. Access: Pedestrian access into and out of the building should be channeled through only one or two points to allow surveillance either by a cashier or a remote television camera.
- E. Sound Detection Equipment and Cameras: Both sound detection equipment and cameras can also be used to help monitor pedestrian activity, especially in remote sections and at entrance and exits. Television or sound equipment should be installed so that it is tamper-proof.
- F. Cash Security: Use of drop safes and silent alarms in the cashier's booth should be considered.

**5) Montgomery County, Virginia 2025: Montgomery County Comprehensive Plan**

<http://www.montva.com/departments/plan> and click on 2025 Comprehensive Plan

Public Safety: Goals

SFY 1.0 Public Safety Goal:

SFY 1.4 New Development: Proactively consider public safety issues in the County's review and approval of new residential, commercial, industrial and institutional developments.

SFY 1.4.1 Site Plan Review: Involve the Emergency Services Coordinator in the site plan review process for major residential, commercial, industrial and institutional developments proposed for the unincorporated portions of the county.

**E. Site Plan Review Committee (Hampton, Virginia - 2003)**

Sec 9-143 paragraphs a and b

The Site Plan Review Committee is responsible for examining any and all preliminary site plans submitted by developers to ensure compliance with the provisions of the Hampton Code to ensure the orderly growth and development of the City of Hampton.

The Site Plan Review Committee is made up of representatives from Public Works, Division of Fire and Rescue, Police Division, Planning Department, Codes and Compliance, and any other department that the Director of Public Works deems necessary to review the plan. During the review of the plan, recommendations concerning the plan may be made and any such suggestions shall be reported to the City Manager when the plan is submitted for his review.

The committee is tasked with the responsibility of perusing the plan to ensure its compliance with the City's building, structure, and safety codes. The Police Division is tasked with ensuring that Crime Prevention Through Environmental Design (CPTED) is achieved. This is accomplished by ensuring appropriate lighting and landscaping design, while minimizing design barriers that may result in unsafe or unlawful activities.

- To review land developers site plans to ensure compliance with City codes.
- Offer recommendations to site developers on ways to improve compliance with building and safety codes.
- Ensure that Crime Prevention Through Environmental Design is achieved.
- To minimize design barriers that may result in unsafe or unlawful activities.

**F. Standard Site Plan Requirements (Arlington County, VA - 2004)**

Administrative Regulation 4.1:

Department of Community Planning, Housing and Development; Planning Division

<http://www.co.arlington.va.us/Departments/CPHD/planning/zoning/CPHDPlanningZoningSitePlan.aspx>

Major/New Site Plan: Admin Regulation 4.1 (.pdf format)

Attachment C1: List of Standard Site Plan Requirements by Category – High Density Office, Residential and/or Mixed Use Development (as of April 2004)

Before Final Building Permit: #45 – Review by CPTED practitioner

Attachment C2: List of Standard Site Plan Requirements by Category – Townhouse and Cluster Development (as of April 2004)

Before Final Building Permit: #36 – Review by CPTED practitioner

## **II. CPTED Ordinances**

### **A. Crime Prevention Through Environmental Design (Broward County, Florida - 1996)**

Section 1. Chapter 27, Part XXVII,

Sec. 27-135. Purpose.

The purpose of this Administrative Policy is to require and provide procedures for Crime Prevention through Environmental Design (CPTED) review during the site plan review procedures established by Chapter 5, Article IX, Broward County Land Development Code.

Sec. 27-136. Definitions.

*County Facility:* For the purposes of this article, shall mean a building or structure used by the general public.

*Crime Prevention Through Environmental Design (CPTED):* a proactive approach using the following four (4) principles in the design and care of the built environment to reduce the incidence and fear of crime:

1. Natural surveillance
2. Natural access control:
3. Territorial reinforcement
4. Maintenance

Implementation of CPTED principles 1 through 3 is handled through the site plan review and approval process addressed by this policy. Implementation of principle 4 depends primarily on individual property owner initiative, and secondarily on code enforcement.

*CPTED Review:* The evaluation of site and building design during the review of a development application for its consistency with CPTED principles.

*CPTED Training:* A basic training course by an instructor as approved by the Office of the Attorney General for the State of Florida or the National Crime Prevention Institute, or a course of study offered by an accredited college or university.

Sec. 27-137. Procedures.

#### A. Training.

This policy calls for the training of personnel involved in plan review from the Broward County Department of Strategic Planning and Growth Management. A minimum of two (2) plan review personnel from the above department must be trained in CPTED. Other personnel, particularly Public Works staff involved in County project design, should be CPTED trained in order to maximize the benefit of CPTED implementation.

#### B. Site plan review.

Applications for site plan approval shall undergo CPTED review for all uses except for one single family dwelling or one duplex. The CPTED review must be completed and signed by one CPTED trained law enforcement officer and one designated CPTED trained person within the Broward County Department of Crime Prevention Through Environmental Design (Broward County, Florida).

**Crime Prevention Through Environmental Design (Broward County, Florida - 1996) *continued***

Strategic Planning and Growth Management. Any application which undergoes an abbreviated review under section 5- 181(c)(3) of the Broward County Code of Ordinances shall only require CPTED review by the Department of Strategic Planning and Growth Management. At the discretion of the Director of the **Crime Prevention Through Environmental Design Broward County, Florida** *continued*

Development Management Division, abbreviated review applications may be sent to a law enforcement officer for CPTED review.

C. Plat review.

Plats with lotted subdivision designs and plats with street designs shall require CPTED review by the Department of Strategic Planning and Growth Management and, at the discretion of the Director of the Development Management Division, may be sent to a law enforcement officer for CPTED review.

D. Effect of staff comments relative to CPTED.

Compliance with the comments noted by the CPTED reviewers shall be voluntary. For sites owned or controlled by Broward County, design firms contracted to design new County facilities shall have CPTED trained staff pursuant to section 27-136.

E. Site plan requirements; other application requirements.

Where applications do not require submission of elevation drawings and site plans, including landscaping and lighting plans, the Director of the Department of Strategic Planning and Growth Management may require submission of same when necessary for purposes of CPTED evaluation.

F. Conflict with Zoning and Land Development Codes.

Where application of CPTED principles conflicts with requirements of either the Broward County Zoning Code or the Land Development Code, code requirements shall take precedence. Strategic Planning and Growth Management staff shall maintain records of such conflicts and, where feasible, may recommend code amendments which reconcile CPTED principles with existing site development standards and principles.

**B. CPTED Ordinance (Seatac, Washington - 2002)**

**Title 17 – CPTED; Chapters 17.04 – 17.60** ([www.ci.seatac.wa.us/mcode/index.htm](http://www.ci.seatac.wa.us/mcode/index.htm))

The City Council adopted a CPTED ordinance on November 25, 2003, amending the City's site design standards. The purpose of the amended design standards is to reduce or eliminate opportunities for crime through environmental design features such as:

- Exterior Lighting
- Open Space
- Landscaping
- Building Security and locks

The standards apply to commercial, office, industrial and multifamily development. Standards relating to building security will also apply to new single-family development.

### **III. CPTED Regulations**

#### **Late Night Retail Workers Crime Protection (Washington State Department of Labor and Industries, 2002)**

[www.lni.wa.gov/wisha/rules/latenightretailing/default/htm](http://www.lni.wa.gov/wisha/rules/latenightretailing/default/htm)

##### Chapter 296-832 Late Night Retail Workers Crime Protection

- WAC 296-832-100 Scope
- WAC 296-832-200 Training
- WAC 296-832-300 Store Safety

##### WAC 296-832-200 Training Summary:

Your Responsibility: To make sure all employees receive crime prevention training as part of your accident prevention program. You must:

- Provide crime prevention training to your employees (WAC 296-832-20005)
- Provide crime prevention retraining to your employees annually (WAC 296-832-20010)

All employers operating late night retail establishments shall provide crime prevention training to their employees.

##### WAC 296-832-300 Training Summary:

Your Responsibility: To take certain safety measures to discourage crime in your store. You must:

- Have a safe in your store (WAC 296-832-30005)
- Post a notice about your store's safe and cash register (WAC 296-832-30010)
- Provide outside lighting (WAC 296-832-30015)

- (a) Post a conspicuous sign in the window or door that states that there is a safe on the premises and it is not accessible to the employees on the premises and that each cash register contains only the minimal amount of cash needed to conduct business. No employer shall be subject to citation and penalty for having moneys in the cash register in excess of the minimal amount needed to do business.
- (b) All display, and any other material posted in window(s) or door(s) should be arranged so as to provide clear and unobstructed view of the cash register; provided each register is located in such a position so as to be visible from the street.
- (c) Have a drop-safe, limited access safe, or comparable device on the premises.
- (d) Operate the outside lights for the portion of the approach and parking area that is necessary to accommodate customers during all night hours the late night retail establishments is open. This may be accomplished through:
  - (i) Surveillance lighting - to detect and observe pedestrian and vehicular entrances.
  - (ii) Providing adequate illumination - adequate illumination throughout the pedestrian area and vehicular entrance areas should be a minimum of one-foot candle to comply with ANISI/IES RP7-1983.

## **IV. CPTED Initiatives**

### **A. Safer by Design - Governor's Crime Prevention Plan (Virginia - 1994)**

- ❑ Establish a Safer By Design Consortium of architectural and urban planning programs within Virginia's universities to develop a curriculum for architecture, engineering, urban planning and public administration students which incorporates CPTED or Crime Prevention through Environmental Design.
- ❑ Encourage localities to incorporate CPTED practices into the master planning process, development, zoning requirements and site plan reviews.
- ❑ Sponsor an annual Governor's Crime Prevention Student Design Competition for students of architecture.
- ❑ Promote crime prevention as a crucial component of economic development.
- ❑ Promote the expansion of proven CPTED practices in the Uniform Statewide Building Code.
- ❑ Require a CPTED component in all master plans of state facilities and CPTED reviews or construction of all new state buildings

### **B. Safe Communities Program (Phoenix, AZ - 1995)**

Since the initiation of the Safe Communities Program the following activities have been implemented.

Standards Assessment & Modifications - A CPTED task force was established comprised of representatives of the various city departments that have ordinances, policies, and/or guidelines that deal with the physical environment. This task force is charged with the responsibility of reviewing all applicable codes that influence the physical environment, whether it be new development or existing development.

The task force has focused on updating the Design Review Guidelines which are used for the purpose of reviewing site plans for new development. These guidelines have the most immediate impact on the physical environment created as a result of new development. Because of the level of development activity in Phoenix, the Design Review Guidelines were the priority for modification based on CPTED principles.

The task force coordinated their work with a citizen committee established to provide feedback and input regarding proposed changes. The citizen committee was representative of a cross section of the community and brought a variety of perspectives that ensured a citizen voice as the amendment process moved forward. The citizen committee also assisted with the community outreach and education regarding the important role that the Safe Communities Program could play in addressing the issues of safety and crime.

### **C. Neighborhood Parks (Collier County, FL - 2003)**

**(I) = Plan Amendment on December 16, 2003 by Ordinance No. 2003-67, Policy 2.1.3**

New neighborhood parks will be carefully sited and intentionally integrated into existing residential neighborhoods, and shall be designed according to the principles of Crime Prevention Through Environmental Design (CPTED). Neighborhood parks may also be co-located with churches, schools, or other recreational facilities

**D. Transportation Goal (Ogden, UT - 2002)**

Transportation choices that are safe, environmentally responsible, accessible and adequate—in a pleasing setting and connected to the region.

Strategies:

7.D. Designing parking lots with CPTED principles (*Implementation: Engineering Division, Planning Division, Planning Commission*)

**E. Comprehensive Parks & Recreation System Plan Update (Boise, ID - 2004)**

16. Safety and Security in Parks and Recreation Programs

6. Ensure that the design and maintenance of park amenities and recreation features promote public security and maintain user safety.

a. Implement park design and maintenance standards that incorporate principles of Crime Prevention Through Environmental Design (CPTED)



## **V. CPTED and Accreditation**

### **A. Commission on Accreditation for Law Enforcement Agencies (CALEA) (1994)**

The Commission on Accreditation for Law Enforcement Agencies is a national organization, which accredits law enforcement agencies. Law enforcement agencies are accredited based on a series of mandatory and optional standards that have been established by the Commission. Section 45 of the standards address crime prevention services.

Crime Prevention Standard: 45.1 .3

If granted the opportunity, by the jurisdiction's governing authority, the agency provides crime prevention input into development and/or revision of zoning policies, building codes, fire codes, and residential/commercial building permits.

### **B. National Advisory Committee on Criminal Justice Standards and Goals (1978)**

The National Advisory Committee on Criminal Justice was a national criminal justice committee sponsored by the U.S. government and supported by national, state and local private and public organizations. The work of the Committee produced an agenda for CPTED that is as useful today as when it was developed in 1978.

#### Environmental Security

- 5.1 Improvement of Door and Window Security
- 5.2 Adequate Security Lighting
- 5.3 Computer Security
- 5.4 Crime Prevention Design
- 5.5 Development of Environmental Security Expertise
- 5.6 Environmental Security in Comprehensive Planning
- 5.7 Crime Prevention Courses in Schools of Architecture and Urban Planning
- 5.8 Inclusion of Crime Prevention Measures in Existing Codes
- 5.9 Crime Prevention Impact Forecast
- 5.10 Crime Prevention Courses as a Job Requirement

## **VI. CPTED Bid Requirement**

### **Recreation (County of Los Angeles Department of Parks and Recreation – 2003)**

#### **A. PURPOSE OF THE REQUEST FOR PROPOSALS**

The purpose of this Request for Proposals (RFP) is to determine if there is any private sector interest in a concession agreement for the design, financing, development, and operation of a Golf Practice Facility and Batting Cage Complex within the Kenneth Hahn State Recreation Area (KHSRA) which is under the jurisdiction of the County of Los Angeles Department of Parks and Recreation (Department).

Due to the unavailability of County general funds for such development projects, the Director of the Department of Parks and Recreation (Director) is seeking private sector funding to accomplish the contemplated improvement project. All prospective proposers are advised that the County does not intend to contribute any of its funds for the project and proposals should assume one hundred percent non-County funding. The County reserves the right, however, to contribute grant funds, or other funding in its sole discretion. Consistent with Los Angeles County's outreach and good faith efforts to broaden participation in competitive solicitation, the Department encourages qualified joint ventures and partnerships, as well as individuals and corporations, to submit a response to this RFP.

#### **Objective 6: Consistency with Crime Prevention Through Environmental Design (CPTED) Guidelines**

CPTED Guidelines are intended to identify creative solutions for using physical design to encourage crime prevention. The three primary CPTED strategies are natural surveillance, natural access control, and territorial reinforcement (Los Angeles County Sheriff's Department 1999). The use of these strategies, which are becoming standard in the design of urban open spaces, can be designed to be both aesthetically pleasing and functional, while, simultaneously, instilling the perception of being "safe."

The proposed project would replace existing fenced vacant lot with proposed recreation development designed to meet the needs of the community. The proposed development provides an opportunity to enhance natural surveillance through creation of access routes, installation of security lighting, and development of clear sight lines. Access to the developed areas can be controlled through strategically placed fencing and security. The development of recreation facilities that serve the needs of the local community provides for territorial reinforcement.

## **VII. CPTED Planner Job Description's**

### **A. Henrico County – County Planner III – CPTED**

Henrico County Division of Police

#### SECTION OPERATIONAL PROCEDURE

Section Name: Community Services, Section #: Community Services - 7

Accreditation #: CALEA 3<sup>RD</sup> Edition

Subject: Crime Prevention Through Environmental Design (CPTED)

Date: 07/01/00      Effective Date: 07/01/00

Reference: CPTED Planner Position

#### PURPOSE

The Crime Prevention Through Environmental Design (CPTED) Planner position is crucial in the overall effort to enhance environmental safety and security throughout the county. This position is not simply ad hoc in nature, but is designed to incorporate existing and ongoing operations within the Division of Police, as well as various county agencies involved in community development.

#### DISCUSSION

The CPTED Planner's main responsibilities include:

1. The review and coordination of all development requests submitted in the county. The CPTED Planner will study plans and/or requests, visit sites, research data relating to requests, solicit input from affected sections within the Division and provide written comments and recommendations.
2. The Planner is the Division's representative at staff/developer meetings, public hearings, etc. The Planner will attend meetings to convey the concepts and strategies of CPTED as they relate to plans and/or requests for development within the community.
3. The Planner will present CPTED concepts and strategies to various groups such as, but not limited to, Division members, development agencies, design engineers, private sector developers and professional organizations.
4. Facilitator of the efforts within the Division to study, plan, develop, implement CPTED concepts and strategies. The Planner will attend various Division meetings as they relate to CPTED, to coordinate the efforts of such members as the Community Officers, Neighborhood Watch Coordinator, Crime Prevention Officers, Community Maintenance Officer, Crime Prevention Support Officers, etc.
5. The Planner will assist in conducting security surveys, as requested, when special concerns arise and in instances where a very large site such as an overall neighborhood, apartment complex, large commercial building or complex is the subject of CPTED concerns. The Planner will provide written recommendations regarding CPTED issues after the completion of these surveys.

By Order Of:

**B. Chesterfield County – Police Planner**

Chesterfield County Police Department

STANDARE OPERATING PROCEDURE

Operations Support Bureau - Support Services Division # SSD-201

Effective Date: 040101

Review Date: 050101

Subject: Crime Prevention Through Environmental Design Amends/Supersedes: SSD-201  
Effective 02-09-01

VLEPSC Standard(s): ADM21.02

OPS Review \_\_\_\_\_

I. Purpose:

To promote an active crime prevention strategy for existing development and a proactive crime prevention strategy for proposed developments. The Police (CPTED) Planner provides CPTED input during development review and re-zoning processes as well as during the update of the land use and comprehensive plans.

II. Procedures:

A. As the Police Department representative, the Police Planner provides crime prevention recommendations during the site plan, subdivision, and rezoning review processes. Early police involvement helps ensure that CPTED principles can be incorporated into development proposals.

1. Site Plan Review

- a. Receive set of development plans from county planning department
- b. Review plans
- c. Forward comments to county planner handling the site plan review
- d. Participate in pre-application meetings with developers and planning office staff
- e. Discuss additional concerns with developer as necessary

2. Rezoning review

- a. Receive zoning applications from county planning department
- b. Review zoning applications
- c. Present CPTED recommendations in pre-application zoning meetings
- d. Meet with developer to discuss additional concerns (as necessary)
- e. Forward comments to planning office for incorporation into planning commission or board of supervisor staff reports
- f. Attend planning commission or board of supervisor meetings as required

3. Subdivision Review

- a. Receive development plans from county planning department
- b. Review plans
- c. Forward comments to planning staff
- d. Participate in pre-application meetings with developers and planning office staff
- e. Discuss additional concerns with developer as necessary

B. Substantial Accord

Police (CPTED) Planner receives requests from police department to verify that facilities are compatible with comprehensive plan. After collecting necessary information, application is filed with the planning department.

Chesterfield County – Police Planner *continued*

C. Comprehensive Plan

The crime prevention contribution to the comprehensive plan ensures that CPTED principles may be incorporated into the planning and development review processes. The CPTED contribution ensures that the police maintain an active role in the plan review process.

Review and update (as necessary) the crime prevention/CPTED section of the comprehensive plan at time of plan update.

D. Crime Site Visits

Where crimes such as robberies, vandalism, etc. have occurred, site visits are made in order to offer crime prevention information and/or a security assessment to the property owner/manager.

1. Visit crime scene
2. Speak to owner/manager and offer CPTED strategies
3. Offer security survey and other crime prevention programs and training
4. Write survey (as necessary) and discuss findings with owner/manager

E. Education

CPTED and crime prevention education informs the public, development community, as well as planning and police office personnel. Educating these groups increases awareness, support and advancement of crime prevention techniques and philosophies.

1. The Police (CPTED) Planner handles information requests from citizens, planning staff, police department personnel, elected officials. Formal presentations are presented before such bodies as the county planning commission, board of supervisors, and other development boards.
2. Trains citizens, developers and officers through seminar instruction within and outside Chesterfield County
3. Makes crime prevention presentations to citizen and neighborhood groups
4. Performs security assessments of commercial and residential properties:
  - a) site survey performed during the day and possibly at night
  - b) crime data analysis for the area evaluated
  - c) written report prepared advising the owner of CPTED measures that should be implemented

F. Records

Maintain annual statistics for applications reviewed and track the status of active plans.

## **VIII. Crime Prevention through Environmental Design in Premises Liability**

**NIJ Research in Brief: April 1996**  
**By: Corey L. Gordon and William Brill**

This report was supported in part by grant 91-IJCX-KO22 from the National Institute of Justice to the American Institute of Architects. Findings and conclusions of the research reported here are those of the authors and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, Bureau of Justice Statistics, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

### **Crime Prevention Through Environmental Design in Premises Liability**

Victims of crime are seeking compensation from owners and managers of the properties on which crime takes place with increasing frequency. These cases, commonly known as premises liability cases, are based on allegations made by the victim that the property owner failed to provide adequate security and thereby contributed to the occurrence of the crime. Claims of inadequate security include systemic, organizational, human, and environmental design flaws. It is further alleged in these cases that the crime that occurred was foreseeable and that the defendant had a legal duty to provide adequate security.

Although these cases often involve specific charges, such as poor lighting, weak locks, no access control, not enough or poorly trained guards, or poor management policies, many test the principles of Crime Prevention Through Environmental Design (CPTED). This Research in Brief discusses the connection between premises liability and CPTED by first explaining the historical evolution of the legal basis for premises liability and then offering illustrations of how CPTED has become a factor in court cases.

#### **Early History: English Common Law**

Unlike criminal or contract law, American civil tort law is based primarily on precedence established by court decisions, a process known as the "common law." American civil law has its roots in English common law. Historically, English common law held fast to the rule that one person was under no duty to take any steps to protect another person from the wrongful acts of a third party. Thus, landowners had no legal duty to prevent criminal assaults on visitors to their property, and no legal liability could befall them.

Early case law developed the notion that a person engaged in a trade or calling who undertook to perform certain activities with respect to another's person or personal possessions had to meet the standards of that particular profession or calling; if they failed to live up to those standards and the person was injured or his goods damaged thereby, the tradesman could be sued for deceit in wrongfully representing himself as skilled in the trade.

From this notion developed the concept of "special relationships," i.e., those relationships that created an expectation on the part of one person that another was undertaking to provide some degree of protection against the criminal acts of others. Two of the earliest special relationships were that of an innkeeper and a guest and a common carrier and its passengers.

In spite of these narrow exceptions, English common law clung tenaciously to the notion that the landowner was sacrosanct, and the general rule of nonliability, despite the special relationships exception, held sway for many decades.

## **Development of the American approach**

Early American case law developed an ancillary exception to the special relationships doctrine, that of assumed duty. Basically, an assumed duty arises when one who would otherwise not owe any legal duty to take acts to protect others from crime nevertheless voluntarily assumes to do so. That assumption can arise by expressed means, such as the assurance of an individual that he will provide for the safety of another, or can arise by conduct, such as the presence of security guards engaged to provide protection to customers.

Similarly, American common law developed the notion that when one takes a person into custody or otherwise places a person in a situation in which that person could not provide for his own protection, then the one taking custody owes a duty to protect the other from harm, including the criminal acts of others. A typical example would be a hospital in which the patient is incapacitated. In this case, the hospital would have a legal duty to reasonably protect the patient from the criminal acts of others.

Despite these expanded exceptions, the general rule was still predominant in the United States that most property owners had no duty to protect against criminal acts. In this environment of nonliability, most property owners, architects, planners, and others responsible for the development of building projects were virtually never the subject of lawsuits in early American case law.

## **Expanding the Special Relationships Concept**

In the middle part of the 20th century, courts began expanding the concept of special relationships to include virtually any business premises that invited others onto their property for business purposes. With the advent of business inviter-invitee special relationships, many more property owners became subject to liability for inadequate security. Restaurants, retail facilities, office buildings, service stations, and other businesses became possible responsible parties for harm caused by criminal acts.

Starting in 1970, American courts began to analogize the landlord-tenant relationship to that of the innkeeper-guest, one of the earliest special relationships. This was particularly so when problems arose in common areas over which a tenant had no control or in circumstances in which the rental agreement prohibited the tenant from taking security precautions such as installing deadbolt locks or other security devices. In the past 25 years, most American jurisdictions have, through case law, recognized the landlord-tenant relationship as a special relationships exception to the general rule of nonliability.

## **Foreseeability and the Prior Similar Incidents Rule**

At the same time that the special relationships concept was being expanded to include landlords and tenants, courts were also creating significant defenses for the growing number of potential defendants. The most significant limitation on liability imposed by American case law was the concept of foreseeability, i.e., no property owner could be held liable for failing to take reasonable steps to prevent a crime unless that crime was foreseeable.

To eliminate the ambiguity of foreseeability and incorporate a standard that judges could automatically apply, early cases developed the notion that a crime was not foreseeable unless it had occurred at the particular premises before. This became known as the "prior similar incidents rule." If a plaintiff could not demonstrate that there had been a prior similar incident to the crime in question, the court would then rule, as a matter of law, that the crime was not foreseeable, and the case would be dismissed.

The use of the prior similar incidents rule, in an effort to achieve a standard, in reality simply created more diverse interpretations and decisions. The predictability and objectivity that had been expected to evolve from early cases proved to be elusive, and case law developed an almost incomprehensible patchwork of decisions. In addition, courts became highly critical of the concept at its core: As the Idaho Supreme Court noted, the prior similar incidents rule had the effect of being a "one free rape rule."

## **Totality of Circumstances**

In the 1980's, courts began critically examining the prior similar incidents rule and, over the next decade, the majority of American jurisdictions abandoned it in favor of a "totality of the circumstances" test. In other words, although prior similar incidents would be one factor that a court would consider in determining whether a crime was foreseeable, the court would look to other factors as well, such as the nature of the business, its surrounding locale, the lack of customary security precautions as an invitation to crime, and the experience of the particular landowner at other locations.

Property owners have been critical of the totality of the circumstances test because of their belief that it is an impossible standard, i.e., that any time a crime occurs, one can argue that the security was necessarily inadequate. What is often overlooked in the analysis, however, is that this test is not whether security was inadequate in any abstract sense, but whether the inadequacies were unreasonable and below generally accepted standards for a particular industry. Furthermore, the deficiency must have been a substantial contributing factor to the incident.

The lack of prior similar crimes does not render it impossible to take reasonable precautions to prevent crimes that most would agree were reasonably foreseeable. Crime prevention experts, for example, routinely develop proactive security plans for premises on which crime has not yet occurred, relying on all the circumstances to predict reasonably foreseeable crime and develop reasonable precautions against it. Therefore, if property owners take no such precautions, their good fortune in not having any prior crimes is not to their benefit when the first unfortunate victim brings a claim.

## **CPTED: A New Liability area?**

With the development of CPTED, architects, developers, and property owners have an important tool for proactive crime prevention. The developing body of CPTED concepts has done much to establish the reasonableness of certain crime prevention approaches and, thus, the unreasonableness of property owners who fail to take widely accepted steps. With the increase in the number of premises liability cases (see "Premises Liability Cases Are on the Rise"), CPTED has underscored the effectiveness of adequate security design: Good security planning is highly effective in deterring crime, and poor security planning not only fails to prevent it, but actually acts as a crime magnet, thereby increasing the risk crime will occur on a given premises.

In this sense, CPTED has been useful in assisting plaintiffs in demonstrating the causation element, i.e., that not only was the defendant's conduct unreasonable but that had the defendant acted reasonably, it would have been a substantial factor in deterring the crime.

## **Premises Liability Cases**

To illustrate the current legal climate as it relates to premises liability and CPTED, a discussion of three types of liability cases follows: convenience stores, shopping centers and malls, and apartment buildings.

### *Convenience Stores*

Convenience store crimes generally involve robberies of stores and customers and may include abductions and murder. Most cases involve allegations that the store's operation was flawed in several respects. The following case illustrates how deficiencies in staffing, training, and store layout combined in a premises liability suit.

The store, part of a small chain, was located in a quasi-residential area next to a park near a two-lane highway. The cashier station was located in the rear of the store, adjacent to a doorway that led to a rear storage room where there was a desk and a safe. Posters and advertisements covered the front windows, and the only outside lighting came from a street light across the road.

One night, two men recently released from a State prison held up the store. After forcing the cashier into the rear storage room and making her open the safe, they shot her. As the men were preparing to leave, two people



entered the store; a female employee coming to work at the shift change and a young man coming in to make a purchase while his date and another couple waited in the car outside.

Seeing the two people enter, the gunman concealed his weapon behind his back and announced that the store was closed. "It can't be," the employee replied. "I work here!" With that, the man revealed his gun, forced the woman and the young man to the rear of the store, and shot them dead.

Although the families of the two murdered employees could not sue the employer due to Workers Compensation, the father of the slain young man sued the store, charging that the store failed to provide adequate security due to the following factors:

- The cashier should not have been alone in such an isolated store.
- The counter was located in the rear of the store, which made it difficult for anyone outside to see what was happening within.
- The posters on the windows further isolated the cashier.
- There was no drop safe, which would have removed the incentive for the robbery.

The second cashier's failure to recognize the threat when she was told by the gunman that the store was closed indicated a failure on the part of the store owners to provide proper security training.

Several of these factors involved environmental design: the lighting, the posters, and the location of the cash register. In an interview, which was used as a basis for expert testimony, one of the perpetrators reported that he canvassed the area looking for the "right store" and that he had rejected several because they were brightly lit, the cashier's station was toward the front of the store, and there were no posters to interfere with the view from the parking lot.

This case did not go to trial; it was settled for a substantial sum after expert testimony was submitted in deposition. Its usefulness as an example lies in the fact that the criminals acknowledged the importance of environmental design in deciding to strike at this particular store.

### *Shopping Centers and Malls*

In premises liability cases involving shopping centers and malls, environmental design is relevant in several ways. First, there is the design of the malls themselves and the image they project of being modern fortresses--organized, controlled, and protected from wind and rain. To a shopper, this can mean a promise of safety, a place where one can relax and not be on guard.

Criminals recognize the opportunity malls present in terms of available cash and merchandise, both from the customers and the retailers. CPTED is critical to how retailers protect their merchandise and protect their customers from becoming victims of crime.

For example, a large regional shopping mall, with over 1.2 million square feet, had grown over the years from its original small, rectangular structure. Various asymmetrical sections had been built out into the parking lot; as a result, security guards could only see a small portion of the lot at any given time because sight lines were obstructed by the various expansions. In addition, as is customary in large shopping centers, most of the walls were solid, preventing shoppers and store employees from being able to view the parking lot. This is known as the "fortress effect," which limits the ability of people inside the mall to perform natural surveillance.

In addition to these physical characteristics, the lighting system at the mall had not been upgraded in some sections of the parking lot since the mall was first built in the late 1960's. As a result, the light poles in some areas were shorter than in other areas, and the fixtures in place employed an older, now-discontinued type of low-pressure sodium lighting. In addition to being essentially monochromatic, low-pressure sodium lights

degrade very quickly, losing as much as 75 percent of their lighting ability in the first 25 percent of their life cycle.

One winter evening, two young women were abducted at gunpoint from one of the sections of the parking lot that had not had its lighting upgraded. At the time of the incident, several of the lights in the area were burned out and the remaining lights had been in place for a long time, resulting in substantially degraded lighting output. As a result, many sections of the parking lot had lighting below the recommended minimums of the Illuminating Engineering Society of North America, including some areas where the lighting was below the minimum amount needed for human beings to discern movement or objects. All of these environmental design factors were alleged by the plaintiffs to have contributed to the perpetrator's selection of that particular location to commit his crime. (See "Dim Lights and Liability" for another example of lighting and legal issues.)

Another premises liability case involved a woman who was attacked while opening the trunk of her car in a mall garage by three girls with baseball bats. Case investigation revealed that the assailants had been parked nearby for over one-half hour. Their car had been parked with the front pointing outward for improved observation of shoppers returning to their cars. It was also discovered that earlier in the day, the assailants had been chased from another mall by a guard who questioned them about their suspicious behavior.

The mall's security program had several deficiencies that contributed to the event and caused this case to be settled before trial. The mall's recordkeeping was inadequate, and it was established that mall management was unaware of the level of criminal activity on its premises. It was also established that management could not verify guard compliance to assigned patrols. In general, mall cases in which juries find for the victim usually involve a combination of deficiencies that include inadequacies in the security guard service and mall policies as well as in design and environmental issues.

#### *Apartment Buildings.*

A common premises liability case in an apartment complex involves the rape of a woman by an intruder. Although the complaint may allege deficiencies in the guard service or management policy, environmental factors are usually at the center of these cases.

Typical allegations in these cases involve charges that the lighting was poor, the perimeter of the property was unsecured, access was uncontrolled, and the locking systems were inadequate. Sometimes a specific deficiency will dominate the case. A sliding glass door, for example, that the intruder was able to lift off the track, pry open, or bend easily so it could be opened; an apartment door that did not have a deadbolt lock on it; or a laundry room, located in an isolated part of the building that a victim was either trapped in or dragged into, are common deficiencies that are central to many cases.

These cases also involve testimony concerning the evaluation of the environment by the perpetrator, a necessary element to any case because of the need for the jury to rule on the legal issue of proximate cause, i.e., to what extent the security deficiencies contributed to the criminal's decision to attack. In order for a jury to find for a crime victim, it must conclude that the property owner failed to provide reasonable adequate security and that this failure contributed to the victim's injury.

### **Premises Liability Cases Are on the Rise**

The increase in the number of premises liability cases has two primary causes:

Crime victims, in part due to the liberating nature of the victims rights movement, are now more likely to seek restitution for what has happened to them.

Courts in most jurisdictions have become increasingly willing to let juries hear theories about the relationship between how properties are managed and designed and criminal behavior. Juries are now being told by expert witnesses that crime is the result of a decision making process that includes an assessment of the property by the perpetrator. Some properties--by virtue of their location, design and layout, and the way they are managed--are more appealing to criminals than others that are better designed and managed.

In these instances, in order to find for the plaintiff, the jury must implicitly agree that the setting in which the crime took place was critical and that had the property been designed or laid out differently, the criminal would likely have been deterred or prevented from attacking.

### **Dim Lights and Responsibilities**

A woman employed in a shopping mall departed after store closing. When she arrived at work, the parking lot was crowded; as a result she parked along the perimeter of the lot. When she left work, the parking lot was mostly empty, and as she reached her isolated car, she was dragged into it and raped.

An analysis of this case demonstrated that the lighting was dimmer where her car was parked than in more central parts of the lot and that the route her assailant used to escape led to an unlit field. It was also determined that the security guards made no special provisions to protect employees they knew would be leaving late and crossing relatively vacant parking surfaces.

### **Premises Liability and CPTED**

Premises liability cases offer insights into the application of CPTED:

It is apparent that judges and juries can appreciate the logic of CPTED and decide in specific cases that the way properties are designed can influence criminal behavior.

Design is usually not a singular cause. Invariably, several factors contributed to the crime: not having a security plan, not being aware of what is happening on the property, not having enough guards, or not having guards that are properly recruited and trained. In other words, the crime was driven by a variety of factors, design being one of them.

## **Appendix B:**

# **Target Hardening Tips and Techniques**

## TARGET- HARDENING TIPS AND TECHNIQUES

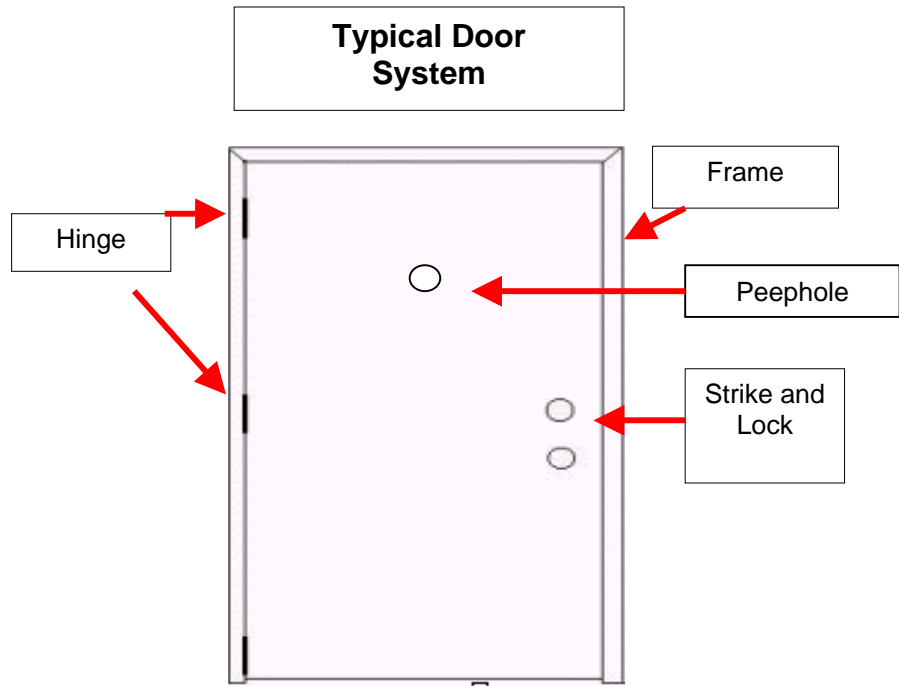
Traditional security measures, such as good locks and alarms, have been important tools in the prevention of crime. Generally they work in harmony with CPTED concepts and recommendations. However, installation of such things as security gates, barbed or razor-wire fences and barred windows can create an impression of an area as having high crime and danger. These added measures might actually deter a legitimate user of the business or area from coming into this community as they feel it is unsafe. Such elements also indicate to criminals that criminal behavior is expected or at least anticipated.

Regardless of how well designed a site is - the buildings, vehicles, etc., should still be locked.

### I. RESIDENTIAL

#### a) Doors

1. Doors should be of solid core (wood or steel) construction and a minimum of 1¾ inch thick.
2. Doors should contain a 180-degree security peephole.
3. Deadbolt locks should be installed in every door. The deadbolt lock should be a separate locking device from the doorknob locking system. The throw bolt should be at least one (1) inch long. (*See Figure 2*)
4. Strike plates must be solidly anchored through the doorframe, into the framing studs, using screws three (3) inches or longer in length. Otherwise, a swift kick could break the doorframe. (*See Figure 3*)
5. Door hinges should be located on the inside of the door in the apartments, as well as on any accessory structures. If this cannot be done, non-removable hinge pins should be used. (*See Figure 1*)
6. Sliding glass doors are a particularly vulnerable point in security. Install pins and Charlie-bars on the doors.
7. Also for sliding glass doors, install two sheet metal screws inside the top of the track to eliminate someone from lifting the doors out of the tracks.
8. French doors, where one door is stationary, are often a vulnerable point in security. The doors should not have more than one-eighth (1/8) of an inch between them. Install a deadbolt-locking device (header and/or threshold bolts could be used) that meets fire code but can serve as both a key lock and a single cylinder deadbolt.
9. Locks should be re-keyed when a resident or employee leaves. This will deter possible burglaries from previous employees and tenants.
10. Storm doors offer little resistance against attack or burglary. Do not use these doors as a means of security.



Deadbolt vs. key in the knob lock (Figure 2)

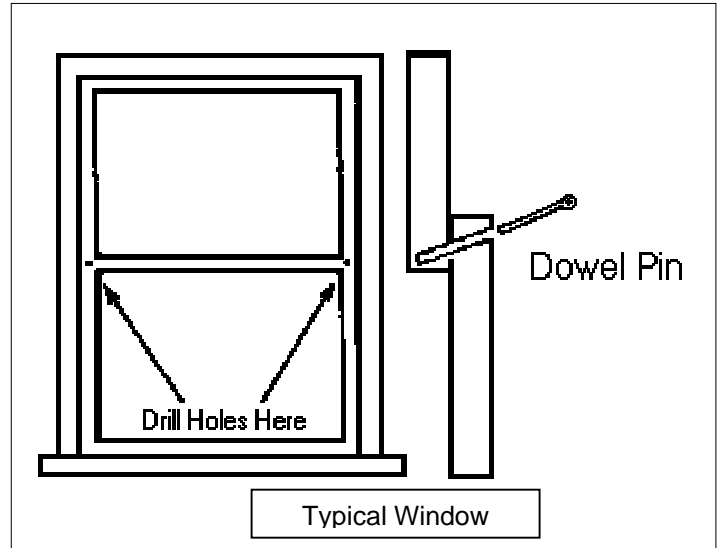
A large diagram titled 'Strike Plates and Bolts (Figure 3)'. It includes several sub-diagrams and images:

- A diagram showing '3-inch screws into the strike plate and into stud around doorframe' with a 'Plywood Space Filler' and labeled 'CORRECT'.
- A diagram showing a 'Spring Latch' mechanism.
- A diagram showing a 'Dead Bolt' mechanism.
- A diagram showing a 'LATCH RECESSED BOLT' mechanism.
- A photograph of various 'Examples of strike plates'.

RESIDENTIAL - *continued*

b) Windows

1. Use pins or alternative locks for windows.
2. Adding additional locking devices on windows may be warranted.
3. Replace any Jalousie (glass louvered) windows with more secure windows.
4. Double hung windows – for added security use some type of window lock or pins in addition to the locking device that is already on them.
5. The crescent latch found on double hung windows is not a security device. Add another locking device on these windows.



c) Miscellaneous

1. Periodically change the code to garage door openers and combination, or keyed, locking and alarm devices.
2. Store away ladders, scaffolds and other climbable equipment when not in use.
3. Lock storage buildings, sheds, crawl spaces, etc.
4. Have your house or business numbers clearly mounted on a high contrast background.

## II. GOVERNMENT & EDUCATIONAL FACILITIES

1. Limit the number of visitor entrances into the building.
2. Locate work-stations within view of the visitor entrances.
3. Require visitors to sign in with name, destination, time in and time out.
4. Lock up musical instruments, audio-visual and computer equipment. Engrave these items as well. These are commonly targeted during burglaries.
5. Light all exterior grounds, particularly if nighttime activities are scheduled.
6. Install magnetic sensors in library materials if theft is a problem.
7. Use security cameras to monitor low-visibility areas. Note: If cameras are installed, they should be monitored or signs indicating otherwise should be installed.
8. Use baffle-type or zig-zag type restroom entrances – no doors.
9. In extreme or special situations metal detectors, or trained dogs, may be employed.

## III. OFFICE BUILDINGS

1. Have security personnel vary patrol schedules and routes.
2. Take measures to keep unmonitored exits from being propped open.
3. Limit the number of visitor entrances into the building. Locate work-stations within view of the visitor entrances.
4. Require visitors to sign in with name, destination, time in and time out.
5. Install appropriate signage throughout the building identifying “Employees Only”, “Warning - Keep Out”, etc. areas.

## IV. COMMERCIAL STOREFRONTS / CONVENIENCE STORES. ETC.

1. Use cash drop safes.
2. Avoid having a single employee making after-hours bank deposits.
3. Install digital camera systems whenever possible. Otherwise, install and monitor video cameras, but hide or secure VCRs (supply a decoy).
4. Provide new employees with safety training (personal safety, robbery prevention, how to report a crime, etc.) and updated safety training annually.
5. Securely lock rear-door entrances.
6. Install either small one-way windows or 180-degree door viewers in rear, side and delivery doors.



## COMMERCIAL STOREFRONTS / CONVENIENCE STORES. ETC. – continued

7. Install the following signs on entrance doors:
  - a) Crime prevention messages such as “Time delay safe”, “Clerk cannot open safe”, etc., should be displayed in a conspicuous location.
  - b) Height tape should be applied to door frames at all exits used for the public to assist with identification of a suspect as they exit the store.
8. Numerical addresses should be mounted on the rear of the business.

## V. MALLS

1. Install monitored video cameras.
2. Install appropriate signage throughout the building identifying “Employees Only”, “Warning - Keep Out”, etc. areas.

## VI. INDUSTRIAL

1. Change locks frequently and limit the number of keys available.
2. Do not leave open padlocks hanging in gates.

## VII. PARKING GARAGES

1. Provide emergency telephones with lights that flash upon activation on each level.
2. Use bright colors and large numbers to identify levels to reduce user disorientation and confusion.
3. Use flashing lights to identify courtesy patrols.

## VIII. PARKS, TRAILS and OPEN SPACES

1. Consider installing call boxes where appropriate.
2. Fence or chain off areas that are off limits. Install signage stating No Trespassing after hours.

**Appendix C:**  
**Resources/Reference Material**

## CPTED RESOURCES:

### CPTED Guidelines

#### ***General Guidelines for Designing Safer Communities***

City of Virginia Beach  
Municipal Center/Police Department  
2509 Princess Anne Rd  
Virginia Beach, VA 23456-9064  
www.vbgov.com  
(757) 563-1066 FAX (757) 563-1064 bjeaton@vbgov.com

#### ***Crime Prevention Through Environmental Design: A guide to creating safer environments in Chesterfield County, Virginia***

Chesterfield County Police Department  
Support Services Division/Crime Prevention Unit  
Clover Hill Police Support Facility  
2730 Hicks Road  
Chesterfield, Virginia 23235  
(804) 674-7006 eicherj@chesterfield.gov

#### ***Crime Prevention Through Environmental Design: General Guidelines for Designing Safer Communities, April 2001***

City of Bristol Virginia  
497 Cumberland Street  
Bristol, Virginia 24201  
(540) 642-2300 bvsocp@bristolva.org

#### ***North Trail Zoning Ordinance - Sarasota, Florida***

Department of Planning and Development  
1565 1st. Street  
Sarasota, FL 34236  
(813) 954-4195

#### ***A Working Guide for Planning and Designing Safer Urban Environments***

Planning and Development Department 20th Fl, East Tower  
City Hall  
Toronto, Ontario M5H 2N2  
(416) 392-0403

#### ***Design For Public Safety***

Department of Planning and Economic Development  
25 West Fourth Street  
Saint Paul, MN 55102  
(612) 266-6660 FAX (616) 228-3261

## RESOURCES AND SUGGESTED READING

Bratiningham, P. J., & Bratiningham, P.L. (eds.) *Environmental Criminology*. Beverly Hills, CA: Sage, 1981.

Clarke, Ronald V. (ed.) *Situational Crime Prevention: Successful Case Studies*. Albany, NY: Harrow and Heston, 1992.

Crowe, Timothy. *Crime Prevention Through Environmental Design*. Stoneham, MA: Butterworth-Heinemann, 1991.

Fennelly, Lawrence. *Handbook of Loss Prevention and Crime Prevention*, 2nd ed. Stoneham, MA: Butterworth-Heineman, 1988.

Governor's Commission on Crime Prevention and Control. *Crime in Minneapolis, 1977*

Jacobs, Jane. *The Death and Life of Great American Cities*. New York, NY: Random House, 1961.

Jeffrey, C. Ray. *Crime Prevention Through Environmental Design*. Beverly Hills, CA: Sage 1971.

National Crime Prevention Council. *Designing Safer Communities, 1997*

National Institute of Law Enforcement and Criminal Justice., *Street Lighting Projects, 1979*.

Newman, Oscar. *Defensible Space*. New York, NY: Colliers, 1973.

Poyner, Barry. *Design Against Crime*. Stoneham, MA: Butterworth-Heineman, 1983.

Werkerle, Gerda R & Carolyn Whitzman. *Safe Cities: Guidelines for Planning Design and Management*. New York, NY. Van Nostrand Reinhold, 1995.

Zelinka, Al & Brennan, Dean. *SafeScape: Creating Safer, More Livable Communities through Planning and Design*. Chicago, Ill: Planners Press, 2001.

## AUDIO VISUAL

Virginia Department of Criminal Justice Services  
Frank Johnstone  
805 East Broad Street  
Richmond, VA 23219  
(804)786-8467 fax (804) 371- 8981

***Safer Places: A Crime Prevention Through Environmental Design Tutorial***  
(CD ROM) A CD-ROM tutorial on CPTED. It takes 4 hours to complete the entire tutorial. Available for free in Windows 95 or Macintosh formats.

Department of Transportation  
Greg Gilbert  
Traffic Engineering  
1401 East Broad St.  
Richmond, VA 23219  
804-786-4034

***Traffic Calming*** (video)  
5 minute video on traffic calming experiments in Virginia

Department of Planning  
221 N. Figueroa St. , Room 1650 A  
Los Angeles, CA 90012-2601  
(213) 580-5249 FAX (213) 580-5261

***Designing Out Crime in Homes and Small Businesses*** (video)  
14 minutes for homes and small businesses.

***Crime Prevention Through Environmental Design*** (video)  
28 minutes for architects, law enforcement, developers and planners.

The MXD Collaborative, Inc.  
1164 14th Place, NE, Suite 1A  
Atlanta, GA 30309-3505  
(404) 875-4027

***CPTED Multimedia Presentation & Training CD ROM***

The CD ROM can be both interactive and self-running. The presentation is complete with professional narration, music highlights and video news footage. The CD can be used as an introduction and training piece on the concepts and principles of CPTED. The view also has the option to let the entire presentation self run from beginning to end - approximately 30 minutes. The CD is available for \$15 each.

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vaprevent@aol.com web: www.vcpa.org

### **National Crime Prevention Council**

1000 Connecticut Avenue, NW, 13th floor  
Washington, DC 20036  
(202) 261-4126 FAX (202) 296-1356  
www.ncpc.org

### **International CPTED Association**

439 Queen Alexandra Way SE  
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7750 Hurontario St.  
Brampton, Ontario, Canada L6V 3W6  
(905) 453-2121 ext. 4025 FAX (905) 453-4428  
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