# Designing Safer Communities

a crime prevention through environmental design handbook

National Crime Prevention Council

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TAKE A BITE OUT OF
CRIME

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CRIME

The National Crime Prevention Council is a private, nonprofit tax-
exempt [501(c)(3)] organization whose principal mission is to
enable people to prevent crime and build safer, more caring com-
munities. NCPC publishes books, kits of camera-ready program
materials, posters, and informational and policy reports on a vari-
ety of crime prevention and community-building subjects. NCPC
offers training, technical assistance, and national focus for crime
prevention: it acts as secretariat for the Crime Prevention
Coalition of America, more than 136 national, federal, and state
organizations committed to preventing crime. It also operates
demonstration programs and takes a major leadership role in
youth crime prevention. NCPC manages the McGruff "Take A Bite
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Acknowledgments

Several senior staff members of the National Crime Prevention Council understood that the crime prevention field needed a document that could introduce CPTED concepts in practical terms for people working in communities.

Introduction

Physical environment has great influence on crime, fear of crime, and quality of life. That relationship has become more evident in recent decades.

eighborhoods may experience problems with gang violence, drug trafficking, property crime, assaults, and other crimes, and residents often say that the area "doesn't feel safe" because streets are empty, properties have been abandoned, graffiti covers the sides of buildings, or trash collection is erratic. Crime prevention through environmental design (CPTED) offers a framework to resolve neighborhood and community problems and provides opportunities for prevention in new and revised construction and land use plans.

Crime prevention through environmental design is a tool for identifying, preventing, and solving local crime problems. CPTED is a process, a way of thinking about crime, not a "cookie cutter" program to replicate. It brings together police officers, residents, local planners, and members of other local agencies to examine how the area's physical features influence crime and the opportunity for crime. Physical features can then be designed or modified to reduce vulnerability to crime.

This document was inspired by countless local successes in applying the crime prevention through environmental design principles of access control, surveillance, and territoriality in communities all over the country. Neighborhoods have helped reduce crime and fear of crime, provided residents with opportunities to promote public safety, and enhanced the problem-solving and prevention skills of community members, law enforcement officers, and others. Communitywide approaches that enlist many systems have increased collaboration between law enforcement and other agencies, helped identify potential crime and quality of life problems before they become serious, and expanded attention to public safety and prevention in planning, development, and redevelopment projects.

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This handbook is not an exhaustive treatment of the topic; it is intended for those familiar with some basics. It provides law enforcement officers and community leaders with the knowledge to establish neighborhood- and community-level projects. The handbook draws on the experiences of numerous local organizations and provides practical tools to help guide discussion and encourage collaborative action. Beyond helping to solve existing problems, it encourages the communitywide use of CPTED in planning, development, and redevelopment projects.

This handbook describes how neighborhood and community groups, working with police, can solve local problems by using CPTED. It introduces the basic principles of CPTED and provides a framework for developing agency, neighborhood, and community partnerships, programs, and policies that support these concepts.

CPTED has proven effective against a variety of crimes. In Bridgeport, Connecticut, the Phoenix Project helped to control street drug trafficking by constructing street barriers in several areas adjacent to highway exits. This was part of Bridgeport's ten-component CPTED plan that coupled traffic control devices with one-way street design and also included increased tactical enforcement and mobilization of area businesses and residents. The initiative resulted in nearly a 75 percent decline in crime, and the lowest crime rate in the area since 1972. In Toronto, many assaults and robberies occurred in parking structures, so the preventive strategy focused on changing local law to increase security standards for these parking structures. The new CPTED-related law included security reminders to drivers and driver escort programs. Within a year over 97 percent of the garages had installed the security measures, reducing fear of crime among women using these facilities.

CPTED'S SCOPE AND REACH

CPTED examines various aspects of community planning including the following:

- the creation of space, its use and safety;
- the locations of land uses;
- the positions of buildings and other structures;
- interior and exterior design details such as color, lighting, entrances and exits, and landscaping; and
- the users of space and when and how they will use it.

CPTED should be a key element in any local comprehensive crime prevention and control strategy. It encourages the community to be more proactive in the fight against crime. Decisions made by planners, designers, and law enforcement officials can help or hinder a neighborhood for decades. These decisions influence resident and business conditions and behavior. They also influence two related phenomena—the probability that a crime will occur and the public's perception of community safety. The concept of crime prevention linked with environmental design provides a framework in which to assess opportunities for crime and to preclude these opportunities. CPTED uses many city agencies (such as planning, law enforcement, licensing and code enforcement, housing, and others) and members of the community in the solution and provides alterna-

tives to traditional methods of dealing with crime. Moreover, it helps fix underlying problems instead of giving isolated solutions to individual incidents.

Unlike some other crime prevention and control strategies, CPTED emphasizes understanding and changing the physical environment of a building or neighborhood. Other strategies to prevent physical crime have emphasized fortification of property. Bars on windows and doors, alarm systems, cameras, gates, and other techniques were employed to protect people and property and reduce revictimization. These measures still have a legitimate, even vital, role. Beyond certain levels, however, hardening of potential crime targets can be expensive and disruptive. While alarms, cameras, and guards can mask the symptoms, they may never resolve the problem if the building's location or its design provide criminals an opportunity.

Using CPTED makes efficient use of local resources. Successful CPTED programs bring together a wide range of community members—from residents and business professionals to government agencies. This multidisciplinary approach includes collaborating to define problems, identify solutions, carry out the most feasible plan, and evaluate the results. CPTED is most effective when the collaborators participate in an ongoing dialog that helps them to anticipate community needs rather than react to them. CPTED strategies enlist the most appropriate local agency or community group to help resolve the problem rather than assuming that law enforcement will take on the task.

Three examples highlight the benefits of CPTED interagency partnerships.

- In Knoxville, Tennessee, police, traffic engineers, public works officials, and residents joined in CPTED and crime prevention training. They formed a task force to address drug trafficking and neighborhood nuisances such as excess vehicle traffic in residential areas. The group collaborated on a comprehensive strategy that resulted in street redesign, revised park schedules, and volunteer-led, security-survey teams. Police officers learned how to work with design professionals.to make projects more compatible with CPTED principles. This strategy reduced cut-through vehicle traffic by over 90 percent. The neighborhood also no longer has drive-through drug trafficking.

- CPTED guidelines that began as a plan to reduce crime in one neighborhood in Sarasota, Florida, became an accepted part of the local planning process. The CPTED task force of planners, law enforcement officials, and representatives of other agencies, organized by the city manager, recommended establishing by law a special zoning district. CPTED became part of a successful revitalization project for that district that was so successful that the city council incorporated CPTED principles into all development and redevelopment in Sarasota.

- A partnership of housing authority management, residents, and police officials in Cincinnati, Ohio, developed a CPTED plan which resulted in a 12 to 13 percent decline in crime in each of three successive years after the plan was implemented. It included community clean-ups, increased maintenance, new fencing, lease enforcement, and an array of on-site programs for parents and youth.

Why don't communities use CPTED more frequently in planning? There are many possible explanations:

- They don't know about it or understand its uses.
- They don't see its relationship to crime and quality of life issues in the community.

CPTED Works!

BENEFITS FOR COMMUNITIES INCLUDE:

Municipal Leadership
- increased collaboration among city agencies to improve public safety
- improved perception of safety and livability in public areas and neighborhoods
- more revenue from safer and busier business districts
- efficient application of local laws and procedures to address crime and quality of life
- enhanced consideration of public safety in planning, development, and redevelopment projects
- increased use of public parks and recreation facilities by residents made safer by CPTED strategies

Local Law Enforcement
- less crime in neighborhoods and business areas
- increased opportunities to develop crime prevention partnerships with residents
- enhanced crime prevention and problem-solving skills for officers
- linkages with planning, development, code enforcement, and other local agencies
- identification of potential crime problems in the community before they become serious
- development of neighborhood priorities related to crime and quality of life
- recognition that crime prevention is everyone's responsibility

Community Residents
- opportunities to participate in community crime prevention
- improved sense of security and quality of life through reduced fear of crime
- fewer crimes committed in neighborhoods, fewer residents victimized
- increased interaction among residents and stronger neighborhood bonds
- new crime prevention and problem-solving skills
- enhanced knowledge of city government agencies and other resources

- They believe CPTED concepts conflict with established crime prevention goals.
- They think CPTED will add requirements and costs to resident and business owners.
- They perceive that CPTED will create additional burdens on local government and slow the decision-making processes.
- They haven't been asked to help or consider what CPTED can do.

WHAT CAN CPTED DO?

A well-crafted CPTED program prevents or reduces crime and it does so by working within established systems and using existing resources. Community leaders who learn about CPTED basics become excited about the possibilities it creates. They want to apply it locally but, in many cases, they don't know where to begin or how to get help. If they experiment with CPTED on a small scale, they may be unsure of how to build on the success of small problem-solving projects.

HOW WILL THIS HANDBOOK HELP?

This handbook was designed to help communities see the potential of CPTED as a crime prevention tool. It illuminates CPTED principles and demonstrates how they can be applied to a specific site using examples from successful local efforts. The handbook also illustrates how CPTED can complement existing policies or initiatives such as crime prevention, community policing, and problem solving, and how it can assist local communities in improving their quality of life. It also provides tools to help engage community organizations, gather needed information, define the scope of CPTED strategy on neighborhood levels, and initiate a discussion of the implications of a CPTED program. It provides extensive resources: national CPTED-related organizations, research materials and reading lists, and CPTED experts who can provide hands-on technical assistance.
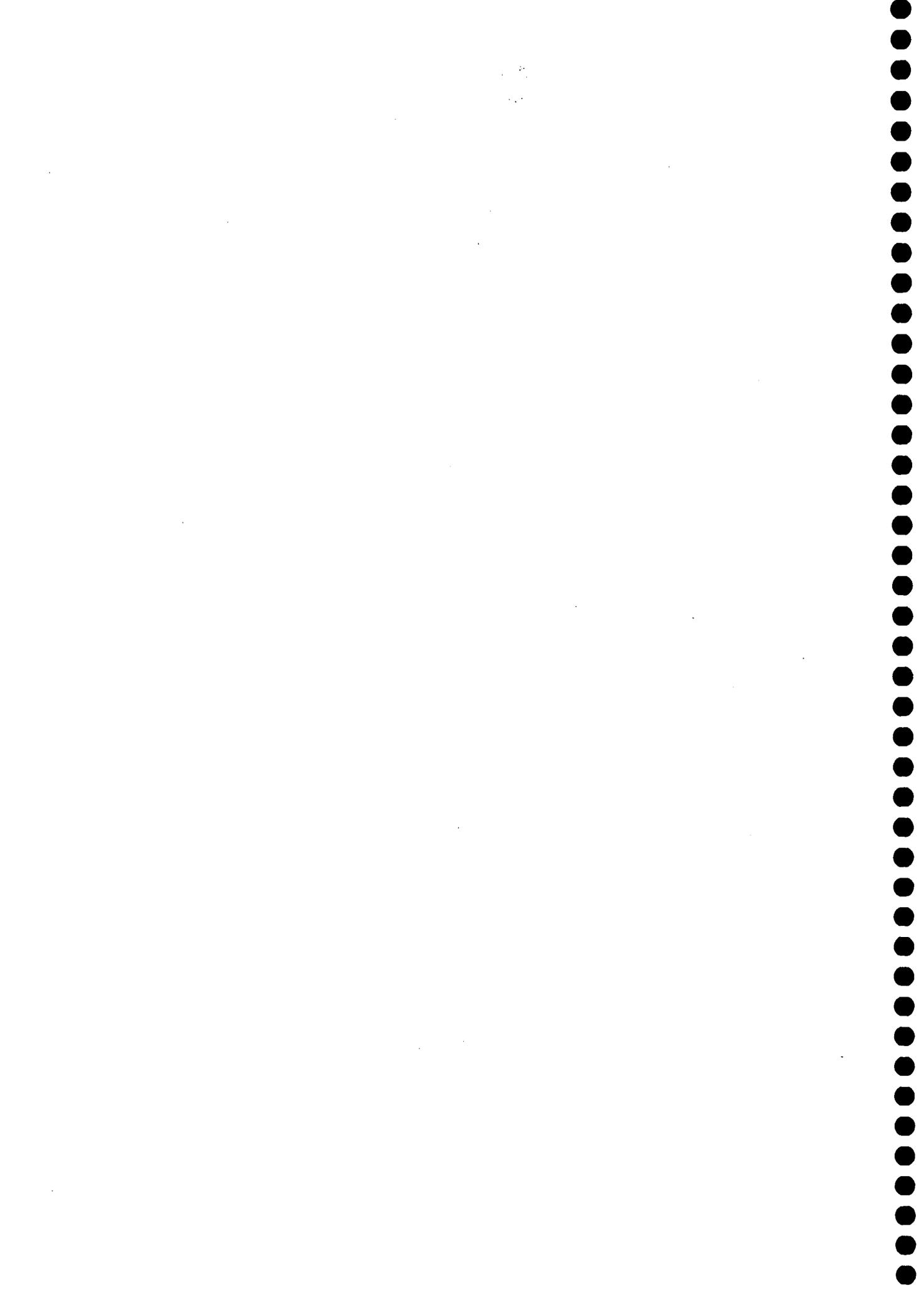
Understanding CPTED: Theory, History, and Practice
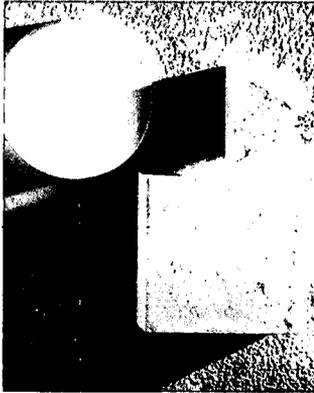
This section of the handbook explores the relationships between the physical environment, human behavior, and opportunities for crime. It explains how crime prevention through environmental design (CPTED) can help improve a community, a neighborhood, or a home.

The design and use of the environment directly affects human behavior, which, in turn, influences both fear of crime and opportunities for crime and ultimately affects the quality of life. Researcher C. Ray Jeffrey coined the term *crime prevention through environmental design (CPTED)* in his landmark 1971 book. Since then, national experts and local practitioners have widely accepted his definition: *the proper design and effective use of the built environment that can lead to a reduction in the fear and incidence of crime, and an improvement in the quality of life.*

CPTED is something most people use intuitively. You have probably lived, worked, visited, or traveled in places where you felt comfortable and safe. In other places you were uncomfortable, perhaps even fearful. Accurate or not, your impressions of these places are based on how well you know the area; what you saw, heard, smelled, or otherwise experienced; and your personal history—your cultural, educational, and personal background. These impressions help you make decisions regarding your activities and risks. Offenders react to their surroundings in similar ways. They consider, when looking at the area, how familiar they are with it, what and who is around, what others' schedules and activities are, and how predictable the features of the environment are.

AT CPTED'S CORE

CPTED is based on three principles that provide systemic change and support problem-solving approaches to crime: natural access control, natural surveillance, and territorial reinforcement.

Natural Access Control

Natural access control employs elements like doors, shrubs, fences, and gates to deny admission to a crime target and to create a perception

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A barrier and concrete planters provide access control.

among offenders that there is a risk in selecting the target. Physical and mechanical means of access control—locks, bars, and alarms (traditionally known as "target hardening")—can supplement natural access control measures if needed. A fence around a neighborhood playground is an example of an access control measure that protects children from wandering off and inhibits entry of potential offenders.

Natural Surveillance

Natural surveillance utilizes design features to increase the visibility of a property or building. The proper placement and design of windows, lighting, and landscaping increases the ability of those who care to observe intruders as well as regular users, and thus provides the opportunity to challenge inappropriate behavior or report it to the police or the property owner. When natural surveillance is used to its greatest advantage, it maximizes the potential to deter crime by making the offender's behavior more easily noticeable to a passing individual, police patrol, or private security detail.

Territorial Reinforcement

Territorial reinforcement employs such design elements as sidewalks, landscaping, and porches to help distinguish between public and private areas and helps users exhibit signs of "ownership" that send "hands off" messages to would-be offenders. Territory is enhanced by supplementing the design with regularly scheduled activities, such as, routine inspections and maintenance.

Table 1 shows how these three key concepts might be applied to address some specific problems: automobile theft, street drug sales, convenience store robbery, and graffiti on private property. It provides examples of practical steps a person could initiate at the site of the crime, within the surrounding neighborhood, and at a communitywide level, based on CPTED concepts.

TABLE 1 POSSIBLE CPTED STRATEGIES

Problem	On the Site	In/Around the Neighborhood	Communitywide
Automobile Theft or Automobile Burglary	Educate local users about the problem and the steps they might take to reduce vulnerability to theft or burglary—locking cars, removing valuables, etc. *Increase access control* ■ Install plants or wrought iron fencing at perimeter ■ Close and lock areas of the lot or garage when not in use *Improve opportunities for surveillance* ■ Install ticket booth at location that allows attendant to see auto and pedestrian entry/exit ■ Reorient parking spaces on the lot or in the garage to allow for better surveillance between cars ■ Trim shrubbery or other perimeter landscaping ■ Paint garage surfaces white to improve reflection *Define territory* ■ Assign areas or spaces to specific users and distribute identification stickers ■ Include uses other than parking on the site or in the garage, for example, auto repair shop, eating establishment, or office space	*Increase access control* ■ Use traffic modifications such as turn restrictions, chicanes, intersection narrowing, etc., to reduce itinerant traffic *Improve opportunities for surveillance* ■ Add street lighting or increase light output from existing fixtures *Define territory* ■ Offer free parking or other incentives to local businesses to create greater use during regular business hours ■ Encourage "shared" parking, for example, use by shoppers or church members on weekends when offices are closed	*Review local codes and ordinances for conflicts with the proposed strategies, for example* ■ landscaping requirements ■ zoning rules or plan review/approval policies related to location of parking lots ■ standards for lighting that illuminate streets and parking lots ■ rules or policies that influence "shared," "assigned," or mixed use *and revise these as necessary.*

TABLE 1 POSSIBLE CPTED STRATEGIES, *continued*

Problem	On the Site	In/Around the Neighborhood	Communitywide
Street Drug Dealing and Prostitution	*Increase access control* ■ Use traffic modifications such as turn restrictions, chicanes, intersection narrowing, diagonal diverters, etc., to eliminate established crime friendly traffic patterns *Improve opportunities for surveillance* ▣ Turn benches to face local commercial establishments, so that activity on the street is easily observed and reported *Define territory* ▣ Remove pay phones or convert to rotary dial or dial-out only options	*Increase access control* ■ Use traffic modifications such as turn restrictions, chicanes, intersection narrowing, diagonal diverters, etc., to eliminate established traffic patterns for drug sales *Improve opportunities for surveillance* ■ Trim vegetation in the area to remove hiding places ■ Adopt a lighting scheme that uses low pressure sodium vapor lamps, for poor color rendition (to reduce the location's attractiveness as a "hang-out") *Define territory* ■ Establish drug-free zone to increase opportunities for enforcement ■ Schedule neighborhood street fair or other activities to bring more legitimate use to the area ■ Organize citizen patrols to increase resident interaction and presence in their neighborhoods	*Evaluate plans, programs, or policies to see if they contribute to the problem, for example* ■ traffic/transportation plans that informally rely on neighborhood streets to relieve traffic congestion; ■ nonconforming use language or building code enforcement practices that result in structural deterioration; ■ trash collection schedules that allow large items to accumulate—items that can be used to complete drug transactions, or to block streets. Consider revising these to make them more consistent with CPTED objectives.
Graffiti Vandalism	*Educate the private property owner or manager about steps to reduce the vulnerability of the property to graffiti vandalism*	*Improve opportunities for surveillance* ▣ Add street lighting along perimeter of facility	*Increase access control* ▣ Control access to graffiti paints and other implements ▣ Provide for increased penalties for property defacement by gang-related graffiti

TABLE 1 POSSIBLE CPTED STRATEGIES, *continued*

Problem	On the Site	In/Around the Neighborhood	Communitywide
Graffiti Vandalism	*Increase access control* ■ Install fencing or other barrier to the property ■ Install shrubbery along the base of the wall or structure to inhibit easy approach by graffiti vandals *Improve opportunities for surveillance* ■ Focus increased lighting on exterior walls of property *Define territory* ■ Recover damaged surface with community or prevention oriented mural designed by residents or the property owner and residents	*Improve opportunities for surveillance* ■ Dedicate targeted patrols ■ Organize a block watch	*Increase access control* ■ Require property owners to remove graffiti within specified time period ■ Outline the support local government will provide property owners with graffiti removal ■ Specify types of graffiti-resistant coatings which must be used on exterior surfaces of buildings *Improve opportunities for surveillance* ■ Establish city agency-supported citizen patrol to provide law enforcement with information on graffiti-plagued properties *Define territory* ■ Educate property owners about cost effectiveness of graffiti-resistant coating materials and other prevention strategies ■ Educate school-aged youth about graffiti vandalism as a serious crime with consequences for the offender and the community ■ Establish public education campaign to publicize local laws and ordinances which address graffiti, clarify sanctions, and describe the economic and other impacts of crime

TABLE 1 POSSIBLE CPTED STRATEGIES, *continued*

Problem	On the Site	In/Around the Neighborhood	Communitywide
Convenience Store Robbery	*Increase access control* ■ Install drop safe and establish procedures for its use ■ Use a "teller window" to complete late-night transactions *Improve opportunities for surveillance* ■ Remove advertising from windows ■ Reduce gondola heights and remove tall display cases ■ Increase light levels for more uniform illumination both inside and outside the store ■ Place cashier station in location that allows the clerk to see the interior of the store and view gas pumps ■ Remove pay phone or locate at remote point that can be seen from the cashier station	*Improve opportunities for surveillance* ■ Increase lighting in the area ■ Encourage local businesses to remain open during evening hours, or add new late-night business to the neighborhood mix *Define territory* ■ Trim vegetation to discourage "hanging-out" around the store and to increase local resident use (or use by other customers)	*Consider how decisions related to convenience stores result in more attractive targets for robbery, for example,* ■ planning that places stores near major highways, making easy escape routes, or in remote areas with few customers ■ beverage control laws that license alcohol sales, so that stores attract "undesirables" ■ state Lottery rules that promise high dollar pay-offs at Lottery franchises, thereby creating requirements for large amounts of cash in the store and work to change policies that are in conflict with goals

Understanding which strategies to adopt—and when—can be a complex process. This handbook shows how to identify problems and devise policies tailored to those unique site or neighborhood characteristics that create opportunities for crime. It also helps the local advocate identify potential allies within organizations in the community. It describes a variety of opportunities to insert CPTED considerations into local prevention planning.

CPTED'S HISTORY

It is impossible to determine when CPTED was "discovered" because human beings have manipulated the physical environment to meet their needs for safety as long as human civilizations have existed, such as in the design of medieval castles. For centuries researchers have studied the relationship between environmental design and behavior. Only recently, though, have we used what we know to prevent crime and create more livable communities.

CPTED draws on a rich, multidisciplinary base. The design fields—architecture, urban design, landscape architecture and planning—explain how land use, siting, and building design contribute to opportunities for crime. The social and behavioral sciences—sociology, criminology, psychology, anthropology, and geography—help us show how political, economic, and social conditions may motivate offenders to commit crimes; how offenders respond to cues in the physical environment; and how to create interactive neighborhoods. Environmental psychology, for example, is devoted to studying how humans respond to their surroundings.

The first highly publicized studies of crime and the environment were conducted at the University of Chicago in the 1920s. Researchers there discovered a pattern of crime in Chicago that was highest in the inner city and decreased in concentric circles away from the central business district. They explained this pattern as a function of "social disorganization," land use, and the city's historical development process.

In 1961, Jane Jacobs, in *The Death and Life of Great American Cities,* recounted her experiences as a resident of New York City's Greenwich Village. She noticed that some areas of Greenwich Village were productive and safe, while other areas only a few blocks away were nearly abandoned and frightening. The more productive neighborhoods included a mix of land uses that generated activity 24 hours a day; consistent block, site, and building designs; and many opportunities for people to watch out for one another. These observations changed urban design and planning, and research on crime and offenders.

The term "crime prevention through environmental design" first appeared in a 1971 book by Dr. C. Ray Jeffery, inspired by Jacobs' work. Jeffery called for an interdisciplinary approach to crime prevention that changes the offender's behavior by changing the offender's environment. His work opened a new era in criminology, one concerned with the physical environment and the circumstances surrounding a crime, not just an offender's behavior.

In 1972, Oscar Newman published *Defensible Space: Crime Prevention Through Urban Design.* Newman had been working in public housing trying to determine the physical and social characteristics that corresponded to safe and productive neighborhoods. An architect by trade, Newman's work was based on the disciplines of physical planning and architectural design; he relied less on criminology and the other behavioral sciences.

A fence distinguishes the territority between the parking lot and pedestrian walkway.

Newman made several contributions; for example, he identified the importance of territory and surveillance in creating safe places. When physical design created and defined public, semi-private, and private spaces, residents exhibited greater indications of territoriality. This deterred criminal activity by creating spaces that were defensible and defended. In the public housing study, he found that crime was lowest in buildings that had the most visibility and the best surveillance based on building orientation and street location. He also found that the crime rate for buildings with minimal opportunities for visibility and surveillance was more than 100 times higher. Newman's work became the foundation for what we know today as crime prevention through environmental design.

Defensible space concepts were tested and refined by the U.S. Department of Justice in four demonstration programs operated through the Westinghouse Electric Corporation in the mid-1970s. These included a school demonstration in Broward County, Florida; a commercial demonstration in Portland, Oregon; and residential projects in Hartford, Connecticut, and Minneapolis, Minnesota. Research on the program, conducted by the National Institute of Justice, revealed that in Hartford, traffic diversion, community policing initiatives, increased lighting, and cleanup campaigns helped residents feel more in control of the neighborhood. It also increased interaction among neighbors, and positively influenced the use of neighborhood facilities.

The Westinghouse model maintained Newman's territoriality and surveillance themes but attempted to address and expand on the issues of social cohesion and social control that had received some criticism in Newman's work. Westinghouse researchers asserted that residents needed to be involved in bringing about change and that they needed to understand how ideas such as lighting improvements and changes in traffic patterns could serve as crime prevention measures.

CPTED research offers three key principles that local jurisdictions and community groups must understand:

■ Land use decisions affect crime and crime-related conditions in the community.

■ Offenders generally work in familiar areas and against people they know.

■ Our own daily routines affect crime and crime risks.

Research and local experience tells us that land use decisions have a direct bearing on the types of crimes that are committed. Following are some examples:

■ Specific types of businesses (e.g. adult-oriented businesses) contribute to increased crime rates in surrounding areas. In Young vs. American Mini Theaters, the U.S. Supreme Court agreed and found that zoning can be in the community interest if it is used to control secondary effects attributed to adult businesses, such as increased crime rates and neighborhood deterioration. .

■ Lax enforcement of land use standards and building codes also contributes to crime. A study of abandoned buildings in Newport News, Virginia, revealed that the burglary rate in a crime-ridden apartment complex dropped 35 percent after 100 apartments that were vacant or lacking repair were boarded up ("Abandoned Buildings: Magnets for Crime," Journal of Criminal Justice, Volume 21, 1993).

Offenders tend to commit crimes in places they know well—near home, work, school, etc.— because they can expect the following:

■ they know who lives and works there, and who regularly visits;

■ they understand what days of the week and what times of the day these people will probably be there;

■ they are aware of the potential crime targets in the area; and

■ they know routes of quick access and egress and places of concealment.

Our daily routines, combined with local rules, regulations, policies and procedures, create or reduce opportunities for crime. For example, when we zone large geographic areas exclusively for single family residences, and when the people who live in these neighborhoods leave home from 8:00 a.m. to 6:00 p.m. to go to work or school, no one is left to observe activity in the neighborhood, which creates the perfect environment for crime. Seniors-only residential complexes or apartment buildings with many children offer different crime prevention challenges.

The following publications present crime prevention through environmental design basics: *Crime Prevention Through Environmental Design* by T. Crowe, *Physical Environment and Crime* by R.B. Taylor and A. Harrell, *CPTED and Community Policing* by D. Fleissner and F. Heinzelmann, and "Broken Windows" by J.Q. Wilson and G.L. Kelling. Please refer to the section on reference materials at the end of this handbook for more information on the above publications and for additional reference materials.

FROM THEORY TO PRACTICE:
BRINGING CPTED TO YOUR COMMUNITY

Understanding the contributions of CPTED to crime prevention and its foundation in planning and design help apply CPTED to local crime problems. By gaining an understanding of the three key concepts of natural access control, natural surveillance, and territorial reinforcement, a crime prevention planner or community leader can put theory into action and use CPTED strategies to address community disorders and incivilities, as well as more serious and violent crimes. The following sections will show how to build a multidisciplinary CPTED team of local agencies and community members. They will also relate CPTED approaches to community planning, zoning, and development strategies, and explain ways to educate key players in the benefits of employing CPTED principles.

This parking attendant booth and barrier allow for both surveillance and access control.

Addressing Neighborhood Problems Using CPTED
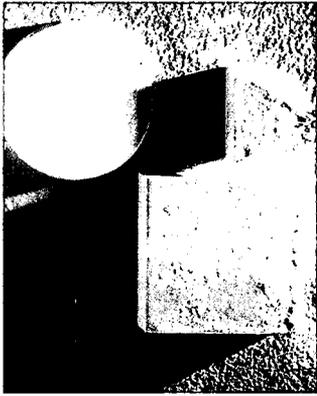
CPTED at the neighborhood level usually addresses a specific problem or issue at a specific site or facility (a street intersection, a convenience store, a school, a park, or an abandoned building).

Local government may initiate the CPTED program because agencies are aware of ongoing or potential crime problems, or because property owners and residents are concerned about a neighborhood's future.

This section of the handbook outlines the connection between the various features of the neighborhood and the kinds of crimes the neighborhood is experiencing. The following are examples:

- *Crime may be related to existing land use.* Vacant buildings or vacant lots that do not contribute to the neighborhood have been taken over by juvenile gangs, drug users, or other undesirables. Office and commercial uses are interspersed with residential dwellings and bring in many outsiders to an otherwise "private" neighborhood. With so much traffic, residents no longer know people on the street, and several homes have been burglarized.

- *Crime may be related to specific site or neighborhood characteristics.* Fencing, landscaping, or inadequate lighting has created many opportunities to hide. Parking lots or garages are designed without opportunities for surveillance from the facilities they serve (or from adjacent buildings), making them attractive locations for theft or assault.

- *Crime may be related to traffic and transit during certain hours of the day.* Drug dealers have established themselves at important street intersections. Neighborhood streets create a convenient path for cut-through traffic. The local bus stop serves as a regional transfer point and brings many outsiders to the area. Businesses complain that patrons waiting for buses are approached by aggressive panhandlers seeking spare change. Many of these patrons do not return because they don't feel safe in the area. Parks may be busy play areas during the day, but

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virtually empty at night if the lack of adequate lighting leaves residents feeling unsafe.

■ *Crime may be related to changes in demographics or changes in length of occupancy.* Owners continue to convert their homes into rental properties and the tenants are not invested in the neighborhood. They don't know other residents or property owners and do not recognize or report criminal activity. New residents are younger, and less affluent, and have a lifestyle that conflicts with that of more established homeowners. Elderly neighbors are afraid and now stay indoors unless they have an escort.

■ *Crime may be related to ineffective rules or policies.* Although the neighborhood may be residential, most properties are actually zoned for commercial or industrial uses. Non-resident landlords make few, if any, improvements, and the deteriorating houses have attracted drug users to the neighborhood. Still, the city does little to enforce the building codes. Pickup of large trash objects is scheduled twice per year, but trash often accumulates because the neighborhood has a high rate of resident turnover. There is no mechanism in city government to respond to residents' concerns about large objects and other debris left in streets and on vacant property. This gives the impression that no one cares about the neighborhood and that it has been taken over by gangs and drug dealers.

■ *Crime may be related to activity schedules and routines.* Office buildings in the neighborhood are occupied only between 8:00 a.m. and 6:00 p.m., Monday through Friday, and are often vandalized or burglarized on weekends. Neighborhood warehouses draw daytime truck or automobile traffic, but little pedestrian traffic. Pick-up and delivery take place only a few hours a day. Many of the warehouses have been burglarized and vandalized, and one truck driver was assaulted recently. The local convenience store is open when other businesses are not and it has been the target of late-night robbery and persistent shoplifting. Speeding and other traffic problems are at their worst when the local high school

Vacant buildings can signal economic decline of a neighborhood and the potential for crime.

lets out for the day with little or no opportunity for afternoon activity, and most neighborhood thefts occur mid- to late-afternoon.

Each of these scenarios suggests a different array of programs and activities that might be employed to change environmental conditions to reduce crime and fear. No two situations will be resolved in the same way, and the strategies a CPTED team employs must consider the unique characteristics of the site or the neighborhood. However, the solutions are all based on three CPTED principles:

- natural access control,

- natural surveillance, and

- territorial reinforcement.

COMPLETING AN EVALUATION

The first step in using CPTED on a crime problem in a particular neighborhood is to evaluate of the area surrounding the problem site or facility to show the characteristics that provide opportunities for crime. The evaluation includes three basic activities: an inventory, observations, and a community survey. Each of these activities contributes to the understanding of issues, resources, and opportunities, and all three are necessary to create positive change.

The first step in using CPTED is to evaluate the area for opportunities for crimes.

In many cases, the local government CPTED team will collaborate to complete the inventory and evaluation, although the team cannot function independently of the neighborhood. The homeowners' association or the neighborhood association can serve as the point of contact because it is knowledgeable about neighborhood conditions. The CPTED process should include input from these sources:

- people with influence in the neighborhood as well as in the community-at-large;

- people committed to positive change; and

- people who represent all facets of neighborhood life, including young people.

Since membership in many neighborhood associations is limited to local homeowners the problems and issues of business managers and employees or those of landlords and renters may be overlooked. In some neighborhoods these renters or businesses are perceived as the source of local problems but, if they do not participate in the association, there is often no forum to communicate their concerns for the neighborhood.

It may also be appropriate to cooperate with the local utility company, banks, insurance companies, or other organizations that may be affected even if not located in the neighborhood. Flexibility is the key. Solving a specific problem may require adding new stakeholders to the team, at least temporarily. A business owner whose store has been robbed, the manager of the large apartment building, and youth who live in the area are possible resources for a CPTED effort. The ultimate success of a CPTED program depends on an appropriate mix of government, neighborhood, and business representatives.

COMPLETING AN INVENTORY OF THE NEIGHBORHOOD

A complete inventory includes information on historical patterns as well as existing conditions related to crime; land use, housing, and transportation; and area demographics. An inventory form is included in Appendix B to help you compile this information.

The inventory process starts with acquiring two maps—a street map and a site map.

To begin the inventory process, it is important to acquire or prepare two maps. The first map (i.e., an enlarged version of a street map) should be used to plot the site's location in relation to other places in the larger community—schools, transit lines, downtown, interstate routes or major highways, housing developments, or facilities like parks, universities, or hospitals.

A second map should show the site and the surrounding neighborhood in greater detail, including its boundaries, general layout and street patterns, and important local landmarks. The map might also provide lot lines and the location of buildings. Cities with geographic information system (GIS) technology have used this capability to map trends and location of crimes.

One or more copies of the second map will be particularly useful because any or all of the data can be represented graphically on the maps. You will be able to use the maps to study the relationship between crime and automobile and pedestrian patterns. Data on arrests for drug trafficking and supplementary information provided by residents may reveal patterns of incidents occurring near highway access points or on neighborhood streets used for cut-through traffic.

As mentioned previously, the CPTED team will be collecting information related to various aspects of neighborhood life. Crime data, of course, are an important element of the evaluation, but you will also need to know about site and neighborhood conditions and about the people who live, work, and visit the area. For instance, how many residents are short-term renters? Is there a significant addition to the area's population during certain hours or seasons because of the presence of a shopping district, office complexes, sports arena, beachfront, or other facility? Depending on the problem(s), it may be appropriate to collect information for the site, the area immediately surrounding the site, and the local neighborhood (or the community as a whole).

Crime Data

Information on crime will probably come from two sources: official statistics compiled by your local law enforcement agency and a survey of local residents and businesses. The survey, discussed in more detail later, will provide statistics on crimes not reported to the police and on levels of fear in the neighborhood, as well as other kinds of information.

You will need to know various things about crime, including the following:

- total police calls for service;
- reported crimes, both total and by crime type;
- where the crimes take place; and
- how these statistics have changed over time.

Because crimes tend to be unevenly distributed—geographically and by crime type—you will need to pay particular attention to "problem" crimes or neighborhood "hot spots." If one type of crime, say burglary, occurs more frequently than other crimes, you will need more detailed information on burglaries, including

- the days of the week, times of the day, and seasons they usually occur;
- how they are carried out;
- what, or who, is targeted; and
- what, if anything, is known about offenders—their age, relationship to victim, etc.

Depending on the size of the area you are studying, you may need a more detailed evaluation of the distribution of crimes on the site. You may also want to complete safety audits or security surveys at these locations.

Neighborhood Conditions

Several aspects of the neighborhood are important to study as part of the inventory. The first of these is land use—both existing land use and future land uses. While it is important to find the links between existing uses and crime, it may be even more critical to anticipate change and to evaluate its potential influence on opportunities for crime in the neighborhood.

Future land use is a function of two items. First, development proposals must conform to the long-range land use goals in the community's comprehensive or land use plan. This document specifies the types of development the community will encourage in various locations over the next five to ten years. Obviously, in a community without long-range land use planning the questions of concentration and kind of development are less clearly resolved.

Second, all redevelopment of vacant land and property and all new construction must comply with existing development regulations. This includes the zoning, subdivision, landscape and other ordinances, plus any additional rules imposed for historic districts, floodplains or other special areas. As mentioned in the section on mobilization, it is important to understand the regulations that govern local development because these may conflict with your CPTED goals and prevent you from implementing the strategies in your neighborhood improvement plan.

Future development can also be predicted from the community's capital improvements plan, which lists schedules, costs and sources of funding for changes to institutional facilities (government buildings, schools, and publicly-owned hospitals); public services (water, sewer, or electric); or highways, streets, and roads.

In addition to the land use data, you should gather information on other aspects of the neighborhood, especially those that will provide neighborhood stability, including those listed in detail in Appendix B (Neighborhood Inventory).

Indicators of neighborhood stability are valuable for a number of reasons. They offer some measure of neighborhood activity outside of crime data. They may help to predict change—both negative and positive, and they help guide neighborhood improvement over the long-term. (Remember that problem businesses or problem facilities will require more detailed examination.)

Traffic and transit are two elements of the environment that directly—and sometimes negatively—affect neighborhood life, especially where traffic and transit systems move outsiders through a neighborhood. Transportation information, therefore, is critical to your overall evaluation, including the following:

- traffic volumes;

- peak load;

- accidents;

- neighborhood complaints (graffiti, vandalism, speeding, cruising, loitering, noise);

- proposed changes or improvements to streets, intersections, or signalization systems; and

- transit routes and the location of stops, shelters, or transit centers.
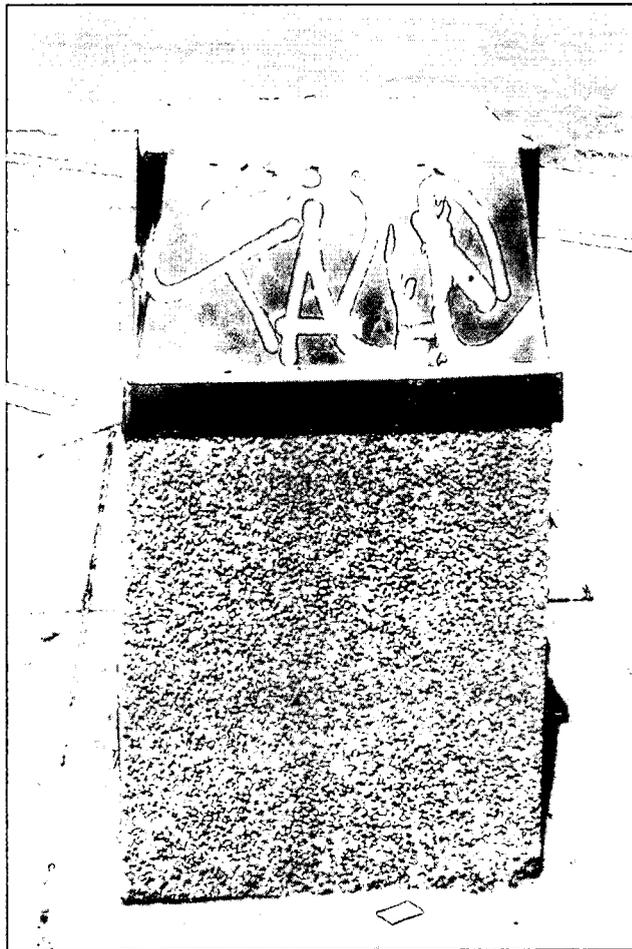
The inventory should take into consideration neighborhood complaints such as graffiti.

Data may not be available for the entire neighborhood, but generally data are compiled for major streets and intersections.

Neighborhood Demographics

Although age, gender, race and ethnicity, family composition, and household income have little to do with the physical environment, they are important for understanding neighborhood life, and local problems and needs. The U.S. Department of Commerce completes a census of population every ten years, and this will be helpful in determining historic patterns and trends. After a few years, though, this information may not accurately represent the demographic characteristics of a neighborhood that is undergoing change. One way to address this problem is to use the neighborhood survey (Appendix C) to update the data.

DOCUMENTING OBSERVATIONS ABOUT THE NEIGHBORHOOD

The second phase of the neighborhood evaluation requires that you document your observations of activities occurring at and around the problem site. Specifically, you are interested in:

- the types of activities taking place;

- when and where these activities are most likely to occur; and

- who participates in the activities.

Although the tendency will be to focus on such problems as loitering, vandalism, public drinking, drug sales, or gangs, it is equally important to understand and document the activities of legitimate users. When you identify community crime problems, observations of police officers and community members can help determine whether there is a crime problem or simply misperception and miscommunication among residents who have little regular interaction. Observations help point out whether the crimes are caused by people who live in the neighborhood, and whether outsiders who come from other communities contribute to the crime problem.

This information will help you evaluate any connections between neighborhood characteristics and both positive and negative behaviors. When observing activity you should consider whether observed behaviors are influenced by other elements of the environment, such as lighting, landscaping, and traffic. This means you should walk or drive around the neighborhood during the day, at night, on weekdays, and again on weekends.

A map showing various activities and their locations will aid you in this analysis. Photographs or videotapes may also be helpful.

It is important to understand and document the legitimate uses of public spaces.

SURVEYING THE COMMUNITY ABOUT ITS CONCERNS

The final task for your analysis will be a survey of neighborhood property owners, residents, business owners and managers, and their employees. Interviews are critical to the planning process because people who are in the neighborhood on a regular basis are most affected by crime and other issues. They can substantiate and supplement official data (and your observations), and they often have ideas for solving the problem. Remember also to ask residents where they feel safest in the community; why they feel safe there; and what specific activities they feel could be more safe, such as waiting for the bus. It is important that the survey identify the positive characteristics of the neighborhood environment as well as its problematic features.

The survey might serve various purposes but is best used to gather information not available from other sources, including these kinds of information:

- how well neighbors know each other and how often they tend to socialize with each other;

- unreported victimization and reasons for not reporting;

- where and why people are afraid;

- schedules and activities during an average week;

- ability to recognize and report criminal activity;

- crime prevention and security measures used by house and apartment dwellers;

- attitudes and opinions about neighborhood problems and priorities, and suggestions for improvement;

- concerns about government, neighbors, and neighborhood quality of life;

- updated or additional demographic information (how long someone has lived in the neighborhood, for example);

- what they want for their neighborhood and how they might be willing to help; and

- resources available from the residents (neighborhoods often have a lot of untapped capacity).

A number of options are available for administering the surveys. If the neighborhood is relatively small, the team may decide to conduct door-to-door interviews. The team could use a neighborhood association or other meeting as an opportunity to gather the information needed, although results could be skewed by the limited participation of renters or businesses. Participants could choose a small sample of addresses to survey and assume that the results can be used to gauge the opinions of everyone in the neighborhood. A survey of high school students, mall patrons, or users of park facilities could yield information to supplement a general community survey. An example of a community survey instrument appears in Appendix C.

Phone and mail surveys are much more expensive to complete and therefore may not be feasible. Some resources may be available at a local college or university. Faculty and students can advise you on sampling techniques, questionnaire construction, or other aspects of the survey process, and possibly even offer resources for interviewing, data entry, or analysis.

Analyzing the Results

The next step is to evaluate the data from the inventory, observations, and surveys and to examine the relationship between the physical environment and crime. Specifically, local CPTED leaders need to consider the interactions of land use, housing, transportation, and demographics with crime, and the impact of crime on the viability and sustainability of the neighborhood. In addition, local CPTED leaders must compare statistical information with feedback on residents' perceptions of the neighborhood. In choosing CPTED strategies, the team should consider perceptions and how fear affects the behavior of members of the community.

To begin this analysis, return to the two maps mentioned on page 20 (one plotting the site's location relative to other places in the community, the other showing the site and surrounding neighborhood in greater detail) and other information on problem crimes and neighborhood hot spots. This information should clarify local problems and issues, and should help in the preparation of a plan of action for the site or facility. For instance, crime data that reveal vacant buildings as the predominate local hot spot for drug users and gang activity may suggest the need for improved enforcement of building codes and action to counter apathy of nonresident owners. The action plan for a site will contain several elements that define CPTED goals and objectives, outline the strategies to be used, estimate their costs, and assign responsibility for specific tasks.

WORKING WITH AGENCY AND COMMUNITY PARTNERS TO DESIGN AN EFFECTIVE STRATEGY

CPTED strategies should address the crime/environment links revealed during the earlier analysis—links between crime and land use, site characteristics, traffic and transit, demographic change, inappropriate or ineffective rules, or scheduled activity. The team or members may have discovered other links as well.

A Neighborhood CPTED Inventory

SHOULD INCLUDE:

Maps and other records that illustrate:

Crime data from police and residents

- What types of crimes were reported?
- Where and when have incidents occurred?
- Who was victimized?
- What were the methods or weapons used in the crimes?
- Are there specific "hot spots" where many incidents have occurred?

Neighborhood conditions

- How is the community zoned? Residential? Commercial? Mixed?
- Are major new public or private development projects planned?
- Is there a redevelopment effort underway?
- Are there any schools, hospitals, or transportation centers?
- Is there a redevelopment effort underway?
- Are there any office buildings, warehouses, or manufacturing facilities?
- Is there a redevelopment effort underway?
- Are there abandoned or dilapidated dwellings in the community?
- Is there a redevelopment effort underway?

Traffic - vehicle and pedestrian

- Is there a redevelopment effort underway?
- What are the primary routes of pedestrian traffic through the area?
- Is there a redevelopment effort underway?
- Do those routes vary by time of day, day of the week, or season? How?
- Is there a redevelopment effort underway?
- What are the primary routes vehicles take through the area?
- Is there a redevelopment effort underway?
- Do those routes vary by time of day, day of the week, or season? How?
- Is there a redevelopment effort underway?
- Are drivers primarily shoppers? Residents? Commuters? Other visitors?
- Is there a redevelopment effort underway?
- Are pedestrians walking to school? To work? To shop? To other activities?

Demographics

- Who lives in the neighborhood? Youth? Families? Seniors? A mix?
- Do most residents own the homes they live in or do they rent?
- How and how often do residents routinely interact?

A Neighborhood CPTED Inventory

SHOULD INCLUDE:

Observations about the neighborhood should address:

Types of activities that take place

- ▣ What kinds of criminal or related activities are taking place? Vandalism? Loitering? Burglary? Drug trafficking?
- ▣ What kinds of legitimate activity are desired or supported? Pedestrian traffic? Recreation? Shopping? Use of transit?

When and where they will probably occur

- ▣ On the street? Near or at schools? Near or at businesses? In parks? In homes?
- ▣ During the day? At night? On weekdays? On weekends? During specific months?

The decision about which strategy or strategies to choose must involve all key members of the community affected by the problems outlined in the analysis. Throughout the decision-making process and while putting the strategy in effect, it is important to maintain communication with the affected neighborhood. This can be accomplished via existing networks of neighborhood associations, tenant groups, community policing officers, a neighborhood services agency newsletter, or other communitywide bulletins. Communication among the CPTED implementing partners is also essential to ensure that everyone working on the project has the most recent information on its progress, who is involved, and whether the project is successful.

The strategies might include the following projects:

- ☐ neighborhood festival or block party;
- ☐ neighborhood watch program;
- ☐ public education and advocacy programs;
- ☐ targeted code enforcement;
- ☐ cleanup campaign;
- ☐ community gardens;
- ☐ landscape maintenance;
- ☐ lighting upgrades;
- ☐ traffic enforcement;
- ☐ security surveys;
- ☐ infill construction or other new development;
- ☐ property acquisition, demolition, redevelopment, and rehabilitation;
- ☐ changes in zoning or in development regulations, such as landscaping;
- ☐ new or modified traffic signal systems or changes to turning movements;
- ☐ street closings or street privatization; and
- ☐ changes to bus routes or schedules.

WARNING

Tudor Top Circle is a

CRIME WATCH NEIGHBORHOOD

POLICE
ANCHORAGE ALASKA

We Report All Suspicious Activities To The Anchorage Police Department

Service Since 1921
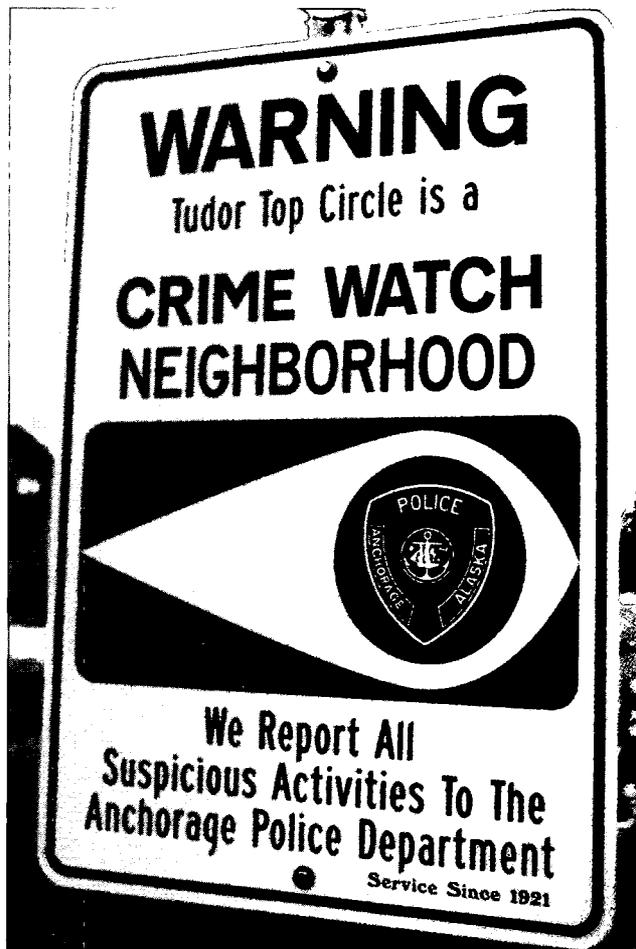
Neighborhood Watch programs are one crime prevention strategy communities can institute.

Once the list of strategies is established, the team will have to estimate any costs associated with their implementation. Many of the strategies may not require additional funds, although items like property acquisition obviously can be quite expensive. Some costs will have to be borne by local residents and businesses.

In estimating costs and financing you should also consider that benefits (such as increases in property values or in the amount of sales tax generated, or decreases in the number of calls for service) may result from this program. If people understand what they will receive as a return on their investment, they may be more willing to participate, both personally and financially. Proper data collection early in the planning process will aid in determining these estimates.

The next step in the process is to identify participants and define their roles and responsibilities in relation to your improvement plan. The mobilization section that follows describes how a variety of agencies, organizations, and individuals play a role in crime prevention through environmental design. The neighborhood improvement program will probably be lead by law enforcement or other local agencies, but should also be the responsibility of area residents, property owners, and businesses. It is unlikely that the police, or any other single local agency, will be able to do this alone. For example, the earlier list of strategies suggests that one or more of the following might participate in a local CPTED implementation process:

■ planning, growth management, and/or economic development agencies;

- the design community (professional architects, landscape architects, interior designers, etc.);

- residents;

- young people;

- real estate developers;

- public works department;

- local utility company;

- code enforcement and licensing;

- traffic engineering;

- transit authority;

- schools;

- the police; and

- business owners.

Even if they do not officially serve as members of the team, they can provide assistance or advice throughout the implementation process—on tactics and logistics, on possible funding sources, and on scheduling. A starter list for CPTED implementers to use in linking up with community-based, local government, and other partners appears at the end of this section.

EVALUATING THE IMPACT OF THE STRATEGY

Evaluation will help determine the effectiveness of CPTED strategies.

The final element of the plan, evaluation, will help determine the effectiveness of those CPTED strategies employed. The measures of success selected should reflect the goals and objectives in the plan; that is, they should measure changes the local implementation team considers most important and relevant. For example, if the goal is to improve neighborhood stability, evaluation measures might include the following:

- change in use of public space;

- change in residential or commercial vacancy rates;

- change in assessed valuation;

- change in property crimes;

- change in code violations or citations;

- change in building permits; and

- change in owner occupancy.

CPTED implementers may place more emphasis on knowing that quality of life has improved in the neighborhood especially if, for example, fear was a major presenting problem. In this case the evaluation will measure whether people feel safer, whether there is less trash, whether there are fewer problems with weeds or stray cats and dogs, or whether vandalism and graffiti have declined.

In addition to the above, local CPTED teams may need to know how the CPTED project has affected other problems in the neighborhood, or how neighborhood problems have changed over the course of implementation. This includes the following considerations:

- greater neighborhood use and control of streets, parks, and other public spaces;

- less frequent or less noticeable drug or gang activity in the neighborhood;

- lower traffic volumes and slower speeds (so that, for example, children can cross the streets more safely);

- evidence that people are taking better care of their properties, by fixing them or keeping them clean; and

- better relationship or better communication between owners and renters, between residents and businesses, and between the neighborhood and government agencies.

In defining the evaluation measures, local implementers might want to select items that are easily measured, like crime, because data are collected on a regular basis. Where data are not available, consider a plan to conduct regular surveys (for unreported victimization and fear, or changes in attitudes). Evaluation is one of the most important elements of a comprehensive CPTED program, because, if the initiative can document CPTED's value, it will be easier to garner long-term support for the concept.

Starting a CPTED Program

KEY QUESTIONS

You may be ready to begin using crime prevention through environmental design strategies but unsure about what local government can do to promote and implement CPTED. Following is a list of questions that might help local implementers.

- What is our goal?
- Do we have a specific site or neighborhood problem that needs attention?
- How will we decide what project to use for our first CPTED initiative?
- Who should take the lead in organizing the CPTED team?
- Which departments, agencies, organizations, and individuals should participate on the team?
- How should representatives from these departments, agencies, and organizations be selected?
- What authority will the team have?
- What will be expected of team members?
- What role will community members play?
- What issues favor a successful CPTED initiative?
- What obstacles are we likely to encounter? How can we overcome them?
- What resources will we need?
- What resources are already available?
- If we need it, who can provide technical assistance?
- Will we need to change local or state laws, regulations, or policies?

Starting a CPTED Program

KEY QUESTIONS, *continued*

- Do we have any allies to help us make these changes?

If you believe your crime prevention through environmental design proposal will meet resistance, consider links between existing programs and crime prevention through environmental design principles:

- Do we have an interdepartmental team that reviews development proposals? Could this team consider crime and safety as part of its review?

- Do we have an interdepartmental team that considers the location, design, and management of public facilities, e.g., schools, housing, parks, mass transit, etc.? Should the team also consider how location, design, and management can improve public safety?

- Do we have a community policing initiative that emphasizes community assessment, crime analysis, and problem-solving partnerships with other agencies and the community?

- Since we have a building code with specifications for design, materials, installation, and other components, does the code include requirements that will increase security and reduce criminal opportunity?

- Do we have ordinances to control issues like panhandling and loitering, graffiti, weeds and trash, excessive concentration of liquor outlets, or other "disorder" problems? How well do we enforce these ordinances?

- Have we used traffic diversion and control to improve neighborhood character and local traffic conditions? Have these projects also reduced opportunities for drug trafficking, prostitution, or other crimes?

- Are there any other local strategies, programs, projects, or approaches already in place that we can use for CPTED? How many of these are mandatory?
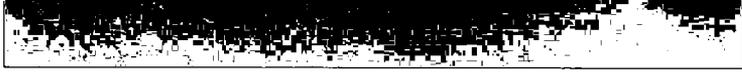
Setting Up a CPTED Team for Your Community
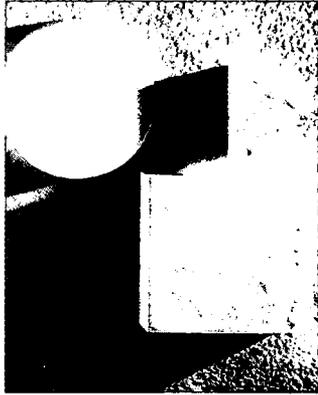
To tap the full benefits of CPTED for your community you must assemble a team that combines the many skills that can help your community identify CPTED-susceptible problems and select and implement the best strategy.

This section of the handbook explains ways in which a team can be organized, identifies possible members of, or allies with, the team, discusses their roles, and describes strategies the team might follow. It shows how crime prevention through environmental design can be incorporated into existing plans, policies, and procedures, so that it becomes part of day-to-day operations. It defines the roles that various departments, agencies, organizations, and individuals may play in creating a successful program.

Section Six, "Examples of CPTED in Action," helps you to understand how several different communities applied the CPTED principles and a team approach to a specific crime-related problem.

BUILDING A TEAM

The first task is to define the boundaries of the community in which the team will work. These boundaries may suggest some of the specific members of the team. The second task is to organize a multidisciplinary CPTED team that will work together to design and implement a variety of CPTED projects in the community. One stalwart person can bring a CPTED program to a community, but he or she will probably become burned out and isolated, as this task is overwhelming for one individual.

Ideally, the team members are people who work well together, communicate effectively with one another, and are willing to try new ideas. The team should include representatives of those departments, agencies, and organizations that are concerned with the community's physical environment and people in the area affected. The team should have a core of regular members, but its precise composition may vary based on the problem, issue, or project under consideration. The "roles and responsibilities" part of this section suggests individuals and agencies you may want to recruit.

Often, the most effective approach is to use existing departments, programs, and resources to prevent crime through environmental design. The team thus formed has a number of options for its first project. Initially, consider the questions outlined in Table 2. In addition, neighborhood surveys and observations from small scale or pilot projects can help determine priorities for a communitywide effort.

FRAMING THE WORK

Success on neighborhood projects demonstrates how CPTED complements existing programs, and how it assists decision makers in achieving objectives without adding substantial time or cost to a project. The team may start by establishing some general goals for government adoption of CPTED principles. It may then incorporate these principles into local government in different ways.

- *Use methods consistent with the CPTED principles.* This means that crime prevention through environmental design will be considered in day-to-day (and more far-reaching) decisions, for example, during plan review of new construction and redevelopment projects. It also means that the decision-making processes will include a variety of participants. A South San Francisco ordinance mandates police involvement in the planning process, mandates security conditions on projects, and allows no occupancy until the police representative signs off on the project. Collaboration among the agencies and community input at public hearings on projects have eliminated the potential for adult-oriented entertainment or other crime-prone business in the California community.

- *Adopt laws, regulations, policies, and procedures that support and facilitate use of CPTED principles,* or at least do not contradict them. It may be equally important to strive for interpretations of existing laws or policies (zoning, for example) that are consistent with CPTED, when this is possible. A building code that included CPTED standards was implemented in parts of Dade County, Florida, for new construction, and from 1975 to 1976 the burglary rate for new homes fell 24 percent.

- *Incorporate CPTED into training and professional development of local law enforcement officers, planners, and other personnel.* This strategy indicates the local government's commitment to CPTED as a crime prevention tool that should be routinely used by the individual as well as supported by the agency. Officers and personnel of other agencies should draw upon these tools every day to do their jobs effectively. Baltimore's comprehensive crime control and prevention strategy recently incorporated CPTED training for community organizers, law enforcement officers, and other members of agencies working with resident groups on projects to assist neighborhoods to combat drug trafficking and other crimes.

- *Offer CPTED educational materials to community groups and neighborhood associations.* Community groups need to establish partnerships with local government agencies and obtain information about how they can identify crime-related problems and devise solutions. Educational materials on CPTED principles and examples of small-scale projects help neighborhood associations recognize its benefits and apply it to solve local problems. Communities also need communication mechanisms to keep them informed of crime trends and opportunities to support crime prevention initiatives. In the late 1980s, the Tucson, Arizona, police

The issue of property maintenance can be a critical element in a community crime prevention program.

department began training community volunteers to install crime prevention devices in the homes of elderly residents. Officers routinely work with neighborhood watch groups on residential security surveys.

■ *Allocate resources necessary to achieve CPTED goals.* These resources do not have to involve cash. Supervisors' and administrators' support for the CPTED team's activities, a variety of incentives, or allocation of staff time are examples of an agency's support for staff participation in plan review and community-level CPTED projects. Ann Arbor, Michigan, and many other police departments assign personnel to review plans for development and redevelopment projects.

The first task for the team will be an audit of laws, regulations, policies, and procedures that are related to crime prevention through environmental design. The audit takes time but it is worthwhile for several reasons: it develops an inventory of local CPTED tools; it helps team members understand how they can employ CPTED principles in the work they already do; and it helps identify what legal and institutional barriers might stand in their way.

COMPLETING A CPTED AUDIT

The CPTED audit begins with an inventory of those laws, regulations, policies, and procedures that govern planning, design, and use and maintenance of neighborhoods and facilities. The inventory should include consideration of these kinds of information:

■ comprehensive plan/master plan/land use plan terms and the development process;

■ zoning, subdivision, landscape, or other ordinances;

■ capital improvements plan and program;

- building codes, fire code, and code enforcement policies; and

- ordinances or policies relating to such "neighborhood disorder" problems as loitering, vagrancy, drinking in public, graffiti, etc.

For each policy or process, the review should address the following issues:

- What agency or agencies control this process or policy? What power do they have?

- What are the steps or decisions in the planning process that incorporate CPTED principles?

- How often and in what context is the plan/policy reviewed? Who participates in that review or assessment?

- Who are the key people involved and how can they be contacted?

Because these documents govern the way the physical environment is developed and used, it is important that they are compatible with and, to the extent possible, support CPTED. They should not contain requirements that conflict with CPTED design principles. Therefore, you will need to review each of the documents in your inventory and note any contradictions. During the review, it will also be important to note any requirements that support CPTED, even if that is not their original intent. Appendix A contains a brief overview of several land use planning documents and the ways they can be used to promote—or deny—application of the CPTED principles.

DEVELOPING CPTED GOALS

The review of rules and policies and your experience in your community will prepare you to establish goals for working with CPTED.

- *Improving neighborhood quality of life through property maintenance and code enforcement.* Although often overlooked, property maintenance and code enforcement can be critical elements in a community crime prevention program. For example, local laws that require proper maintenance of property signify that someone is responsible, and that someone is present to take care of the property, the facility, or the neighborhood. Several communities have used enforcement quite effectively. This includes building and housing code enforcement and the application of "public disorder" laws that address issues like public drunkenness; loitering; trash, weeds, and litter; and trespassing; as well as more traditional criminal law enforcement. Cities that pursue this strategy must be aware of the impact on residents temporarily or permanently displaced by destruction of blighted housing.

For example, pushy panhandlers in Seattle caused many complaints from residents and tourists until a new law took effect in 1987. The city's most recent ordinance makes it illegal to sit or lie on sidewalks in commercial districts between 7:00 a.m. and 9:00 p.m. In some downtown areas, the problem of panhandlers sitting and lying on sidewalks has been eliminated.

- *Completing neighborhood evaluations and developing neighborhood CPTED strategies.* The section "Addressing Neighborhood Problems Using CPTED" provides several examples of approaches used in neighborhoods. A Knoxville, Tennessee, interagency group working with several public housing communities, determined

that the poor physical condition of these areas had contributed to a climate that encouraged street-level drug trafficking. To combat this problem, CPTED goals focused on stepped-up enforcement and neighborhood action. The team surveyed areas for compliance with lighting requirements, established clearer boundaries to the neighborhoods, trained volunteers to conduct safety inspections, and removed garbage and abandoned vehicles.

■ *Incorporating CPTED in design, planning, and decision-making processes.* The next section, "Designing CPTED into New Development," discusses decision-making processes and opportunities for crime prevention through environmental design.

■ *Revising laws, regulations, policies, and procedures that contradict CPTED principles.* Appendix A, "Planning and CPTED," gives several examples of potential conflicts and offers solutions. A short-term goal might be to revise local building codes in order to reduce delays in enforcing standards of property maintenance. Community organizers in New Orleans are working with the county to identify problem properties and board them up while they change the law that enforces maintenance. Changing state codes is a long-term project.

■ *Educating law enforcement officers, planners, and building and design professionals in CPTED principles and their application.* Sustaining emphasis on CPTED principles and influencing crime and quality of life issues will require that members of a CPTED team or those who influence decisions about development projects receive training in how to apply neighborhood level and communitywide strategies. Tucson's CPTED strategy included educating the community and related professionals. The police department's educational slide presentation on CPTED was shown to a group of architects from across the state. As a result of this demonstration the department began contributing CPTED ideas to coursework for students at the College of Architecture at the University of Arizona.

■ *Educating managers, owners, and residents of apartment complexes in CPTED principles and their application to multifamily housing.* Using examples from Mesa, Arizona, and other communities, the state police academy in Oregon recently began a training program to provide CPTED skills to building managers and residents. Piloted in several communities in Oregon, the curriculum will be replicated throughout the state.

The goals you select will focus the work of the CPTED team. These goals also will suggest which departments, agencies, organizations, and individuals must participate in the CPTED program in order for it to be successful.

DECIDING ON ROLES AND RESPONSIBILITIES

Everyone in government has some responsibility for tasks that relate to CPTED. In selecting participants your team should focus on individuals whose budgetary or policy authority, understanding of crime prevention, and involvement in the community suggest they would be most interested in issues related to CPTED. Some suggestions for individuals are referenced in Appendix D, "CPTED Link-Up List for Local Initiatives." As you begin to identify the primary and secondary participants in your program, you may want to consider the following:

Everyone in government has some responsibility for tasks that relate to CPTED.

Public Agencies and Their Roles

In many communities, law-enforcement officials are chosen as leads in CPTED teams because of their involvement in crime prevention in the community and their knowledge of community issues. However, other communities choose to emphasize the design aspects of CPTED and believe lead responsibility should rest with the planning department. Some very successful CPTED programs have been the responsibility of economic development, parks and recreation, traffic engineering, or other departments. In some cases, a multiple agency task force is managed by the mayor or city manager. The most appropriate group to lead the program, in each of these instances, demonstrated expertise, leadership, and provided staff and other resources to serve the needs of the community. Success has less to do with who was "in charge" than with how the group did its work. Understanding problems and issues is the key to identifying team members, but the program's success comes from team building and team work.

Within the team, each agency should consider the ways that it might contribute to a local governmentwide CPTED initiative. The planning department might be responsible for reviewing and changing development codes—but all departments participating in the plan review should consider CPTED as part of that process. This includes planning and community development; fire department; public works; traffic engineering; law enforcement; and in some locations, forestry, assessment, or parks and recreation.

In many communities the housing and transit authorities and the school board are independent organizations. They may even have their own law enforcement staffs. Even so, their activities often affect adjacent neighborhoods, and they must be included in discussions of local problems and issues. In some cases they are affected by problems that begin in other area neighborhoods.

Understanding what resources are available outside local government is also important. There are many groups you may recruit to support your local CPTED effort.

Schools, Colleges, and Universities and Their Roles

Educational institutions can participate in CPTED in a variety of ways. Many are involved in their own crime prevention efforts to combat property crimes and crimes against persons on school grounds. A local CPTED plan may address opportunities for crime on area campuses.

Another CPTED strategy might concentrate on neighborhood crime near these institutions. Schools invite many outsiders into the community and areas around the schools can become "hot spots" for crime. Cooperation can improve safety on campus as well as in the community at large.

Schools can make positive contributions to a CPTED effort. First, their security staff can help provide crime prevention education—both to students and staff and to community residents and businesses. Second, schools can offer technical assistance in support of CPTED objectives. Faculty and staff may be able to help in many areas such as data collection and analysis, sampling and surveys, program evaluation, review and modification of laws or policies, design alternatives, or cost-benefit analysis.

The Business Community and Its Role

The diversity of activities and interests within the local business community presents many opportunities to support a CPTED initiative. Identifying and communicating with

business owners and merchant associations is critical because these participants can influence change in the public sector as well. The size and nature of individual business interests will affect the owner or manager's perspective on crime issues in the community. Small retail outlets owned by residents of the community will probably view local crime problems from a different perspective than managers of large retail outlets or manufacturing and distribution facilities. Small business owners may feel more of a stake in the community. Regardless of size, the hours of operation, number of customers served, the number of employees, and the variety of products sold will influence how a businessperson thinks about crime issues, possible solutions, and the business's role in resolving crime-related problems. Business leaders can provide the CPTED team with information about crime in the area, publicize meetings to discuss strategy, and provide services like meeting space and printing to support the work of the team.

Private Housing or Business Property Developers

Private housing or business property developers may be reluctant to adopt CPTED if they believe it could limit flexibility and be costly to implement. However, many understand that the security of housing and office buildings strongly influences their profits. The local team's challenge will be to show that CPTED supports developer objectives, including their profit motive. The team should make available information comparing the potential costs of crime (lost profit, productivity, potential liability, and perception of the business or property within the community) with the modest investment of CPTED measures to prevent it (e.g., adjustments to location and lighting of parking lots, landscaping designs, and access control through entrances and exits).

Electric Utilities and Other Companies With Special Expertise

Certain enterprises have a natural affinity for CPTED. They can help identify issues, locate products, or estimate costs associated with possible solutions. The local electric utility company can work with you to evaluate street lighting or site development and may even establish its own lighting improvement program. A landscaping or fencing company can estimate the costs of materials and evaluate which materials would be best for surveillance and maintenance.

Architects and Designers

Since design is such an important part of crime prevention through environmental design, a key ally should be the design community. This includes architects, landscape architects, engineers, and interior designers. Most design decisions take place before the public sector begins its review process. If local designers are not aware of CPTED principles (or compelled to apply them by ordinance), the community will continue to produce problem buildings.

When considering a project, CPTED team members may want to approach an innovative public or private sector architect and work with that person on a project already under consideration. It may be possible to generate more than one design solution—one that uses CPTED and one that does not, for example, or more than one CPTED design response for the same building or site. A public school, a park, or a government building might be a good choice, since agency members of the CPTED team are likely to be involved in its planning, design, and construction or renovation.

This property is well maintained; the walkway provides access control and the trees and brushes are the correct heights for surveillance.

If they appear reluctant, designers often can be convinced of CPTED's value if you discuss successful examples of their work and then compare these to more problematic sites or buildings. Many times they have not considered that crime prevention is primarily responsible for low turnover rates, positive reviews, or other feedback they receive on their designs. And many firms would like to be able to promote themselves as understanding safety and security issues, especially since this may generate new projects.

The Legal Community

The legal community is valuable to the process because attorneys understand how laws are interpreted and they may be of tremendous help in proposing changes to existing laws or codes. Municipal and private sector attorneys concerned about premises liability will see the advantages of CPTED, because it has the potential to reduce the liability of the jurisdiction or private owner. CPTED reduces opportunities for victimization by crime. The cost of lawsuits to cities or companies can be significant. In addition, declining sales or tax revenue from parking garages, downtown sports and entertainment facilities, and shopping districts not used because the public fears crime can promote CPTED concepts.

The Role of Neighborhoods

A CPTED program will improve the quality of life in neighborhoods, so neighborhood residents, including young people, and community groups must be involved in the process. To support neighborhood CPTED projects, representatives must understand the CPTED design principles and local CPTED goals. They need to know what CPTED is, what it can do for them, and how the CPTED team can help address local problems.

Neighborhood groups and young people may concentrate on concerns such as insufficient lighting along a residential street, the graffiti-strewn wall of a neighborhood

school, or why and where young people are afraid to walk to or from school. These may be communitywide concerns such as dilapidated houses abandoned by owners or public buildings damaged by vandalism. Even in communities where violent crime seems to dominate neighborhood life, residents remain concerned about quality of life issues (such as trash, overgrown lots, noise nuisances) which CPTED can address very effectively. Local officials should educate resident groups about CPTED principles and how to apply them in partnerships between local government and communities.

CPTED provides communities with a framework for understanding how adjustments to lighting, maintenance, landscaping, fencing, traffic patterns, and design of parks and other public places and can address crime and quality of life concerns. Residents aware of how local policies, plans, or ordinances support or inhibit CPTED can be important allies of local CPTED efforts. Young people can help define problems, conduct and analyze neighborhood surveys, and help run neighborhood clean-ups, etc. Neighborhood groups can advocate changes in local statutes or act as vital partners of law enforcement and agencies charged with applying policy and legal tools.

Therefore, CPTED can be an invaluable tool for mobilizing resident action on a variety of issues, including organizing a local government CPTED initiative supporting neighborhood-level crime prevention and control objectives.
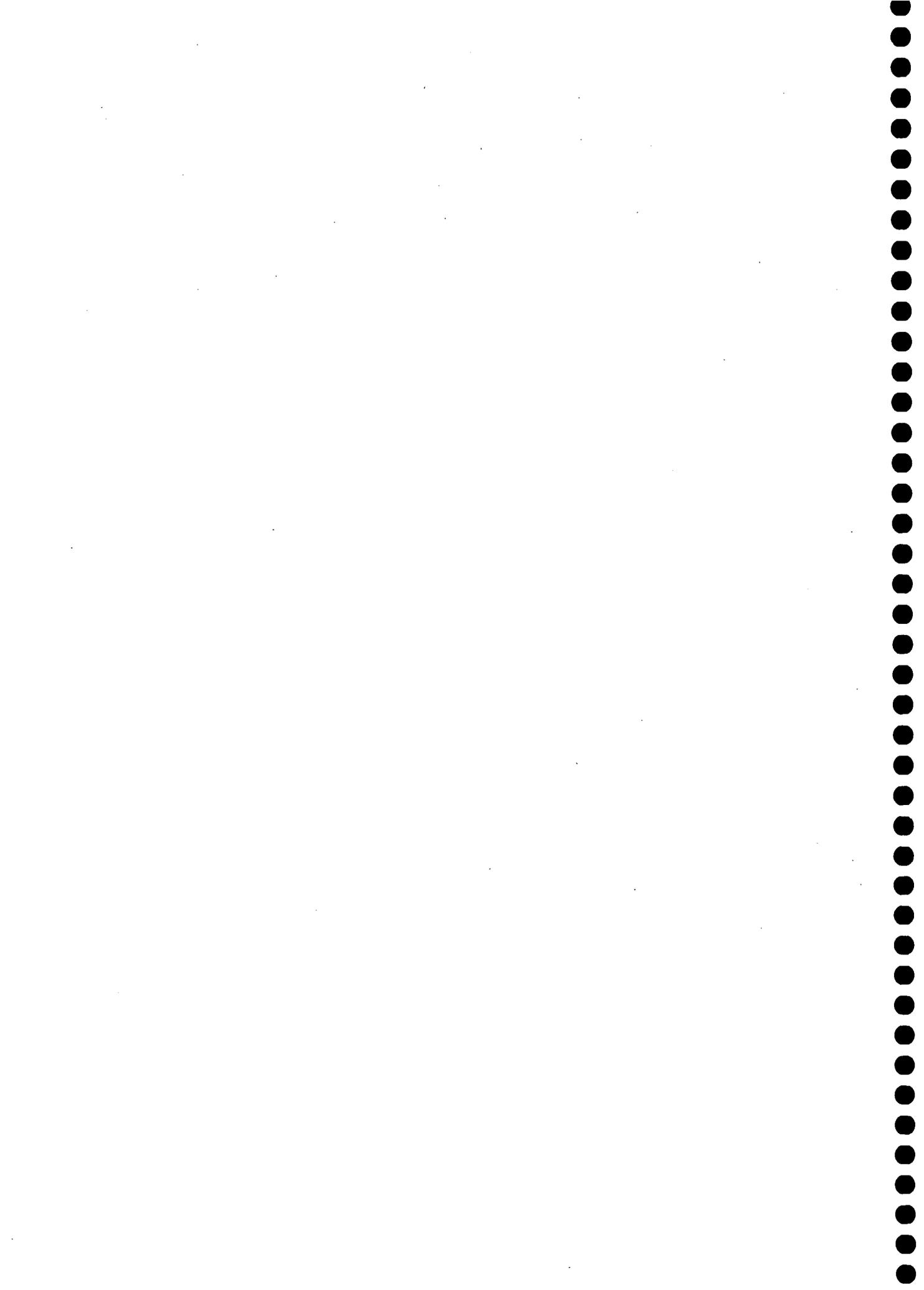
Incorporating CPTED into New Development
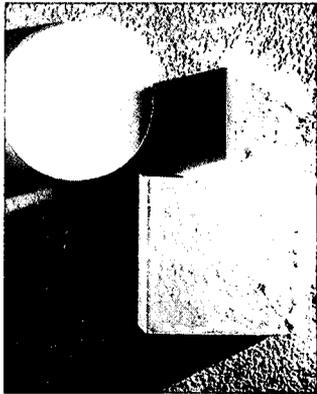
One of the important activities of a CPTED program is deciding on the location, siting, and design of new or remodeled facilities. These decisions can increase or reduce crime opportunities and the quality of life in neighborhoods for decades. Once made, they can be difficult and expensive to modify.

ffective participation depends upon understanding the design and planning processes. These include the individual activities and their sequence, the timing of various decisions, who makes the decisions, and how to incorporate CPTED principles into the processes. Your ability to incorporate these principles depends also on the information available, the project, and the setting; expertise in interpreting site plans; and ability to communicate CPTED concepts to others in the review process.

Identifying the responsibilities, roles, and authorities that influence the design and construction of new development is important. Members of the CPTED team should share information on terminology and process with their partners from other agencies, identify steps in the development process where CPTED concepts can be introduced, and help clarify how the agencies and outside groups in the CPTED team will work together during review of projects. If an interagency CPTED team approach does not exist, informal conversations among community members and law enforcement officers or between law enforcement officers and planners can influence CPTED goals.

DECISION MAKING IN DESIGN AND PLANNING

A flowchart of the design and planning processes is shown in Figure 1. The flowchart is intended to illustrate a "typical" process; however, you may find your community has adopted another scheme. For example, some cities or counties require a preapplication meeting before design begins. Others issue a building permit based on the site plan and therefore do not review construction documents. Most communities only require plan review for large or potentially intrusive types of development. You will need to compare Figure 1 with local decision making to be certain you know when, where, and how to participate in the planning process.

As you examine Figure 1, note that two stages in the design process—schematic design and design development—occur before any material is submitted for local government review. Many CPTED reviewers become frustrated when they are unable to convince an owner or designer to change a development scheme. They interpret this lack of cooperation as a reluctance to adopt CPTED principles when, in reality, the owner's response is merely a cost-saving strategy. The more advanced the stage of the design process, the more time and money the client must forfeit in order to respond to comments and concerns. Therefore, changes will often be limited to those items that are required by law or policy.

DESIGN AND PLANNING PROCESS

Design Process   **Plan Review Process**

Schematic Design

↓

Design Developent → Plan Submission

↓

Staff Review

↓

Committee Review
and Recommendations

↓

Planning Commission
Review and Approval

Construction Documents ←

Construction Documents →

Building and
Environmental Permits

↓

Bidding and Negotiation

↓

Construction
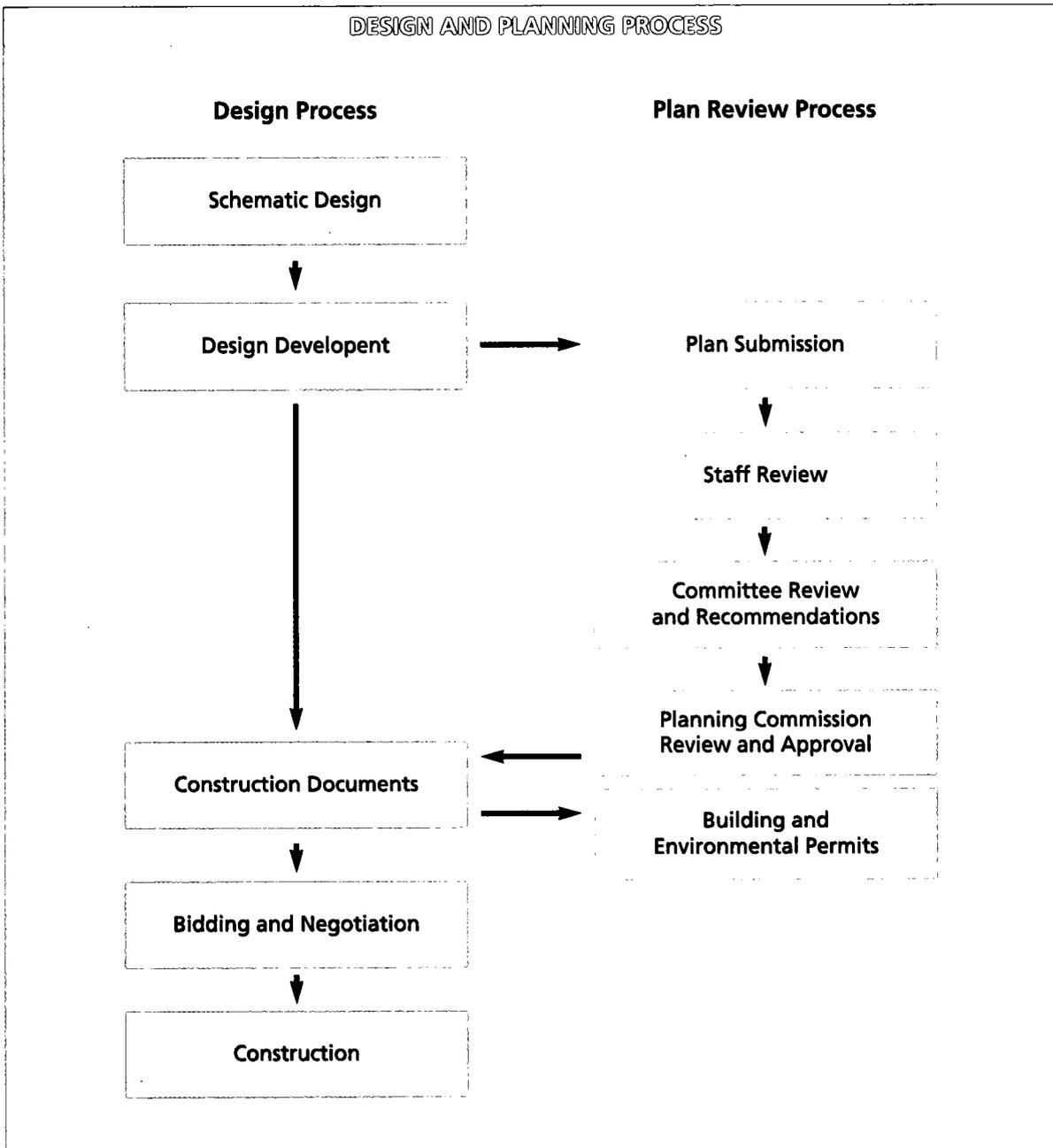
The most critical time for input regarding CPTED is *before* plan review. Once plan review is underway, any CPTED recommendations not required by ordinance will probably not be implemented. Thus, the property owners, architects, engineers, landscape architects, and others who participate in design development should be familiar with CPTED principles so that they understand how these can be incorporated into their work. Educational materials and communication with crime prevention, planning, or design professionals expert in CPTED can help influence architects' and developers' proposals.

Notice also that two stages of development—bidding and negotiation, and construction—occur after plan review and permitting processes are complete. It is during these two phases that contractors request material or product substitutions to reduce costs. Many budget-conscious property owners follow the recommendations of their contractors; contractors may not understand some negative implications of these material changes. Trained CPTED team members can help contractors and owners/developers appreciate the security value of lighting, landscaping, fencing, and locking system products. This education process may also highlight cost effectiveness and aesthetic features of the CPTED product.

Contractor substitutions will not affect large-scale decisions like the location of a building or a parking lot, but very often do affect fences, gates, doors, windows, locks, or other "details" that are critical to the security of the building or facility. What a contractor recognizes as "equivalent" will not always meet CPTED "best practice" standards.

If contractor substitutions do not meet the building code or other local requirements, they may be denied by the code inspector or the fire marshal. Most substitutions, though, will meet code requirements and will be allowed if someone with expertise in CPTED does not question their installation.

During the construction phase, contractors often request material substitutions that may not meet CPTED best practice standards.

INCORPORATING CPTED INTO THE PROCESS

Now let's look at each phase of the design and planning process and the issues that must be considered as part of a crime prevention through environmental design program. Table 3 offers a set of questions to guide your review during the various phases of the process.

Schematic Design

The schematic design results from discussions between the designer and the property owner (or client). In these discussions, the client has outlined the design "program," a list of requirements regarding the intended use(s) for the property. The designer organizes these requirements into groups of activities that will be described in later design phases.

At the schematic phase, the designer considers site organization, which includes building location, parking location, or site entrances and exits; and building organization, which suggests locations for building entrances and exits.

CPTED review during schematic design should focus on the location of the building site: it should evaluate how the development will affect the surrounding neighborhood and how the neighborhood may affect the proposed development. Understanding these relationships will help you to influence the property owner's decisions regarding (a) access control measures; (b) surveillance opportunities from various locations on the site and between the site and the neighborhood; (c) design details that will be considered during later phases of the project; and (d) policies regarding the eventual use of the property.

Design Development

Once the functional relationships have been established, the designer works to give location and dimension to the various activities that will occur on the site. Design development details the size and shape of buildings, parking and other site features. During this phase the designer selects structural, heating and cooling, plumbing, lighting and communications systems. The designer also makes decisions regarding door and window types and locations.

During this design phase you need to consider the relative position of buildings and associated facilities on the site, the intended uses of the facilities, and the influence of existing features on opportunities for crime. In particular, you should look for a design scheme where "public" and "private" activities are either physically or functionally separated. Automobile and pedestrian routes should not compete or conflict with one another. Activities should be located so as to promote surveillance from one part of the site to another, and this surveillance should not be interrupted by the site's topography.

Design development usually includes a plan for landscaping the site. Landscaping is important, especially when considering opportunities for crime, because its design may offer places of concealment or may reduce surveillance. An evaluation of the landscaping plan should consider the types and locations of plant materials and their potential impact on crime. Other elements of the landscaping plan, such as fences and walls, dumpsters, signs and graphics, or lighting should also be considered.

Design Review Questions

During Schematic Design

Questions about neighborhood conditions

■ What kind of neighborhood is this?

■ What kinds of crimes occur in this neighborhood? Which occur most often?

■ Who lives in, works in, uses, or travels through this neighborhood?

■ How many people are likely to be in the neighborhood during the day? In the evening? Late at night?

■ Will neighborhood conditions have any impact on the proposed development?

■ Will the proposal positively or negatively affect its surroundings?

Questions about site conditions

■ Who will live on, work on, use, or visit the site?

■ What time of the day is the site likely to be used? What days of the week?

■ How will people get to the site? On foot? By car? By bus? By train?

During Design Development

Questions about access, circulation, and parking

■ Are there separate entrances for employee vehicles, visitor vehicles, and delivery vehicles?

■ Can entrances be closed, locked, or blocked during off hours?

■ What provisions are there for emergency access to the site? To the building?

■ Is there a conflict between access to the property and the normal flow of traffic on adjacent streets and through nearby intersections?

■ Is pedestrian movement separated from automobile traffic?

■ Are parking stalls and bicycle racks located on the site and oriented to allow for surveillance from the street? The building? Entrances and exits? Adjacent sites or buildings?

Questions about proposed buildings

■ Will buildings and their numbered address be visible from the street(s)? From adjacent properties or buildings?

■ Will building entrances and exits be visible from parking areas and pedestrian paths?

■ Are there opportunities to gain roof access (via standpipes, flag-poles, adjacent buildings, etc.)?

Questions about landscaping

■ What kinds of trees, shrubs, or other plants are proposed for the site?

■ Where will each of the different kinds of plants be installed? Will trees be planted adjacent to fences or walls?

■ Do you have any recommendations or requirements for plant maintenance?

■ Are walls, fences, plazas, fountains, or other landscape elements included in the plan?

Design Review Questions

During Design Development, continued

- Will plants, walls, fences, plazas, or other landscape elements reduce or remove opportunities to see entrances and exits? Parking? Pedestrian paths? Delivery or loading areas? Buildings?
- Will they provide places to hide?
- Will they be attractive to outsiders?
- How are the dumpsters screened, if this is required?
- Have signs been provided? Where?

Questions about lighting

- Where will light fixtures be located? Along streets? In parking lots? Near buildings? Attached to the buildings?
- What kind of lamp is proposed? How bright?
- How tall will the light poles be?
- Where are the lights relative to the building? Parking? Loading areas? Entrances and exits? Pedestrian paths?
- Will trees or other landscape elements block some or all of the light falling on the buildings? On the ground?
- Are entryways well lit?

During Preparation of Construction Drawings

Questions about floor plans

- Does the interior space appear to be organized in a logical fashion? Have functional areas been grouped together?
- What is the relationship between space that can be accessed by the public and space that is reserved for employees?
- Where are doors and windows located?
- Where are restrooms located (especially public restrooms)?
- Are there pay phones or public phones in the building?

Questions about materials and products

- What style doors and windows will be installed?
- Are mirrors, cameras, alarms, or other security devices shown on the plan or in detail drawings?
- Does the facility use vandal- and graffiti-proof wall coverings or other materials?

Plan Submission and Plan Review

At this point in the process, the designer may continue to add detail to the plan, but will submit any required documents for review and approval by local government agencies. Staff review is limited to those items that are required by ordinance or local policy. Each person that participates in plan review will evaluate a different component of the proposal. For example, the planning department representative will be most concerned about the proposed development's conformance with the comprehensive plan, existing zoning, and development regulations. A traffic engineer will focus on access and circulation. Other departments or organizations will consider those issues relevant to their

The bushes' height and the site's topography permit a view from one side of the park to the other.

own responsibilities. Crime prevention and security issues, then, are left to a law enforcement representative or a CPTED reviewer.

Unfortunately, law enforcement review is the exception rather than the rule; most cities and counties do not ask for this input. Officers who do participate find that, because their recommendations are not required by ordinance, their comments are viewed as only optional by the owner or designer.

Two modifications to the process would enhance consideration of CPTED. First, all plan review participants (including the owner and the designer) need to be aware of the CPTED principles and understand how these principles relate to their development issues. Second, the plan review participants must consider ordinances and process issues. Some communities require conformance to CPTED principles through ordinances. This includes the conditional use permit process (CUP), an interim step before plans are submitted on a new development or application to change land use designation. When police and other departments inform prospective applicants of whether the project meets CPTED standards or identify modifications to meet CPTED standards, then problem projects can be modified before development proceeds further. Involving a law enforcement officer in the CUP and plan review processes will ensure that crime prevention is considered.

Depending on the scale of the project and the issues surrounding the proposal, the plan may require planning commission review and approval. This takes place after the designer has responded to committee comments. Planning commission review offers another opportunity for public input on issues of crime and safety.

Construction Documents

During plan review, the designer continues to add detail to the proposal, and finally produces a set of construction drawings and a manual of material and product specifications. These are used to solicit bids for construction services and building materials and products, and to guide construction and materials installation.

By the time construction drawings are assembled, the designer has completed floor plans and knows the specific dimensions of every aspect of the design. Interior details are complete now, and the relationship between interior and exterior activities of buildings are apparent.

The specification manual precisely identifies door and window types; hardware and locking systems; communications systems; signs and graphics; interior lighting; paint and wallpaper; tile, carpet, or other flooring; and other details for every material or product that will be installed in the building or on the site. The specification manual is an important tool, because it offers information on the useful life and required maintenance for products like locks, wall finishes, carpet, etc. This is particularly helpful if you are worried about problems with breaking and entering, or vandalism and graffiti, and the costs resulting from these activities. Many people do not give enough time to the specification manual because it is part of "construction."

Bidding and Negotiation

The construction drawings and the specification manual are distributed to interested contractors for bidding. Although much of the cost of construction will be labor, the contractor can reduce costs—and possibly increase profits—by requesting materials substitutions in the bid.

Construction

The owner and the designer observe construction to be certain that work conforms to the plans and specifications they developed. During construction the contractor may request product substitutions—or may use substitutions without permission. Workers may install locks or other products incorrectly or incompletely, thereby limiting their value as security measures. For these reasons construction observation is an important responsibility.

Construction will also be inspected to see that it meets local building and fire codes. If standards are established through ordinance or other policy, building inspection can adequately address all safety issues.

CPTED AFTER OCCUPANCY

The way the property will be used is as important to crime prevention as its design.

The planning and design processes deal with site organization and building layout, but do not consider the rules and policies that might be put into place once the facility is occupied. The way the property will be used is as important to crime prevention as its design. This includes hours of activity and scheduling, assignment of space, maintenance of the property and the disciplinary code, if this is appropriate. Therefore, as crime prevention through environmental design program participant, you should work with property owners, managers, and residents to encourage CPTED as part of their use of the property.

Examples of CPTED in Action: Case Studies
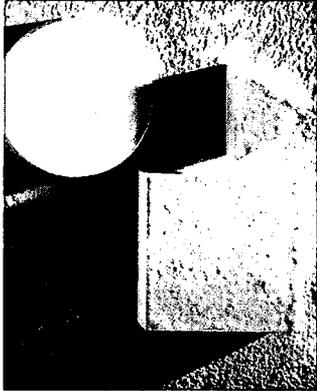
Many communities in the United States and around the world have adopted CPTED to reduce or eliminate opportunities for crime.

The case studies below demonstrate how many different ways CPTED concepts can be employed to create neighborhood change. The cases involve a wide range of settings, problems and issues, and approaches to problem solving. They employ a variety of techniques—from planning and policy to physical improvement to enhanced law enforcement and other services—and bring together a number of different organizations as part of the process. They also offer lessons for other communities that want to establish their own CPTED programs.

SARASOTA, FLORIDA

Promoting Safety In Redevelopment of Business Districts Through a CPTED Task Force

Sarasota's 1989 *City Plan* noted the need for an in-depth study of the North Tamiami Trail corridor, a mixed use area of "mom and pop" motels and other deteriorating structures. Neighborhood conditions called for cooperation among a number of departments and so the city formed a CPTED task force to complete the study. The original task force consisted of representatives of the planning department, the police department and the building department, and included input from the legal, fire, engineering and public works departments.

Members of the task force began by collecting data on land use, demographics, and reported crime along the North Tamiami Trail. These data were supplemented with resident and business surveys. The analysis supported local perceptions of a neighborhood in economic decline, with drug and prostitution problems. The "mom and pop" motels could not compete with more modern facilities.

Neighborhood conditions were exacerbated by codes and regulations restricting redevelopment. These called for a wider right-of-way and deeper setbacks; additional landscaping, parking, and stormwater facilities; and lower densities of development. Even minor improvements to area properties might exceed the threshold for bringing the property into compliance with existing code requirements.

The city instituted a multifaceted program for neighborhood improvement that included additional police patrol plus undercover operations to combat the drug and prostitution problems. The program also called for an amendment to the "Sarasota City Plan" to allow greater opportunity for physical improvement to deteriorating structures in the area.

The plan amendment created a new "NT" zone to "promote development and redevelopment in a manner that creates a safe and attractive environment for specified uses as well as cultivates an attractive gateway to the city." Development regulations for the "NT" area relaxed some of the existing barriers to improvement and called for CPTED review of proposed development.

The North Tamiami Trail project made clear that redevelopment offers an important opportunity to incorporate CPTED into local planning and decision making. Older areas often suffer from aging building stock, maintenance problems, absentee landlords, undesirable land use patterns, disgruntled residents and business owners, and real and perceived crime. Solving these problems requires a team effort. A team that has CPTED as its common denominator can be successful in creating positive change.

The CPTED task force adopted as its goal to "employ crime prevention through environmental design principles to reduce crime and perception of crime in Sarasota." Implementation of these principles is handled through the site plan review and approval process, and through building code enforcement and law enforcement.

Based on its experience, the Sarasota CPTED task force recommends the following:

- create a small group of planning, zoning, building, and crime prevention professionals who are knowledgeable and excited about their own work and the possibilities for CPTED;

- provide CPTED training to all task force members and other critical staff, and educate local decisionmakers on CPTED's potential;

- require CPTED *review* as a condition of redevelopment and ask the developer to respond to the CPTED recommendations, but do not require a *design response*; and

- enlist creative design solutions from local professionals as a way to sell the CPTED concept.

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TEMPE, ARIZONA

Prioritizing CPTED in City Development and the Planning Process

For over 20 years the City of Tempe actively sought a large shopping center/mall to be located within the city limits. After numerous false starts and discussions with several developers, the city won the battle for a regional mall.

The challenge for the Tempe Police Department was to incorporate CPTED concepts in the development without creating undue expense or roadblocks for the developer (Arizona Mills).

The city's planning process requires the CPTED coordinator, a Tempe police officer, to sign off on all plans before a building permit or certificate of occupancy is issued.

The mall is more than a typical shopping center; it is intended to be a destination spot for visitors and residents. The mall covers 1.5 million square feet, has 16 anchor stores, 153 small specialty stores, a 24 screen cineplex, an IMAX theater, and various specialty restaurants.

The national developer stated that never before had they consulted with a police department before beginning a project.

The CPTED coordinator, Tempe Police Officer Dick Steely, was assigned from the department's Crime Prevention Unit. During the initial planning stages he was concerned with numerous items, including the following:

- signage;
- loading docks;
- entryways;
- roadways;
- phones/lockers;
- service corridors;
- rest rooms;
- lighting; and
- landscaping.

As a result of on-site reviews of similar centers, a long-term bus loading zone was established to maintain clear pedestrian entryways and minimize traffic congestion.

Proper lighting was a prime focus of Officer Steely. He demanded specific levels of lights in high-risk areas within the mall and required transitional lighting throughout the project. The lighting design will allow for the landscape to mature over the years.

The local lighting engineer was required to provide specific photo-metrics (light levels) and was enthusiastic to learn "somebody believes in what I'm pushing" and the department is "where other agencies will be in ten years."

Service hallways were designed with security window panels enabling store employees to view these concealed areas prior to entering.

Restrooms were designed without exterior doorways to eliminate barriers to quick exits, and interior lighting was enhanced to provide security.

Initial consultations with the developer and the contractors and architect required 20 hours a week, but now that most conflicts have been resolved, the time required has dropped to about five hours a week.

When the mall finally opens in November 1997, the partnership should yield positive results for the department. The department expects to see a safe and productive economic focal point in the city with well-thought out CPTED principles incorporated into its design.

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TORONTO, ONTARIO

Designing a Safer City Through Interagency Partnerships

Since 1989 the City of Toronto has been building partnerships to prevent crime and reduce fear in the community. Government, business, and citizen groups share information and cooperate in developing and evaluating environmental design, community development, and education programs intended to reduce opportunities for criminal behavior.

Toronto's approach combines social development and design improvement. The program focuses on strategies to prevent violence against women and other vulnerable groups—within existing programs and budgets. The basic tenet of this approach is that local government has the responsibility to ensure that public space is safe and accessible to the public.

Although city government provides leadership and some financial resources, participation by neighborhood residents and businesses assures that programs and solutions address unique problems and needs in each community. Individual citizens are considered the experts on urban violence and must be involved in policy and decision making.

The city's many accomplishments over the last several years include

- The City Council established the Safe City Committee composed of council members and representatives of community organizations;

- Buildings and Inspections instituted security requirements for parking garages and multiunit housing;

- Parks and Recreation adopted a new policy for security in parks and in recreation centers, and offers free self-defense classes for women;

- Public Works has re-lighted most city streets with energy efficient, pedestrian-friendly street lighting;

- Housing has completed extensive evaluations of CPTED-based improvements to existing facilities;

- Planning and Development has integrated safety into the master plan and has published design guidelines for development review; and

- A grants program, "Breaking the Cycle of Violence," disburses nearly Can$500,000 per year to community groups working to prevent violence.

Carolyn Whitzman, who coordinates Safe City Committee activities, says the Committee has learned many lessons in attempting to break the cycle of violence:

Programs should focus on and solicit input from the most vulnerable groups, and should be location specific, crime specific, gender specific, and income specific. It is the *process* of gathering information, developing solutions, and implementing programs or policies that generates the result. There are no simple answers.

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KNOXVILLE, TENNESSEE

Reducing Drug Trafficking Through Law Enforcement-Led Problem Solving

The City of Knoxville designed and implemented a three-phase "law enforcement-based crime prevention program...to demonstrate the importance of crime prevention as a major police activity of equal professional stature to patrol and investigative activities in the country's major police and sheriff's departments," using demonstration funds from the U.S. Department of Justice. Each phase built on previously completed activities and resulted in a cooperative citywide action program—and significant reductions in crime.

The goal of the first phase of the program was a proactive response to crime, victimization, and fear. This required that the Knoxville Police Department integrate crime prevention into all law enforcement activities. Among other activities, the department trained a wide range of government agency and community representatives in basic crime prevention techniques (locks, lighting, alarms, security surveys, etc.), and acquired specialized CPTED training for a few critical positions.

Phase Two was devoted to the development of a citywide task force of government agencies, political leaders, nonprofit organizations, citizen groups, and private businesses. The task force collaborated on assessments of target neighborhoods that included the following:

- crime rates and offender information;

- land use and physical features, such as buildings, streets, and lighting;

- school vandalism, violence, truancy, and dropout statistics;

- sociodemographic information, e.g., poverty levels, families at risk, welfare recipients; and

- community concerns, problems, and needs.

The information was used to design and deliver a broad range of programs to meet neighborhood needs, the focus of Phase Three.

Knoxville's "Deal Street" is an important example of how the systems approach impacts neighborhood crime and quality of life. "Deal Street," as the name implies, was

the locus of drive-through drug dealing for as many as 1,200 cars per day. Based on the neighborhood analysis, the city adopted the following programs and activities:

- The city departments picked up garbage and debris and replaced broken street lamps and fixtures;

- Traffic Engineering closed streets or created cul-de-sacs and added speed bumps in the neighborhood;

- Code Enforcement cited building and merchandising violations;

- The Fire Department established emergency response routes;

- The Parks Department redesigned parks or rescheduled recreation activities to encourage appropriate use of park facilities;

- The city trained volunteers in security surveys and offered free or reduced-rate security hardware or low-interest loans for security improvements; and

- The Police Department trained officers to work with planning, design, and development professionals on projects that were compatible with CPTED objectives.

The result: only 50 cars a day come into the neighborhood, and children now safely cross the streets to get to and from school.

Police Chief Phil Keith says his department learned a number of valuable lessons from this experience. Shifting from concept to action was difficult because the program was asking local government agencies (police, fire, code enforcement, planning, engineering, etc.) to change the way they deliver services. Chief Keith recommends the following to other communities who adopt the systems approach:

First, leadership in law enforcement (and other agencies) must support a systems approach and must change the way they approach "prevention." The program should include a leadership development component so that there is consensus building and commitment to the prevention program.

Second, the implementation process must recognize that the learning curve will vary from unit to unit within the police agency, depending on its level of participation and understanding. The key to the success of the learning curve is the commitment by supervisory personnel.

Third, interdepartmental/agency relationships are critical to the success of this approach. Participating agencies need common goals and common definitions of terms in order to make the strategy work. They must communicate a sense of urgency to make changes in work behavior, improve the responsiveness of the departments and/or agencies, and focus on problem solving both short- and long-term.

Fourth, foundations and nonprofit organizations should participate early in the process, as they are critical to decisions regarding the allocation and redirection of resources.

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Revitalizing the Quality of Life in Urban Neighborhoods

The City of Houston, under the direction of Mayor Bob Lanier, established Neighborhoods to Standard, a model urban revitalization project that builds on existing Houston City Council initiatives designed to enhance quality of life in residential communities. The Neighborhoods to Standard program targets public and private investment for revitalization and stabilization of inner city neighborhoods. Public funding sources include Community Development Block Grants, sales tax, water and sewer revenues, and general obligation and improvement bonds.

Neighborhoods are selected for the program using a number of criteria. Typically, the target neighborhoods are those that can be stabilized with high-impact efforts and concentrated expenditures, geographically well-defined residential neighborhoods with a sound housing stock, a high level of owner-occupancy, and active resident participation.

The process begins with a survey of the neighborhood to gather information on problems and needs. Community input throughout the process is essential. Improvements include upgraded public utilities, enhanced street lights, street overlays, curb replacements, demolition of abandoned structures, ditch cleaning, heavy trash removal, and beautification efforts.

Crime prevention through environmental design is both supportive and reflective of the Neighborhoods to Standards concept. CPTED was an integral part of the first community improvements under this initiative. Numerous public safety issues were identified that reduced the quality of life for area residents:

- An open air drug market in one of the community's two parks created fear, and reduced resident patronage despite the addition of amenities for children. Inadequate lighting in the park enhanced the drug dealers' success, so additional lights with higher than standard wattage were installed on streets along the park's perimeter (without capital expenditure in the park). The drug market was eliminated through a combination of design modifications and intensive law enforcement efforts, and a "Fun Day in the Park" program was established to draw families back into the park.

- Multiaxle trucks cut through the neighborhood, creating safety hazards for residents, particularly children, and destroying local street pavement. Traffic calming devices (e.g., one-way streets) were installed at each of the five entrances into the neighborhood to reduce the potential for cut-through traffic by heavy trucks.

- Street lighting improvements were negated in many cases by dense tree canopies, so Public Works Department personnel completed nighttime inspections to determine the need for limb removal to enhance effectiveness of the street lamps.

- An extremely dark and overgrown railroad right-of-way on the neighborhood's west perimeter served as a hiding place for miscreants and created the perception that the area was unsafe. The city began to mow the right-of-way rather than wait for the railroad company to assume this responsibility, and street lights were added behind the residences and along the length of the tracks.

- An undeveloped street right-of-way was overgrown with vegetation approximately ten feet tall. The Public Works Department also now mows this area regularly.

The city has enacted new ordinances to support Neighborhoods to Standard functions and to improve quality of life, and is working to amend state law to enhance its enforcement powers. As the targeted neighborhoods are revitalized, their residents will benefit and the city's ad valorem tax base will increase—thus enabling the process to be replicated in other neighborhoods. It is hoped this will trigger an "oasis effect" that will stimulate surrounding communities to begin the stabilization process.

Neighborhoods to Standard expands upon existing neighborhood grass roots efforts and empowers citizens to effect change in their communities. Civic associations have been strengthened and are maintaining many of the processes begun through the program, such as cleanup campaigns and beautification efforts. Local government processes have been streamlined to facilitate requests by citizens for improvements in their communities.

This program has been so successful that it has received national attention and has resulted in the development of numerous other programs to improve quality of life in Houston, including Parks to Standard (see below).

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Houston, TX 77251-1757
713-850-6254

HOUSTON, TEXAS

Revitalizing Parks

The Parks to Standard program is a continuation of the Neighborhoods to Standard theme created by Mayor Bob Lanier (and discussed above). This program is the City of Houston's first large-scale commitment to renovate existing parks, and is believed to be the largest effort of its kind in the country.

Implementation of Parks to Standard began with individual park assessments, including community input, with a focus on crime prevention through environmental design. The result was a master plan/program that included landscaping enhancements, renovation of recreation centers, sports fields, and courts; swimming pools, bath houses, and restroom facilities; picnic areas and playgrounds; trails and walkways; and compliance with the Americans with Disabilities Act (ADA) access requirements.

Phase One will test the program concept in 77 of Houston's 277 community parks. The $52 million budget for Phase One includes resources from voter-approved public improvement bonds, federal Community Development Block Grants (CDBG), and private donations from local sponsors.

CPTED is an integral aspect of this phase, which includes several innovative approaches to park improvement:

- Many of the modifications were designed to address park-specific problems, including: trails that will provide access to remote areas of the parks (nicknamed "CPTED trails"); and motion detectors and high intensity lighting that will improve opportunities for surveillance of after-hours congregation points.

- To increase the presence of uniformed police in parks, work rooms with computer terminals were installed in all community recreation centers for use by on-duty officers.

- Graffiti and other signs of decay and disorder were removed.

- Maintenance and other policies were revised to enhance park operations.

The renovations have resulted in increased patronage and a renewed sense of owner-ship by the community. This program is expected to significantly enhance quality of life in Houston neighborhoods.

The Parks to Standard program will eventually bring all 277 parks into compliance with consistent, comprehensive standards for accessibility, safety, and security.

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713-845-1000

CINCINNATI, OHIO

Making Public Housing Communities Safer and Maintaining Improvements

Cincinnati Metropolitan Housing Authority (CMHA) Executive Director Don Troendle believes in "back to basics" management that focuses on customer service and recognizes that public housing residents are entitled to the same kind of services as others in the rental housing market. As a result, he decided to begin a comprehensive program of physical, social, and administrative improvement on Authority properties. The program is a partnership between management, resident councils, and the residents, and is designed to address the unique problems and needs of each community. It has resulted in a 12–13 percent decrease in crime on CMHA property in each of the past three years.

Among the programs and activities the Authority has initiated are the following:

- Curb Appeal. This effort is designed to create clean, attractive places to live, and includes a variety of activities dedicated to that purpose. To reduce litter prob-lems, each unit has been assigned an area (indicated on a color-coded map) that must be kept clean. Residents are given 90-gallon trash bins for once-a-week pickup, and litter receptacles have been installed in common areas for use by pedestrians. The Authority regularly removes graffiti, tows abandoned cars, and sweeps streets—with new equipment that makes street cleaning a one-person task.

    To aid in defining territory and responsibility, CMHA has installed fencing. Wrought iron defines yards and creates barriers to unwanted foot traffic while promoting a residential appearance for the property. The fencing has been installed in combination with street closings that help identify "neighborhoods" and reduce drive-through access.

- Lease Enforcement. A newly created lease form makes clear the rights and respon-sibilities of both residents and staff, and outlines new rent collection rules.

Residents who are delinquent in paying rent more than twice in 12 months will be evicted. Clear rules and consistent enforcement have actually resulted in a reduction in eviction filings for the Authority.

CMHA has also increased the amount of the security deposit in an effort to promote resident investment in the unit. The lease enforcement program has been combined with a 90-day inspection program and training for new tenants who do not meet standards for care-taking.

■ Impact Maintenance. A coordinated program of interior and exterior repairs, upgrades, and preventive maintenance is designed to reduce maintenance calls and total repair costs by dealing with a variety of issues at one time. CMHA offers maintenance training for residents as part of this program.

■ Comprehensive Modernization. As part of its modernization program, the Authority has converted four-story walkups to townhomes with separate entrance ways, and recycled fencing defines private yard space to help families create neighborhood "villages."

■ Investing in the Community. CMHA offers a broad range of programs to strengthen individuals, families and neighborhoods. These include support for resident business initiatives, adult literacy and GED programs, resident training in carpentry and painting trades, leadership skills training and mentorship programs, conflict management classes, and drug abuse education. The programs are complemented by an increased law enforcement presence.

Director Troendle says the program has taught him how important it is for residents to be proud of where they live. Projects that define individual territory, like fencing and landscaping, create momentum and establish agency credibility—and reduce other problems, like litter, over the long-term. They recognize the agency's commitment to improvement, even if changes are to building exteriors and yards, and not to the interiors of individual units.

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Cincinnati, OH 45210
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GAINESVILLE, FLORIDA

Combating Robberies in Convenience Stores and Small Businesses

When faced with a frightening increase in the number of convenience store robberies in 1985, the Gainesville Police Department decided to carry out an exhaustive evaluation of the problem and possible solutions. Nearly every convenience store in the community (96 percent) had experienced a robbery, and the vast majority of stores (81 percent) had been victimized more than once—some as many as 14 times over a six-year period. In fact, half of all commercial business robberies in Gainesville occurred at convenience stores.

More detailed analysis revealed that these robberies were taking place during night and early morning hours (7:00 p.m. to 5:00 a.m.), times of low customer activity. In most

cases, one clerk was on duty. Stores that employed two clerks on a shift were less likely to be robbed as were stores that were brightly lit, with clearly visible windows, robbery detection cameras and drop safes.

Initially local convenience store representatives suggested voluntary implementation of some physical and managerial changes, but few store operators made the necessary improvements. After sixteen months, in July 1986, the Gainesville City Commission adopted the "Gainesville Convenience Store Ordinance," requiring that store operators

- remove signs from windows to offer clear views to and from the cash register and sales area;

- locate the sales area and cash register in a place visible from the street;

- post signs declaring limited cash availability and the use of a drop safe;

- provide bright, even illumination in parking areas;

- install a security camera; and

- train all employees in robbery prevention.

A later ordinance required that two clerks be on duty between 8 p.m. and 4 a.m.

As a result of its work, the police department reported a 64 percent reduction in convenience store robberies, including a significant decrease (75 percent) in the number of robberies committed between 8 p.m. and 4 a.m. The Gainesville ordinances eventually served as models for Florida's "Convenience Business Security Act" (Sections 812.1701-812.175, Florida Statutes), which passed in 1990.

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Gainesville, FL 32602
352-334-2479

RICHMOND, VIRGINIA

Securing the Safety of Automated Teller Machine Customers

Signet Bank operates a branch facility along a Richmond, Virginia, commercial strip. Although this is a highly profitable location, the neighborhood it serves is in decline and contains numerous vacant properties and abandoned businesses. The bank property faces the commercial street, with other businesses on either side. Property behind the bank is vacant and beyond this parcel is a housing development.

The branch facility is oriented toward the commercial strip, with two handicapped parking spaces in front of the building. Parking for other patrons is available nearby. Three drive-up teller stations are attached along the building's east side. The building's facade is broken by the front entry doorway and a window, both of which allow tellers inside the bank to see patrons as they approach or leave. An Automated Teller Machine (ATM) has been installed on the front side of the bank as well—around the corner from the drive-up teller stations. The ATM includes an internal video camera for recording transactions. It is visible from the street and is well lit.

As a safeguard against potential robbery, Signet installed bullet-resistant enclosures for tellers inside the bank in 1993. However, its ATM patrons were being robbed an average of once a month. Based on victim statements, security staff developed the following

model of a typical crime: a robber would come to the bank after-hours and hide around the corner from the ATM, under cover of the darkened drive-up teller area. An ATM patron would drive to the bank, park in front of the building, and approach the ATM on foot. Once the transaction had been completed, the offender would jump from cover and rob the patron.

In March 1994, the Virginia Department of Criminal Justice Services (DCJS) delivered a brief crime prevention through environmental design presentation for Signet employees. Training involved bank security staff as well as facility managers and space planners. Signet asked DCJS to use the ATM problem as a training exercise.

Bank security had already considered a number of options for dealing with the ATM robbery problem:

- moving the ATM

- eliminating the ATM

- installing additional video cameras to monitor the ATM area

- increasing light levels around the ATM

Because of its profitability as an ATM location, marketing staff would not consider eliminating the ATM entirely. The other options were not supported by the bank because they involved a significant expenditure of funds; and they would interrupt ATM service for one or more days.

After considering the CPTED information provided by DCJS during training, one of the bank employees suggested a very simple and cost-effective solution: *construct a fence at the corner of the building and take away any opportunity to jump out and surprise ATM patrons*. So, the bank installed an 8-foot tall, 16-foot long ornamental aluminum picket fence at a cost of $800. Since its installation there have been no more robberies at this location.

Signet learned the following lessons:

- The most obvious response, in this case, moving or removing the ATM, is not necessarily the best response.

- Understanding the details of the problem is critical to devising an appropriate solution.

- CPTED concepts are often best understood when applied to a familiar site or problem.

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Richmond, VA 23260
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A successful crime prevention through environmental design program requires input from people with a variety of interests and areas of expertise. While it is important to take advantage of local resources as much as possible, you may require additional training, information, or assistance in order to complete a CPTED plan.

This table lists organizations that are active in areas related to crime prevention through environmental design. Remember, too, that your state criminal justice agency, your state crime prevention association, and area colleges and universities often have information and resources to help you.

ORGANIZATIONS	Phone/Fax	Data/Statistics	Discipline-related Information	CPTED Information	Laws Regulations Policies	Training or Technical Assistance Services	State and Local Affiliates	Professionals in the Community
American Bar Association 740 15th Street, NW Washington, DC 20049	202-662-1680 Fax 202-662-1032		■		■	■	■	■
American Planning Association 122 South Michigan Avenue, Suite 1600 Chicago, IL 60603-6107	312-431-9100 Fax 312-431-9985		■				■	■
American Society of Landscape Architects 4401 Connecticut Avenue, NW, Fifth Floor Washington, DC 20008-2369	202-686-1001 Fax 202-686-2752		■				■	■
American Institute of Architects 1735 New York Avenue, NW Washington, DC 20006	202-879-7753 Fax 202-626-7421		■	■	■	■	■	■
Center for the Community Interest 1136 19th Street, NW, #250 Washington, DC 20036	202-785-7844 Fax 202-785-4370				■			
Community Policing Consortium 1726 M Street, NW Washington, DC 20036	202-833-3305 202-833-9295			■	■	■		
Council of Educational Facility Planners International 8687 East Via de Ventura, Suite 311 Scottsdale, AZ 85258	602-948-2337 Fax 602-948-4420	■	■	■	■	■	■	■
Florida Criminal Justice Executive Institute Florida Department of Law Enforcement PO Box 1489 Tallahassee, FL 32301-1489	904-488-1340 Fax 904-487-4812		■	■	■	■		
International Association of Chiefs of Police 515 North Washington Street Alexandria, VA 22314	703-836-6767 Fax 703-836-4543		■	■	■		■	■
International City/County Management Association 777 North Capitol Street, NW, Suite 500 Washington, DC 20002-4201	202-962-3531 202-962-3500	■	■		■			
Justice Research and Statistics Association 444 North Capitol Street, NW, Suite 445 Washington, DC 20001	202-624-8560 Fax 202-624-5269	■	■		■	■	■	
National Association of Convenience Stores 1605 King Street Alexandria, VA 22314-2792	703-684-3600 Fax 703-836-4564	■	■	■				■

| ORGANIZATIONS	Phone/Fax	Data/ Statistics	Discipline-related Information	CPTED Information	Laws Regulations Policies	Training or Technical Assistance Services	State and Local Affiliates	Pro-fessionals in the Community
National Association of Home Builders 15th and M Streets, NW Washington, DC 20005	202-822-0351 Fax 202-822-8873		■	■	■		■	■
National Center for Community Policing School of Criminal Justice, 560 Baker Hall Michigan State University East Lansing, MI 48824-1118	800-892-9051 Fax 517-432-1787	■	■	■	■			
National Crime Prevention Council 1700 K Street, NW, Second Floor Washington, DC 20006-3817	202-466-6272 Fax 202-296-1356	■	■	■	■	■	■	■
National Crime Prevention Institute University of Louisville Louisville, KY 40292	502-852-6987 Fax 502-852-6990			■		■		
National Criminal Justice Association 445 North Capitol Street, NW, Suite 618 Washington, DC 20005	202-347-4900 Fax 202-508-3859	■			■		■	
National League of Cities 1301 Pennsylvania Avenue, NW, 6th Floor Washington, DC 20004	202-626-3010 Fax 202-626-3043	■	■		■		■	
National School Safety Center 4165 Thousand Oaks Boulevard, Suite 290 Westlake Village, CA 91362	805-373-9977 Fax 805-373-9277	■	■	■	■	■		
National Sheriffs' Association 1450 Duke Street Alexandria, VA 22314-3490	703-836-7827 Fax 703-519-8567		■	■	■		■	■
National Urban League 500 East 62nd Street New York, NY 10021	212-310-9000 Fax 212-593-8250	■			■	■	■	
Police Executive Research Forum 1120 Connecticut Avenue, NW, #930 Washington, DC 20036	202-466-7820 Fax 202-466-7826	■	■	■		■		
U.S. Conference of Mayors 1620 I Street, NW Washington, DC 20006	202-293-7330 Fax 202-293-2352		■	■	■		■	
U.S. Department of Housing and Urban Development 451 7th Street, SW Washington, DC 20410	800-245-2691 Fax 301-251-5767	■	■	■	■	■	■	
U.S. Department of Justice Office of Justice Programs 633 Indiana Avenue, NW Washington, DC 20531								
Bureau of Justice Assistance	800-688-4252 Fax 301-251-5212	■	■	■	■			
Bureau of Justice Statistics	800-732-3277 Fax 301-251-5212	■	■	■	■			
National Institute of Justice	800-851-3420 Fax 301-251-5212	■	■	■	■			
Office for Victims of Crime	800-627-6872 Fax 301-251-5212	■	■	■	■			
Office of Juvenile Justice and Delinquency Prevention	800-638-8736 Fax 301-251-5212	■	■	■	■			
Urban Land Institute 1025 Thomas Jefferson Street, NW, Suite 500W Washington, DC 20007	202-624-7000 Fax 202-624-7140		■	■	■		■	■

Researchers and Other Experts

A number of individuals are involved in research, training, or technical assistance related to crime prevention through environmental design. If expert resources are not available locally, you may wish to contact one of the people listed below. This listing is provided for informational purposes and does not constitute an endorsement.

INDIVIDUALS	Phone/Fax	E-mail	Training and Technical Assistance	Research	Planning and Design	Law Enforcement or Policing	Crime Prevention	Environment and Crime	Neighborhoods
Carolyn Rebecca Block Illinois Criminal Justice Information Authority 120 South Riverside Plaza Chicago, IL 60608	312-793-8550 Fax 312-793-8422	73244.27 26@comp userve .com		■		■		■	■
Paul and Patricia Brantingham Department of Criminal Justice Simon Fraser University Burnaby, British Columbia Canada V5A 1S6	604-291-4175 604-291-3213 Fax 604-291-4140	branting @sfu.ca	■	■			■	■	■
Sherry and Stan Carter Carter & Carter Associates 3760 Maple Hollow Court Sarasota, FL 34243	941-358-9888 Fax 941-359-1635	cccpted@ aol.com	■		■	■	■	■	■
Ronald Clarke Rutgers University Department of Criminal Justice 15 Washington Street Newark, NJ 07102	201-648-5870 Fax 201-648-5896	clarke@ andromeda. rutgers.edu		■			■	■	
Marcus Felson Rutgers University Department of Criminal Justice 15 Washington Street Newark, NJ 07102	201-648-5237 Fax 201-648-5896	felson@ andromeda. rutgers.edu		■			■	■	
Paul Cromwell University of Miami Department of Sociology Coral Gables, FL 33124	305-284-6762 Fax 305-284-3648	pcromwel @umiami. ir.miami.edu		■		■	■	■	
Timothy D. Crowe TDC Associates 14508 Ashmont Place Louisville, KY 40245	502-245-7834 Fax 502-244-6291		■				■	■	
Bonnie Fisher University of Cincinnati Department of Political Science Cincinnati, OH 45221-0375	513-556-3319 Fax 513-556-2314	Bonnie .Fisher @uc.edu		■	■		■	■	
Connie Guberman METRAC 158 Spadina Road Toronto, Ontario Canada M5R 2T8	416-392-3135 Fax 416-392-3136		■		■		■	■	
Pam Harlan Law Enforcement Environmental Planners Association of CA Roseville Police Department 401 Oak Street, Office 400 Roseville, CA 95678	916-774-5150 Fax 916-781-2344		■		■	■		■	

INDIVIDUALS	Phone/Fax	E-mail	Training and Technical Assistance	Research	Planning and Design	Law Enforcement or Policing	Crime Prevention	Environment and Crime	Neighborhoods
Adele Harrell The Urban Institute 2100 M Street NW Washington, DC 20037-1264	202-857-8676 Fax 202-463-8522	paffairs@ui. urban.org		■			■	■	
Pat Harris Virginia Crime Prevention Association 4914 Radford Avenue, Suite 306 Richmond, VA 23230	804-359-8120 Fax 804-359-1705		■			■	■	■	
Richard Hollinger Department of Sociology University of Florida 3206 Turlington Hall Gainesville, FL 32611	904-392-2497 Fax 904-392-6568	rhollin@ soc.uf.edu		■			■		
Ron Hunter Jacksonville State University Department of Criminal Justice Jacksonville, AL 36265-9982	205-782-5335			■		■	■	■	
Fred Kent Project for Public Places, Inc. 153 Waverly Place New York, NY 10014	212-620-5660 Fax 212-620-3821		■		■				■
James LeBeau Center for the Study of Crime Southern Illinois University Carbondale, IL 62901	618-453-5701 Fax 618-453-6377	lebeau @siu.edu		■		■		■	
Richard Peiser Lusk Institute for Real Estate Development University of Southern CA Los Angeles, CA 90089-0042	213-743-2776 Fax 213-743-2476	peiser@ almaak. usc.edu		■				■	■
Sgt. Ron Petrocchi Planning Liaison and Environmental Design Program South San Francisco Police Department 33 Arroyo Drive San Francisco, CA 94080	415-877-8927 Fax 415-877-5982		■		■	■	■	■	
George Rengert Department of Criminal Justice Temple University Philadelphia, PA 19132	215-204-7994 Fax 215-204-3872			■		■	■	■	■
Severin Sorensen SPARTA Consulting Corporation 7313 Woodmont Avenue Bethesda, MD 20814	301-656-6600 Fax 301-656-6770	postmaster @spartacc .com	■				■		■
R.J. "Dick" Steely Crime Prevention Officer/ CPTED Coordinator Tempe Police Department 120 East Fifth Street Tempe, AZ 85280	602-350-8562 Fax 602-350-8379		■		■	■	■	■	
Gerda Wekerle Faculty of Environmental Studies York University, 4700 Keele Street North York, Ontario Canada M3J 1P3	416-736-5252 Fax 416-736-5679	es050020 @orion. yorku.ca		■	■		■	■	■

INDIVIDUALS	Phone/Fax	E-mail	Training and Technical Assistance	Research	Planning and Design	Law Enforcement or Policing	Crime Prevention	Environment and Crime	Neighborhoods
Carolyn Whitzman Safe City Committee City Hall Toronto, Ontario Canada M5H 2N2	416-392-1183 Fax 416-392-0071	safecity @web .apc.org	■		■		■	■	■
Jerry Wright Risk Analysis Management, Inc. 24569 Hallwood Court Farmington Hills, MI 48335-1667	810-474-5740 Fax 810-474-5740		■			■	■	■	
Richard Wright School of Justice Administration University of Missouri-St. Louis St. Louis, MO 63121	810-474-3430 Fax 314-516-5034	srtwrig @umslvma. umsl.edu		■			■	■	
Diane Zahm College of Architecture and Urban Studies Virginia Tech Blacksburg, VA 24061-0113	540-231-7503 Fax 540-231-3367	dzahm @vt.edu	■	■	■		■	■	
Michael O'Brien College of Architecture and Urban Studies Virginia Tech Blacksburg, VA 24061-0113	540-231-9931	mobrien @vt.edu	■	■	■		■	■	■
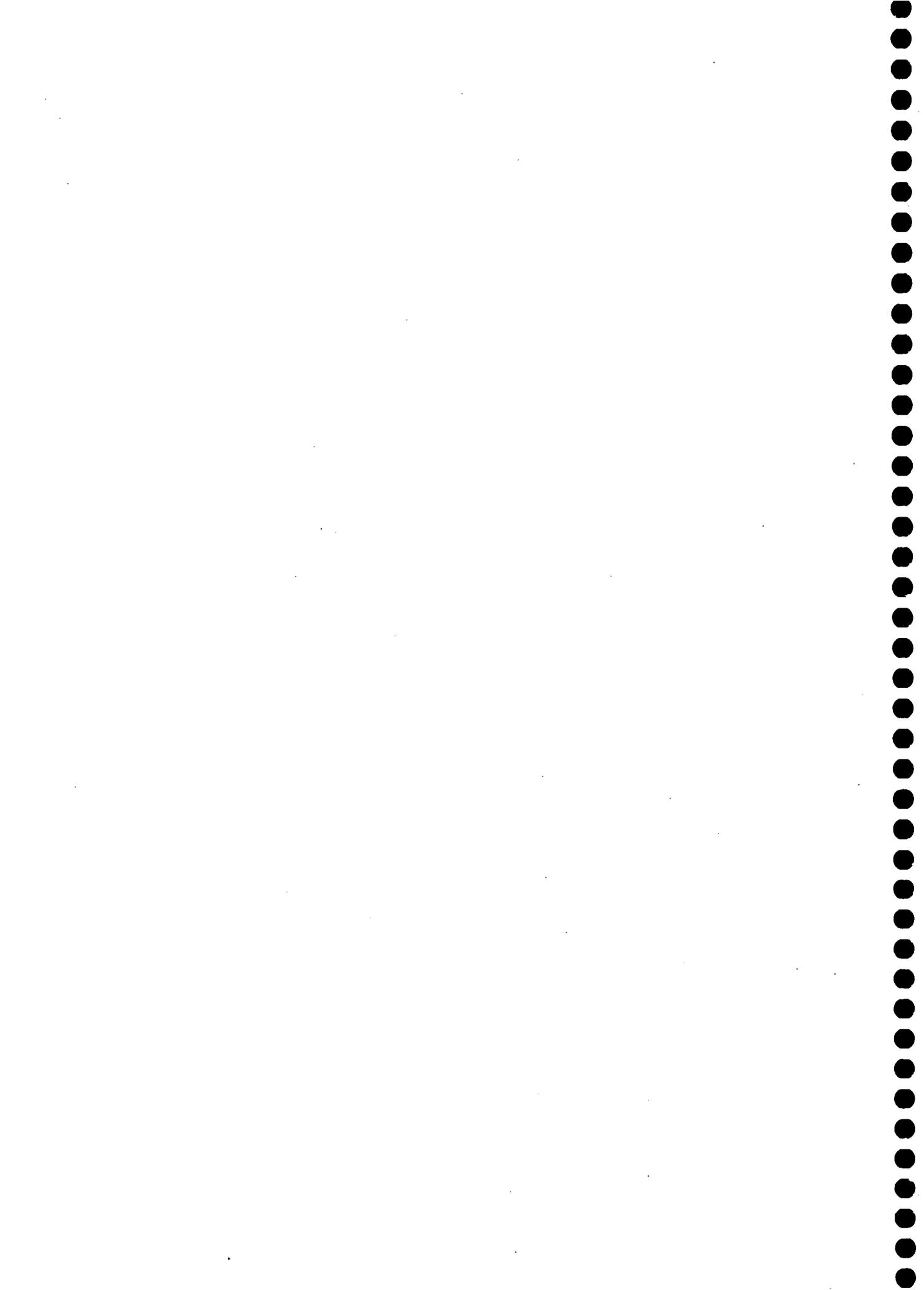
Reference Materials

A variety of reference materials are available that offer information related to crime prevention through environmental design. Some of these materials deal specifically with CPTED, while others offer guidance for people in related professions, such as architects or police officers. The list below includes several types of information (books, magazine articles, or video tapes), with resources for researchers as well as practitioners.

	Practical Ⓟ or Research Ⓡ Orientation	NOTES
J.Q. Wilson and G.L. Kelling, "Broken Windows," *The Atlantic Monthly*, March 1982, pp. 29-38.	Ⓟ	At the time of its publication, this article was instrumental in changing attitudes about the role of law enforcement and its approach to problem solving. The title of the article is drawn from the example that one broken window, if not repaired, will soon become many broken windows.
C.R. Jeffery, *Crime Prevention Through Environmental Design*, Beverly Hills, CA: Sage Publications, 1971.	Ⓡ	This book gave crime prevention through environmental design its name. It calls for a change in the way the criminal justice system deals with offenders by evaluating the offender's surroundings and opportunities for crimes.
Crime Prevention Through Environmental Design, Crime Prevention Through Environmental Design in Convenience Stores (videos),Tallahassee, FL: Office of the Attorney General, 1988.	Ⓟ	Two videos: one covers basic CPTED concepts, the other addresses their application in the convenience store setting.
T.D. Crowe, *Crime Prevention Through Environmental Design*, Stoneham, MA: Butterworth-Heinemann, 1991.	Ⓟ	A basic text and practical handbook that defines concepts and terminology, provides both simple and more complex examples and offers models for evaluating schools or other environments.
Dan Fleissner and Fred Heinzelmann, *Crime Prevention Through Environmental Design and Community Policing*, Washington, DC: U.S. Department of Justice, National Institute of Justice, August 1996.	Ⓟ	Evaluates the role of the police in the context of crime prevention. The move to community policing resulted in many officers dealing with a broad range of neighborhood problems and CPTED concepts may be valuable for identifying appropriate solutions.
M.S. Smith, *Crime Prevention Through Environmental Design in Parking Facilities*, Washington, DC: U.S. Department of Justice, National Institute of Justice, April 1996.	Ⓟ	Discusses those elements of parking lot and parking garage design that promote security.
J. Jacobs, *The Death and Life of Great American Cities*, New York, NY: Vintage Books, 1961.		An important book that describes lively and safe neighborhoods and those that are unsafe. Jacobs' observations influenced professionals in many fields and changed their approaches to planning, design, housing, and criminology.
O. Newman, *Defensible Space: Crime Prevention Through Urban Design*, New York, NY: Macmillan, 1972.	Ⓟ Ⓡ	An early book documenting Newman's work in public housing. He examines both physical and social characteristics of that housing—size and scale, open space, degree of ownership and responsibility—and offers recommendations for improving the public housing environment. Newman's defensible space concepts are the foundation for most later work in crime prevention through environmental design.
B. Poyner, *Design Against Crime: Beyond Defensible Space*, London: Butterworths, 1983.	Ⓟ Ⓡ	
P.J. and P.L. Brantingham, ed., *Environmental Criminology*, Beverly Hills, CA: Sage, 1981.	Ⓡ	A collection of articles that describe how offenders perceive space, how they use their environments, and the relationship between the physical environment and opportunities for crime.

	Practical Ⓟ or Research Ⓡ Orientation	NOTES
C.L. Gordon and W. Brill, *The Expanding Role of Crime Prevention Through Environmental Design in Premises Liability*, Washington, DC: U.S.Department of Justice, National Institute of Justice, April 1996.	Ⓟ	This report follows trends in premises liability and case law and finds that victims are seeking compensation for crime due to failure to provide security. CPTED could reduce opportunities for crime and, when crimes occur, could reduce owner/manager liability.
G.L. Kelling and C.M. Coles, *Fixing Broken Windows*, New York, NY: The Free Press, 1996.	Ⓟ	*Fixing Broken Windows* examines maintenance and its relationship to crime reduction. Kelling, co-author of "Broken Windows," and Cole discuss maintenance initiatives throughout the country, including a successful initiative in the New York City subways.
L. Fennelly, ed., *Handbook of Loss Crime Prevention*, 3rd ed., Boston, MA: Butterworth-Heinemann, 1996.	Ⓟ	The handbook discusses security hardware and safety issues in specific environments, e.g., banks, school campuses, homes.
C.C. Marcus and W. Sarkissian, *Housing as if People Mattered*, Berkeley, CA: University of California Press, 1986.	Ⓟ	Offers a series of design guidelines for a humanistic approach to the planning, design and development of multifamily housing.
D. Appleyard, *Livable Streets*, Berkeley, California: University of California Press, 1981.	Ⓟ Ⓡ	*Livable Streets* examines the relationship between street design, neighborhood land use, and use of the street. The author uses several approaches to evaluate the street environment case examples of approaches to street design or traffic modification.
J.Q. Wilson and G.L. Kelling, "Making Neighborhoods Safe," *The Atlantic Monthly*, February 1989, pp. 46-52.	Ⓟ	A sequel to "Broken Windows" describing actions throughout the country to improve community quality of life.
R.B. Taylor and A.V. Harrell, *Physical Environment and Crime A Final Summary Report Presented to the National Institute of Justice*, Washington, DC: U.S. Department of Justice, National Institute of Justice, May 1996.	Ⓡ	Examines Newman's defensible space theories and the related concepts of crime prevention through environmental design. The report studies neighborhood land use, street layout and other features, and their implications for crime.
A Police Guide to Surveying Citizens and Their Environment, Bureau of Justice Assistance monograph. Washington, DC: U.S. Department of Justice, Office of Justice Programs, October 1993.	Ⓟ	A handbook that offers an overview of sampling and surveying and provides questions and forms for a complete evaluation of neighborhood crime conditions.
H. Goldstein, *Problem-Oriented Policing*, New York, NY: McGraw-Hill, 1989.	Ⓟ Ⓡ	Goldstein calls on police departments to take greater advantage of information and evaluation resources. He attempts to discover the causes of problems and to deal more effectively with these causes. Without problem-oriented policing, law enforcement officers repeatedly respond to community problems but never solve them.
M. Felson, "Routine Activities and Crime Prevention in the Developing Metropolis," *Criminology*, 1987, Vol. 25, pp. 911-931.	Ⓡ	Felson examines the differences between older, more compact cities and newer, automobile-oriented cities and the impact of city form on opportunities for crime.
G.R. Wekerle and C. Whitzman, *Safe Cities: Guidelines for Planning, Design and Management*, New York, NY: Van Nostrand Reinhold, 1995.	Ⓟ	An excellent description of Toronto's Safe Cities Program and its methods for auditing unsafe places and for designing safe places.
R.V. Clarke, ed., *Situational Crime Prevention: Successful Case Studies*, New York, NY: Harrow and Heston, 1982.	Ⓟ Ⓡ	Clarke's case studies book outlines a method for evaluating a specific crime problem at a specific location and devising a response to prevent additional crimes from occurring. The book includes cases on parking lots, libraries, markets, buses, and other subjects.
L.E. Cohen and M. Felson, "*Social Change and Crime Rate Trends: A Routine Activities Approach*," American Sociological Review, 1979, Vol. 44, pp. 588-608.	Ⓡ	The authors identify three things that must come together in space and time for a crime to occur: a motivated offender, a target, and the lack of a guardian. When and where this occurs depends upon the routine activities of both offender and potential guardian.
National Crime Prevention Institute, *Understanding Crime Prevention*, Stoneham, MA: Butterworth Publishers, 1986.	Ⓟ	Introductory textbook on crime prevention that includes terminology, hardware, programmatic, and other issues.

Planning and CPTED

Planning and land use regulation serve several purposes including the following:

■ preserve, protect, or improve the public health, safety, and general welfare;

■ guide decisions related to the physical development of the community;

■ provide for public facilities and services;

■ conserve and protect natural, cultural, historic, or scenic resources; and

■ stimulate community cohesion and interaction.

When used in planning the word "safety" is usually thought to refer to protection against fire, flood, disease, or injury rather than to designs that reduce crime or fear of crime. Therefore, planners must first revise their definition of "safety" so that discussions of crime and crime prevention are part of routine planning activities. Once that has been accomplished, crime prevention can be incorporated into a number of plans, ordinances, and policies.

Crime prevention strategies, especially CPTED strategies, are easily incorporated into many planning activities. Here are a few examples.

COMPREHENSIVE PLAN

Also known as the land use plan or the master plan, the comprehensive plan allocates local physical, social, and economic resources to meet the future needs of the community. Although it is not a legal document in the strictest sense, all future land use decisions must be in accordance with the comprehensive plan. If crime prevention is included in the comprehensive plan, then it will be part of the planning process, even if it is not specifically mentioned in other plans, ordinances, or policies.

As with all planning documents, it is important to review local building, zoning, landscaping, lighting, and other codes for the phrase "public health, *safety,* and general welfare," to be certain that the definition of "safety" includes the concepts of freedom from crime and fear of crime. The municipal attorney's office or the zoning, planning, development, or licensing or inspections agency can provide this information and help you understand how existing codes and rules address CPTED concepts.

Ideally, the comprehensive plan should include a section on safety (most do not), but this is not necessary in order to achieve CPTED objectives. Instead, it may be appropriate to include a discussion of crime and its prevention in relevant sections of the plan, such as housing and neighborhoods, public buildings, public facilities, and recreation.

The future land use maps can reveal areas where change may generate greater opportunities for crime. On the map, look for conflicts between the existing and proposed uses for a parcel, and between proposed uses within a neighborhood—for example, future commercial intrusion in residential areas.

DEVELOPMENT REGULATIONS

Zoning Ordinance

Zoning is an exercise of local "police powers" that has as its general goals to provide light and air, secure *safety* from dangers, prevent overcrowding, and achieve a logical pattern of land use. Often the zoning ordinance contains requirements that conflict with or limit opportunities to apply the CPTED principles of natural access control, natural surveillance, or territorial reinforcement. These might include such requirements as deep front yard setbacks, parking at the rear of the lot, or minimum lot sizes that generate low density development.

CPTED review of the zoning ordinances should compare the zoning map with existing land uses to see if the zoning ordinance creates nonconforming uses (or the need for variances). It should then examine the nonconforming use language to see if this will prevent maintenance and upkeep. (See the Sarasota, FL, case in "Examples of CPTED in Action.") Finally, the review should look for code enforcement language that clearly states standards for maintenance of any CPTED application and specifies how standards will be enforced.

Subdivision Ordinance

Because it regulates items like streets, sidewalks, and open space, the subdivision ordinance may impose requirements that conflict with basic CPTED principles. For example, many subdivision ordinances promote unrestricted travel, especially for emergency vehicles. They require a street right-of-way wide enough for two lanes of traffic, plus on-street parking on each side of the street. These wide streets are perfect for cut-through traffic, which could encourage cruising or excessive use by non-residential users seeking convenient outlets from main roads.

Designers and developers often respond to concerns about cut-through traffic by creating a system of cul-de-sacs. Depending on the length of the street, this approach may make travel through the neighborhood confusing, or may create a sense of isolation for some residents. One alternative might be to redesign streets as one-way and use stoplights to help slow traffic and define the appropriate passageways through the area.

Some communities do not require sidewalks in their subdivisions, which limits pedestrian activity. Many subdivision ordinances emphasize (or require) open space. Open space *per se* will not create problems, but poorly planned open space often results in unassigned territory, which can lead to inappropriate or criminal use by residents or outsiders. Signage, lighting, fencing, and landscaping can help address this issue.

Landscape Ordinance

This establishes requirements for providing open space and for installing and maintaining plant materials (if not covered under other ordinances). Generally the landscape ordinance is designed to save or replace existing trees, provide shade and allow for retention/absorption of storm water, or for aesthetics. It outlines minimum plant dimensions like height, freestory, spacing, caliper, and percent coverage. The ordinance also may include language governing the installation of fences, walls, lighting, or other materials.

Many landscaping requirements reduce or eliminate opportunities for surveillance. For example, the ordinance may require solid walls or fences, berms, or dense plantings

to hide parking lots, dumpsters, or other unsightly elements.

Surveillance is also a factor when the ordinance defines minimum—but not maximum—plant sizes. At installation, the plant materials may allow for surveillance, but quickly grow to a size that eliminates these opportunities. Sometimes, when maximum sizes develop, the ordinance fails to include maintenance or enforcement provisions. Even when these do exist, they are seldom put into practice.

Other Development Standards

Those preceding are the most common forms of land development ordinances, but many other types of regulations exist and must be reviewed for CPTED problems or opportunities.

Performance standards take the place of zoning and subdivision requirements in some communities. They establish overall development densities and other general goals, but do not place specific restrictions like minimum lot sizes on the developer to limit dense cluster developments. Performance standards often are employed to encourage mixed use—which may be inappropriate for crime prevention.

Other development standards may regulate signs, parking, historic structures, or other aspects of development that are important to crime prevention.

Capital Improvements Plan and Program

The capital improvements plan outlines a schedule and cost estimates for future construction, upgrade, or maintenance of public facilities. It generally includes schools and other public buildings; streets and sidewalks; and public water, sewer, and other utilities. Independent districts may have their own capital improvements plan.

Since many facilities are covered by the capital improvements plan, it is not surprising that many issues related to crime prevention will be part of the process. For example, many schools and other public buildings are remodeling to meet the requirements of the Americans with Disabilities Act (ADA). In existing facilities it is often difficult to provide complete accessibility; the result is that in many buildings, a person with disabilities has to use out-of-the-way doors or hallways. While this design response meets ADA requirements, it can place the disabled user at risk of victimization.

When facility expansions are proposed, these often adversely affect their surrounding neighborhoods by increasing traffic and use by outsiders. These expansions may be accompanied by changes in transportation routes—for example one-way streets, street widenings, or intersection realignments; or changes to bus stops or bus routes to serve the expanded development. In addition to the capital improvements plan, the metropolitan area transportation plan will offer details regarding any proposed changes.

Parking lots and parking garages also present problems. They are the scene of robberies, thefts from cars, assaults, and vandalism. Careful consideration of the CPTED principles will limit victimization in these facilities as well as malls, individual retail outlets, and apartment buildings. Facility design, lighting, training of security staff, control of access, and control of the property's perimeter can each be addressed during the design and development of the project. CPTED education programs should provide private property owners and developers with information about liability issues related to crime. As noted in the National Institute of Justice's 1996 article, "The Expanding Role of Crime Prevention Through Environmental Design in Premises Liability," premises liability crime cases occur because the offender is able to take advantage of lax security or improper design of the building or of the property.
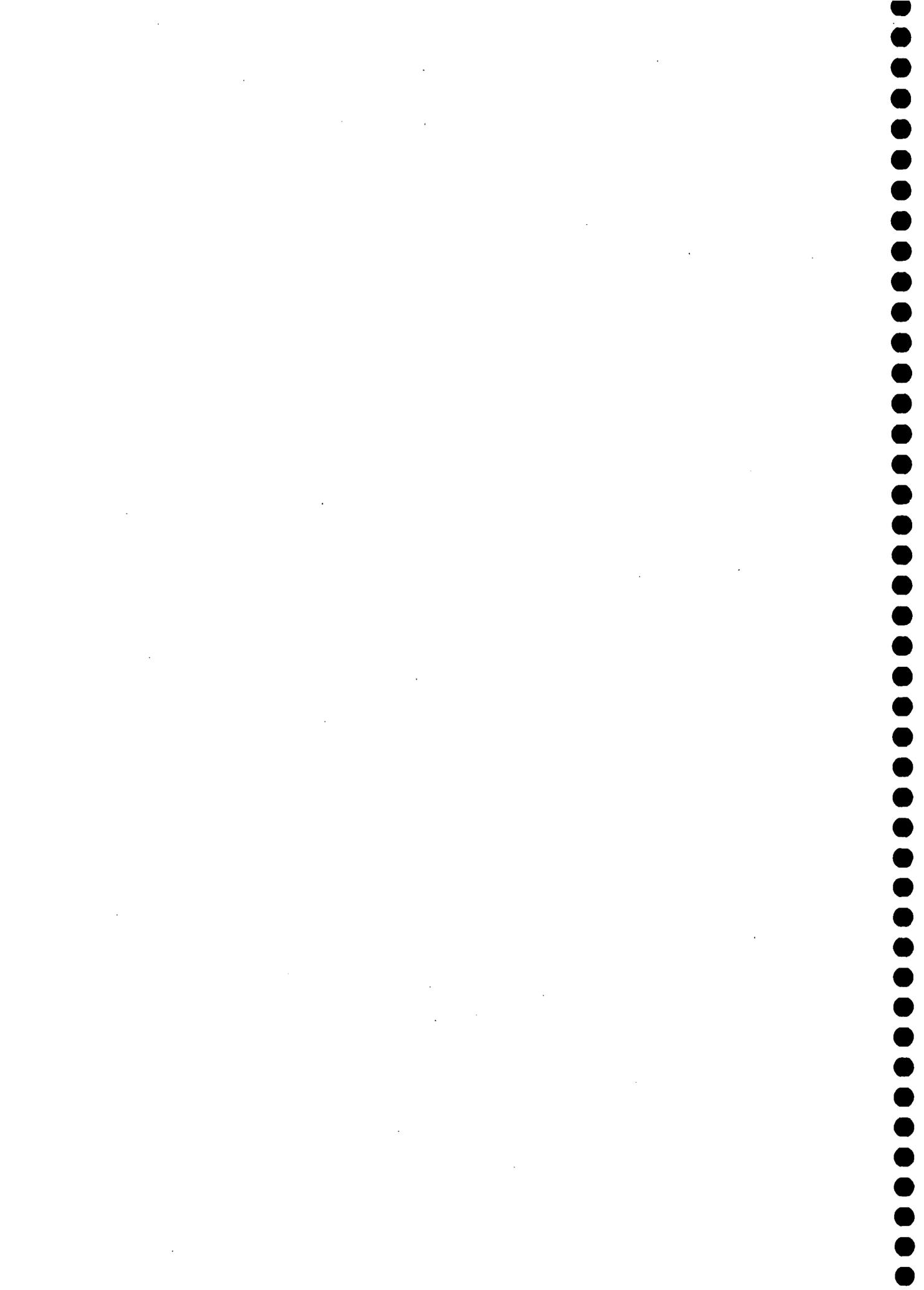
Neighborhood Inventory

Crimes Reported per _____ persons	5 years ago 19___	Last year 19___	Year to date 19___	% of Change 19___
total # calls for service				
homicide				
rape				
robbery				
aggravated assault				
burglary				
larceny				
motor vehicle theft				
drug trafficking				
graffiti vandalism				
prostitution				
quality of life/nuisance				

Neighborhood Land Use	Existing land use (# acres)	Under zoning	Planned for future	Amount of Change
single-family residential				
multi-family residential				
commercial				
office/business				
industrial				
public/semi-public, e.g., schools, parks				
vacant				
other land uses:				

Neighborhood conditions	5 years ago 19___	Last year 19___	Today	% of Change
# dwelling units				
# owner occupied units				
# rental units				
average assessed value				
average rent				
leasable commercial space (square feet or # commercial spaces)				
# businesses/# employees				
# vacant properties vacant commercial spaces				

Neighborhood conditions	5 years ago 19___	Last year 19___	Today	% of Change
# permits/citations issued				
# construction permits				
# demolition permits				
# certificates of occupancy				
# building code violations				
# health code violations				

other conditions:

Demographic information	1980 census	1990 census	Today	% of Change
# households				
# one person households				
# single parent households				
# households below poverty				
median household income				
total # persons				
age 0-17				
age 18-24				
age 25-34				
age 35-44				
age 45-54				
age 55-64				
age 65+				
# male				
# female				
# white				
# black				
# asian				
# native american				
# hispanic				

other demographic characteristics:

Neighborhood Survey

1. In general, would you say this area has become a better place to live in the past year, a worse place, or is it about the same?

   ☐ Better ☐ Worse ☐ Same ☐ Don't Know ☐ Refused

2. In general, do you think this area will be better, worse, or about the same a year from now as a place to live?

   ☐ Better ☐ Worse ☐ Same ☐ Don't Know ☐ Refused

3. Here are some problems people often mention in their neighborhoods. Can you tell me whether any of these is a big problem, something of a problem, or little or no problem for your neighborhood?

	Big	Some	Little	No Problem	Don't Know	Refused
Congestion in shopping area	☐	☐	☐	☐	☐	☐
Crime	☐	☐	☐	☐	☐	☐
Schools	☐	☐	☐	☐	☐	☐
Drug trafficking	☐	☐	☐	☐	☐	☐
Prostitution	☐	☐	☐	☐	☐	☐
Homelessness	☐	☐	☐	☐	☐	☐
Loitering	☐	☐	☐	☐	☐	☐
Noise	☐	☐	☐	☐	☐	☐
Traffic	☐	☐	☐	☐	☐	☐
Trash	☐	☐	☐	☐	☐	☐
Gun violence	☐	☐	☐	☐	☐	☐
Gang activity	☐	☐	☐	☐	☐	☐
Overgrown lots/yards	☐	☐	☐	☐	☐	☐
Kinds of residents	☐	☐	☐	☐	☐	☐
Abandoned buildings	☐	☐	☐	☐	☐	☐
Vandalism	☐	☐	☐	☐	☐	☐
Graffiti	☐	☐	☐	☐	☐	☐
Unsupervised kids	☐	☐	☐	☐	☐	☐

4. Would you agree or disagree with this statement: "There's little my neighbors and I can do to solve problems in this neighborhood."

   ☐ Agree ☐ Disagree ☐ Unsure ☐ Refused

5. What kinds of community groups are you active in? (check all that apply)

   ☐ Church ☐ School ☐ Service club ☐ Sports ☐ Political ☐ Other
   ☐ Fraternal ☐ Block assn. ☐ Social club ☐ Youth ☐ Neighborhood Block watch

6. Do you and your neighbors get together for social events?

   ☐ Often ☐ Sometimes ☐ Occasionally ☐ Rarely or Never

For community needs, discussions, or meetings?

☐ Often   ☐ Sometimes   ☐ Occasionally   ☐ Rarely or Never

7. In the past year, have you personally been the victim of a crime or an attempted crime (such as assault, robbery, or rape) in this neighborhood?

☐ Yes   ☐ No   ☐ Unsure   ☐ Refused

If yes, did you report this incident or the attempt to the local police?

☐ Yes   ☐ No   ☐ Refused

8. In the past year, has someone broken into your house, stolen something from your yard, vandalized your property, or attempted any of these crimes against any of your property in this neighborhood?

☐ Yes   ☐ No   ☐ Unsure   ☐ Refused

If yes, did you report this incident or the attempt to the local police?

☐ Yes   ☐ No   ☐ Refused

9. How safe do you feel being outside in your neighborhood?

☐ Very Safe   ☐ Somewhat Safe   ☐ Somewhat Unsafe   ☐ Very Unsafe
☐ Don't Go Out Much   ☐ Don't Know   ☐ Refused

10. Are there any areas of your neighborhood where you feel unsafe often or all of the time (Check all that apply)?

☐ Within three blocks   ☐ More than three blocks away   ☐ Around school

☐ Streets/alleys   ☐ Park   ☐ Transit stop(s)   ☐ Parking lots   ☐ Business areas

☐ Most of the neighborhood feels safe most of the time   ☐ Other

11. In the last year, do you feel that crime in your neighborhood has increased, decreased, or stayed about the same?

☐ Increased   ☐ Decreased   ☐ About the Same   ☐ Don't Know   ☐ Refused

12. Check the appropriate spaces which describe you.

Sex	**Education**	**Marital Status**
☐ Female	☐ Less than 12th grade	☐ Single
☐ Male	☐ High school graduate	☐ Married
	☐ Some college	☐ Divorced
	☐ Advanced degree	☐ Other

Type of Residence	**Number of Persons in Home**
☐ House	☐ 1
☐ Condo	☐ 2
☐ Apartment	☐ 3
☐ Mobile home	☐ 4
	☐ 5+

Residence

☐ Own

☐ Rent

Length of Residence

☐ One to six months

☐ Six to twelve months

☐ One to five years

☐ Five to ten years

☐ Ten to fifteen years

☐ More than fifteen years

Family Income

☐ Less than $4,999

☐ $5,000 - $9,999

☐ $10,000 - $14,999

☐ $15,000 - $19,999

☐ $20,000 - $34,999

☐ $35,000 - $49,999

☐ $50,000 and above

Race

☐ Asian

☐ Black

☐ Eurasian

☐ Hispanic

☐ Native American

☐ White

☐ Other

13. Zip code _____

14. Do you have resources/skills that you would like to contribute to the neighborhood?

☐ Yes   ☐ No   ☐ Refused

If yes, what are they?

_____

_____

_____

15. Optional Information

Name _____

Address _____

City/State/Zip _____

Phone _____
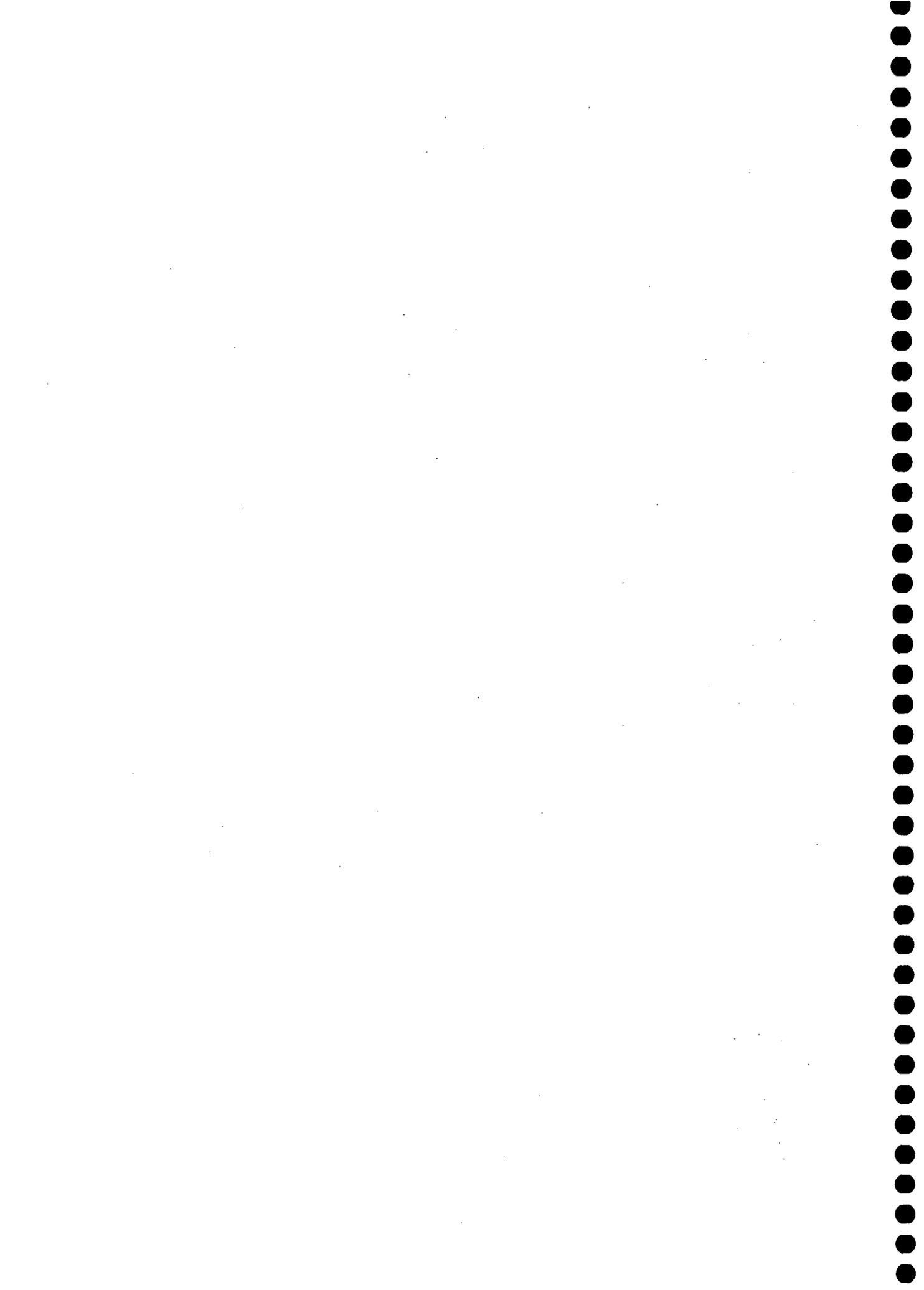
CPTED Link-up List for Local Initiatives

Name:_____

Position	Contact Name	Phone Number	Fax Number
Chamber of Commerce			
Civic Organization			
Community Associations			
Community-based Substance Abuse Treatment Ctr.			
Community Development Corporation			
Community Policing Supervisor			
Crime Analysis Unit of Police Department			
Crime Prevention Unit of Police Department			
District Commander(s) of Police Department			
Economic Development Agency			
Engineering Depart. of the Municipality or County			
Inspections and Code Enforcement Department			
Legal Department/Municipal Attorney			
Media Manager (television, radio, print)			
Neighborhood Merchants Association			
Neighborhood Services Agency			
Neighborhood Watch Captain			
Planning Agency			
Public Health Agency			
Public Housing Authority Security Director			
Public Transportation System Security Director			
Public Works Department			
Recreation and Parks Department			
Religious Leader			
Sanitation Department			
School District Building/Planning Director			
School District Security Director			
University Research/Evaluation Professionals			
Volunteer Coordinator for Police Department			
Youth-Serving Organization			
Youth Organization			
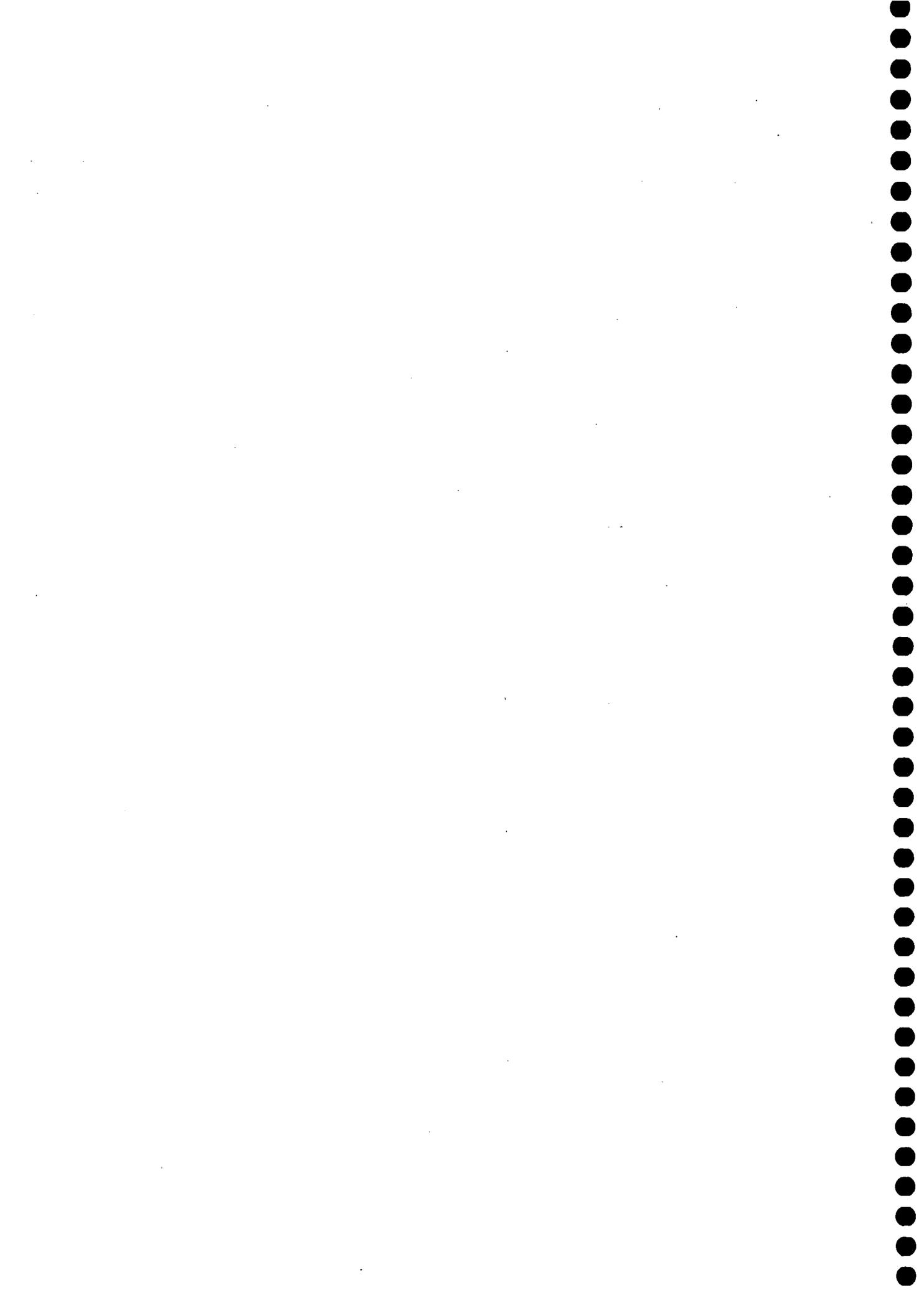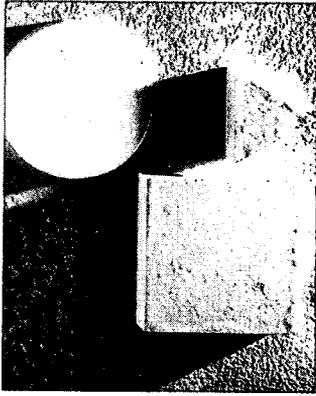
Karen Daly
City Manager's Office
Arlington (TX)

"This is a really useful introduction to CPTED. It stays basic and doesn't get bogged down in terminology. I really enjoyed the opportunity to read it. It will be useful for citizens in our community."

Captain Stan Carter (ret.)
Sarasota, Florida

"This is a really great piece of work. NCPC must be proud of this effort. It will be a great resource."

Janet Quist
Legislative Counsel
National League of Cities

"This document taught me a lot about CPTED. It is a good primer!"

Sgt. Ron Petrocchi
South San Francisco (CA)
Police Department

"Thank you for the opportunity to review your draft CPTED document and the consideration that our Department's input is valuable to your process. Your project should go a long way in filling a void of information about CPTED..."

Mark Bach
Tempe (AZ) Police Department

"This is a very good piece for folks not familiar with CPTED."

Dan Gilmore
Virginia Department of Criminal
Justice Services

"After reading this manual, I compliment NCPC and your writer and contributors for putting together a fine document that is sorely needed by the field. We will definitely use it in Virginia."

Carol Gilbert
Director
Neighborhood Design Center
Baltimore, MD

"This is a really well done piece. It will be a useful and practical addition to our effort to train residents, officers, and city agencies to use CPTED to solve neighborhood crime and drug problems."

Lt. Don Wactor
Orange (NJ) Police Department
New Jersey Crime Prevention
Officers Association

"This is excellent. When will it be available for us to buy and use in New Jersey? We'd love to have it and NCPC's CPTED training up here."

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