Crime Prevention Through Environmental Design (CPTED):

Planners and Police Officers Working Together to Create Livable Communities

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SeaTac Police Services
Why Crime Prevention?

• If a like crime can occur
  – at the same location,
  – to the same victim group, and
  – by a similar suspect type.
Not a desirable situation!

• Arrest is a strategy - not the solution!
Insanity

• Doing the same thing the same way, but expecting different results.

– Albert Einstein
Why Livability?

The way we build, rebuild, and maintain our communities affects the behavior of people. That behavior influences public safety. The degree to which public safety exists affects the livability of our communities.
Cityscapes promoted by both planners and police officers
What is CPTED?

- CPTED is an acronym for Crime Prevention Through Environmental Design. CPTED is the design or re-design of an environment to reduce crime opportunity through natural, mechanical, and procedural means.
Key CPTED Principles

- Locational Setting and Place Considerations
  1. Natural Surveillance
  2. Access Control
  3. Territorial Reinforcement
  4. Image and Maintenance
- Importance of Lighting
Locational and Place Considerations

- Crimes occur at specific locations and places.
- CPTED is concerned with the environmental settings of crime and how crime is influenced by the proximity and juxtaposition of safe and unsafe activities, building design, and site characteristics.
- Modern CPTED must consider environmental criminological issues that impact crime opportunity at specific places.
1. Natural Surveillance

- CPTED focuses on the placement of physical features, activities, and people in such way as to maximize visibility. This includes the lighting of public spaces and walkways at night.
2. Natural Access Control

- CPTED features the physical guidance of people coming and going from a space by the judicial placement of entrances, exits, fencing, landscaping, and lighting.
3. Territorial Reinforcement

- CPTED encourages the use of physical attributes that express ownership, such as fences, pavement treatment, art, signage, and landscaping.
4. Image and Maintenance

• CPTED allows for the continued use of a space for its intended purpose and serves as an additional expression of ownership.
• CPTED is concerned with vigilant management practices that reduce crime opportunity and sustain territoriality, access control, and surveillance.
Natural Surveillance (#1)

Dude! Where’s My House?
CPTED “Masterpiece”
Natural Surveillance

NOTE
Clear visibility should be maintained from store to sidewalk, street, parking areas, and passing vehicles. Window signs should cover no more than 15% of any window area.

NATURAL SURVEILLANCE FOR COMMERCIAL PROPERTY
Natural Surveillance (#1)

Commercial Landscape
Natural Surveillance (#1)

Commercial Landscape
What Do You See?
Natural Access Control (#2)

- Decrease opportunities for criminal activity by denying access to potential targets.
- Most criminal intruders will try to find a way into an area where they will not be easily observed.
- Limiting access and increasing natural surveillance keeps them out altogether or marks them as an intruder.
Natural Access Control
Multi-Family Residential
Natural Access Control
Single Family Residential

Prune up or thin tall shrubs near doors and paths
Prune tree branches away from roof and windows
Prune shrubs below window level
Light outdoors along paths in shrubbery at entrances

LANDSCAPE "A"
Natural Access Control

Single Family Residential

- Train spiny vines over fences
- Use gravel along paths passing bedrooms
- Use infrared security lights
- Put prickly plants below vulnerable windows
- Protect outside face of fence with thorny shrubs or ground covers
- Keep fences and shrubbery low along property front
- Keep gates locked

Drawing indicates steps to take in the garden to help secure your home against intruders. Use some or all the suggestions.
Territorial Reinforcement (#3)

• CPTED encourages the use of physical attributes such as buildings, fences, pavement treatment, signage, lighting, art and landscape to express ownership and define public, semi-public and private space.

• “Area of Influence”
Territorial Reinforcement (#3)

- An environment designed to clearly delineate private space does two things.
  - First, it creates a sense of ownership. Owners have a vested interest and are more likely to challenge intruders or report them to the police.
  - Second, the sense of owned space creates an environment where “strangers” or “intruders” stand out and are more easily identified.
Territorial Reinforcement
Single Family Residential
Territorial Reinforcement
Commercial Outside Seating
Territorial Reinforcement
Security Layering of Space, AIA
Territorial Reinforcement
Subdivisions

- Porches, sidewalks, etc. encourage interaction between neighbors.
- Pavement treatments, architectural treatments, etc. define public from private zones.
- Low landscaping defines property lines without creating blind spots or hiding places.
- Sidewalk-scale lighting.
- Street designed to discourage cut-through traffic.
- Open green space observable from nearby houses.
- Streetlamp lighting (provide adequate distance from trees).
- Fence to backyard.
- View.
- House.

Architectural design features define subdivision (provide adequate lighting).
Image and Maintenance (#4)

• A well maintained home or building creates a sense of guardianship and helps deter criminals.
Image and Maintenance (#4)
Image and Maintenance
“The single most important CPTED security feature is lighting. Lighting codes should meet the standards of the Illuminating Engineering Society of North America.”

*Research in Brief*, National Institute of Justice, April 1996
Purpose

• The advantages of darkness to the criminal:
  – Less likely that police patrols, neighbors or passerby will observe criminal activity
  – Darkness and shadow provide good cover for watching a target and for escape
  – Fear of being on the streets at night minimizes the number of potential witnesses
  – Darkness increases the ease with which criminals can use surprise to gain control of victims
Visibility

- Lighting is an important element needed to preserve visibility and help a person see potential assailants.
- Paths of travel need illumination - designed to illuminate the faces of pedestrians.
- Lighting that is too bright can diminish safety by creating a fishbowl effect.
- Quality of light is as important as quantity.
Lighting Benefits

- Less vandalism & fewer break-ins
- Improved morale & perception of safety
- Fewer assaults
- Improved curbside appeal
- Increased building value
- Improved productivity
- Increased utilization of areas
- Annualized value of legal savings from premise liability litigation
“High Flare” Gas Station
“Low Flare” Gas Station
CPTED & Zoning Codes

CPTED can be incorporated into zoning regulation in two ways:

1. Encourage CPTED review, based upon guidelines.

2. Require CPTED review, based upon adopted standards.
MANDATORY REVIEW (normally by ordinance)

Benefits

• Provides opportunity to apply CPTED standards uniformly throughout the jurisdiction.
MANDATORY REVIEW

Drawbacks

• Labor intensive

• Often seen by developers as simply another hurdle.
Mandatory & Non-Mandatory Review

NON-MANDATORY REVIEW

Benefits

• Allows agencies with limited resources to focus on critical projects.

• Less bureaucratic stigma attached.
Mandatory & Non-Mandatory Review

NON-MANDATORY REVIEW

Drawbacks

• Have to sell the benefits of CPTED. This is often difficult because the developer is most likely not the end user.
Best Time to Apply CPTED

• The best time to apply this philosophy is in the design phase, before a building or neighborhood is built.

• You can also successfully apply it later, but retrofitting an existing building or site can sometimes become costly or cost prohibitive.
SeaTac’s CPTED Experience

- Council 1st briefed on benefits of CPTED
- Incorporated CPTED principles into new Zoning Code MF Design Standards
- Adopted CPTED Chapter (Zoning Code) – combo of mandatory and voluntary
- Police at pre-application conference
- Fully integrated into dev. review process
- Code enforcement can be a challenge
Lessons Learned

• Very effective to have Planning and Police partnering together to advocate for good design standards
• Push for standards over guidelines, whenever possible
• Be clear what is mandatory vs. voluntary
• Important to regularly educate business owners about requirements and benefits of CPTED
Lessons Learned (cont.)

• Helpful to also educate residents about simple CPTED techniques (such as use of longer “dead bolts” and trimming of vegetation around windows) to reduce potential for crime

• Planning and Police may disagree on some aspects of landscaping (e.g., buffer vs. visibility) – discuss different perspectives, and compromise if necessary
WA Cities Using CPTED

- Federal Way
- Issaquah
- Lacey
- Marysville
- SeaTac
- Tacoma
- University Place

Source: Municipal Research & Services Center
Large Group, Warm-Up Exercise:

Office Building Lobby
Exercise: Enhance access control to this office building.

A. Through elevators from below ground to working floors
B. Main entrance
C. Side entrance
D. Guard booth
**Exercise:** How did everyone do?

A. Elevators serving lobby and specified floors above
B. Elevators serving lobby and floors below
C. Rest rooms
D. Building main entrance
E. Main floor corridor
F. Controlled access/egress door
G. Receptionist/Safety
   Guard station
Case Study #1

Elementary School
Case Study #2

“Highway Commercial”
Business Use
Questions?
Bonus Activity

Outside Lighting Exercise (Voluntary)

When?
Tonight, At End of the Reception

Where?
TBD
Extra slides
WA Jurisdictions using CPTED

- Outdoor lighting regulations are currently on a city by city, or county by county basis.
- **SeaTac** has a comprehensive ordinance for outdoor and parking lot lighting.
- **Island County** has outdoor lighting regulations to curtail uplight from outdoor lighting.
WA Jurisdictions using CPTED

- **Tumwater** is the first jurisdiction in the South Sound to adopt an ordinance aimed at reducing **light pollution** from outdoor lighting.
- **Sequim** has a similar ordinance.
Cityscapes promoted by both planners and police officers.
Lighting Applications

A useful rule of thumb to use when considering lighting levels for pedestrians or normal CCTV cameras, the minimum level of reflected light is:

- For detection – 0.5 fc
- For Recognition – 1.0 fc
- For Identification – 2.0 fc
Lighting Economies

- The proportion of lighting costs is approximately:
  - 8% capital items
  - 4% maintenance
  - 88% energy
CPTED and Community Planning Processes

There are four basic steps to incorporate CPTED into planning and development review processes:

1. Train development review staff to apply CPTED principles
CPTED and Community Planning Processes

2. Include CPTED criteria in planning documents that deal with land use, such as Comprehensive Plans and Zoning Codes.

3. Include CPTED trained staff in Community Planning activities such as neighborhood revitalization efforts, special studies, sector plans, etc.
4. Require CPTED trained staff and CPTED criteria in contracts for Design, Planning and Engineering consultants
CPTED LANGUAGE

Provision for natural surveillance.

1. The placement and design of physical features to maximize visibility. This will include building orientation, windows, entrances and exits, parking lots, walkways, guard gates, landscape trees and shrubs, fences or walls, signage and any other physical obstruction.
CPTED LANGUAGE

2. The placement of persons and/or activities to maximize surveillance possibilities.

3. Lighting that provides for nighttime illumination of parking lots, walkways, entrances, and exits.
CPTED LANGUAGE

Provision for natural access control.

1. The use of sidewalks, pavement, lighting and landscaping to clearly guide the public to and from entrances and exits.

2. The use of fences, walls or landscaping to prevent and or discourage public access to or from dark and / or unmonitored areas.
CPTED LANGUAGE

Provision for territorial reinforcement.

1. The use of pavement treatments, landscaping, art, signage, screening and fences to define and outline ownership or property.
Maintenance.

1. The use of low-maintenance landscaping and lighting treatment to facilitate the principles of natural surveillance, natural access control and territorial reinforcement.
Pedestrian design features:

- Direct pedestrian access shall be provided from the principal entrance of the building to the sidewalk. Pedestrian access shall be provided for rear parking facilities to ground floor uses, either through rear or side building entrances, pedestrian ways along the perimeter of buildings, or by pedestrian throughways which connect the rear parking lots to the sidewalk.
Pedestrian design features:

• Pedestrian throughways may be exterior and located between buildings or may be incorporated into the interior design of a structure.
Pedestrian design features:

Pedestrian throughway shall be a minimum of six (6) feet wide, well lighted and visually accessible from either the interior of the building or street and parking areas. The intention is to provide a safe and aesthetically pleasing environment.
Landscaping:

- To provide greater visibility, demonstration of ownership (territorial reinforcement), an enhanced pedestrian environment, and a suitable buffer with the adjoining residential, the basic landscaping theme consists of low ground covers, with a maximum height of 2.5’ and canopy trees, with a minimum lower canopy of 5’.
What Are The Boundaries?

- For a single family home?
- In a subdivision?
- In a townhouse community?
- In a multi-family condo/apt. community?
- In a commercial/mixed use building?
- On a commercial/mixed use site?
Pedestrian Oriented Developments

• Multi-level office buildings contain retail on the street level.
• Mixed-use developments contain complimentary land uses within convenient walking distances of each other and are connected by safe, reasonably direct walkways.
Subdivision regulations determine:

- lot size and dimensions
- street and right-of-way locations and dimensions
- construction of sidewalks and other "amenities"

Which influences:

- who has access to the neighborhood and where this occurs
- separation/conflict between pedestrian and auto traffic
ZONING AND CPTED

**Zoning regulates:**
- use type
- development density
- lot size and dimensions
- yard setbacks
- open space
- building height, mass, bulk

**Which influences:**
- activities and routines (opportunities for crime)
- surveillance -- street to site, site to site, and on/around the site
- assignment of territory and the definition of public, semi-public and private spaces
SUBDIVISION REGULATIONS & CPTED

- Subdivision regulations determine:
  - location and installation of utilities
  - development review and approval procedures

Which influences:

- locations for street lighting
- connections with the larger community
Design Guidelines

• Location of activities and definition of public and private space
• Opportunities for surveillance
• Points of auto and pedestrian access
• Travel paths
• Links to adjacent neighborhoods
Design guidelines cover:

- goals and objectives for site and building performance
- site layout and the location of specific facilities

Which influences:

- mix of uses on the site
- amount of undeveloped/open space
- location of activities and the definition of public and private territories
Design guidelines cover:

- design of buildings, roads and driveways, parking, footpaths, etc.
- maintenance and replacement

Which influences:

- opportunities for surveillance
- points of auto and pedestrian access
- wayfinding and travel paths
- links to the adjacent neighborhood
Pedestrian Oriented Developments

- Development is guided into urban centers, which are compact, mixed use areas with shopping, work, and housing all within walking distance.
Crime Prevention and Planning

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

• Preserve, protect, or improve the public heath, safety, and general welfare.
Crime Prevention and Planning

• Guide decisions related to the physical development of the community.

• Provide for public facilities and services.
Crime Prevention and Planning

• Stimulate community cohesion and interaction.

• Conserve and protect natural, cultural, historic, or scenic resources.