

Note: *This template presents draft guidelines for existing and new multi-family residential developments. The intent is that, once these are refined, they may be adapted for use with commercial developments or single family properties, but multi-family housing was identified as a specific need during the October work session, and consequently selected for the preliminary target development type. These guidelines would be similar, but not identical, for other contexts. This draft also does not address neighborhood-wide CPTED principles, which are different in nature. These could be addressed with a set of neighborhood CPTED guidelines, which would address the public realm versus the private. This would be a different type of tool, however.*

In addition to overall review, please give special attention to:

- *Implementation strategies—are these feasible and appropriate? Are there alternate suggestions?*
- *“Required” versus “guideline” elements—what should be mandatory? What should be optional? Should the City provide incentives for developers or property owners to adopt more of the suggested practices?*
- *Alternate model of categorizing each parcel by use and setting lighting and other requirements based on level of risk. This may present challenges in categorizing some properties and in adapting CPTED interventions to specific cases, but was a model that was well received in the staff work session.*

Draft Multi-Family CPTED Guidelines

Introduction

Crime Prevention Through Environmental Design, CPTED, is defined as “the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life.”

CPTED emphasizes physical environment, behavior of people, productive use of space, and crime/loss prevention. CPTED promotes a new partnership approach and response to crime. The partnership approach integrates action by police, government, business, institutions, and residents to develop preventative and repressive technical, CPTED and informational solutions.

There are four types of crime: reported crimes, unreported crimes, unacknowledged, and undetected.

Major Benefits of CPTED

- Reduction in crime.
- Reduction in potential for crime.
- Perceived greater safety and security.
- Improvement and beautification of the physical environment.
- Improved quality of life.
- Revitalization and preservation of neighborhoods.
- Increased business activity.
- Encouragement of the middle class to remain in the city.
- More efficient use of city personnel and equipment in crime prevention.
- City departments working toward a common goal.
- Increased communication and interaction between the city government and the public.

- An improved business environment.

CPTED Principles

CPTED is supported by overlapping principles that are applied to specific sites and situations. Recognition of these underlying concepts may help guide owners, architects, planners and developers of property in designing built environments that accomplishes the goals of CPTED as outlined in these Guidelines.

Natural Surveillance

Natural surveillance refers to areas where people and their activities can be readily observed. Areas can be designed so they are more easily observed through:

- Designing landscapes that allow clear unobstructed views of surrounding areas.
- Improving visibility with lighting or transparent building materials.
- Avoid the creation of building entrapment areas.

Natural Access Control

Natural access control means controlling access to a site. It can be achieved by:

- a. Ensuring that entrances are visible, well lit and overlooked by windows.
- b. Clearly define entranceways and control other points of access to a site.

These three principles can be implemented using the following three types of security strategies:

- a. Natural – spatial definition, location of work stations, etc. (Primary design concept)
- b. Organized – guards, etc. (Secondary design concept)
- c. Mechanical – alarms, cameras, fences, etc. (Secondary design concept)

Requirements and Guidelines

1) Locks

Required – Locks

- One (1)-inch dead bolts on all apartment doors.
- Keyed/locked gates on pool area fence.
- Locks on Laundry Room doors.

Guidelines - Locks

- Use devices that automatically lock upon closing on all common building entrances.

2) Lighting

Required – Lighting

- Provide lighting for parking, walkways, laundry rooms, common areas, front porches. No dark shadow areas within the complex.

Guidelines – Lighting

Lighting Configuration & Timing

- (a) The height and configuration of building-mounted and freestanding light fixtures are described in [Section X, Part X of the Zoning Ordinance] relating to outdoor light control. Trees and shrubs should not interfere with the distribution of lighting required by CPTED.
- (b) Transitional lighting should be incorporated into exterior areas going to and from the building(s) or use(s) within the site. Transitional lighting should be provided for: recreation/office building, swimming pools, laundry and mail rooms, covered breezeways, and other common areas.
- (c) All exterior lighting should be directed downward and away from adjoining properties, with luminaries shielded to prevent unnecessary glare.
- (d) All exterior fixtures should be illuminated from dusk until dawn, unless otherwise designated.
- (e) Details of exterior lighting should be provided on a landscape site plan drawn on 24” x 36” format prepared to scale. Photometric calculations should be detailed on an exterior lighting plan unless waived by [who would waive this?]. Photometric calculations should be based on the "mean" light output per the manufacturer's values of the specified lamp and luminaire photometry data formatted on Illumination Engineering Society (I.E.S.) file compiled by an approved testing laboratory. The details provided for exterior lighting should include point-to-point photometric calculations at intervals of not more than ten (10) feet, at ground level, and may also be required at six (6) feet above ground level, depending on the applicable risk factors.
- (f) Any exterior lighting device (luminaire) designed for security lighting should be protected by weather- and vandal-resistant covering, a managed light source, directed down, to minimize glare and intrusiveness.

Minimum Illumination Guidelines

All minimum illumination guidelines listed in this section should be maintained from ground level to a height of six (6) feet.

- The minimum-to maximum uniformity ratio may range up to 6:1 in acceptable layouts. The lighting levels specified are the minimum levels that are typically acceptable to meet the requirements of [Section X].¹

3) Landscaping

Required –Landscaping

- Three feet tall below the windows or cut up from the ground.
- Trees cleared at least six feet up.

▪ ¹ In some circumstances, customer convenience, closed-circuit surveillance, and customer attraction may require a higher level of lighting. In addition, demographics, the crime index and other factors particular to a certain geographic area may require a higher level of lighting than listed below.

Groundcover plants

- Location
 - Groundcover plants, including perennial and annual wildflowers, should be used within six (6) feet of the edge of walkways and areas requiring visual surveillance; and within twelve (12) feet of the edge of walkways and areas where children are regular users. The use of trees, pruned up to six (6) feet above ground, may also be used in such areas to provide shade for pedestrians.
- Height
 - The height of groundcover plants should not exceed two (2) feet at maturity. Desert plants with thin stalks over two (2) feet high that still allow for visual surveillance may be used in these areas.
- Shrubs
 - Location - In combination with groundcovers and trees pruned up to six (6) feet above ground, shrubs should be used between six (6) and twelve (12) feet from the edge of walkways requiring visual surveillance.
 - Height - The height of shrubs should not exceed three (3) feet at maturity. Shrubs that exceed a height of three (3) feet due to natural growth, such as oleanders, typically will not be approved. Desert plants with thin stalks over three (3) feet high that allow for visual surveillance may be used in these areas.
- Barrier Plants
 - Location - Barrier plants have thorns or needles and a dense structure. Barrier plants should be used below and to the sides of windows and adjacent perimeter walls, fences, and other building walls where desirable. Even where walls or windows occur closer than the six or twelve foot zones described in sections 2 and 3 above, barrier plants may still be approved.
 - Height - Since the purpose of barrier plants is to discourage pedestrian through-traffic, some types of barrier plants may exceed three (3) feet and still be approved.
- Trees
 - Location - Trees of an appropriate number, size and species are encouraged throughout landscaped area, and are required by the Zoning Ordinance in certain instances. See Zoning Ordinance, [Section X, Part X] To provide shade for pedestrians, trees should be located adjacent to walks leading from street frontages and major parking areas to major building entrances and site areas.
 - Height - As indicated in the subsection relating to groundcover plants, trees are to be pruned up to six (6) feet above ground. Conflicts with light standards should be avoided in order to maintain illumination levels as specified in section 11-20(a)(2) concerning exterior lighting.
- Landscaping Rock
 - River rock (stone) and other masonry materials such as brick, rip-rap, etc. that are normally used for landscaping accents, borders or scuppers frequently lend themselves for use as weapons and/or tools for the commission of crimes. When river-rock (stone) and other masonry materials are used, the material should be grouted to prevent removal by hand. River

rock should be grouted so that only one-third (1/3) of the rock is exposed above ground.

Guidelines – Landscaping

- Recommended Plant Materials
 - The following lists are not meant to be all-inclusive. Rather the lists represent plants that require minimal maintenance to meet visual surveillance objectives. Other plant materials that are not listed, but still conform to these Guidelines, may still be approved.

4) *Windows/Screens*

Required – Windows/Screens

- Windows/sliding glass doors secured with a locking device.
- Screens on windows
- No window coverings on laundry rooms.

Guidelines – Windows/Screens

- Security bars covering windows should be avoided whenever possible.

5) *Peep Holes*

Required – Peep Holes

- Bypassed if there is an available window next, or in, the door.

6) *Strike Plate Screws*

Required – Strike Plate Screws

- Two to three inches in height.

7) *Walls and Access Gates*

Required – Walls and Gates

Walls

- Freestanding walls or fences in the required front yard set back areas may not be more than four (4) feet high.
- Walls in the side or rear yard areas may not be more than eight (8) feet high. However, if the wall is over six (6) feet high and would be visible from a public street, school, park or other common area.
- Walls at least eight (8) feet high will be required to provide access control for the following areas:
 - Commercial and industrial areas (storage areas)
 - Mini-storages

- Preschools, nursery and other similar playgrounds
- Along rear property lines of residential "reverse frontage" lots which border public streets.

Access Gates

- Submitted plans must indicate where the gate(s) will be located.
- Details on the type of gate and access control through the gate must also be submitted.
- To comply with CPTED the gates must provide Police Department access at all control points and services.²

Guidelines – Walls and Gates

- Define property lines with landscaping or decorative fencing.
- Define entrances to the site and each parking lot with landscaping, architectural design, or symbolic gateways.
- Allow no more than four apartments to share the same entrance; individual entrances are recommended.
- Block off dead-end spaces with fences or gates.
- Limit entrance access to the building to only one or two points.

8) Signage and Address

Required – Signage and Addresses

- Ensure appropriate signage that indicates parking areas, private property, and address numbers.
- Color, Style, and Height Specifications
 - Color of numbers and letters shall be of a contrasting color to the background to which they are attached and must be visible at all times.
 - Style of numbers and letters must be readily discernible.
 - To be readily discernible, the height of multifamily unit numbers should conform to the following:
 - Four (4) inch if illuminated.
 - Six (6) inch if non-illuminated.
 - Three (3) inch at door if door is recessed and unit number is displayed at the entryway to the recessed area.
- Location.
 - The identification signs for multifamily developments and the site address should be mounted in a permanent stationary and durable manner and should remain unobstructed at all times by trees, shrubs or vines, or anything that would tend to hide or obscure the number or letter and shall be visible at all times from public access to the property. Placement should not conflict with mature trees or plants.

² The Zoning Ordinance relating to **Design Review** already provide for certain requirements and procedures for gates that are used for vehicular and pedestrian access control to a residential site.

- No other number should be affixed to a structure which might be mistaken for, or confused with, the number assigned to that structure.
- The assigned address, including the suite number, should be displayed on all electric meters in accordance with the [Richmond Electrical Code] and the utility company standards.
- The building and unit number for multifamily should be placed as follows:
 - Each principal building should display the number or letter assigned on each corner of each free-standing side. If a side of the structure is less than sixty (60) feet in length, then only one number or letter is required to be displayed on that side. Additional display of numbers and letters should be placed at the midpoint of the structures, for structures over two hundred (200) feet in length.
 - An illuminated unit number should be placed adjacent to the entry door to each unit. For buildings with recessed entryways, the illuminated unit number should be placed in the entryway to the recessed area and an additional unit number may be required adjacent to the entry door to each unit. If the recessed area provides access to more than one dwelling unit, each unit's number should be displayed.

9) *Directories*

Required – Directories

- The directory should be in contrasting colors (black on white, dark brown on beige, etc.) with pools and water areas in blue and tennis courts in green.
- The directory should be properly oriented with respect to the viewer and a red dot with a red arrow one-half (1/2) inch in diameter, with the words "YOU ARE HERE" affixed in the logical place on the directory.
- The directory should be located on the site so as to be easily and quickly identified and free from visual obstruction. Depending upon the layout and size of the site, multiple directories may be necessary.
- CPTED requires that the directory be internally illuminated. The directory should be internally lit with a projected white light source, and illuminated from dusk until dawn. The directory should have vandal-resistant glazing to minimize criminal damage and the structure should be weather resistant.
- Signs should be installed in a manner that does not conflict with traffic visibility zones as provided for by traffic engineering and the planning department. Traffic movement and safety should not be compromised as a result of directory placement.

10) *Vision Panels*

Required – Vision Panels

- The glazing material used in the security vision panel should comply with all current and applicable fire-rated door standards.
- The vision panel should be a minimum of thirty-six (36) square inches to a maximum of one hundred (100) square inches. The minimum width of the glazing area should not be less than six (6) inches.

- The security vision panel should be center mounted on the service door. The center of the glazing material used should be mounted at no more than sixty-three (63) inches from the bottom edge of the door.
- Burglar resistant glazing should be used.

11) *Closed Circuit Television (CCTV)*

Guidelines – CCTV

- Consider installing CCTV infrastructure in communal areas to deter criminal activity.

12) *Lease Addendum*

Required – Lease Addendum

- Posted in office and/or available during the application process.
- Signed with rental agreement.
- Each Resident agrees to live a Crime Free Life Style. They are not only responsible for their own actions but the actions of their guests; if they or their guests commit any crimes, on or about the property, then tenancy is relinquished.

Guidelines – Lease Addendum

- Discourage loitering by non-residents; enforce occupancy provisions of leases.

13) *Certificates and Rules*

Required – Certificates and Rules

- All three Crime Free Multi-Housing Certificates displayed in plain view inside the office.
- Display CPTED Certification in plain view.
- Apartment rules must be posted on the office in plain view.

14) *Applicant Screening*

Guidelines – Applicant Screening

- Criminal background checks and/or credit cards.
- Photo copy ID

15) *Property Management*

Required - Property Management

- Include CPTED Guidelines in property management papers
- Maintain all common areas to very high standards, including entrances, and right-of-ways.
- Prune trees and shrubs back from windows, doors and walkways.

- Use and maintain exterior lighting.
- Strictly enforce rules regarding junk vehicles and inappropriate outdoor storage.³

16) *Adjacent Land Uses*

Guidelines – Adjacent Land Uses

- Consider the following when developing multi-housing development design:
 - Proximity of every day goods and services including: schools, parks, grocery stores and shopping areas.
 - Avoid locating multi-housing in close proximity to industrial areas.

17) *General Appearance*

Required – General Appearance

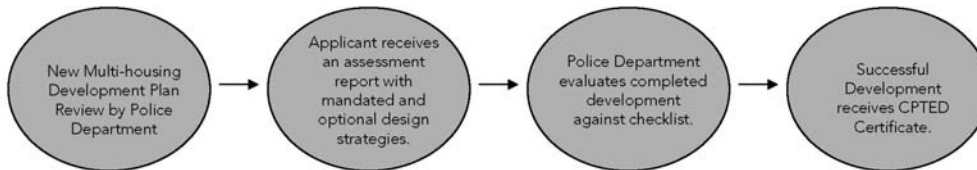
- Graffiti, parking areas, laundry rooms, common use areas, pool areas, trash areas, buildings clearly marked, and landscaping.

³ Disregard of these rules will make a site appear uncared for and less secure.

Implementation

New Multi-Family Development

Design Review



- New development should be reviewed at the design phase by a specific CPTED Police Unit.
- Applicant fee charged based on development type of \$X. [Threshold type to be developed based on police data]
- Police Department Staff will work with the applicant to complete a questionnaire (see below).
- Applicant will receive an assessment report with mandated and optional design strategies.
- Once completed, the Police Department will assess the development to ensure all CPTED requirements are met.
- If successful, the property owner will receive a CPTED Certificate.

CPTED Plan Review - Design Phase Questionnaire

During Schematic Design

Questions about neighborhood conditions

- 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 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, 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?

Questions about access, circulation, and parking

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

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?
- What are the recommendations or requirements for plant maintenance?
- Are walls, fences, plazas, fountains, berms or other landscape elements included in the plan?
- Will plants, walls, fences, plazas, berms or other landscape elements reduce or remove opportunities to see entrances and exits?
- 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 building?
- 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 oriented 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)?

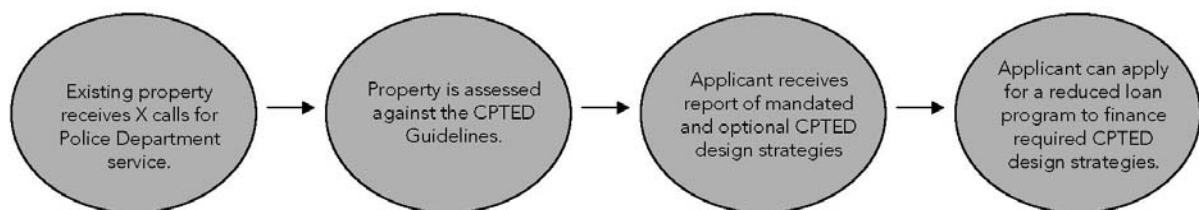
- Are there pay phones or public phones in the building?

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?

Existing Multi-Family Development

Assessment Methodology



If a property receives X calls for service, the CPTED Police Department will issue a citation.

- The Police Department staff will assess the property using the CPTED Checklist (includes Required Design Strategies).
- The property owner and/or manager will receive a report of mandated and optional CPTED strategies for the property.
- A reduced loan program will provide funding to complete CPTED strategy implementation.
- A Police Department representative will reassess the property after X months to ensure all requirements are met.

Public Outreach and Funding

The CPTED Guideline program will be promoted to Richmond residents, property owners, and property managers through the following means:

- Include media in outreach (such as the Richmond Annex resident training)
- Information sessions on CPTED for schools using easily comprehended dialogue
- Sell CPTED by branding the program– “We are a CPTED Corridor” or “We are a CPTED Community”

Available grants and funding to support CPTED policies include:

- Energy grants
- Green
- CDBG programs
- GHG Reduction Grants
- Safe Routes to Schools

Glossary

Barrier plant means a plant that consists of dense structure and foliage that is thorny or has needles.

CPTED means Crime Prevention Through Environmental Design.

Dwelling means an enclosed space providing complete, independent living facilities for a family including permanent provisions for living, sleeping, eating, cooking and sanitation, including single and multifamily dwellings.

Footcandle (abbreviated "FC") means a measure of light striking a surface one square foot in area on which one unit of light (lumen) is uniformly distributed.

Identification Sign means a sign that includes as copy only the name of the business, place, organization, building or person it identifies.

Landscaping or Landscaping materials means any tree, shrub, ground cover, vine or other organic and inorganic materials, or combination of any of these elements, placed on a site or exterior of a building to enhance appearance. Public art, water features, plazas, patios, decorative courtyards and lighting may also be considered landscape elements.

Luminaire means a complete lighting unit that consists of one or more lamps and ballast, if needed, together with other parts designed to distribute light, position and protect lamps, and connect the lamps to the power source.

Non-residential means any uses or occupancies which are not residential as defined in this section.

Residential means uses or occupancies upon which one or more dwellings are located.

Shrub means a woody plant having more than one stem, each less than two (2) inches in diameter, a height of less than ten (10) feet, and an undefined crown.

Transitional lighting means gradual increase or decrease or footcandles of light going from one activity to another, minimizing glare or intrusive light.

Tree means a woody plant which, at maturity, has one well-defined trunk at least two (2) inches in diameter, a height of at least ten (10) feet, and a formed crown of foliage.

Two family dwellings means a building designed exclusively for occupancy as two dwellings on an individual lot.

Walkway means any area that is intended for use by pedestrians, including, but not limited to, sidewalks.

Zoning Ordinance refers to Ordinance [No. X of the City of Richmond]

Alternate Structure:

Assign “risk” based on land use (Tempe model). Use level of risk to mandate lighting level and other security measures. Potential risk categories could include:

Risk Areas***High Risk Activity Land Uses***

- ATMs
- Clustered Mail Boxes (minimum of 20’ radius from edge of mail box)
- Pay Phones
- Gated Communities Entries
- Pedestrian Tunnels and Covered Pedestrian Walkways
- Bus/Transit Shelters
- All exterior entrances

Medium High Risk Activity

- Convenience Stores
- Hotels/Motels
- Pool Halls
- Loading Docks/Areas
- Grocery Stores (24 hour, immediate parking area)
- Establishments Licensed for the Sale of Liquor
- Parking Structures and Lots

Medium Risk Activity

- Gas Stations (not convenience stores)
- Entertainment/Amusement
- Covered Parking (carports)
- Fast Food
- Pharmacies
- Laundries
- High School and Middle School Campuses (after hours)
- Car Dealers (after hours)
- Parks (after dark)
- Banks
- Restaurants (no liquor)
- Malls

Medium Low Risk Activity

- Health Care/Hospital
- Industrial (night use)
- Elementary and Preschools (after hours)
- Places of Worship
- General Retail
- Dental
- Warehouse (night use)
- Storage

- General office (night use)
- Grocery stores (non-24 hours)

Low Risk Activity

- Warehouse (day use)
- Office (day use only)
- Industrial (day use)
- Mini-storage
- Walkways in Apartment Complexes