

URBAN DESIGN ELEMENT

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I. INTRODUCTION

A. General. The purpose of the Urban Design Element (UDE) is to provide guidance on appropriate urban design that is context sensitive and sustainable while creating a greater sense of place.

Broward County is expected to grow significantly in the next 25 years. Currently, Broward County is close to built out with little vacant land available for new construction. It has a congested traffic system and conditions of urban sprawl that have acted to reduce community identity and sense of place. In order to accommodate the projected growth, given its current situation, Broward County will need to consider Higher Density Mixed-Use Development. Development that will need to address:

- Required densities for viable transit along transportation corridors, so that transit can alleviate traffic congestion.
- Housing that accommodates growth while supporting transit densities, so that affordable and variable alternatives are available in live, work, and play neighborhoods.
- Reducing infrastructure costs, commuting times and carbon footprints while helping to create community identity.
- Neighborhood design that creates easily walkable communities with the dynamic public amenities and parks and open space needed to build a strong sense of place and to attract the increasing demographic categories of childless couples, single parents and empty nesters.

However, the past has taught us that a program of strong Urban Design is crucial for successful higher density development. To address this crucial role, and to respond and plan for the future need for higher density development, Broward County has created an Urban Design Element for the County's Comprehensive Plan.

The plans and policies of the element address government activities and provide direction and assistance to the efforts of the private sector. The UDE Support Documents provide data and analysis used as the basis for the goal, objectives, and policies included in the UDE.

B. Service Area. The planning service area for the UDE is all of Broward County. The regulatory service area is generally confined to the Unincorporated Area; however, for programs involving County Buildings, or County project involvement, municipalities may be included.

C. Planning Horizon. For the purposes of the UDE, the short-term planning horizon is 2013, while the long-term planning horizon is 2018.

D. Definitions. The following definitions are provided to assist in interpreting the UDE.

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Context Sensitive Design: Considers the needs of the users, surrounding areas and the environment to integrate a project into the context or setting of the area. It responds to the particular characteristics of a project and includes early involvement of the stakeholders and consideration of the natural, social, economic and cultural environment.

Crime Prevention Through Environmental Design (CPTED): a system of design and effective use of the built environment that can lead to a reduction in the incidence of crime. CPTED strategies rely upon influencing decisions before a criminal act is committed.

Functional Aspects of Design: how well a design functions is based on how well it fulfills its purpose. In the case of urban design it might be how well a mixed-use development creates an attractive and popular live, work and play environment.

Green Certification Programs: apply criteria and standards to the design and construction of buildings that conserve and protect the environment, increase profitability through energy efficiency and create healthier places to live, work and play.

Greenhouse Gas Emissions: the Earth's surface absorbs the Sun's energy and radiates this energy as heat. Greenhouse gases in the atmosphere absorb this radiated heat and in turn emit it in all directions, warming the atmosphere and causing global warming. One major greenhouse gas is carbon dioxide. Combustion of all fuels containing carbon (gasoline, natural gas, coal, diesel, wood, and propane) yield carbon dioxide which in turn absorbs and emits heat in the atmosphere causing global warming.

Mixed-Use Development: is the practice of allowing more than one type of use in a development area. In land use and zoning terms, this can mean some combination of residential, commercial, industrial, office, institutional, or other uses.

NatureScape Broward: is a strategy of landscaping that encourages the use of native plants to create Florida friendly green spaces that conserve water, protect water quality, and create wildlife habitat. Native species are uniquely adapted to South Florida and require little watering and are naturally pest resistant.

Overlay Zones: are land use zoning districts that define boundaries and overlay existing zones/boundaries to create specific areas with specific codes and regulations requiring specific treatment and control.

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Parking Ratios: Is a standard that establishes the number of parking spaces required for a certain type of development use. Typically, for residential use this is given in spaces per dwelling unit, and for office or retail it is given in spaces per unit of square feet.

Passive Survivability: is a building's ability to maintain critical life-support conditions in the event of extended loss of power, heating fuel, or water, or in the event of extraordinary periods of extreme heat. Passive survivability includes features such as cooling-load avoidance, natural ventilation, a highly efficient building envelope, passive solar heating, natural day lighting, and onsite water collection and storage.

Sense of Place: The term sense of place is defined in different ways by different people. Generally, it is a feeling or perception of the characteristics of a place that make it special or unique, feelings that foster a sense of authentic human attachment and belonging.

Shared Parking: using a parking structure to serve more than one type of use, taking advantage of different use patterns to even out peak demand.

United States Green Building Council Leadership in Energy and Environmental Design (LEED): Rating system for green building design requiring a minimum of twenty-six points for a minimum LEED certification. Points are received for meeting different design criteria and standards. Categories considered are: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process.

II. DATA AND ANALYSIS REQUIREMENTS

During a 2002 Broward County Commission Goal Setting Session, it was determined that building a stronger sense of place was a priority goal for Broward County. To address this, funds were dedicated to creating a County-Wide Community Design Guidebook. The UDE is the result of condensing the Guidebook into some of the most important concepts and using them to form a written set of Urban Design priorities for Broward County.

Part II begins by addressing the Goal of the Element: Creating a stronger “Sense of Place” and community identity in Broward County through improved aesthetic and functional design. It then covers the categories of the four objectives of the Element.

A. Sense of Place. The idea of what sense of place is and how design relates to sense of place is covered in Sections 5.1 through 5.13 of the County-Wide Community Design Guidebook (see [Attachment 18-1 Preface – Sense of Place](#)) and provides the basis for why utility,

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function, and form, together affect the quality of the built and natural environment and how five design categories constitute the plans of action that can connect us with a stronger sense of place. These five categories provide the basis for the four objectives of the UDE. The objective categories are as follows: Objective 18.1: Urban Design, Objective 18.2: Architectural Design, Objective 18.3: Landscape /Open and Green Space Design, 18.4: Transportation Design and Environmental Graphic Design.

B. Urban Design. The concepts and principles of Urban Design are covered in Sections 3.1 through 3.34 of the County-Wide Community Design Guidebook (see [Attachment 18-2 Design Principles – Urban Design](#)). Topics covered include; density transitions, proportions and massing conducive to public space, context-based development patterns, pedestrian and transit oriented compact mixed-use development, and the principles of Crime Prevention through Environmental Design (CPTED). More information on CPTED can be found in Attachment 18-8, An Overview of Crime Prevention through Environmental Design.

C. Architectural Design. The concepts and principles of Architectural Design are covered in Sections 5.1 through 5.20 of the County-Wide Community Design Guidebook (see [Attachment 18-3 Design Principles – Architecture](#)). Topics covered include; architecture that responds to the climate and character of an area, pedestrian and transit oriented design, and green design certification programs. More information on green certification programs are contained in Attachment 18-7, An Overview of Building Green. Information on the United States Green Building Council’s Leadership in Energy and Environmental Design (LEED) can be found by visiting www.usgbc.org.

D. Landscape/Open and Green Space Design. The concepts and principles of Open and Green Space Design are covered in Sections 4.1 through 4.17 of the County-Wide Community Design Guidebook (see [Attachment 18-4 Design Principles – Landscape Architecture](#)). Topics covered include; landscaping that defines urban space, protects the environment, conserves water, and creates sense of place by using species that are iconic symbols of the area. The encouragement of the principles of NatureScape Broward are also covered. More information on NatureScape Broward can be found at www.broward.org/naturescape/welcome.htm.

E. Transportation Design and Environmental Graphic Design. The concepts and principles of Transportation and Graphic Design are covered in Sections 2.1 through 2.33 and 6.1 through 6.17 of the County-Wide Community Design Guidebook (see [Attachment 18-5 Design Principles – Transportation](#) and [Attachment 18-6 Design Principles – Environmental Graphics](#)). Transportation Design Topics covered include; multimodal transportation systems, road systems designed for pedestrian and bicycle safety, corridor section drawings, transit stops designed for

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the climate, and context driven corridor design. Environmental Graphic Design Topics covered include; wayfinding systems that are legible, context sensitive, pedestrian friendly and that create community identity and help promote sense of place. Further principles of wayfinding systems are contained in the document titled Broward County County-Wide Wayfinding Report and can be found at www.broward.org/planningservices/wayfindingreport.pdf.

III. IMPLEMENTATION

A. Authority. This section briefly describes the legal authority and responsibilities for those County agencies charged with implementing the Urban Design Element.

1. The Broward County Planning and Redevelopment Division (PRD). The PRD was established by Section 8.30 of the Broward County Administrative Code and is responsible for implementation of the objectives and policies of the UDE. Several redevelopment programs conducted by the PRD will be used as vehicles of implementation, including the Transit and Housing Oriented Redevelopment Program (THOR) and the Urban Design Center. A UDE interdepartmental implementation team will also be established to carry out the objectives and policies of the UDE.
2. The Broward County Metropolitan Planning Organization (MPO). The MPO was established by Section 8.17 of the Broward County Administrative Code and is responsible for providing transportation short and long range plans that will help shape the implementation of the UDE. The MPO will also partner with the PRD as an active member of the implementation team and to help develop design concepts for transit infrastructure.
3. The Broward County Transportation Department (TD). The TD was established by Section 15.1 of the Broward County Administrative Code and is responsible for partnering with the PRD and MPO as an active member of the implementation team and to help develop design concepts for transit infrastructure.

B. Programs. This section discusses programs being carried out by the Broward County Planning and Redevelopment Division that will act as vehicles to implement the objectives and policies of the UDE in the following ways.

The PRD will establish, by December 2009, an UDE implementation team represented by the Broward County MPO, Broward Transportation Department, and other pertinent County Departments and Divisions. This team, among other things, will coordinate the efforts of various government agencies to carry out specific interdepartmental element policies, such as, an implementation program for pedestrian friendly intermodal transit infrastructure.

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The team will also be responsible for compiling a list of developers and municipal contacts to be used in establishing a series of meetings or workshops to address the creation of design review criteria and checklists that can be used as aides and guides for the review of development design and proposals. These meetings will also discuss the creation of incentives and bonuses that will be effective in obtaining voluntary design review participation. The incentives, bonuses and review criteria will also address Green Certification and the implementation of NatureScape Broward. The team will establish recommendations for design review criteria and incentives by December 2010, with determination on adoption of recommendations by December 2012.

The following PRD programs will provide real life examples to apply the principles and gage the effectiveness of the implementation of the UDE objectives and policies.

Transit and Housing Oriented Redevelopment Program: THOR is an initiative to address quality of life concerns. It is a multi-disciplinary strategy to create vibrant, livable transit corridors throughout Broward County. The THOR team will develop planning strategies to improve transit, increase housing options, and encourage redevelopment along transit corridors. The team will conduct studies, identify opportunities, and develop and implement corridor plans. The development and implementation of these plans will provide an avenue for the implementation of the objectives and policies of the UDE.

Urban Design Center: the urban design center offers a broad range of services designed to develop and assess potential development sites and scenarios. As develop sites are designed, urban and architectural design principles to be established as part of the UDE, will be used to review the quality and effectiveness of the design.

As projects are developed and reviewed by the County or municipalities; in the County's instance, primarily through the THOR program or the Urban Design Center, the soon to be established review criteria will be used to evaluate proposals, make recommendations and check the design in regard to development codes, ordinances, regulations, green certification, and NatureScape Broward principles. Findings of non-compliance will then be evaluated versus desired design outcomes with the following alternatives considered:

- Amendments to code.
- Land use and zoning amendments, with consideration given to mixed-use zoning and land use categories that are in-line with the principles and priorities being encouraged by the element.
- Variances to code.

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Upon determination of the best alternative, implementation of the amendment or variance process will be considered.

The THOR and Urban Design Center plan development and implementation process will also be used to:

- Explore incentives that would encourage design review participation.
- Implement urban design priorities, such as, development along transportation corridors that is compact, mixed-use, context sensitive and pedestrian friendly.
- Further design and implement multi-modal pedestrian friendly transit infrastructure while addressing other roadside design issues.
- Promote NatureScape Broward principles and construction that is certified green.
- Further integrate land use, transportation planning and way-finding information systems.

ATTACHMENT 18-1

Preface – Sense of Place.

Chapter A-5, Broward County County-Wide Community Design Guidebook

Link: <http://www.broward.org/planningservices/senseofplace.pdf>

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ATTACHMENT 18-2

Design Principles – Urban Design.

Chapter C-3, Broward County County-Wide Community Design Guidebook

[Link: http://www.broward.org/planningservices/urbandesign.pdf](http://www.broward.org/planningservices/urbandesign.pdf)

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ATTACHMENT 18-3

Design Principles – Architecture.

Chapter C-5, Broward County County-Wide Community Design Guidebook

[Link: http://www.broward.org/planningservices/architecture.pdf](http://www.broward.org/planningservices/architecture.pdf)

ATTACHMENT 18-4

Design Principles – Landscape Architecture.
Chapter C-4, Broward County County-Wide Community Design Guidebook

[Link: http://www.broward.org/planningservices/landscape.pdf](http://www.broward.org/planningservices/landscape.pdf)

ATTACHMENT 18-5

Design Principles – Transportation.

Chapter C-2, Broward County County-Wide Community Design Guidebook

[Link: http://www.broward.org/planningservices/transportation.pdf](http://www.broward.org/planningservices/transportation.pdf)

ATTACHMENT 18-6

Design Principles – Environmental Graphics.

Chapter C-6, Broward County County-Wide Community Design Guidebook

[Link: http://www.broward.org/planningservices/environmentalgraphics.pdf](http://www.broward.org/planningservices/environmentalgraphics.pdf)

ATTACHMENT 18-7
An Overview of Building Green.

An Overview of Building Green

Green Buildings and Architecture

Buildings have a major impact on the environment. According to the Environmental Information Administration, energy consumption of new and existing buildings are a leading contributor to global warming and account for 39% of carbon dioxide emissions in the U.S. However, with the appropriate use of construction materials and methods common to green buildings, carbon dioxide emissions can be reduced by 33-39%.

In addition to green buildings, green architecture can also lessen the effects of carbon dioxide emissions and minimize other impacts on the environment. Green architecture uses construction materials and operation methods to conserve water, land, energy, and other natural resources. As a sound option to demolition, high-performance designs and sustainability measures of green architecture can reduce dependence on new materials via remodeling or adaptive reuse, and can meet or exceed codes, ordinances, and permit requirements. Green architecture construction methods and materials can help to preserve the integrity and history of a community.

Another feature that has a role in green buildings and green architecture is passive survivability. According to Building Green (www.buildinggreen.com), passive survivability is a building's ability to maintain critical life-support conditions in the event of extended loss of power, heating fuel, or water, or in the event of extraordinary periods of extreme heat. Passive survivability includes features such as cooling-load avoidance, natural ventilation, a highly efficient building envelope, passive solar heating, natural day lighting, and onsite water collection and storage.

Green buildings use green architectural design to conserve and protect the environment, increase profitability through energy efficiency and create healthier places to live, work and play.

Green Certification Program

Programs certifying green buildings establish criteria and standards for various levels of environmental merit. There are numerous international and domestic programs that promote sustainable green building design and construction. Requirements for what determines a green building can vary widely. Some programs offer green building certification. Some programs offer a wide variety of tools and standards. For example, one tool could be details on how to conduct site selection to minimize environmental impacts. An example of a standard could be criteria for on-site mitigation for the management of water and wastewater.

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Two examples of international organizations that focus on environmental assessment protocol, rating systems, and green construction guides are the Green Building Initiative (www.thegbi.org) and Green Globes (www.greenglobes.com).

In the United States, the National Association of Home Builders' (www.nahb.org) Model Green Home Building Guidelines are designed to advance green building practices for residential construction into mainstream marketplaces. Domestic certification programs include the U.S. Green Building Council (USGBC) (www.usgbc.org) Leadership in Energy and Environmental Design (LEED) for neighborhoods, schools, and new and existing residential and commercial buildings. The LEED green building rating system awards points for meeting different design criteria and standards. The six major environmental LEED categories that projects can earn points for are: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation in Design. LEED can be applied to all building types including new construction, commercial interiors, core & shell developments, existing buildings, homes, neighborhood developments, schools and retail facilities. The USGBC is currently developing a category for healthcare.

LEED certification is awarded at four progressive levels: Certified (26 pts), Silver (33 pts), Gold (39 pts) and Platinum (52 pts). A green building is awarded a certification level based on the total number of points earned within each LEED category. A minimum number of twenty-six points must be earned for a project to achieve the minimum LEED certification level of Certified.

Another domestic certification program, Green Advantage (www.greenadvantage.org), focuses on connecting consumers to construction industry professionals. In Florida, the Florida Green Building Coalition (www.floridagreenbuilding.org) offers a certification program to establish criterion for green residential, high rise and commercial buildings.

In 2006, as part of Florida's Energy Plan, the Florida Department of Environmental Protection began working administratively with other state agencies to improve energy diversity, sustainability, efficiency and conservation statewide. In 2007, the Governor's Action Team on Energy and Climate Change issued three energy policy Executive Orders to address global climate change, reductions in greenhouse-gas emissions, and increased energy efficiency and development of renewable energy sources. The Orders specify that all new construction of state buildings adopt USGBC LEED new construction standards to the highest certification level possible. Also, Florida State Statute, Chapter 255.2575 (2), states, All county, municipal, school district, water management district, state university, community college, and Florida state court buildings shall be constructed to meet the United States Green Building Council

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(USGBC) Leadership in Energy and Environmental Design (LEED) rating system, the Green Building Initiative's Green Globes rating system, the Florida Green Building Coalition standards, or a nationally recognized, high-performance green building rating system as approved by the Department of Management Services.

At the local level, in counties and municipalities throughout Florida, the adoption of innovative policies and standards continues to foster government capacity for green buildings. In South Florida initiatives to implement certifications, tools and standards for green buildings typically reflect the region's climate and the unique character of individual jurisdictions. In response to the statutes and the state energy directives, Broward County has adopted Resolution 2008-856. The resolution specifies that all new county-owned and operated building construction achieve a minimum rating of LEED certified.

Green Building Incentives

Florida continues to undergo expansion of green construction in the public sector. To encourage this effort, several Florida green building incentive programs have been established. In Alachua County, an ordinance in the City of Gainesville requires that county buildings achieve LEED certification. Gainesville also provides a fast-track building permit incentive and a 50% reduction in the cost of building permit fees for private contractors that use LEED.

The Residential Green Homes Policy of Hillsborough County offers expedited permitting to home builders with a completed scorecard from either LEED for Homes or Florida Green Home Standard Checklist. The Hillsborough County Board of Commissioners has also updated its Development Review Procedures Manual to allow for expedited plan review for projects with a USGBC or Florida Green Building Coalition completed scorecard.

In Sarasota County a resolution has been issued that mandates all county buildings achieve LEED certification. The county also provides a fast-track building permit incentive and a 50% reduction in the cost of building permit fees for private contractors that implement LEED. Incentives are also offered for projects pursuing LEED for Neighborhood Developments or Florida Green Building Coalition Green Development Standards.

The City of Jacksonville in Duval County recently issued an Executive Order to establish a Sustainability Policy. The Order requires all new municipal building construction and major renovation achieve LEED certification, and that all existing and future municipal buildings be maintained and operated in accordance with LEED for Existing Buildings.

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In Miami-Dade County, commissioners passed an ordinance to expedite the permit process for commercial, industrial, and residential green building projects in unincorporated areas and the City of West Miami that are certified by recognized environmental rating agency.

A list of green building incentives has been compiled by the Florida Green Building Coalition. The list includes incentives available across Florida including the state's energy office, local utilities, local building departments, and discounts and rebates from product manufacturers. In addition to the green building resources and incentives available from local governments the Florida Public Utilities (www.fpuc.com) also encourages the building of energy efficient homes. Toward this end, this agency offers a range of program entitlements to assist the development community build green.

Conclusion

Among the various tools, standards and purveyors of programs and certifications there is a general consensus that green buildings provide a wide range of environmental, economic, health and community benefits that contribute to an improved quality of life. According to the USGBC, green buildings are healthier and safer for occupants, lower operating costs and increase asset values, reduce landfill waste, conserve energy and water, and reduce harmful greenhouse gas emissions. Additionally, green buildings demonstrate an owner's commitment to environmental stewardship and social responsibility, and qualify for tax rebates, zoning allowances and other incentives.

At the local level, Green Advantage reports that commercial and residential owners can also benefit directly from green building practices. Benefits include reduced energy dependence, fewer power plants, cleaner air, healthier environment, increased sustainability, improved public health, and decreased susceptibility to disasters. Both Green Advantage and USGBC concur that the "triple bottom line" of green buildings equates to financial, social and environmental benefits.

In combination or applied independently, green buildings, green architecture, and passive survivability offer a wide range of opportunities to improve the quality of life in Broward County. As the County explores opportunities for future redevelopment, green construction methods and standards will play a major role in establishing the high-quality, carefully designed pedestrian-friendly neighborhoods and self-sustaining communities that are vital to the region's sustainability.

ATTACHMENT 18-8
An Overview of Crime Prevention through Environmental Design (CPTED).

An Overview of Crime Prevention through Environmental Design (CPTED)

CPTED Principles and Classifications

“Crime Prevention through Environmental Design” or CPTED is based on the assumption that the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, and lead to an improvement of the quality of life. CPTED focuses on physical environments, the behavior of people, and redesigning or using existing space more effectively.

Crime Prevention is defined as the anticipation, recognition, and appraisal of a crime or safety risk and the initiation of some action to remove or reduce it. CPTED takes this one step further by studying site design and working with stakeholders to create safer designs in both the new and existing built environment.

CPTED has three classifications. Mechanical Measures, which refers to target hardening, or using hardware and technology systems to protect targets. Human and/or Organizational Measures, which refers to the teaching of individuals and groups to take steps to protect themselves and the spaces they occupy. Natural Measures, which refers to designing space to ensure the environment works effectively for its users while also deterring crime.

There are several core characteristics of CPTED design. Natural surveillance allows for maximum visibility. The placement of physical features, people, and activities acts as a deterrent towards criminal or unsafe acts and allows for the easier apprehension of an offender. Natural Surveillance is a way to deter criminal activity. Access control employs elements like doors, shrubs, fences, and gates to deny admission to a crime target and then create a perception among offenders that there is a risk in selecting the target. Territorial reinforcement uses design elements such as sidewalks, landscaping, and porches to help distinguish between public and private areas and helps users exhibit signs of ownership. Property lines and private areas should be defined with plantings, pavement treatments, or fences. Fencing or landscaping should direct pedestrian traffic to desired access points only. Private areas should be distinguishable from public areas. Site signage should indicate public entrances. Maintenance is also part of CPTED design. Care and maintenance allows for the continued use of a space for its intended purpose.

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CPTED Design Specifics

Natural Surveillance

Blind Corners - Avoid blind corners in pathways and parking lots. Pathways should be direct and all barriers along pathways should be permeable including landscaping, fencing, etc.

Site and Building Layout – Layout shall allow natural observation from the street to the use, from the use to the street, and between uses. In multifamily development, orient the main entrance towards the street. Habitable rooms should be positioned with windows that face the front. Access to residential units should not be from the rear of the building. Offset windows and doors to allow for natural surveillance as well as privacy. In commercial areas the main entrances should also be oriented towards the street. If employee entrances must be separate from the main entrance they should allow natural surveillance from the street. Administration and offices should be located at the front of the building/property. Avoid large expanses of parking lots. Where large parking areas are proposed, surveillance should be provided such as security guards or cameras. Use of perpendicular parking at storefronts is preferred rather than parallel parking as perpendicular parking allows more visibility between cars. Access to elevators and stairwells in parking structures should be clearly visible from the parking area. Hidden recesses should be avoided. Locate parking areas in locations that can be observed by adjoining uses.

Open Space/Common Areas – Active uses of habitable rooms shall be positioned with windows adjacent to main open space areas. Dumpster enclosures should not provide opportunities to hide. Walking areas and external entries to elevators/stairs shall be located close to areas of active uses to make them visible from the building entry. Locate public seating in areas of active uses.

Entrances – Design entrances to allow users to see into them before entering. Entrances should be clearly identified

Fencing – Fence design should maximize natural surveillance from the street to the building and from the building to the street, and minimize opportunities for hiding. Front fences shall be open in design, allowing for visibility. High solid fencing shall be designed in a manner that incorporates open elements to allow visibility above five feet in height. For example, open elements of the fencing could be present at the level above five feet so as to be visible above five feet from the other side. If noise insulation

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is needed for the building, install double glazed windows rather than high fencing at the front of the building.

Landscaping – Landscaping that does not allow natural surveillance shall be avoided. Trees with dense low growth should be spaced. Use low groundcover or high canopied trees around play areas, pedestrian pathways, and parking areas. Avoid landscaping that conceals the building entrance from the street.

Exterior Lighting – Exterior lighting shall enhance natural surveillance. Locate elevated light fixtures in a coordinated manner that provides coverage. When lighting is placed at lower levels for pedestrians, ensure that it is resistant to vandalism. Ensure that inset areas, access routes and signage are well lit. Ensure that lighting shines on pedestrian walkways and possible entrapment spaces. Place lighting to account for vegetation in both its current and mature form. Avoid lighting areas not intended for night time use to avoid giving a false sense of security at night. Avoid climbing opportunities by locating lighting and electrical equipment away from walls or low buildings. Use photoelectric lighting rather than lighting that operates on a timer.

Mix of Uses – Locate shops and businesses on lower floors and residences on upper floors. Include food kiosks, restaurants etc. within parks and parking structures. Mixed use buildings that have users at various times and locations provide a greater opportunity for natural surveillance.

Security Bars, Shutters, and Doors – When used and permitted by code, security bars, shutters, and doors should allow observation of the street and be consistent with the architecture of the building. Security bars should be visually permeable.

Access Control

Building Identification - Buildings should be clearly identified by street number to prevent unintended access and to assist people trying to find the building. Street numbers should be made of durable materials, preferably reflective or lighted. Larger projects should provide location maps and directional signage at entry points and along internal routes. With proper identifiable locations, police and fire response will be easier and it will be less likely for users to get disoriented.

Entrances - Entrances should be easily identifiable through design features and signage.

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Landscaping - Use vegetation as barriers to deter unauthorized access such as using thorny plants as a barrier. Thorny plants should be considered as a deterrent to unauthorized access. Barrier landscaping may create a perception among intruders that there is more risk to entering the area.

Landscaping Location - Landscaping should not be placed in locations that enable access to a building. Large trees should not be placed next to second story windows or balconies.

Security - Security systems or security staff should be used to inhibit opportunities for unauthorized access.

Signage - Signage should be clearly visible. Informational signs should make use of bright colors, standard symbols and graphics. Parking areas should have signage showing pedestrians and drivers the directions to stairs, elevators, and exits. This will allow users to promptly find their destination and reduce chances of becoming a victim of crime. In multi-level parking structures, use of creative signage or colors should differentiate the different floors. Clearly show what security features are in place and where to find them such as security phones. Provide signage in the parking areas advising users to lock their cars. This will deter break-ins and auto theft.

Ownership

Maintenance – Create an image that looks cared for. Landscaping should be well maintained and give an impression of ownership. Users tend to respect a property that is taken care of, and criminals will feel less comfortable in well-maintained areas.

Materials – Materials that are vandalism-resistant should be used. Common area street furniture or lighting should be anchored securely. Anti-graffiti paint or clear coat over paints should be used so that graffiti can be easily removed. Materials should be used such as glazed ceramics, stainless steel, and treated masonry to inhibit graffiti.