

BUILDING SECURITY GUIDELINES

A Companion to the City of Orange Building Security Standards

OMC Chapter 15.52 (Ord. #7-79)

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PURPOSE OF THE BUILDING SECURITY GUIDELINES

The City of Orange General Plan's Vision for the Future includes achieving a high quality of life for all residents by providing residential, commercial, industrial, and public uses that exist in harmony with the surrounding urban and natural environments. Personal safety and the perception of a safe environment play an important part in the enjoyment of community life. The General Plan's Public Safety Element explains how the Vision of the City can be accomplished through goals, policies and actions that focus on improving community safety and reducing opportunities for criminal activity. The City's Municipal Code establishes specific requirements which implement these goals and policies. These Security Guidelines are intended to serve as a companion of the General Plan and Municipal Code, providing information about best practices, and safety considerations that have proven to benefit the safety of new development and the community as a whole.

The Police Department works to educate developers and the public about crime prevention methods such as defensible space planning and Crime Prevention through Environmental Design (CPTED). These crime-preventative characteristics and design features are integrated into all phases of the planning and development process guided by the philosophy that it is best to start by designing new development in a thoughtful manner. Therefore, these Security Guidelines have been created in order to offer guidance and recommendations for new development in encouraging projects to provide safe and functional design while reducing the opportunity of crime and enabling emergency responders to easily and efficiently locate a property should their services be needed. Property owners, developers, architects and contractors proposing new development should first review the Security Building Standards, as these Security Guidelines are meant to supplement the requirements of the Orange Municipal Code (OMC).

WHY CRIME PREVENTION?

The Orange Police Department Crime Prevention Bureau works with the community to promote safety by increasing awareness of personal and property crime risks. Crime prevention also involves educating the public about personal safety, business and neighborhood watch programs, and residential and business security.

STEPS FOR A SUCCESSFUL PROJECT USING THE SECURITY GUIDELINES

1. Become familiar with the City of Orange Building Security Standards Orange Municipal Code Ch. 15.52 and these Security Guidelines.
2. Review the property's context and site features.
3. Consult with Police Crime Prevention staff.
4. Engage a professional design team (architect, landscape architect, lighting consultant).
5. Prepare and submit a complete Land Use application for review.
6. Be responsive and collaborative following review of City feedback.
7. Attend meetings with City staff pertaining to the project.

PLAN CHECK REVIEW

Some of the Security Guidelines contained in this document could be included as conditions for a future development. The conditions will usually be associated with CPTED design features that are not cited in the Building Security Standards, but may be necessary to prevent future crime and disorder based on specific project characteristics. For additional information on the Building Security Standards or Security Guidelines, contact the Orange Police Department Crime Prevention Unit at (714) 744-7327.

GUIDANCE FOR ALL DEVELOPMENT TYPES

Crime Prevention through Environmental Design (CPTED)

Orange values environmental design as a tool to help prevent crime. The concepts of CPTED offer non-invasive and permanent measures to prevent crime in the City. To ensure high levels of public safety, security and design measures that employ Defensible Space concepts should be incorporated in development and construction plans. These concepts involve consideration of elements such as placement and orientation of structures, access and visibility of common areas and placement of doors, windows, addressing and landscaping. CPTED promotes public safety, physical security and allows residents the ability to monitor activity in neighboring areas in an attractive and livable environment.

GENERAL CPTED CONCEPTS

- Crime Prevention through Environmental Design ("CPTED") is the proper design and effective use of the built environment in order to lead to a reduction in the fear and incidence of crime, and an improvement in the quality of life.
- CPTED involves the design of a physical space so that it enhances the needs of people and communities; the users of the space. This emphasis on design and use deviates from the traditional "target hardening" approach to crime prevention.
- For CPTED to be successful, it must be understandable and practical for the users of the space. The normal users know more about what is going on in the environment and they have a vested interest (their own well-being) in ensuring that their immediate environment operates properly. The "Three-D" approach to space assessment provides a simple guide for the normal users in determining the appropriateness of how their space is designed and used. The Three-D concept is based on the three functions or dimensions of human space:
 - All human space has some designated purpose.
 - All human space has social, cultural, legal or physical definitions that prescribe the desired and acceptable behaviors.
 - All human space is designed to support and encourage the desired behaviors.

- CPTED is supported by the following five overlapping principles that are applied to specific sites and situations:

1. Territoriality

Territoriality is a concept that clearly delineates private space from semi-public and public spaces, and creates a sense of ownership. Ownership thereby creates an environment where appearance of such strangers and intruders stand out and are more easily identified through:

- a. The enhanced feeling of legitimate ownership by reinforcing existing natural surveillance and natural access control strategies with additional symbolic or social ones.
- b. The design of space to allow for its continued use and intended purpose.
- c. The use of pavement treatments, landscaping, art, signage, screening and fences define and outline ownership of space.

2. Natural Surveillance

Natural surveillance is a design concept directed primarily at keeping intruders under observation. Provision of natural surveillance helps to create environments where there is plenty of opportunity for people engaged in their normal behavior to observe the space around them. Areas can be designed so they are more easily observed through:

- a. Design and placement of physical features to maximize visibility. This will include building orientation, windows, entrances and exits, parking lots, refuse containers, walkways, guard gates, landscape trees and shrubs, use of wrought iron fences or walls, signage and other physical obstructions.
- b. Placement of persons or activities to maximize surveillance possibilities.
- c. Minimum maintained lighting standards that provide for nighttime illumination of parking lots, walkways, entrances, exits and related areas to promote a safe environment.

3. Access Control

Access control is a design concept directed primarily at decreasing criminal accessibility. Provision of natural access control limits access and increases natural surveillance to restrict criminal intrusion, especially into areas where they will not be easily observed. When present, intruders are more readily recognized through:

- a. The use of sidewalks, pavement, gates, lighting and landscaping to clearly guide the public to and from entrances and exists.
- b. The use of gates, fences, walls, landscaping and lighting to prevent or discourage public access to or from dark or unmonitored areas.

4. Activity Support

Activity support is the presence of activity planned for the space. Activity support involves placing activity where the individuals engaged in an activity will become part of the natural surveillance system. Examples include:

- a. Place safe activities in areas that will discourage would be offenders, to increase the natural surveillance of these activities and the perception of safety for normal users, and the perception of risk for offenders.
- b. Place high risk activities in safer locations to overcome the vulnerability of these activities by using natural surveillance and access control of the safe area.
- c. Locate gathering areas in locations that provide for natural surveillance and access control or in locations away from the view of would-be offenders.
- d. Improve the scheduling of space to allow for effective use and appropriate intensity of accepted behaviors.

5. Maintenance

Proper maintenance of landscaping, lighting treatment and other features can facilitate the principles of CPTED, territorial reinforcement, natural surveillance and natural access control. Functions include:

- a. Proper maintenance of lighting fixtures to prescribed standards.
- b. Landscaping which is maintained at prescribed standards.
- c. Minimizing the conflicts between surveillance and landscaping as the ground cover, shrubs and trees mature.

Recognition of these underlying concepts can help guide property owners, architects, and developers in designing built environments that accomplish the goals of CPTED as outlined in these guidelines.

GUIDELINES FOR ADDRESSING

For emergency responders, proper addressing can be a critical factor in finding a location quickly. In an emergency, Police and Fire Departments need clearly visible address numbers to be able to identify locations in an expedited manner. A slight delay could mean life or death. The following guidelines identify address details for different buildings.

Single Family Residences

Addressing for single family buildings should be displayed as a street address number and consider the following:

- Position numerals to be clearly visible from the street.
- Contrast numerals with the color of the background surface.
- Numeral size at least four inches in height and illuminated during the hours of

darkness. Light source should be contained within a single, weather-resistant fixture with an uninterruptible power source.

- Include directional arrow or wording indicating any second dwelling unit not visible from the addressed street.

Multi-family Residences

Multi-family buildings should display a street address number and consider the following:

- Each individual unit within the buildings should display clear visible numerals of a contrasting color to the background at the main dwelling entry door, but not on the entry door. Size and design should conform to the following:
 - Minimum four inches in height; or
 - Minimum two inches in height if the entry door is located within a fully enclosed corridor; or
 - Minimum two inches in height if, from the interior of the building common space area, the sight line to the entry door from any approach does not exceed 50 feet.
 - Numerals within one foot of the door frame and illuminated during the hours of darkness. Light source should be contained within a single, weather-resistant fixture with an uninterruptible power source.

Multi-family Complex

At each vehicle entrance of a multi-family complex, an illuminated diagrammatic representation of the complex should be provided which depicts the location of the viewer and the unit locations within the complex. The diagram should be of a size clearly readable from a distance of at least 10 feet. It should be lighted during the hours of darkness utilizing a light source constructed of weather and vandal resistant materials, and with an uninterruptible power source.

A wayfinding plan should be developed indicating the following:

- Location and wording of directional signage for vehicles and pedestrians;
- Location of building address numbers; and
- Landscaping details for areas near any signage or address numbers.
- The use of numerals at least eight inches in height, if located less than 100 feet from the center line of the addressed street or 12 inches in height if placed further than 100 feet. The numerals should be illuminated during the hours of darkness using a light source with an uninterruptible power source.

For sites having multiple buildings for which addressing mounted on the building is not clearly visible from the street, or for which drive aisles diverge from a site entrance in a manner such that the direct route to each building is not obvious, vehicle directional signs should be provided. Vehicle directional signage from the point of site entry to each

building entrance should display building addresses or unit number range, and be located at all turning points along the route to a building entrance.

- Signs should be at least 2 feet from ground level and not obstructed by landscaping at full maturity or parked cars.
- Building addresses or unit number range numerals should be at least 4 inches in height using clearly legible font.

Nonresidential Sites

For nonresidential properties, building addressing is referenced in Special Building Provisions OMC Section 15.52.090 J. Address number sizes may be scaled larger depending on the building's bulk and mass beyond Security Ordinance Standards at the direction of the Police and/or Fire Department. Large scale building complexes may require additional sub-addresses and/or directories at the discretion of the enforcing authority. Buildings with multiple tenants and units should verify and/or update all address numbering records, contact the Public Works Engineering Division at (714) 744-5525.

GUIDELINES FOR CONSTRUCTION SITES

Construction Site

Security measures should be implemented at construction sites in a manner that is reasonably necessary to control access to the site, and to deter vandalism, theft, and other crime. The number of access points onto the site should be minimized and, where feasible, situated in locations that are highly visible from an adjacent street. Perimeter construction site fencing should be installed adjacent to streets and designed as follows:

- An address sign should be installed at all perimeter vehicle access points and include the street name and number, using minimum eight-inch high letters and numbers, and posted at the top of the perimeter fence at least five feet from the ground.
- A "No Trespassing" sign, conforming to the requirements of California Penal Code, Section 602, should be installed at all perimeter access points, posted at the top of the perimeter fence or at least five feet from the ground.
- A 24-hour emergency phone number, for management of the site, should be posted at the main gated entrance and on the exterior of an on-site office trailer or building near the main vehicle entrance.
- Chain link or other metal fencing and gates, at least six feet in height, covered with green 94 percent minimum block out heavy duty plastic screening material.

- ❑ Vehicle and pedestrian access gates should not be covered by view obscuring material. Fencing should not be covered for the first 20 feet in lineal length, or greater where necessary for sight distance control, on each side of a gate.
- ❑ All vehicle and pedestrian openings should have gates and be secured after Business hours by a padlock(s) designed to prohibit cutting of the shackle.
- ❑ Gates may be secured by coil chain, minimum 30 grade, at least 3/8-inch thick or cable at least 5/16-inch thick.
- ❑ Perimeter fencing may be removed when there is no longer outside storage of building materials or building fixtures and when there are no remaining exterior construction activities requiring separation of non-construction related personnel and public from exterior construction activity.
- ❑ Alternative fencing and protection may be approved by the Chief of Police, their designee or Chief Building Official.
- ❑ All motorized construction equipment (such as forklifts, bobcats, backhoes, etc.) should be rendered inoperable at the end of construction hours; by removing the key and adding a device to either disable the engine or other measure to prevent moving it.
- ❑ A record of on-site motorized construction vehicle equipment should be developed and maintained for equipment with wheels a minimum of 15 inches in diameter or larger, listing the manufacturer, model, license plate number, vehicle identification number (VIN), and product identification number (PIN).

Office trailers and temporary buildings should be secured as follows:

- ❑ Doors should have a deadbolt lock per OMC Section 15.52.090 B., and an auxiliary locking device using a hasp or slide bolt with a protective device to prohibit cutting of a padlock, attached with non-removable bolts from the exterior, and locked with a padlock having a minimum 1/2-inch thick shackle with heel and toe locking; or secured in a manner as approved by the Chief of Police, or designee.
- ❑ All windows should be secured from entry using either:
 - ❑ Steel bars of at least 1/2-inch round or one-inch by 1/4-inch flat steel material, spaced not more than five inches apart, securely attached on the inside of the trailer using bolts that are non-removable from the exterior; or
 - ❑ Steel grate mesh of at least 1/8-inch thick material, securely attached on the interior or exterior of the trailer using means that are resistant to removal from the exterior.

Storage containers with at least 64 square feet of storage area should be secured as follows:

- Doors should be secured using a hasp or slide bolt with a protective device to prohibit cutting of the padlock, attached with non-removable bolts from the exterior, and locked with a padlock having a minimum 1/2-inch thick shackle with heel and toe locking; or secured in a manner as approved by the Chief of Police, or their designee.
- Exterior hinge pins should be rendered non-removable by design or welding.

Site lighting should be installed and designed as follows unless otherwise modified or waived by the Chief Building Official, Chief of Police, or their designee:

- Where required lighting would impinge on occupied residential properties vandal proof motion sensors may be used to control light fixtures.
- All vehicle gate locations should be illuminated, during the hours of darkness, at a minimum one foot-candle of light on the ground, within and on all sides of the gated opening for a distance of 15 feet beyond the opening.
- Outdoor lighting should be maintained and installed so that direct rays are confined to the site and adjacent properties and streets open to the public are protected from glare.
- All open centralized storage areas for building materials or building fixtures should be illuminated during the hours of darkness, at a minimum one foot-candle of light on the ground, within and on all sides of the stored items for a distance of 15 feet beyond the materials or fixtures.
- All trailers, temporary buildings, or containers used as an office or for storage of building materials, or fixtures for buildings, or construction equipment should be illuminated on all sides with openings during the hours of darkness, at a minimum one foot-candle of light on the ground for a distance of 15 feet beyond the exterior walls.

Construction Site Security Plan

A security plan may be necessary if the residential construction site has 25 or more dwelling units, or a nonresidential construction site has 50,000 square feet or more of building area. A security plan should be submitted as part of Building plan check review unless otherwise modified or waived by the Chief Building Official, Chief of Police, or their designee prior to issuance of building permits.

A security plan should include the requirements in Section 15.52 and the following:

- A description of the construction site including: Location, size, boundaries, type of project, overall site plan, access points, office/storage locations, and contact person responsible for implementing the security plan.
- Institute at least one of the following additional security measures:
 - Provide color cameras that view all vehicle access points and record vehicle license plates when the hours of operation cease, saving recorded activity for at least 60 days; or
 - Utilize a California State Licensed Security Guard for every 20 acres or portion thereof, to monitor the site when hours of operation cease, recording persons and vehicles entering and leaving it, saving recorded activity for at least 60 days; or
 - Other alternate measure(s) approved by the Chief of Police or their designee that are found to provide at least the equivalent security of providing one of the measures above.

GUIDELINES FOR VACANT PROPERTY

The owner of a vacant property should apply measures reasonably necessary to control access to the site, and to deter vandalism, theft, and other crime. All security measures taken to secure vacant properties should be consistent with OMC Chapter 15.52 regarding minimum property maintenance standards and building security standards, and consider the following:

- The number of access points onto the site should be minimized and placed in locations that are highly visible from an adjacent street.
- Perimeter fencing should be installed consistent with construction site fencing guidelines.
- Buildings that are unoccupied should maintain lighting at all exterior doorways.
- Gated vehicle and pedestrian openings should be secured after hours of operation by a padlock(s) chain or cable designed to prevent cutting of the shackle;
- An address sign should be installed at all perimeter vehicle access points.

- A "No Trespassing" sign, conforming to the requirements of California Penal Code, Section 602, should be installed at all perimeter access points, posted at the top of the perimeter fence or at least five feet from the ground.
- A 24-hour emergency phone number, for management of the site, should be posted at the main gated entrance and on the exterior of any building or office trailer near the main vehicle entrance.

GUIDELINES FOR PARKING STRUCTURES

The following crime prevention measures are recommended for the design of parking structures. These recommendations are not applicable to single family residences or residential carports.

- Parking structure design should create openness by utilizing high ceilings and long-span construction.
- Shear walls should be avoided, especially near turning bays and pedestrian paths. Where shear walls are required by the Building Code, openings should be incorporated where possible to improve natural surveillance.
- Solid perimeter walls should be either full height or not exceed 42 inches in height from the parking surface.
- Interior walls should be painted or stained a light color to improve illumination.
- The number of pedestrian and vehicular access points should be minimized. Protection against unintended points of access from adjacent building rooftops is also recommended.

Parking Structure stairway design should consider the following:

- Interior doors with clear glazing panels.
- Fully enclosed areas beneath stairways at or below ground level or restricted access.
- Complete visibility from either the interior or exterior or both, unless mandated by the Uniform Building Code to be enclosed.
- Installation of shatter resistant mirrors or other equally reflective material at each level and landing and fully enclosed stairways when required by the Uniform Building Code and be designed or placed in such a manner as to provide visibility around corners.

Elevator cabs and lobbies should be designed to incorporate:

- Clear glazing in elevators which serve more than two floors, above ground level, with at least one shaft wall exposed to the exterior should have clear glazing installed in one wall to provide visibility into the elevator cab.
- Elevator cabs with shatter resistant mirrors or other equally reflective material placed in a position that maximizes visibility into the cab from lobby areas.
- Illumination of elevator cab.
- Glazing in enclosed elevator lobbies.

Lighting of driveways, parking areas, stairways, walkways and doors should address the following:

- Illumination levels of three to five foot-candles of light at ground level at all times unless pedestrian and vehicle access is precluded during non-business hours, in which case lighting levels may be reduced.
- All types of exterior doors should be illuminated, after dark, with a minimum maintained one foot-candle of light.

Bicycle storage units or racks within parking structures should be designed and protected as follows:

- Located in areas highly visible to users of the facility.
- Be illuminated to a level equivalent to the required lighting for the parking facility.

GUIDELINES FOR PRIVATE PARKS, TRAILS AND OPEN SPACES

The following crime prevention measures are recommended for design of parks, trails and open spaces associated with private development.

- Provide clearly defined paths between parking lots and other facilities.
- Erect maps to provide a sense of where one is and where one can go. The maps should clearly identify trails, facilities, emergency phones and other characteristics.
- Post park and trail rules at access and gathering points.
- Utilize open fencing to maintain visual access to trail corridors and parks from adjacent land uses, so that trails and parks do not become isolated from public view.

- Locate parking lots, picnic areas and facilities used at night near streets and other activity centers, so they are easily observable by police patrols and other park users.
- Locate children's areas and public restrooms near staffed areas to make observation of these areas easier.
- Provide clearly visible entries to park buildings.
- Provide a clear distance of at least 10 feet between trails and landscaping/ woodland to offer proper sight lines.
- Clearly mark the areas to be used only during the day with entrance signs or gates to control accessibility
- Place safe activities in areas that will discourage would-be offenders, to increase the natural surveillance of these activities and the perception of safety for normal users, and the perception of risk for offenders.
- Place high risk activities in safer locations to overcome the vulnerability of these activities by using natural surveillance and access control of the safe area.
- Locate gathering areas in locations that provide for natural surveillance and access control or in locations away from the view of would-be offenders.
- Locate and trim trees and bushes to keep paths open and to eliminate the potential for areas of concealment.
- Locate an adequate number of trash receptacles in areas where people congregate and by using durable, vandal-resistant materials.
- Park benches should have seat dividers to discourage long-term usage such as sleeping.

APPENDIX A – GLOSSARY

Access Control - a CPTED design concept directed primarily at decreasing criminal accessibility. Provision of natural access control limits access and increases natural surveillance to restrict criminal intrusion, especially into areas where they will not be easily observed.

Activity Support - a CPTED design concept is the presence of activity planned for the space. Activity support involves placing activity where the individuals engaged in an activity will become part of the natural surveillance system.

Construction site - means any site, excluding a single residential lot and additions and alterations to existing nonresidential structures, upon which construction or demolition work is occurring, or upon which such work has commenced but has not been completed. The provisions of this section should apply from the time raw building materials or equipment are placed on the site until the project is completed.

Crime Prevention through Environmental Design (CPTED) – Security and design measures that employ Defensible Space, which involves consideration such as placement and orientation of structures, access and visibility of common areas, placement of door, windows, addressing and landscaping. CPTED promotes public safety, physical security and allows residents the ability to monitor activity in neighboring areas.

Maintenance - a CPTED design concept that proper maintenance of landscaping, lighting treatment and other features can facilitate the principles of CPTED, territorial reinforcement, natural surveillance and natural access control.

Natural Surveillance - a CPTED design concept that is directed primarily at keeping intruders under observation. Provision of natural surveillance helps to create environments where there is plenty of opportunity for people engaged in their normal behavior to observe the space around them.

Territoriality - a CPTED design concept that clearly delineates private space from semi-public and public spaces, and creates a sense of ownership. Ownership thereby creates an environment where appearance of such strangers and intruders stand out and are more easily identified.

Vacant property - means any property where there are buildings or other facilities of any type that have been abandoned or are otherwise not in use for a period of more than 30 calendar days, except that a residential lot should not be deemed to be a vacant property merely by virtue of the fact that a home on the property is currently unoccupied.