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## Chapter 18.54

### PARKING FACILITY DESIGN STANDARDS

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**18.54.010 Purpose**

Design standards are established to ensure safe and accessible parking facilities for vehicle parking, bicycle parking, accessible parking and loading facilities. Such standards shall be used by the building official, the director of planning and community environment (the “director”), the planning commission, the architectural review board, and any other authorities, departments, boards or commissions responsible for application and administration of parking, bicycle, and loading requirements established by Chapter 18.52.

(Ord. 4964 § 3 (part), 2007)

**18.54.020 Vehicle Parking Facilities****(a) Parking Facility Design**

Parking facilities shall be designed in accordance with the following regulations:

- (1) Requirements for dimensions of parking facilities at, above, and below grade are contained in this section and in Figures 1-6 and Tables 5-8 of Section 18.54.070.
- (2) Stalls and aisles shall be designed such that columns, walls, or other obstructions do not interfere with normal vehicle parking maneuvers. All required stall and aisle widths shall be designed to be clear of such obstructions.
- (3) The required stall widths shown in Table 5 of Section 18.54.070 shall be increased by 0.5 foot for any stall located immediately adjacent to a wall, whether on one or both sides. The director may require that the required stall widths be increased by 0.5 foot for any stall located immediately adjacent to a post, where such post limits turning movements into or out of the stall.
- (4) Dead-end aisles shall be avoided to the greatest extent feasible.
- (5) Except for at-grade parking facilities serving a maximum of two dwelling units, all parking facilities shall be set back a sufficient distance from the street so that vehicles need not back out into or over a public street (not including an alley) or sidewalk.

**(b) Off-Street Parking Stalls**

- (1) Each off-street parking stall shall consist of a rectangular area not less than eight and one-half (8.5) feet wide by seventeen and one-half (17.5) feet long (uni-class stall), or as otherwise prescribed for angled parking by Table 1 in Section 18.54.070.
- (2) Garages and carports for single-family and two-family development shall provide a minimum interior clearance of ten (10) feet wide by twenty (20) feet long for a single car and a minimum of twenty (20) feet wide by twenty (20) feet long for two cars to allow sufficient clearance.
- (3) Dimensions of parking stalls for parallel parking shall be as follows. The minimum dimensions of such a stall located adjacent to a wall shall be ten feet wide and twenty feet long. The minimum dimensions of such a stall located adjacent to a curb with a minimum two-foot clearance to a wall shall be eight feet wide and twenty feet long. These required stall widths are in addition to the required width of the access driveway or aisle.

**(c) Off-Street Loading Spaces**

- (1) Each off-street loading space shall consist of a rectangular area not less than twelve (12) feet wide and forty-five (45) feet long, with a vertical clearance of not less than fifteen (15) feet.
- (2) Each parking and loading space shall have adequate drives, aisles, and turning and maneuvering areas for access and usability, and shall at all times have access to a public street or alley.

**(d) Tandem Parking**

Tandem parking shall be allowed in the R-1 and other low density residence districts and in parking assessment areas as specified in Section 18.52.080. Tandem parking shall be allowed in multiple family residence districts for any unit requiring two parking spaces, provided that both spaces in tandem are intended for use by the same residential unit. For projects with more than four (4) units, not more than 25% of the required parking spaces shall be in a tandem configuration.

**(e) Slope of Driveways in the Hazardous Fire Area**

The slope of driveways shall not exceed fifteen percent in the hazardous fire area (i.e., that area west of Interstate 280).

**(f) Figures and Tables**

Figures 1-6 and Tables 3-6 are located at the end of this chapter in Section 18.54.070 and depict design requirements for parking stalls, aisles, driveways, accessibility, and parking lots.

(Ord. 4964 § 3 (part), 2007)

## 18.54.030 Accessible Parking Facilities

### (a) Compliance with Other Laws

The requirements for accessible parking facilities as described in this section are in conformance with the California Code of Regulations, Title 24, and the Americans with Disabilities Act of 1990, as amended.

### (b) Requirements for Residential Facilities

In addition to parking for non-residential facilities, the requirements set forth in this section shall apply to common parking in residential facilities of four (4) or more units. These requirements shall not apply to parking which is restricted by design for the exclusive use of a single unit.

### (c) Number of Stalls Required

The following table establishes the number of accessible parking stalls required.

**TABLE 1  
ACCESSIBLE PARKING REQUIREMENTS**

Total Number of Stalls in Lot or Structure	Number of Accessible Stalls Required
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1,000	2% of total
More than 1,000	20 spaces + 1 space for each 100 spaces over 1,000.

### (d) Van-Accessible Stalls

(1) When at least five (5) total parking spaces are provided at buildings and facilities subject to these regulations, one in every eight accessible stalls, but not less than one, shall be “van accessible,” and shall be specially signed as such. When fewer than five total parking spaces are provided at buildings and facilities subject to these regulations, one accessible parking space shall be provided and shall be a minimum of fourteen (14) feet wide and be lined to provide a minimum nine-foot (9') parking area and a five-foot (5') loading and unloading area, as illustrated in Figure 1 of Section 18.54.070.

However, there is no requirement that this stall be van-accessible and no requirement that it be reserved exclusively or identified for use only by persons with disabilities.

(2) All “van accessible” parking stalls may be grouped on one level of a parking structure.

- (3) **Van-Accessible Parking Stall Size.** If only one van-accessible stall is provided, it shall be seventeen (17) feet wide and lined to provide a nine (9) foot parking area and an eight (8) foot loading and unloading area on the passenger side of the vehicle. When more than one van-accessible stall is provided, in lieu of providing a seventeen (17) foot wide space for each parking stall, two stalls may be provided within a twenty-six (26) foot wide area lined to provide a nine (9) foot parking area on each side of an eight (8) foot loading and unloading area in the center. The minimum length of each parking stall shall be eighteen (18) feet. Refer to Figures 1 and 2 of Section 18.54.070

**(e) Required Number of Stalls for Medical Facilities**

At facilities providing medical care and other services for persons with mobility impairments, accessible parking stalls shall be provided in accordance with the table in subsection (c) above, except as follows:

- (1) Ten percent (10%) of the total number of parking stalls provided serving each outpatient unit or facility shall be accessible.
- (2) For units and facilities that specialize in treatment or services for persons with mobility impairments, twenty percent (20%) of the total number of parking stalls provided serving each such unit or facility shall be accessible.

**(f) Non-Van Accessible Parking Stall Sizes**

If only one non-van-accessible stall is provided, it shall be fourteen (14) feet wide and lined to provide a nine (9) foot parking area and a five (5) foot loading and unloading area on the passenger side of the vehicle. When more than one stall is provided, in lieu of providing a fourteen (14) foot wide space for each parking stall, two stalls can be provided within a twenty-three (23) foot wide area lined to provide a nine (9) foot parking area on each side of a five (5) foot loading and unloading area in the center. The minimum length of each parking stall shall be eighteen (18) feet. Refer to Figures 1 and 2 of Section 18.54.070.

**(g) Parking Stall Location**

Accessible parking stalls serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility. In buildings with multiple accessible entrances with adjacent parking, accessible parking stalls shall be dispersed and located closest to the accessible entrances.

**(h) Arrangement of Parking Stalls**

In each parking area, a bumper or curb shall be provided and located to prevent encroachment of cars over the required width of walkways. The stalls shall also be located so that a person with a disability is not compelled to wheel or walk behind parked cars other than his/her own. Accessible pedestrian ways shall be provided from each such parking stall to related facilities, including curb cuts or ramps as needed. Ramps shall not encroach into any parking stall. The following exceptions apply:

- (1) Ramps located at the front of accessible parking stalls may encroach into the length of such stalls when such encroachment does not limit the capability of a person with a disability to leave or enter his/her vehicle, thus providing equivalent facilitation. Refer to Figures 1 and 2 of Section 18.54.070.
- (2) Where the city's accessibility coordinator determines that compliance with any regulation of this subsection (h) would create an unreasonable hardship, an exception or waiver may be granted, when equivalent facilitation is provided.
- (3) Parking stalls may be provided which would require a person with a disability to wheel or walk behind other than accessible parking stalls when the city's accessibility coordinator determines that compliance with these regulations or providing equivalent facilitation would create an unreasonable hardship.

**(i) Slope of Parking Stall**

Surface slopes of accessible parking stalls and passenger loading zones shall be a minimum of 1:100 (one percent, for drainage purposes) and shall not exceed 1:50 (two percent) gradient in any direction.

**(j) Identification**

Each accessible parking stall shall be identified by a permanently affixed reflectorized sign constructed of porcelain on steel, beaded text, or its equivalent, displaying the international symbol of accessibility. The sign shall not be smaller than seventy (70) square inches in area and shall be centered at the interior end of the parking space at a minimum height of eighty (80) inches from the bottom of the sign to the finished grade of the parking space, or centered on the wall at the interior end of the parking space at a minimum height of thirty-six (36) inches from the finished grade of the parking space, ground, or sidewalk. Van-accessible parking stalls as described in subsection (d)(3) above shall have an additional sign "Van-accessible" mounted below the symbol of accessibility.

A sign shall also be posted, in a conspicuous place, at each entrance to the off-street parking facility. The sign shall be no less than seventeen (17) inches by twenty-two (22) inches in size with lettering no less than one inch in height, clearly and conspicuously stating the following:

Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or license plates issued for disabled persons may be towed away at owner's expense.  
Towed vehicles may be reclaimed at \_\_\_\_\_ or by telephoning \_\_\_\_\_.

Blank spaces are to be filled in with appropriate information as a permanent part of the sign.

In addition to the above requirements, the surface of each accessible parking stall shall have a surface identification duplicating either of the following schemes: by outlining or painting the stall in blue and painting on the ground in the stall, in white or suitable contrasting color, the international symbol of accessibility (a profile view depicting a wheelchair with occupant); or by painting the international symbol of accessibility on the ground in the stall in white on a blue background. The symbol shall be at least three feet by three feet square and be located so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space, as illustrated in Figures 1 and 2 of Section 18.54.070.

**(k) Vertical Clearance**

Entrances to and areas within parking structures shall have a minimum vertical clearance of eight feet two inches (8'2") where required for access to accessible parking stalls. The minimum vertical clearance at accessible passenger loading zones and along at least one vehicle access route to such areas from site entrance(s) and exit(s) shall be nine feet six inches (9'6"). The following exceptions apply:

- (1) Where the city's accessibility coordinator determines that compliance with this subsection would create an unreasonable hardship, an exception may be granted, when equivalent facilitation is provided.
- (2) This section shall not apply to existing buildings where the city's accessibility coordinator determines that, due to legal or physical constraints, compliance with these regulations or equivalent facilitation would create an unreasonable hardship.

**(l) Accessible Passenger Loading Zones**

If passenger loading zones are provided, then at least one passenger loading zone shall be accessible. Accessible passenger loading zones shall provide an access aisle at least five feet wide and twenty feet long adjacent and parallel to the vehicle pull-up space (refer to Figure 2 of Section 18.54.070). If there are curbs between the access aisle and the vehicle pull-up space, then a curb ramp shall be provided.

**(m) Valet Parking**

Valet parking facilities shall provide a passenger loading zone complying with subsection (l) above, located on an accessible route to the entrance of the facility. The requirements of this section apply to facilities with valet parking.

(Ord. 4964 § 3 (part), 2007)

**18.54.040 Landscaping of Parking Areas**

The following minimum standards shall be observed; however, additional landscaping may be recommended by the architectural review board and required by the director of planning and community environment pursuant to Sections 18.76.020 and 18.77.070 of the Palo Alto Municipal Code. Landscape requirements of Section 18.40.130 (Landscaping) shall also be considered in the design of parking lot landscaping.

**(a) Perimeter Landscaping**

Each unenclosed parking facility shall provide a perimeter landscaped strip at least five feet wide between and adjacent to a line defining the exterior boundary of the parking area and the nearest adjacent property line, not separated by a building. The perimeter landscaped strip may include any landscaped yard or landscaped area otherwise required, and shall be continuous except for required access to the site or to the parking facility. Where the landscaped strip adjoins a public street or pedestrian walkway, the landscaped strip may be required to include a fence, wall, berm, or equivalent feature. Where the parking facility adjoins another site, a fence, wall, or other equivalent screening feature may be required.

**(b) Interior Landscaping – Amount Required**

Interior landscaping is required within the parking facility between the perimeter landscaped area and the edge of pavement adjacent to any building on the site. Each unenclosed parking facility shall provide a minimum of interior landscaping in accord with Table 2. Where the total parking provided is located in more than one location on a site separated by differences in grade or by at least ten feet of unpaved area, each such area shall be considered a separate facility for the purpose of this requirement.

**TABLE 2  
MINIMUM INTERIOR LANDSCAPING REQUIREMENTS FOR PARKING FACILITIES**

Size of Facility (Square Feet)	Minimum Required Interior Landscaping (Percentage of Total Parking Facility Area)
Under 14,999	5%
15,000-29,999	7.5%
30,000	10%

**(c) Interior Landscaping – Layout**

- (1) Interior landscaped islands within a parking area shall have a minimum dimension of five feet by five feet, excluding curbing.
- (2) Landscaped islands shall exist for every ten spaces in a single row.
- (3) Parking lot trees shall be planted or exist for each six parking stalls. Only fifty percent of the trees located along the perimeter of the parking area may count toward the required number of trees.

**(d) Tree Canopy and Sizes**

Landscaping within surface parking areas shall include tree plantings designed to result in 50 percent shading of parking lot surface areas within 15 years. Trees required to meet any section of this title shall be a minimum fifteen gallon size, and at least twenty-five percent (25%) shall be twenty-four-inch box or larger. Fifty percent (50%) of shrubs shall be a minimum of five-gallon size. Provided, in the Site and Design Review (D) combining district, the minimum plant size requirements set forth in this section may be decreased, as set forth in Chapter 18.30(G).

**(e) Impervious Surfaces**

Areas required to be landscaped may contain no more than twenty-five percent impervious surface, exclusive of driveways and walkways needed for access to the site.

**(f) Landscape Screens**

Where this title requires a landscaped screen or buffer, a combination of trees and shrubs shall be used and the following minimum standards shall apply:

- (1) On sites abutting or located opposite a residential site, a dense visual buffer shall be provided. In addition, trees shall be planted or shall exist at a ratio of not less than one tree per three hundred square feet of the landscape screen or fraction thereof, and supplemented with shrubs and groundcover.

- (2) Landscape screens required by Chapter 18.16 (CN, CS, and CC Districts) and areas subject to Chapter 18.70 (Landscape Combining District) shall provide a dense visual buffer. In addition, trees shall be planted or in existence at a ratio of not less than one tree per six hundred square feet of the landscape screen area or fraction thereof, and supplemented with shrubs and groundcover.

**(g) Irrigation and Landscape Maintenance**

- (1) Provision shall be made for automatically irrigating all planted areas, unless the director determines that irrigation is not necessary (e.g., for xeriscape plantings).
- (2) All landscaping shall be continuously maintained.

**(h) Wheel Stops**

A permanent curb, bumper wheel stop or similar devices shall be installed which shall be adequate to protect the required sidewalks, planters, landscaped areas and structures from vehicular damage. If such protection is provided by means of a method designed to stop the wheel, rather than the bumper of the vehicle, the stopping edge shall be placed no closer than two feet from the edges of the required sidewalks or any building. The innermost two feet of each parking space (between the curb and any planter or sidewalk) may remain unpaved, be planted with low groundcover, and added to landscaping, to allow for bumper overhang.

**(j) Planters**

Architectural planters built on top of a deck covering a below-grade parking structure, and proposed to meet minimum requirements for landscaped areas, shall have a soil depth dimension of at least eighteen inches for shrubs and thirty-six inches for trees, and have drainage outlet(s) connected to a storm drain system.

**(k) Requirements for Temporary Parking Facilities**

The landscaping standards set forth above shall not apply to temporary parking facilities; however, the architectural review board, through its review, may require minimum landscaping for such facilities.

**(l) Sight Lines**

Landscaping height must meet the requirements of Section 18.54.050(b) (sight distance) within a parking lot and at the intersection of a parking facility driveway or ramp and a public street.

(Ord. 4964 § 3 (part), 2007)

## **18.54.050 Miscellaneous Design Standards**

**(a) Vertical Clearance**

All parking stalls shall have a vertical clearance of not less than seven and one-half feet, except in the R-E and R-1 single-family residence districts, where the vertical clearance shall be seven feet or greater. Accessible parking stalls and access to such stalls, must meet the requirements for vertical clearance of Section 18.54.030.

**(b) Sight Distance**

- (1) For residential uses of three or more units, and for all nonresidential uses, including public facilities, clear sight distance triangles for exiting driveways shall be provided as shown in Figure 6 of this Section 18.54.070. In the non-zero setback zone only, if a stop sign is provided at the driveway exit, the director may decrease the required dimensions of the sight distance triangles. For cases not covered by Figure 6, sight distance triangles shall be provided as required by the director. Neither the sight distance triangles nor any portion of the public right of way shall contain any wall, sign, berm, or other obstruction that is greater than three feet high above driveway grade, unless its width (measured in any direction or diameter) is eighteen inches or less. Nor shall the sight distance triangles or any portion of the public right of way contain any landscaping, except trees, that is greater than two feet in height above top of curb grade (refer also to Sections 8.04.050(a)(8) and 9.56.030(a)(10)). The height of landscaping shall be its maximum untrimmed natural growth height.
- (2) In a parking lot, within the twenty-foot triangle of public or private property, measured from the projected curb or edge lines, at the intersection of a parking lot aisle with another aisle, driveway, or pedestrian walkway, there shall be no wall, sign, berm, landscaping (except trees), or other obstruction that is greater than three feet high above parking lot grade, unless its width is eighteen inches or less. The height of landscaping shall be its maximum untrimmed natural growth height.

**(c) Additional Parking Facility Design Requirements**

Additional requirements for parking facility design, internal layout, acceptable turning radii and pavement slope, vehicular and pedestrian circulation, and other design features may be adopted by the director when deemed appropriate.

**(d) Paving and Drainage**

The following basic standards shall be observed:

- (1) In all districts, parking and loading facilities shall be surfaced and maintained with permanent pervious or impervious surfacing material sufficient to prevent mud, dust, loose material, and other nuisances, subject to approval by the city engineer.
- (2) In the OS and AC districts, and for temporary parking facilities in any district, gravel surfacing shall be permitted as approved by the city engineer.
- (3) All parking and loading facilities shall be graded and provided with permanent storm drainage facilities, meeting the construction specifications set by the city engineer. Surfacing, curbing, and drainage improvements shall be sufficient to preclude free flow of water onto adjacent properties or public streets or alleys, and to preclude standing pools of water within the parking facility.
- (4) Paving and drainage approaches for parking facilities shall be integrated with storm water protection approaches, consistent with Section 18.40.150 (Storm Water Quality Protection) of this title.

**(e) Safety Features**

Parking and loading facilities shall meet the following standards:

- (1) Safety barriers, protective bumpers or curbing, and directional markers shall be provided to assure safety, efficient utilization, protection to landscaping, and to prevent encroachment onto adjoining public or private property.
- (2) Visibility of and between pedestrians, bicyclists, and motorists shall be assured when entering individual parking spaces, when circulating within a parking facility, and when entering and exiting a parking facility.
- (3) Internal circulation patterns, and the location and traffic direction of all access drives shall be designed and maintained in accord with accepted principles of traffic engineering and traffic safety.

**(f) Lighting**

Lights provided to illuminate any parking facility or paved area shall, to the maximum extent feasible, be designed to reflect away from any residential use or any riparian corridor.

**(g) Noise**

Areas used for primary circulation, for frequent idling of vehicle engines, or for loading activities shall be designed and located to minimize impacts on adjoining properties, including provisions for screening or sound baffling.

**(h) Maintenance**

All parking and loading facilities shall be maintained to assure desirability and usefulness of the facility. Such facilities shall be maintained free of refuse, debris, or other accumulated matter and shall at all times be available for the intended off-street parking or loading use for which they are required or intended.

**(i) Application of Design Standards to Other Paved Areas**

The standards of this section apply to all paved areas used for outdoor display, storage, sales, or other purposes associated with permitted and conditional office, commercial, or industrial uses.

(Ord. 4964 § 3 (part), 2007)

**18.54.060 Bicycle Parking Facilities**

Bicycle parking facilities shall be provided for new buildings, addition or enlargement of an existing building, or for any change in the use that results in the need for additional vehicle parking facilities consistent with the parking requirements contained within Section 18.52.040. Bicycle parking facilities required by Section 18.52.040 may contain bicycle parking elements of the types described in subsection (a) below, and arranged according to the layout requirements described in (b) below. The department of planning and community environment maintains a list of Approved, Conditionally Approvable, and Prohibited types of bicycle racks and bicycle lockers. Bicycle racks and lockers not on the “Approved” list must be approved by the director. Likewise layout diagram examples

specifying clearances and other aspects of bicycle parking areas are also available from the department of planning and community environment.

**(a) Types of Facilities**

Bicycle parking is designed for two types of uses: long-term and short-term. Depending on use, a bicycle parking facility may be a bicycle rack, a bicycle locker, or a multifamily dwelling unit storage locker, a restricted access enclosure, or a school bicycle enclosure as described below.

**(1) Short-Term Bicycle Parking (Bicycle Racks)**

Short-term bicycle parking is intended for shoppers, customers, and visitors who require bicycle storage for up to several hours.

**(A) Bicycle Rack**

An acceptable bicycle rack is a stationary object to which the bicycle user can lock the frame and one or both wheels of a bicycle with a user-provided high-security U-shaped lock (“U-lock”) or cable, and which is either anchored to an immovable surface or is heavy enough that it cannot be easily moved.

*(i) Intended Use*

Bicycle racks located in publicly accessible areas are intended for short-term parking, to encourage shoppers, customers, and visitors to use bicycles.

*(ii) Performance*

All bicycle racks provided pursuant to this ordinance shall support a bicycle by its frame in a stable upright position with both tires on the ground or floor, without damage to the bicycle or its finish. The parts of the rack that secure the bicycle shall resist disassembly and cutting with manual tools. Bicycle racks should provide independent access to parked bicycles without the need for awkward movements even when the rack is fully loaded.

**(2) Long-Term Bicycle Parking**

Long-term bicycle facilities are intended for bicyclists who need to park a bicycle and its components and accessories for extended periods during the day, overnight or for a longer duration. Long-term bicycle storage is typically for employees, students, residents and commuters. The facility frequently protects the bicycle from inclement weather. Four design alternatives for these facilities are as follows:

**(A) Bicycle Locker**

A bicycle locker is a fully enclosed space for one bicycle, accessible only to the owner or operator of the bicycle. It protects the entire bicycle, its components and accessories from theft and inclement weather, including wind-driven rain. Bicycle lockers may be pre-manufactured or may be designed for individual sites.

*(i) Intended Use*

Bicycle lockers are the preferred long-term storage option for employees or residents.

(ii) *Locking Device*

Internal Lock. A bicycle locker must be equipped with an internally mounted key-actuated or electronic locking mechanism, and not lockable with a user-provided lock. Groups of internal-lock bicycle lockers may share a common electronic access mechanism provided that each locker is accessible only to its assigned user.

External Lock. An external-lock such as padlock hasps are not acceptable for most uses. External lock bike lockers may be permitted in shopping centers with the approval of the director on a case-by-case basis.

(B) *Restricted-Access Bicycle Enclosure*

A restricted-access bicycle enclosure is a locked area containing within it one bicycle rack space for each bicycle to be accommodated, and accessible only to the owners or operators of the bicycles parked within it. The maximum capacity of each restricted-access bicycle enclosure shall be 20 bicycles unless approved by Transportation Division staff. The doors of such enclosures must be fitted with key or electronic locking mechanisms that admit only users and managers of the facility. The enclosure doors must close and lock automatically if released.

In multiple-family residential developments, a common locked garage area incorporating bicycle racks shall be deemed a restricted-access bicycle enclosure provided that the garage is accessible only to the residents of the units for whom the garage is provided. In such cases it is preferable that the bicycle storage area within the garage be separately enclosed and secured to enable access only by bicycle owners.

*Intended Use*

A restricted access enclosure is an alternative long term bicycle storage option for commercial and multifamily residential projects.

(C) *Multifamily Dwelling Unit Storage Locker*

A multifamily dwelling unit storage locker is a locked area separate from the dwelling unit, secured by a lock that can be opened only by the occupants of the respective dwelling unit.

*Intended Use*

A multifamily dwelling unit storage locker is intended for long-term storage of household possessions that are not kept in the dwelling unit, including bicycles.

*Configuration*

In multiple-family developments, the required bicycle storage and household storage areas for each dwelling unit may be combined into a multifamily dwelling unit storage locker assigned to that unit, provided that the total space requirement shall be the sum of the household storage and bicycle storage requirements computed separately. A usable space 2' wide by 6' long shall be provided for each stored bicycle.

(D) School Bicycle Enclosure

A school bicycle enclosure is a locked area at a primary, middle or secondary school, containing within it one bicycle rack space for each bicycle to be accommodated. The doors of such enclosures must be fitted with locking mechanisms that admit only school and maintenance staff, and must close and lock automatically if released. School bicycle enclosures should be kept locked except during student arrival and departure periods. The student bicycle parking requirement for a school may be provided by two or more enclosures where students arrive on bicycles from two or more points along the school perimeter.

**(b) Bicycle Facility Design Standards**

(1) Location

- (A) Neither short-term nor long-term bicycle parking areas shall be located inside occupied buildings.
- (B) All bicycle parking areas shall be located at street floor level, or equivalent in a parking garage. In underground garages, only long-term bicycle parking is allowed and such bicycle parking facilities must be located near employee elevators or stairwells.
- (C) Short-term bicycle parking shall be located within 50 feet of a main visitor entrance(s). Where there is more than one building on a site or where a building has more than one main entrance, the short-term bicycle parking must be distributed to serve all buildings or main entrance(s).
- (D) Long-term bicycle parking shall be situated at least as conveniently as the nearest convenient vehicle parking area.

(2) Layout

- (A) Convenient access to bicycle parking areas shall be provided. Where access is via a sidewalk or pathway, or where the bicycle parking area is next to a street, curb ramps shall be installed where appropriate. A twenty-four-inch side clearance shall be provided between walls or other obstructions and the centerline of the bicycles parked on the nearest bicycle rack.
- (B) Bicycle facilities shall be separated from vehicle parking and circulation areas by a physical barrier or by a distance sufficient to protect parked bicycles from damage by vehicles, including front and rear overhangs of parked or moving vehicles.
- (C) If more than 10 short-term spaces are required, at least fifty percent (50%) must be covered.
- (D) A four foot (4') wide aisle shall be provided to allow bicycles to maneuver in and out of the bike parking areas and between rows of bicycle parking facilities. An aisle into which the door of a bicycle locker opens shall be at least 5' wide. Aisle width shall be measured between the rectangular areas that bicycles will occupy when parked on bicycle racks and/or the surface area occupied by bicycle lockers

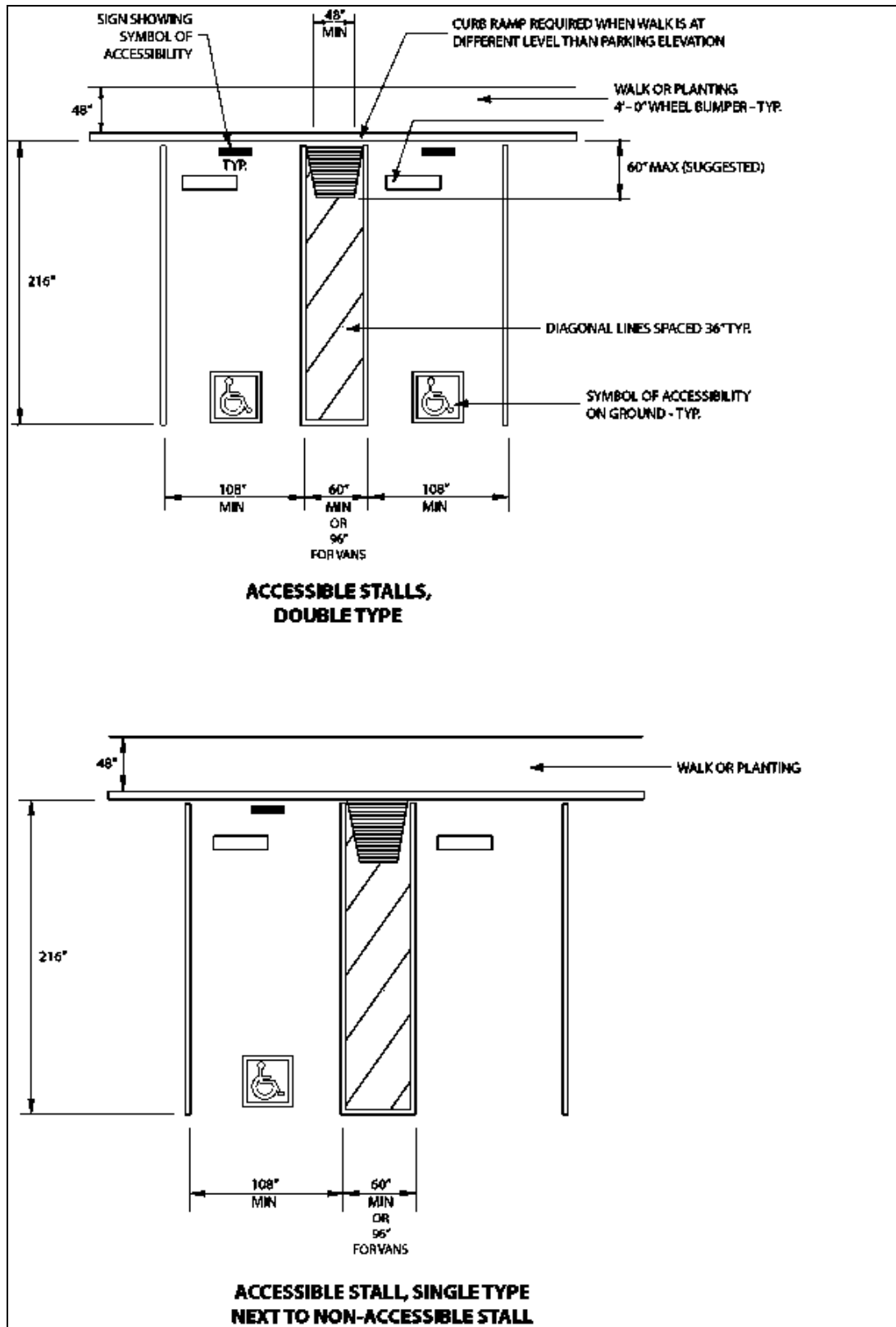
- (E) Where a public sidewalk or walkway serves as an aisle of a bicycle parking area and bicycles are parked perpendicular to that sidewalk or walkway, an additional 12" of paved area shall be provided between the sidewalk and the area occupied by adjacent parked bicycles.
  - (F) Where a public sidewalk or walkway serves as an aisle of a bicycle parking area and the doors of bicycle lockers open toward that sidewalk or walkway, the lockers shall be set back so an open door does not encroach onto the main travel width of the sidewalk or walkway.
- (3) Paving
- Bicycle parking areas shall be paved. Aisles and primary access areas shall be paved with asphalt or concrete. Bicycle parking areas may be surfaced with alternate paving materials as approved by the director.
- (4) Lighting
- Lighting of not less than one foot-candle of illumination at ground level shall be provided in both exterior and interior bicycle parking areas.
- (5) Signage
- (A) Where bicycle parking areas are not clearly visible to approaching bicyclists, signs shall be posted at the building entrance to direct cyclists to the facilities. (MUTCD sign D4-3 for bicycle parking). For bicycle parking areas intended for visitors, that entrance shall be the building's main entrance. For bicycle parking areas intended for employees, that entrance shall be the employee entrance served by the bicycle parking area.
  - (B) Long-term bicycle parking areas that incorporate bicycle lockers shall be identified by a sign at least 12"x12" in size that lists the name or title, and the phone number or electronic contact information, of the person in charge of the facility.
  - (C) Signs for restricted-access bicycle enclosures shall state that the enclosure shall be kept locked at all times.
- (6) Approval
- (A) The director shall have the authority to review the design of all bicycle parking facilities required by this chapter with respect to safety, security, and convenience.
  - (B) Where bicycle lockers or restricted access bicycle enclosures are required for a use, the director may approve secure bicycle storage facilities providing the same level of security. The Transportation Division must approve bicycle parking areas located in parking garages.

(Ord. 4964 § 3 (part), 2007)

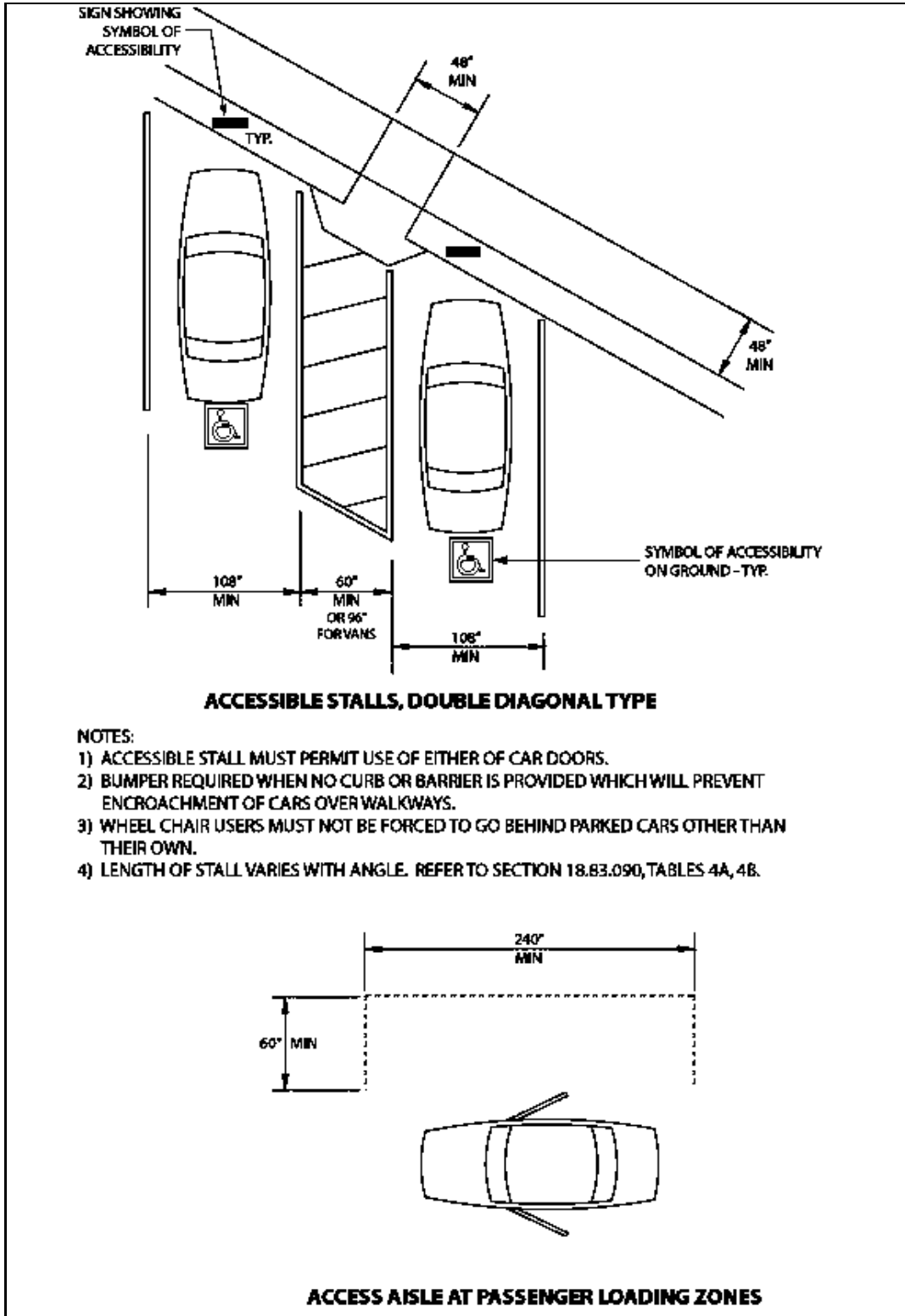
## **18.54.070 Parking Design Tables and Figures**

Parking design tables and figures referred to elsewhere in this chapter are provided on the following pages.

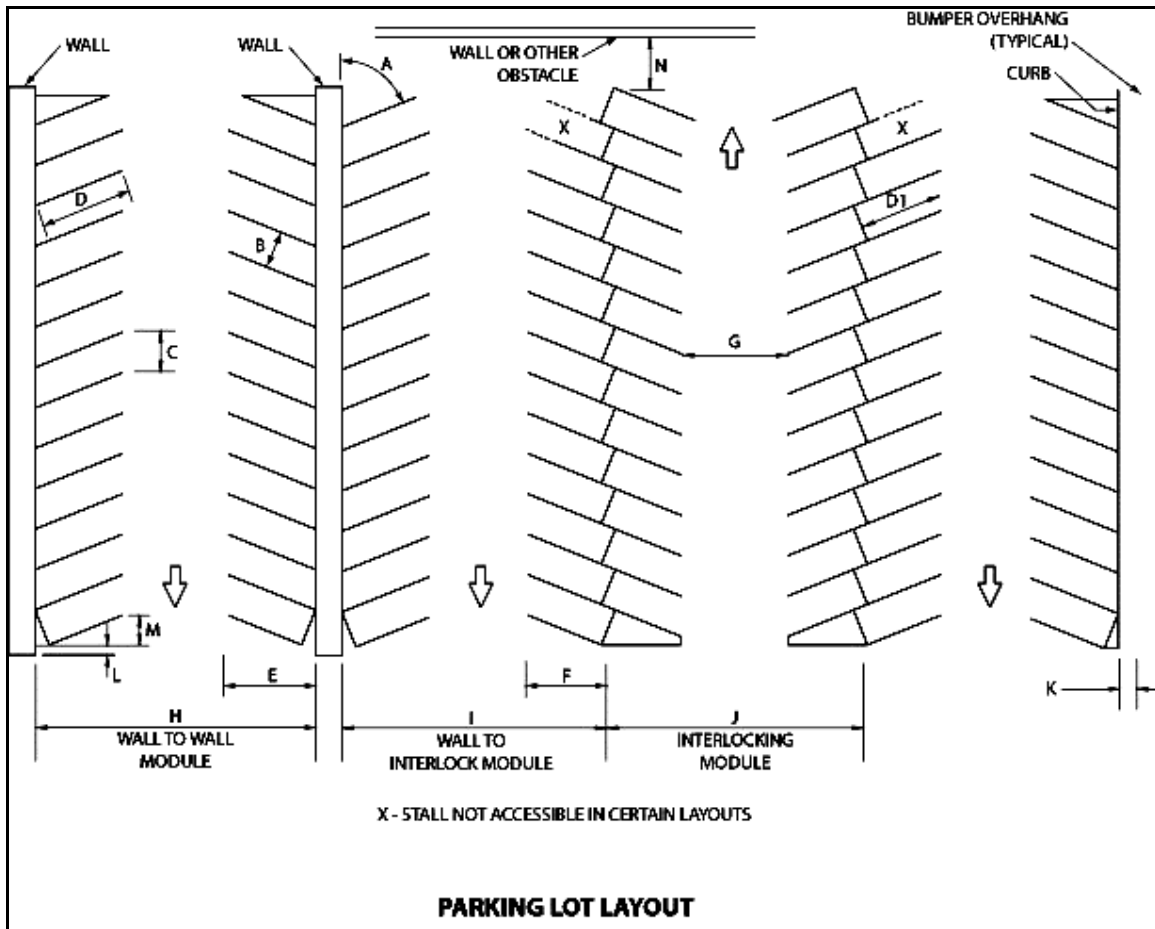
**FIGURE 1  
ACCESSIBLE STALLS, DOUBLE AND SINGLE**



**FIGURE 2**  
**ACCESSIBLE STALLS, DOUBLE DIAGONAL AND ACCESS AISLES**



**FIGURE 3  
PARKING LOT LAYOUT**



**TABLE 3**  
**PARKING LOT LAYOUT DIMENSIONS FOR**  
**UNI-CLASS PARKING STALLS<sup>a</sup> FOR VARIOUS STALL WIDTHS (FEET)**

Dimension On Diagram (Figure 3)									
A	B	C	D/D	E	F	G	H	I	J
Parking Dimensions (Feet <sup>b</sup> )									
Parking Angle and Vehicle Size	Stall Width	Stall Width Parallel to Aisle	Stall Length	Stall Depth to Wall	Stall Depth to Interlock	Aisle Width Between Stall lines	Module Wall to Wall	Module Wall to Interlock	Module, Interlock to Interlock
<b>45 PARKING</b>									
	8.5	12.0	24.4/21.2	17.25	15.00	13.0	48	46	43
	9.0	12.7	24.4/21.2	17.25	15.00	12.0	47	45	42
	9.5	13.4	24.4/21.2	17.25	15.00	11.0	46	44	41
<b>60 PARKING</b>									
	8.5	9.8	21.4/19.7	18.50	17.00	18.0	55	54	52
	9.0	10.4	21.4/19.7	18.50	17.00	16.0	53	52	50
	9.5	11.0	21.4/19.7	18.50	17.00	15.0	52	51	49
<b>75 PARKING</b>									
	8.5	8.8	20.9/20.2	18.50	18.00	23.0	60	59	58
	9.0	9.3	20.9/20.2	18.50	18.00	22.0	59	58	57
	9.5	9.8	20.9/20.2	18.50	18.00	21.0	58	57	56
<b>90 PARKING</b>									
	8.5	8.5	17.5/17.5	17.50	17.50	25.0	60	60	60
	9.0	9.0	17.5/17.5	17.50	17.50	24.0	59	59	59
	9.5	9.5	17.5/17.5	17.50	17.50	23.0	58	58	58

- a. The required stall widths shall be increased by 0.5 foot if a stall is immediately adjacent to a wall on one or both sides. If there are walls on both sides of a stall, the increase shall still be 0.5 foot.
- b. Module widths rounded to whole foot.

**TABLE 4  
DRIVEWAY DIMENSIONS FOR MULTIPLE-FAMILY  
RESIDENTIAL USES OF 3 TO 10 UNITS**

Dimension (Feet)		Urban	Rural
<b>Width, excluding flares or curb radius<sup>a, b</sup></b>			
Minimum (one-way)			
	paved width	8	12
	total width <sup>c</sup>	10	12
Minimum (two-way)			
	paved width	14	24
	total width <sup>c</sup>	16	24
	Maximum (one-way)	20	30
	Maximum (two-way)	33	35
<b>Right turn radius<sup>d</sup></b>			
	Minimum	10	15
	Maximum	30	50
<b>Minimum Spacing<sup>e, f</sup></b>			
	From side property line	5	0
	From street corner	10	15
<b>Angle<sup>g</sup></b>		75°	75°

- a. Two-way ramps for above or below ground parking facilities must meet the requirements of Figure 5 except that the minimum width may be 16 feet instead of 18 feet.
- b. In special cases, the Uniform Fire Code, Section 10.207, may require two-way driveways to be a minimum of 20 feet wide.
- c. The total width shall be free of obstacles to vehicular and pedestrian use.
- d. On the side of driveway exposed to entry or exit by right-turning vehicles. Applicable only to driveways with curb radius.
- e. Minimum spacing is measured along the front property line from the driveway throat to the side property line, or to a line passing through the intersection curb return (see Figure 5). For additional requirements regarding driveway location, including spacing between two driveways on the same property, refer to Section 12.08.060(9).
- f. For driveways on collector or arterial streets, the chief transportation official may require increased spacing from the street corner.
- g. Minimum acute angle measured from edge of pavement.

**TABLE 5  
DRIVEWAY DIMENSIONS FOR MULTIPLE-FAMILY RESIDENTIAL USES  
OF 11 UNITS OR MORE AND FOR ALL NONRESIDENTIAL USES**

Dimension (Feet)		Urban	Rural
<b>Width, excluding flares or curb radius</b>			
	Minimum (one-way)	12	15
	Minimum (two-way) <sup>a</sup>	20	30
	Maximum (one-way)	20	30
	Maximum (two-way)	33	35
<b>Right turn radius<sup>b</sup></b>			
	Minimum	10	15
	Maximum	30	50
<b>Minimum Spacing<sup>c, d</sup></b>			
	From side property line	5	0
	From street corner	10	15
<b>Angle<sup>e</sup></b>		75°	75°

- For ramp width for above or below ground parking facilities, please refer to Figure 5.
- On the side of driveway exposed to entry or exit by right-turning vehicles. Applicable only to driveways with curb radius.
- Minimum spacing is measured along the front property line from the driveway throat to the side property line, or to a line passing through the intersection curb return (see Figure 5). For additional requirements regarding driveway location, including spacing between two driveways on the same property, refer to Section 12.08.060(9).
- For driveways on collector or arterial streets, the chief transportation official may require increased spacing from the street corner.
- Minimum acute angle measured from edge of pavement.

**TABLE 6  
DRIVEWAY DIMENSIONS FOR SINGLE FAMILY AND TWO-FAMILY RESIDENTIAL USES**

Dimension (Feet)		Urban	Rural
<b>Width, excluding flares<sup>a</sup></b>			
	Minimum		
	paved width	8	8
	total width <sup>b</sup>	10	10
	Maximum	20	30
<b>Angle<sup>c</sup></b>		75°	75°

- Minimum driveway widths for flag lots in "Urban" and in "Rural" area shall be 15 feet.
- The total width shall be free of obstructions to vehicular and pedestrian use.
- Minimum acute angle measured from edge of pavement.

**Note:** For additional requirements regarding driveway location, including spacing between two driveways on the same property, refer to Section 12.08.060(9).

FIGURE 4  
MEASUREMENT OF MINIMUM SPACING

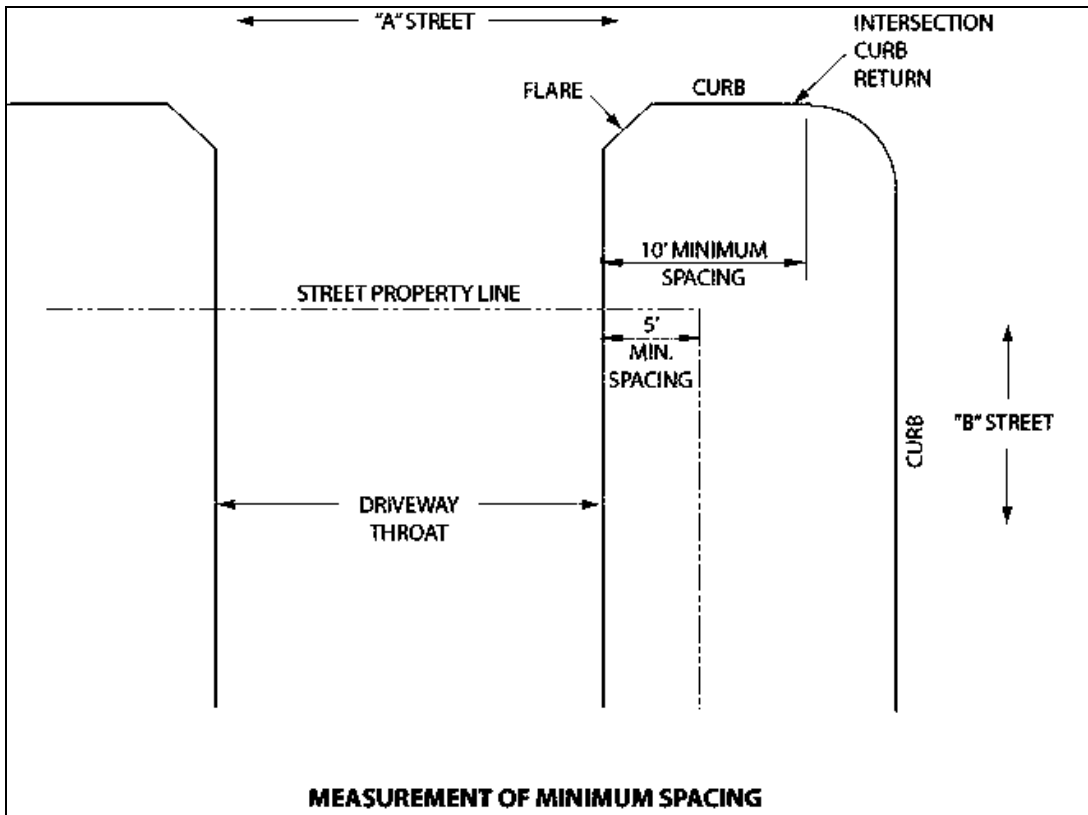
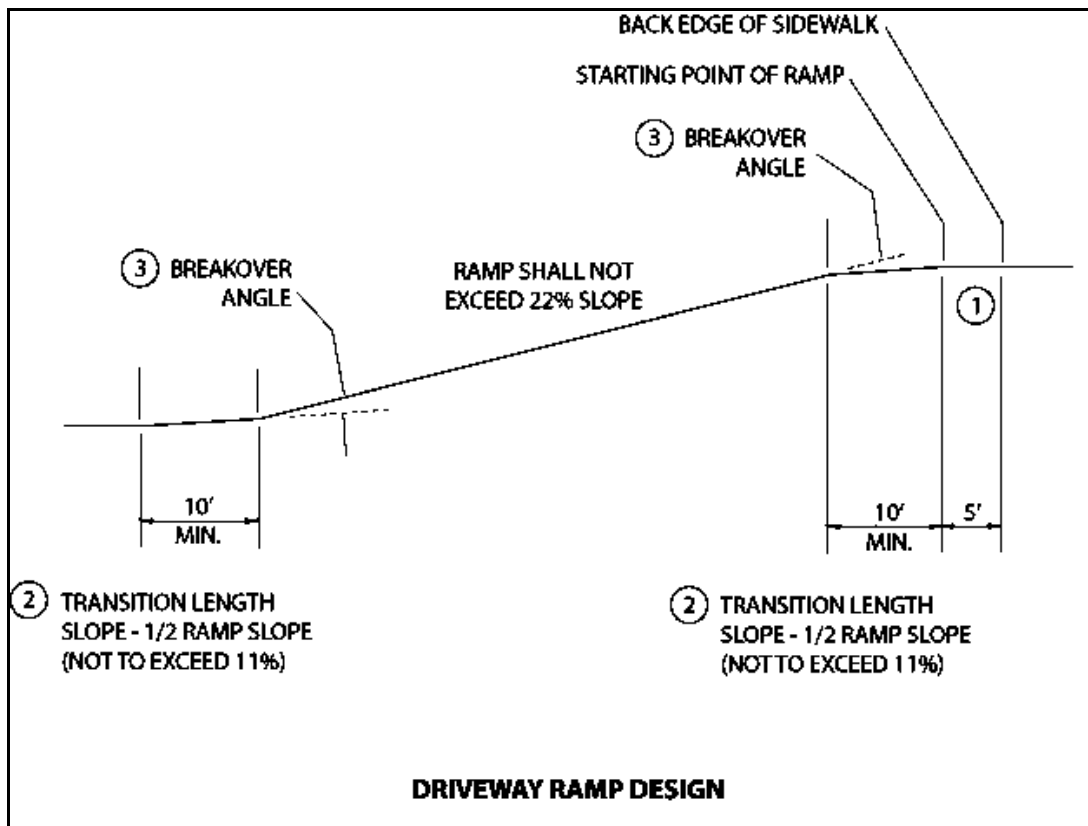


FIGURE 5  
DRIVEWAY RAMP DESIGN



1. A distance of 5 feet shall be maintained at the same slope as the sidewalk from the back edge of the sidewalk to the starting point of the ramp.
2. The first and last 10 feet of the slope grade (transition length) shall not exceed 11 percent.
3. The remaining portion of the ramp shall not have a slope greater than 22 percent and the breakover angle (see Figure 5) shall not exceed ten degrees ( $10^{\circ}$ ).
4. Minimum ramp width (two-way) for above or below ground parking facilities shall be 18 feet.
5. The slope of all parking areas shall not exceed seven percent.

**FIGURE 6  
DRIVEWAY RAMP SETBACK ZONES**

