



Bikeable Design

a toolkit for bike-friendly development



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Also see Project Acknowledgements at end of Guide.

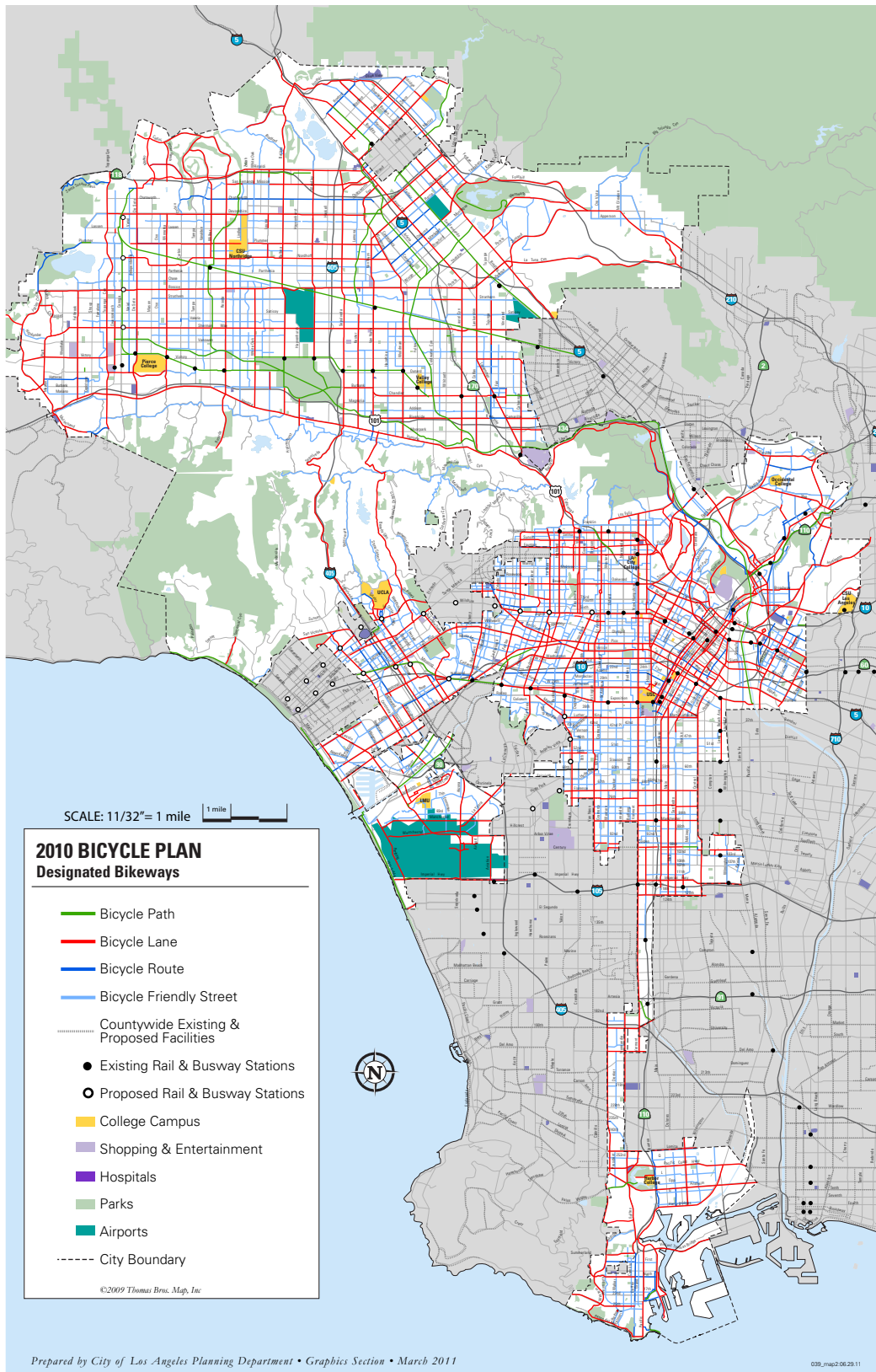


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This toolkit was developed as a comprehensive client project for Sheridan/Hawkes submitted in partial satisfaction of the requirements for the degree, Master of Arts in Urban Planning at UCLA by Shelma Jun.

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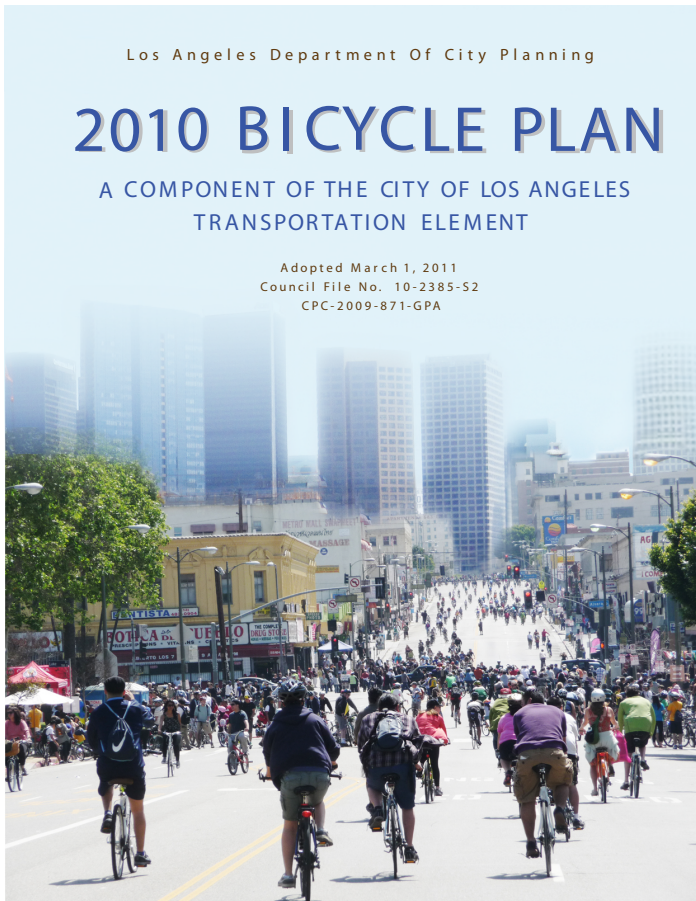
2010 Bicycle Plan Map



City of Los Angeles Bikeways

Information and maps of the existing, upcoming, and overall bike network are available at Los Angeles Department of Transportation Bicycle Services.

http://www.bicyclela.org/maps_main.htm



City of Los Angeles Bikeways

The Bicycle Plan, Technical Handbook, and Five Year Implementation Strategy documents are available at the Los Angeles Department of City Planning.

http://www.planning.lacity.org/cwd/gnlpln/transelt/NewBikePlan/TOC_BicyclePlan.htm

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Chapter One: Introduction

This chapter presents information on the toolkit's:

- background
- purpose
- intended audience
- intended role in the bicycle planning process

Organization

This toolkit is organized into five chapters. Chapters 2 through 4 contain the toolkit's design guidelines.



Photo by Georgia Sheridan



Photo by Eric Richardson



Photo by Alison Manushkin



Photo courtesy of imagebroker.net



Photo courtesy of Inhabitat.com

Chapter 1: Introduction

Outlines the toolkit's background and purpose.

Chapter 2: Key Design Strategies

Provides an easy-to-use list of key applicable design strategies for planning staff and developers to use during the planning process.

Chapter 3: Design Toolkit

Provides recommended design strategies to create a bike-friendly private development.

Chapter 4: Site Typologies

Outlines design strategies for common land uses (i.e. retail, office, multi-family residential).

Chapter 5: Resources

Provides resources and acknowledgements.

Background & Purpose

BACKGROUND

While bicycles were an important form of transportation in American cities during the early 1900s, their importance waned post-WWII with the boom of automobiles and the proliferation of auto-oriented development. In the last thirty years, bicycling has regained momentum as an alternative mode of transportation in many large U.S. cities and has spurred a slow yet steady growth of public investment into bicycle infrastructure. During this time period, the number of annual bicycle trips has more than doubled, from 1.7 billion annual trips in 1990 to 4.0 billion annual trips in 2009.

In 2011, the City of Los Angeles approved the updated Los Angeles Bicycle Master Plan which documents the plans, methods, and goals of the City to improve its bicycle infrastructure. The document plans for a future network of 1,680 miles of interconnected bikeways, including more than 200 miles of new bicycle routes every five years. The City continues to improve bicycling conditions in Los Angeles after the passage of the Master Plan by adopting bicycle parking regulations for private developments effective March 2013. In March 2012, after 37 years, Los Angeles County adopted a new Bicycle Master Plan. These documents, along with the recent announcement that the City of Los Angeles will pursue a bike share program, are changing the landscape of bicycle planning in the Los Angeles area.

The purpose of this toolkit is to provide a widely applicable set of design interventions to help create bike-friendly development in Los Angeles.

PURPOSE

The toolkit is intended for developers, planners, designers, and any other interested parties who seek guidance on how to implement effective bicycle facilities and amenities into private development to create a more bicycle-friendly city. It contains the requirements from the City of Los Angeles bicycle parking regulations along with recommendations for best practices from around the world. This toolkit should be used during the early stages of site and building design to help identify where and what type of bicycle infrastructure should be included in the site for new development. The toolkit can also be used as a guide for existing development to retrofit their site and building for improved bikeability.

CONTENTS

The toolkit provides a set of design strategies to create bike-friendly development. The design strategies are organized into several categories to address common issues and questions that arise when creating bike-friendly development (i.e. how much bike parking is needed? where should the parking be placed? how do bicyclists find bike parking?)

The toolkit also addresses when and where the design strategies should be used according to different site typologies (i.e. office, multi-family, commercial) to explain how bicycle needs vary with different land uses.

A simple design checklist can be found on pages 6-7 to provide a quick reference guide and summary of all the design tools in this document.

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Chapter Two:

Key Design Strategies

This chapter provides a quick, easy-to-use list of the key design strategies for bicycle planning that are discussed later in Chapters 3 and 4. This overview is intended as a reference guide for planners and developers to use during the planning process.

BIKEABLE TOOLKIT: KEY DESIGN STRATEGIES

Short-term Parking

1. Determine the amount of short-term parking needed on-site. See pp. 10-11 for reference.
2. Design parking fixture so that the bicycle has two points of contact for support, and ensure that one wheel and frame can be securely attached to the fixture.
3. Install parking fixture at sidewalk grade.
4. If in a parking garage, locate parking on the level closest to the ground level and near primary entrance to the building.
5. Locate parking fixtures within 50 feet of the building entrance with a clear line of sight between street and building.
6. Design parking space with minimum dimensions of 6 feet (length) by 2 feet (width).
7. Arrange parallel racks at a minimum of 36 inches from each other.
8. Install fixtures per Americans with Disabilities Act guidelines to maintain minimum accessible routes between the rack and curb, building, or other street fixtures.



Long-term Parking

1. Determine the amount of long-term parking needed on-site. See pp. 12-13 for reference.
2. Design parking fixture so that bicycle has two points of contact for support and ensure that one wheel and frame can be securely attached to the fixture.
3. Enclose bike racks above and on all sides and protected from the elements.
4. Locate in a secure, limited access area that is:
 - a) Accessed through key or key card or
 - b) Located in plain view of parking attendant or security guard.
5. If in a parking garage, locate parking on the level closest to ground level.
6. Design parking space with minimum dimensions of 6 feet (length) by 2 feet (width).
7. Arrange parallel racks a minimum of 36 inches from each other.
8. Provide a minimum of 5 feet of headroom for single-tier bicycle parking and a minimum of 4 feet of headroom for each tier for two-tier bicycle parking.
9. In mixed use developments, separate long-term parking requirements for residential and commercial uses and place in a convenient location for each user.
10. Install fixtures per Americans with Disabilities Act guidelines to maintain minimum accessible routes between the rack and curb, building, or other street fixtures.



: Multi-family Residential



: Commercial - Retail



: Commercial - Office

Facilities

1. Determine the number of showers needed on-site. See p. 14 for requirements.
2. Locate showers where easily accessible from long-term bicycle parking area.
3. Determine the number of clothing lockers needed on site. See p. 15 for reference.
4. If showers are gender separated, provide clothing lockers in both areas.
5. Use two-tiered clothing lockers. Standard dimension for lockers are 12 inches wide, 18 inches deep and 30 inches high.
6. Include basic bicycle repair tools (see p. 16), stand-up bicycle pump and a marked 4 feet by 8 feet workshop area for the bicycle repair station.



Wayfinding Signs

1. Place clear, simple signs at primary building entrances directing users to long-term bicycle parking.
2. Place clear, simple signs at the location of long-term bicycle parking directing users to the primary pedestrian entrance of building.
3. Communicate the existence and direction of bicycle parking with signage that is visible from a traveling bicycle.
4. Place clear, simple signs at long-term bicycle parking areas to direct users to shower and clothing locker facilities.



Lighting

1. Provide a well-lit path from the building entrance to both short-term and long-term bicycle parking.
2. Clearly light short-term, long-term parking, and wayfinding signs.
3. Use direct "dark sky" compliant lighting that is consistent and glare-free to provide even light distribution.
4. Equip shower and clothing locker facilities with motion sensor lights that are triggered immediately upon entrance.



Network Connections

1. Connect bike facilities on private property to larger transportation network (street grid, Metro stops and stations, bicycle trails, lanes, routes, etc) with safe and clearly articulated pathways and crossings with adequate lighting and wayfinding signage. See p.19 for discussion.
2. Innovative approaches not covered in this toolkit are encouraged and will be considered by the City. See p.20 for examples.



: Multi-family Residential



: Commercial - Retail



: Commercial - Office

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Chapter Three:

Design Toolkit

This chapter details the key tools and strategies for creating a bike-friendly development, and discusses the recommended locations, typical dimensions, and key considerations for designing and installing bicycle infrastructure and amenities.

The recommendations in this Chapter are developed through research on bicycle parking guidelines and ordinances in the U.S. and through interviews with professionals in real estate development, planning, and the bicycle advocacy community in Los Angeles.

Parking: Short-Term

Short-term parking is typically intended for a stay of less than two hours. Short-term parking also can refer to a trip that is not made on a regular basis.

Short-term parking facilities should be located close to the building or shop entrance for safety and convenience. If short-term bicycle parking is located too far from the entrance, often bicyclists will lock their bike to a piece of street furniture or fence.

Typical Users:

- Customers of retail, food and drink and personal services.
- Clients of medical, financial and other professional services.
- Guests of multi-family residential buildings.

Location:

- Locate parking no more than 50 feet from the main entrance. If there are multiple entrances, short-term parking should be split evenly among all main pedestrian entrances.
- Install parking at sidewalk grade (preferred). If located in a parking garage, install parking on the ground floor or level closest to the primary pedestrian entrance.
- Locate parking to maintain accessible routes free and clear per ADA requirements.

Recommended Equipment:

- Inverted U-rack on sidewalk.
- Multiple racks parallel to each other to accommodate more bicycles. (See Figure 1 & 2)
- Bicycle Corrals in parking lots. (See Figure 3)
- Specialty Art Racks. (See Figure 4)

Security:

Note: High visibility is the best security.

- Place racks where easily visible, with a clear line of sight from building entrance, near busy areas, and from street. When placed in highly visible places with “eyes on the street,” bike are policed informally by passersby.

Reference Tools:

- Adequate Lighting. See Lighting Section.
- Appropriate and applicable wayfinding signage. See Wayfinding Signs Section.
- See Network Connections Section.
- See Resources Chapter.

Other Important Features:

- If more than 20 short-term parking spaces are provided, at least 50% of the spaces should be covered by a roof or overhang.
- Parking fixtures should be securely anchored to the ground.
- Parking fixtures should have two points of contact (i.e. one wheel and the frame) to prevent it from falling over.
- A bike rack should allow one wheel and frame to be securely locked to it. (See Figure 5)
- Parking should meet all ADA requirements for Accessible Sites and Exterior Facilities: New Construction.

Parking: Short-Term (cont'd)

Figure 1: City Bicycle Parking Ordinance Minimum Requirements and Preferred Spacing.

Recommended Bike Rack: Minimum 36 inches tall and 24 inches wide. Racks installed parallel to walls shall be a minimum of 30 inches from the wall.

Bike Space: Minimum 6 feet long and 2 feet wide.

Bike Rack: Minimum 5 feet between rack and curb, walls, fence, automobile parking space, building or street furniture for maneuvering. Racks installed parallel from walls shall be a minimum of 30 inches from the wall.

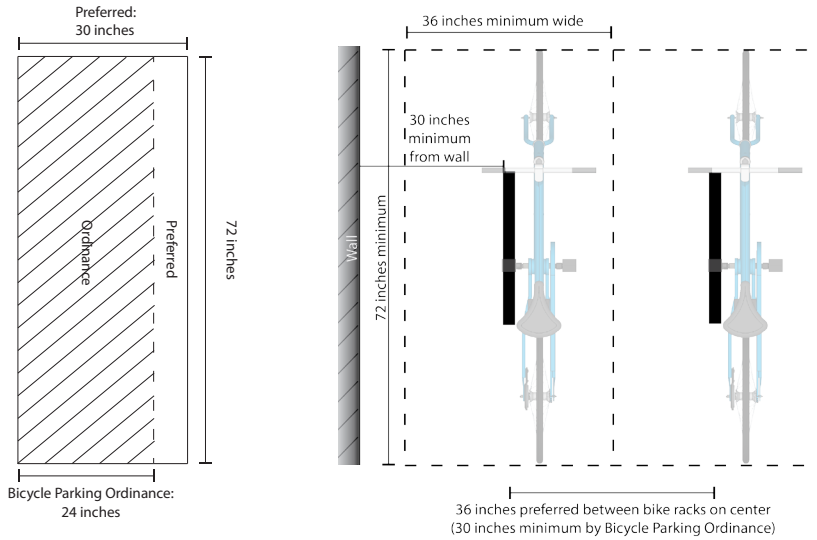


Figure 1a: Plan view bike parking space.

Figure 1b: Plan view bike rack.

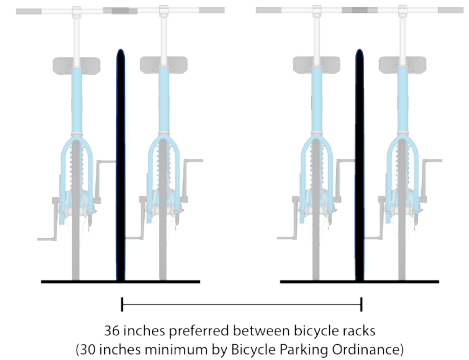


Figure 1c: Elevation view surface bike parking



Photo by CTS Brazil

Figure 2: Bike Rack Placement Highly visible bicycle racks that are close to the entrance will encourage more people to bicycle to and from the site.



Photo courtesy of Press-Telegram

Figure 3: Bike Corrals Bicycle corrals can be a good way to accommodate up to 10 bikes in one automobile parking space. They are especially useful in places like shopping centers.



Photo courtesy of David Byrne

Figure 4: Art Racks These decorative racks can add a personal touch and help with neighborhood identification. Art racks are acceptable as long as they contain all the important features listed on the previous page.



Photo by Shelma Jun

Figure 5: Important Features When the bicycle can touch the rack in two places, it prevents bicycles from being knocked over. In order to safely lock a bicycle, one wheel and frame should be able to be u-locked to the rack.

Parking: Long-Term

Long-term parking is often defined as parking that accommodates bicycles for longer than two hours or for people who travel regularly to the same destination, such as work or home.

When bicyclists are staying for a longer period of time, their needs and expectations of security increase. Security and weather protection become more important than convenience and proximity.

Typical Users:

- Tenants of all ages in multi-family residential buildings.
- Employees at commercial/office buildings.
- Employees at retail, food and drink, and personal services.

Location:

Long-term parking can be located farther away from the primary building entrance than short-term parking as long as it is secure and there are signs directing users to the location. Typical long-term bicycle parking locations include:

- Parking lockers or cages inside a building on the ground floor or primary building entrance level
- Designated area on ground floor of parking garage.
- Designated space within owner's work or living space (See Figure 7).
- Locate parking to maintain accessible routes free and clear, per ADA requirements.

Recommended Equipment:

Some standard examples are:

- Bicycle cages or rooms. (See Figure 8)
- Single or two-tiered bicycle parking systems. (See Figure 9)
- Vertical bicycle racks. (See Figure 10)
- Bicycle Lockers. (See Figure 11)
- Station with attendant. (See Figure 12)

Security:

Note: Long-term parking facilities should have a higher degree of security and protection than short-term parking.

- Facilities should have key or keycard access to cages, rooms or lockers.
- If facilities are not secure, then bike parking should be located in plain view of a parking attendant/security guard, near busy areas close to public amenities, or in plain view of bicycle owner.

Other Important Features:

- Parking fixtures should have two points of contact (i.e. one wheel and the frame) to prevent it from falling over. (See Figure 6)
- Parking areas should be covered and enclosed on all sides to protect from the elements. (See Figure 6)
- In mixed-use developments, parking for residents and commercial users should be separated.
- Parking should meet all ADA requirements for Accessible Sites and Exterior Facilities: New Construction.

Reference Tools:

- Adequate Lighting. See Lighting Section.
- Appropriate and applicable wayfinding signage. See Wayfinding Signs Section.
- See Network Connections Section.
- See Resources Chapter.

Parking: Long-Term (cont'd)

Figure 6: City Bicycle Parking Ordinance Minimum Requirements and Preferred Spacing.

Recommended Bike Rack: Minimum 36 inches tall and 24 inches wide. Racks installed parallel to walls shall be a minimum of 30 inches from the wall.

Bike Space: Minimum 6 feet long and 18 inches wide.

Bike Rack: Minimum 5 feet between rack and curb, walls, fence, automobile parking space, building or street furniture for maneuvering. Racks installed parallel from walls shall be a minimum of 30 inches from the wall.

Bike Lockers Clearance: Minimum 48 inches on the side and 72 inches in front of the lockers is recommended.

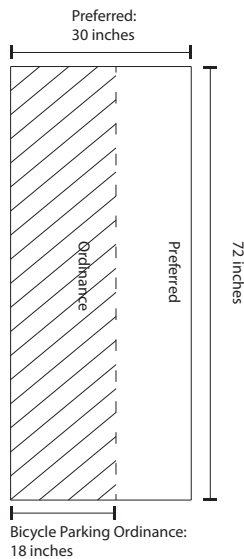


Figure 6a: Plan view bike parking space.

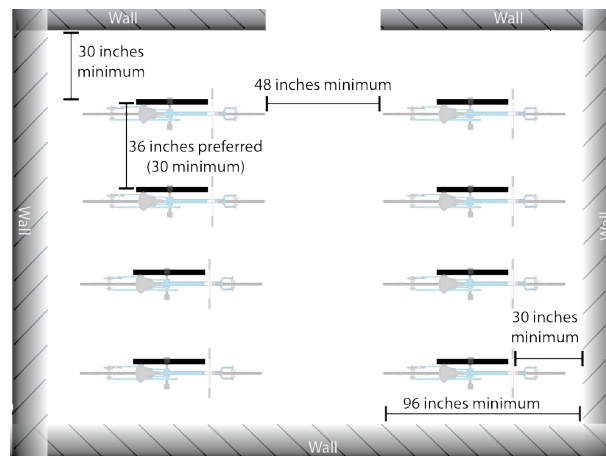


Figure 6b: Plan view bike cage

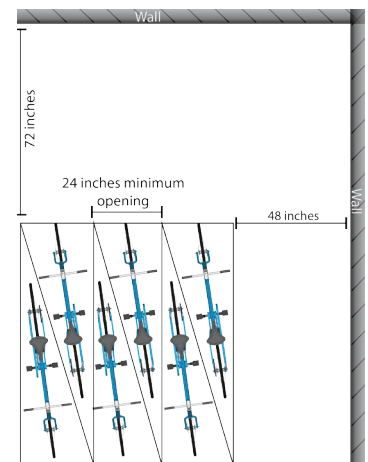


Figure 6c: Plan view bike lockers



Photo courtesy of Studio O+A

Figure 7: Parking on Office Floor
Some companies, such as Yelp, provides bike parking within their office. This can often maximize the perception of security.



Photo courtesy of icporches.com

Figure 8: Bicycle Room/Cage
A limited-access room or cage that is surrounded on all sides provides a safe place to leave bicycles for long periods of time.



Photo courtesy of APBP

Figure 9: Two-tiered Parking
Each bike should have a space 2' wide and 6' long. Each tier needs a vertical clearance of 48" (a single-tiered rack needs 96" of clearance).



Photo courtesy of APBP

Figure 10: Vertical Bike Rack Dimensions
are 2' wide and 6'4" tall. Racks should be distanced 24" from each other.



Photo courtesy of Sirgius

Figure 11: Bike Lockers
Triangle-shaped bike lockers can vary in length but must have a mouth a minimum of 24" for clearance.



Photo by Jonathan Maus

Figure 12: Bike Parking Attendant
Another form of security is having an attendant (such as Bike Station) or having bicycles in plain sight of a security guard.

Facilities: Showers

The lack of proper shower facilities on-site can be a major deterrent to employees who may be considering bicycling to work. Bicycle commuters need a place to clean up before starting their work day.

Location:

Showers should be located a convenient distance from the long-term bicycle parking.

Shower facilities should be:

- Located adjacent to locker facilities in parking garages.
- Integrated into the building bathroom facilities. (See Figure 13)
- Located near long-term bicycle parking. (See Figure 14)

Applicability:

Showers are especially important in places of employment where employees commute by bicycle such as

- Office buildings
- Medical centers/hospitals
- Retail/restaurant
- Schools
- Civic buildings

Building Standards:

- Showers should be built in accordance with the Los Angeles Building Code and Plumbing Code requirements. See the Los Angeles Municipal Code.
- Existing restrooms can be retrofitted to include bike shower facilities.

Reference Tools:

- Adequate Lighting, See Lighting Section.
- Appropriate and applicable wayfinding signage. See Wayfinding Signs Section.
- See Resources Chapter.

Figure 13:
Bathroom Showers
Showers can be located within the bathroom facilities of the office. This allows everyone to utilize the showers.



Photos courtesy of homedesignsites.com

Figure 14:
Parking showers.
Showers may be located at the site of the bicycle parking.

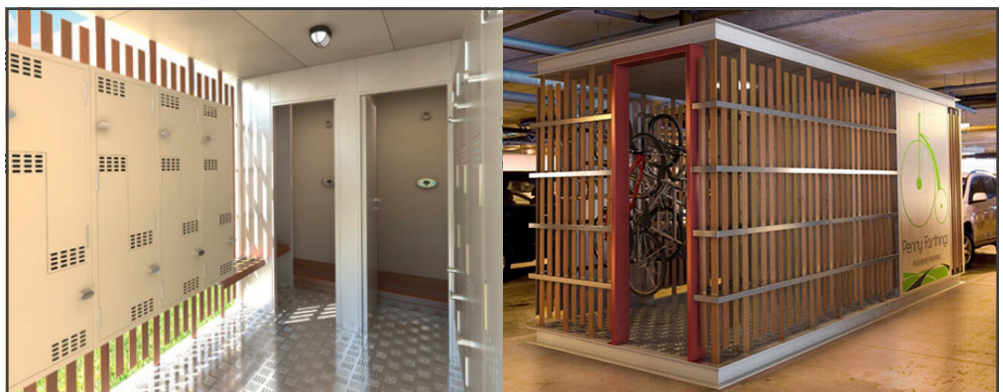


Photo courtesy of Penny Farthings

Facilities: Lockers

Clothing lockers provide commuters with a safe and secure place to store clothing, helmets and other bicycle accessories while working. This is especially helpful where employees, such as kitchen workers, do not have desks or a permanent workstation to store items during the workday.

Location:

Clothing lockers should always be located within close proximity of:

- Shower facilities. If there are separate showers for each gender, there should also be separate clothing lockers. (See Figure 15)
- Bathroom or changing area.

Applicability:

Like showers, clothing lockers should be provided in places of employment where employees commute by bike.

- Even if showers are infeasible due to space or plumbing, clothing lockers can be a welcomed amenity to store bicycle accessories and clothing. (See Figure 17)

Recommended Locker Size:

The recommended clothing locker size is 12 inches wide, 18 inches deep and 30 inches high. (See Figure 16)

- At this depth, a jacket can comfortably be hung on a hanger from a hook on top of the locker.
- Helmets and other accessories can easily be stored in a locker of this width.
- This height accommodates a two-tiered locker setup that maximizes space.

Reference Tools:

- Adequate Lighting, See Lighting Section.
- Appropriate and applicable wayfinding signage. See Wayfinding Signs Section.
- See Resources Chapter.



Photo courtesy of League of American Bicyclists

Figure 15: Proximity to Showers Lockers placed adjacent to showers make it convenient to change after showering and to store shower items.



Photo courtesy of League of American Bicyclists

Figure 16: Recommended Locker Size This two-tier locker setup maximizes space and allows for the storage of all necessary items.



Photo courtesy of SABA

Figure 17: Lockers at parking site. If there is no feasible way to add showers to your site, lockers should be placed near the long-term parking to make it most convenient.

Facilities: Workshop Area

Having a designated place with tools to make quick fixes such as a flat tire or a brake adjustment is an amenity that can encourage more people to bike to their destination.

Location and Dimensions:

A workshop or maintenance area should be located close to the long-term bicycle parking for easy access.

- Place at grade near long-term bicycle parking.
- A minimum area of 4 feet by 8 feet should be designated and marked as the workshop area. (See Figure 18)

Applicability:

- Like showers and clothing lockers, the workshop area should be provided in places of employment where employees may commute by bike.
- In addition, a workshop area is also an amenity for residents at multi-family residential sites.

Recommended Equipment:

The following tools are strongly recommended for the workshop area:

- Bicycle pump, patch kits and a bicycle stand.
- Small, locked box supplied with the basic bicycle maintenance tools. (See Figure 19)

Reference Tools:

- Adequate Lighting, See Lighting Section.
- Appropriate and applicable wayfinding signage. See Wayfinding Signs Section.
- See Resources Chapter.



Figure 18: Small Workshop Area

A bicycle maintenance stand and floor area to work on bikes are essential to creating a usable workstation.



Figure 19: Bicycle Repair Tools

In order to facilitate repairs, a small worktable and key tools are necessary. Refer to a bicycle repair manual of bicycle store for the necessary tools.

Photo courtesy of American League of Bicyclists

Photos by Graham McCall and Geoff Cisler

Wayfinding Signs

Wayfinding signs not only direct users to bicycle parking and the entrances, but it also informs users of the existence of bicycle parking. This is important as bicycle parking and other amenities are not always visible as bicyclists approach a site.



Photo by Richard Drdul

Location:

Wayfinding signs should be easy to read, highly reflective and located where users will see them without having to search.

- Locate just above eye-level so as to be visible from a distance.
- Ensure that both symbols and text are large enough to be seen from a distance.
- Visible from both pedestrian and vehicle entrances.
- Locate within 100 feet of primary building entrances and bicycle parking.



Photo courtesy of McClellan Park TMA

Applicability:

Wayfinding signs should be placed everywhere users will be during their time at the site:

- Clearly mark vehicle and pedestrian main entrances with signs directing users to the location of short-term and long-term bicycle parking.
- Place wayfinding signs at bicycle parking stations that directs users to building entrances, showers and lockers and workshop areas.



Photo courtesy of Radoslaw Orszewski

Recommended Dimensions:

The recommended sign dimensions vary by type of sign.

- Signs directing users to bicycle parking should be at least 18 inches high by 12 inches wide.
- Bicycle parking signs should be at least 18 inches wide and 16 inches high.



Photo courtesy of The Bulletin

Reference Tools:

- Adequate Lighting. See Lighting Section.
- Use with Short-Term Parking, Long-Term Parking, Shower and Locker Facilities and Network Connection Sections.
- See Resources Chapter.

Lighting

Good lighting is imperative at bicycle amenities and along pathways to bicycle facilities to make people feel safe and secure.

Location:

Lights should be placed directly above and along the following locations:

- Short-Term and Long-Term Bicycle Parking.
- Bicycle wayfinding parking signs.
- Pedestrian pathways between bicycle parking and building entrances.
- Bicycle pathways on private property.
- Bicycle rooms, shower and locker facilities (Motion-sensor lights are recommended here).
- Bicycle workstation facilities.

Applicability:

Lights should be placed at all bicycle facility locations, as well as along pathways to bicycle facilities.

Recommended Features:

- Lighting should be glare-free and consistent to provide even light distribution. (See Figure 20)
- Lighting should be direct “dark sky” compliant lighting. (See Figure 21)

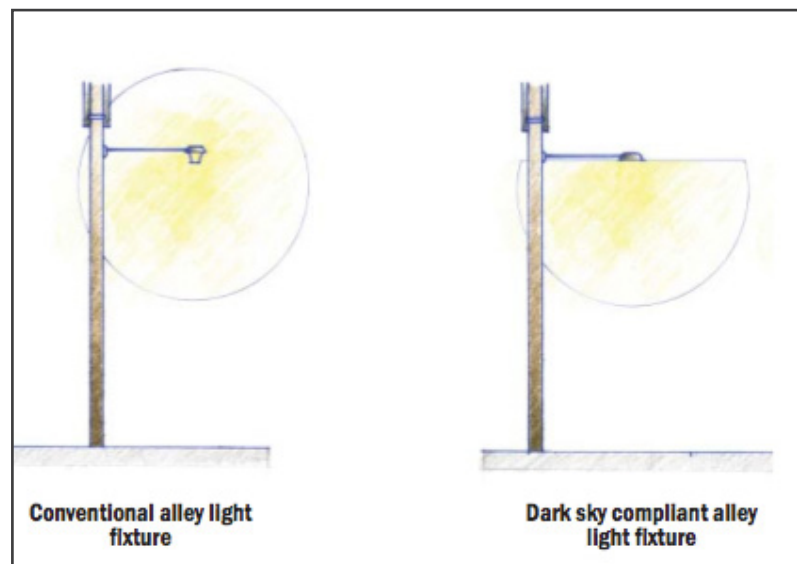
Reference Tools:

- Use with Short-Term Parking, Long-Term Parking, Shower and Locker Facilities, Wayfinding Signs and Network Connection Sections.
- See Resources Chapter.



Photos courtesy of Metro Taipei

Figure 20: Lighting in Taipei, Taiwan
Consistent and glare-free lights creates even light distribution that conveys a safe environment.



Drawings courtesy of Re-Nest.com

Figure 21: Dark Sky Compliant Lighting
These fixtures focus light downward and direct it to where light is needed. This creates better lighting below and less light pollution above.

Network Connections

Clear and safe connections between bicycle facilities and the existing and proposed transportation network (i.e. bicycles routes, trails, paths, transit stops, streets, etc.) are essential to creating a bike-friendly city.

See both the Bicycle Master Plans for City and County of Los Angeles for more information on existing and proposed bicycle networks (2011 and 2012, respectively).



Photo courtesy of David Baker + Partners



Photo courtesy of League of American Bicyclists



Photo by Cathy Cole



Photo by Patrick Lydon

Connection to Right of Way:

- Consider how bicyclists will access transit and bike routes from the building development.
- Design safe and convenient pathways from bicycle facilities to bicycle routes, pathways, and transit stations or stops along the street.

Important Considerations:

- Install easy to read, well marked wayfinding signs that direct bicyclists from the travel lane to parking and vice versa.
- Locate parking strategically as to not create dangerous maneuvering situations (e.g. unsafe left turns)

Reference Tools:

- Adequate Lighting, See Lighting Section.
- Use with Short-Term Parking, Long-Term Parking, Shower and Locker Facilities and Network Connection Sections.
- See Resources Chapter.

Connections within Site:

- Mark bike lanes, sharrows, and/or bicycle wayfinding signs to create more visibility to automobiles.
- Design direct and safe paths to bicycle facilities through the property.
- Consider where bicycle pathways and auto pathways intersect to avoid conflicts and increase safety with safe crossings and signage to increase visibility.
- Where possible, a site plan that includes stairways should also include an alternative, level access route for bicycles. If it is not possible to provide an alternative access, a ramp or a small channel for bicycle wheels on the edge of a stairway should be provided. This will prevent cyclists from having to carry bicycles up and down stairs. Stairs are not accessible for bicycles and stairway ramps should be used as a last resort.

Innovative Designs

Non-conventional innovative designs meeting ADA requirements are encouraged in order to create a bicycle-friendly development and city. This section highlights three examples.



Photo and rendering courtesy of Giken Seisakusho Co

1) Automated Bicycle Parking - EcoCycle:

Automated bicycle parking is an efficient and economical method of accommodating a large number of bicycles.

- Cylindrical parking storage area is underground.
- Computer retrieves bicycles in approximately 10 seconds.
- Small footprint (23 foot diameter), stores 144 bicycles.
- Construction takes only 50 days. Low construction and maintenance costs.



Renderings by Yinnon Lehrer

2) On-site Bicycle Hubs - Yinnon Lehrer:

A self-contained bicycle station provides bicycle parking, showers and lockers.

- Vertical bicycle racks work on a counter-weight system.
- Hubs can be assembled into a variety of configurations.
- Solar water heaters help minimize the station's carbon footprint.
- Hub acts as a good option at a site where it is infeasible to place long-term parking and showers inside the building.



Photos courtesy of Downtown DC Business Improvement District

3) Downtown DC Business Improvement District (BID) - Washington, D.C.

The Downtown DC BID works with public and private sector partners to make the neighborhood bike-friendly. The BID:

- Pledges to match the number of city bicycle racks installed.
- Provides building and business owners information and encourages installation of long-term bicycle spaces or cages.
- Sponsors two annual events: Bike to Work Day and Bike DC.

ADA Design Guidelines

Building bicycle development that follows ADA guidelines creates a safe and accessible city for persons with disabilities.

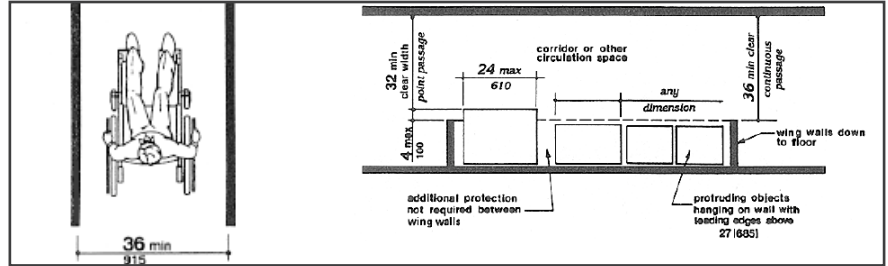


Figure 22

Rendering courtesy of Department of Justice

Accessible Route:

Bike racks, cages and lockers must be placed to allow a minimum accessible route of 36 inches.

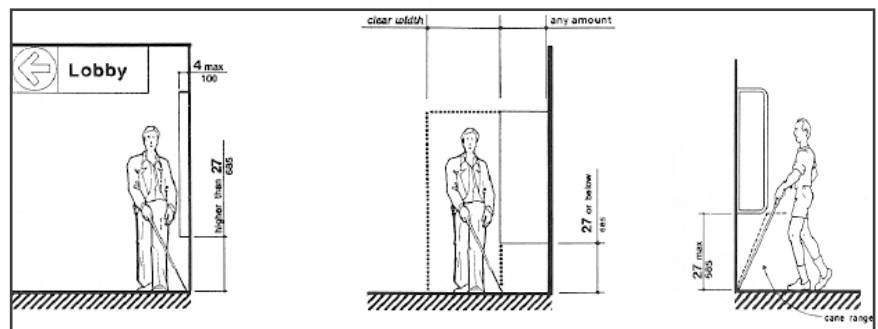


Figure 23

Rendering courtesy of Department of Justice

Protruding Objects Along an Accessible Route:

Vertical racks installed on a wall that have a leading edge between 27 and 80 inches should not protrude more than 4 inches into an accessible route (See figure 22). This can be resolved by placing the bike racks in an alcove or behind wing walls so that they do not restrict the accessible route.

Vertical racks with their leading edges at or below 27 inches may protrude any amount (See Figure 23).

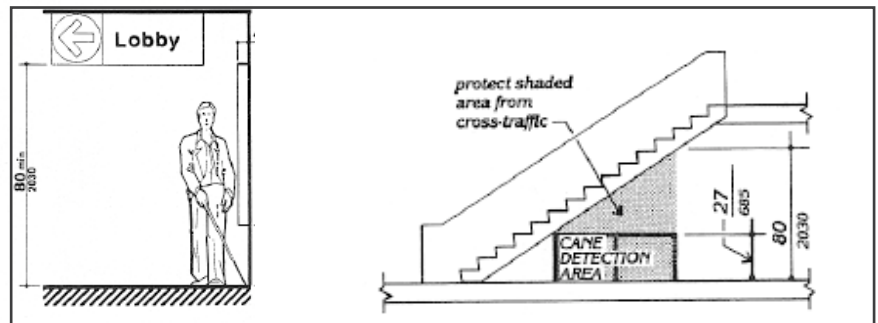


Figure 24

Rendering courtesy of Department of Justice

Head Room Along an Accessible Route:

Vertical bike parking adjoining an accessible route that reduces the overhead clearance space to less than 80 inches must have a barrier to warn blind or visually impaired persons.

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Chapter Four:

Site Typologies

Chapter 4 identifies a set of three common site typologies (retail, office, and multi-family) and discusses the unique needs of each typology based on their primary hours of activity, typical patrons, and security requirements.

All projects must follow the City's Bicycle Parking Ordinance to determine the number and type of bike parking spaces and amenities required. This chapter is intended as a guide only.

Retail/ Commercial

Key Issue for Bicyclists at Site: Visibility and proximity of bicycle parking to building entrance.

Site Characteristics

- Primary Uses: Retail shops, restaurants, or personal services. Primary Visitors: Customers staying for less than two hours and employees that stay from anywhere between six to ten hours.
- Common Building Typologies: See Figures 25 and 26.

Applicable Tools

- Short-term parking (for customers) and long-term parking (for employees).
- Showers, clothing lockers and bicycle repair workstation for retail store employees.
- Wayfinding signs directing users to amenities and entrances.
- Adequate lighting of pathways and all bicycle amenities.
- Safe connections from bicycle networks in the right-of-way.

Example A: 10,000 SF Restaurant

- 5 short-term parking spaces (10,000 SF/2,000 SF = 5 spaces)
- 5 long-term parking spaces (10,000 SF/2,000 SF = 5 spaces)
- 0 showers (less than 50,000 SF)
- 5 clothing lockers

Example B: 150,000 SF Retail

- 15 short-term spaces (150,000 SF/10,000 SF = 15 spaces)
- 15 long-term spaces (150,000 SF/10,000 SF = 15 spaces)
- 2 showers per gender required
- 15 clothing lockers

Table 1: Required Quantity of Bicycle Parking per Los Angeles Municipal Code (LAMC)

	Short-Term Bicycle Parking	Long-Term Bicycle Parking
Restaurants/Bars and General Retail	1 per 2,000 SF (minimum 2)	1 per 2,000 SF (minimum 2)
Retail - Furniture	1 per 10,000 SF (minimum 2)	1 per 10,000 SF (minimum 2)
Hotels & Hostels	1 per 20 guest rooms (minimum 2)	1 per 20 guest rooms (minimum 2)

Table 2: Required Quantity of Showers & Lockers per LAMC

New Buildings and additions	Showers Required
More than 50,000 SF floor area	1 per gender
150,000-250,000 SF floor area	2 per gender
250,000 or more SF floor area	2 per gender plus 1 per gender for each additional 100,000 SF
Clothing Lockers Required	1 locker per required long-term bicycle parking space



Photos courtesy of Enspire Design Group PLLC

Figure 25: Shopping Center/Strip Mall Commercial - Retail
Common commercial configuration in Los Angeles where buildings are set back on parcel with parking lot in front.



Photos by Balcer

Figure 26: Zero-Lot Line Commercial - Retail
Traditional "Main Street" commercial configuration in which buildings are built to parcel line, fronting sidewalk. Parking and loading are typically in rear of parcel out of site from sidewalk.

Office/ Commercial

Key Issue for Bicyclists at

Site: Well-marked, secure long-term parking with shower and locker facilities.

Site Characteristics

- Primary Uses: Medical and other professional services, general office buildings and financial services.
- Primary Users: Employees staying for average work day (eight hours) and clients who may visit for several hours.
- Common Building Typologies: See Figures 27 and 28.

Applicable Tools

- Short-term parking (for clients) and long-term parking (for employees).
- Showers, clothing lockers and bicycle repair workstation for office workers as well as maintenance and service employees.
- Wayfinding signs directing users to bicycle parking, amenities and entrances.
- Adequate lighting of pathways and all bicycle amenities.
- Safe connections from bicycle networks in the right-of-way.

Example A: 50,000 Office

- 5 short-term parking spaces (50,000 SF/10,000 SF = 5 spaces)
- 10 long-term parking spaces (50,000 SF/5,000 SF = 10 spaces)
- 1 shower per gender (less than 150,000 SF)
- 10 clothing lockers

Table 1: Required Quantity of Bicycle Parking per LAMC

Short-Term Bicycle Parking	Long-Term Bicycle Parking
1 per 10,000 SF (minimum 2)	1 per 5,000 SF (minimum 2)

Table 2: Required Quantity of Showers & Lockers per LAMC

New Buildings and additions	Showers Required
Less than 150,000 SF floor area	1 per gender
150,000-250,000 SF floor area	2 per gender
250,000 or more SF floor area	2 per gender plus 1 per gender for each additional 100,000 SF
Clothing Lockers Required	1 locker for each required long-term bicycle parking space



Photos courtesy of A+D Museum

Figure 27: Mid-sized Office Buildings

Typically house a few tenants or one large tenant within one building with surface parking.

Figure 28: Large Office Buildings
Typically house several large companies with a restricted access underground parking garage.



Photos courtesy of skyscrapercity.com

Multi-family Residential

Key Issue for Bicyclists at

Site: Secure, limited-access parking for residents with bicycle maintenance area and bicycle parking for children.

Site Characteristics

- Primary Uses: Apartment units or condos.
- Primary Users: Apartment or condo tenants that reside in the building.
- Common Building Typologies: See Figures 29 and 30.

Applicable Tools

- Short-term parking (for guests) and long-term parking/storage (for residents).
- A bicycle repair workstation area for residents to maintain and repair bicycles.
- Wayfinding signs directing users to bicycle amenities and main entrances.
- Adequate lighting of pedestrian and bicycle pathways and all bicycle amenities.
- In residential buildings where space can be limited, the utilization of double decker racks or vertical racks can help accommodate more bicycles.

Example A: 50 Dwelling Units

- 5 short-term parking spaces (50 units/10 = 5 spaces)
- 50 long-term parking spaces (50 units = 50 spaces)
- No showers required
- No clothing lockers required

Table 1: Required Quantity of Bicycle Parking per LAMC

Short-Term Bicycle Parking	Long-Term Bicycle Parking*
1 per 10 dwelling units	1 per dwelling units

* Recommend 1 children's parking space per 5 spaces.

Table 2: Required Quantity of Showers and Clothing Lockers per LAMC

Showers Required	Clothing Lockers Required
None	None



Photos courtesy of Wikipedia

Figure 29: Large Multi-Residential Building

A multi-story residential building with dozens of residential units, often with underground parking.



Photo by Tobias Begalke

Figure 30: 2-Story Apartment

Small residential building where residential units are located on second story with tuck-under parking.

Chapter Five: Resources

This chapter provides a list of other resources where one can find more detailed information on creating bike-friendly private developments.

Resources

[Los Angeles Policies and Programs](#)

Los Angeles 2010 Bicycle Plan and Technical Design Handbook

City of Los Angeles Department of City Planning

http://planning.lacity.org/cwd/gnlpln/transelt/NewBikePlan/TOC_BicyclePlan.htm

County of Los Angeles Bicycle Master Plan, 2012

<http://dpw.lacounty.gov/pdd/bikepath/bikeplan>

City of Los Angeles Municipal Code

www.amlegal.com/library/ca/losangeles.shtml

Walkability Checklist Guidance of Entitlement Review, 2008

City of Los Angeles Department of City Planning, Urban Design Studio

www.urbandesignla.com/walkability.htm

LADOT Bicycle Services

Los Angeles Department of Transportation (LADOT) Bicycle Services

www.bicyclela.org/index.php

LADOT Sidewalk Parking Program

The Los Angeles Department of Transportation Bicycle Program

<http://www.bicyclela.org/Parking.htm>

Bicycle Parking Guidelines for Metro Joint Development

Los Angeles Metropolitan Transit Authority: Bike Metro

http://www.metro.net/riding_metro/bikes/images/bicycle_parking_guidelines.pdf

[Los Angeles Bicycle Advocacy Organizations/Firms](#)

Los Angeles County Bicycle Coalition (LACBC)

<http://www.la-bike.org>

City of Los Angeles Bicycle Advisory Committee

Los Angeles Department of Transportation

http://ladot.lacity.org/tf_Bicycle_advisory.htm

Los Angeles Bicycle Kitchen

<http://www.bicyclekitchen.com>

Metro Bicycle Roundtable

Los Angeles Metropolitan Transit Authority

<http://www.metro.net/around/bikes/bikes-metro/bicycle-roundtable>

[Sample US Cities Bicycle Parking Regulations](#)

Zoning Resolution Article II, Chapter 5, Section 25-80

City of New York Planning Department, NY

www.nyc.gov

Title 33, Planning and Zoning. Chapter 33.266.200-220

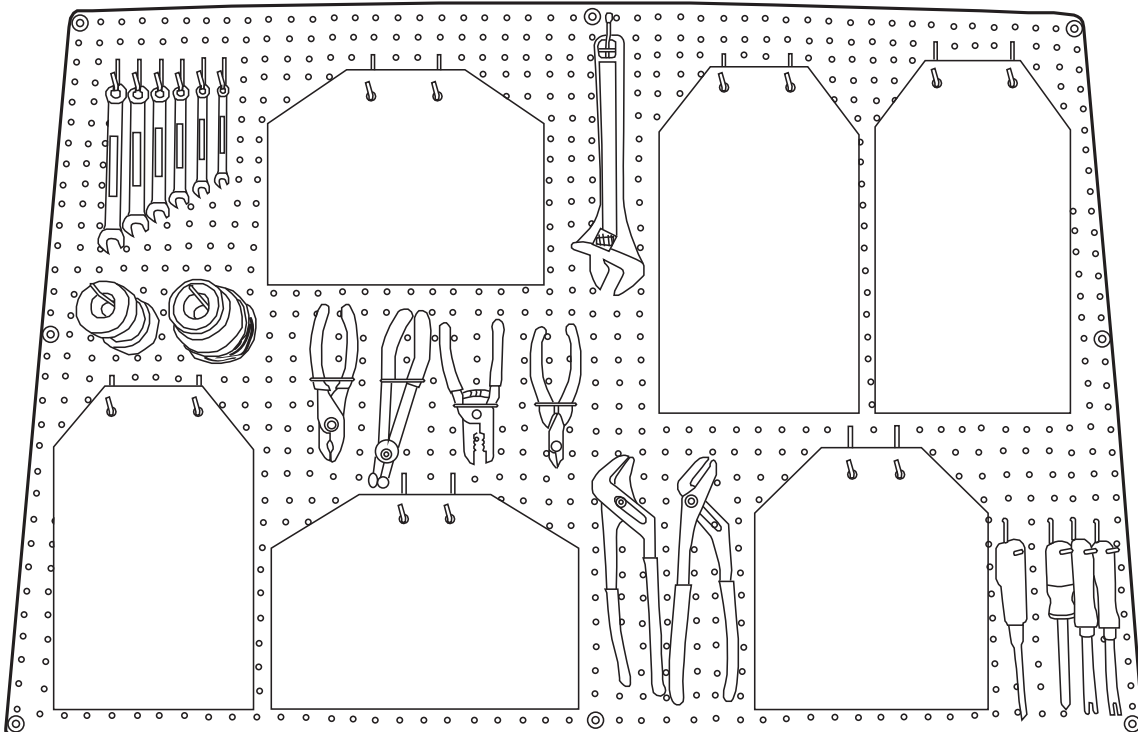
City of Portland Planning Department, OR

www.portlandonline.com

Planning Code. Article 1.5, Sections 155.1-155.5

City of San Francisco Planning Department, CA

www.sfgov.org



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Mott Smith, Civic Enterprise Associates
Ryan Snyder, Snyder & Associates

chapter six:

Appendices

This chapter provides the adopted Bicycle Parking Ordinance and current Department of Building and Safety Requirements.

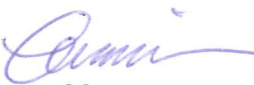
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Guidance for Bicycle Parking Requirements

CITY OF LOS ANGELES
Department of Building and Safety
INTRA-DEPARTMENTAL CORRESPONDENCE

Date: March 26, 2013

To: All Plan Check Personnel

From: Lincoln Lee, Chief 
Development Services Case Management

Subject: **BICYCLE PARKING REQUIREMENTS**

Ordinance No. 182386 (attached) amends Los Angeles Municipal Code (LAMC) to encourage safe and secure bicycle parking and expand the bicycle parking requirements beyond commercial, institutional and industrial uses to include residential developments. This ordinance, effective as of March 13, 2013, also allows replacement of some of the required automobile parking spaces with bicycle parking spaces for existing commercial uses.

Any permit for a new development or additions of floor area, dwelling unit or guest room to an existing development shall be subject to the requirements of providing bicycle parking spaces with the following exceptions:

1. Unmanned Facilities.
2. Any development with individually accessed private garages for each unit such as townhouses or group dwellings.
3. Any Change of Use permit including Adaptive Reuse projects.
4. Any residential building containing 3 or less dwelling units; 5 or less guest rooms; or a combination of five or less dwelling units plus guest rooms.
5. Any project where plans were accepted by the Department of Building and Safety per Section 12.26A3 prior to March 13, 2013.
6. As determined by the Department of City Planning, any project for which the Project has an approved entitlement or a filed and accepted application.

The following are the highlights of the ordinance and a few examples showing the calculation of the required bicycle parking spaces for different uses:

How Many Bicycle Parking Spaces Are Required?

Short-term and Long-term bicycle parking spaces shall be provided per Table 12.21A.16(a)(2) for a new development OR only for the portion of a new addition to an existing development.

After the first 100 bicycle parking spaces are provided for non-residential uses listed in Table 12.21A.16(a)(2), additional required bicycle parking spaces may be provided at a rate of 5% of the automobile parking spaces for both short and long term bicycle parking spaces according to the Los Angeles Green Building Code Article 99.05.106.4. These bicycle parking spaces can be either Short or Long Term as determined by the business or property owner beyond the first 100 bicycle parking spaces. This 5% rate can be applied to replacement only and not swapping.

Example 1

An office Building with 1,500,000 sq. ft. of floor area.

- Code required automobile parking spaces = 3000 (based on 1/500)
- Code required Bicycle parking spaces = 150 (short) and 300 (long) = 450 total

Beyond 100 required bicycle parking spaces, this building would be eligible for the reduction in the number of required bicycle parking spaces

- Per LA Green Code = 5% of 3000 = 150 bicycle parking are required
- Total bicycle parking spaces required = First 100 (required by table) +50 (150 - first100) = 150

Conclusion: The project shall provide 150 bicycle parking spaces instead of 450 per table. For the first 100, they should provide the same ratio as the table: $100 (100/300) = 34$ minimum for Short-term and 66 minimum for Long-term. The remaining bicycle parking spaces per the Green code above the first 100 can be either short or long-term.

How Many New Automobile Parking Spaces Can Be Replaced?

By providing the bicycle parking spaces as required per Table 12.21A.16(a)(2), one of the incentives allows the reduction in the number of code-required automobile parking spaces for the site.

By providing the required and additional non-required bicycle parking spaces, the code-required automobile parking spaces can be reduced by the number of bicycle parking spaces divided by 4 and up to a maximum of:

- 20% for non-residential projects
- 30% of non-residential projects located within 1,500 ft. of a transit stop as defined by 12.24.Y. (including any stops along the rapid transit lines showed as a white dot on the system map: Go to the web site for the map:
http://www.metro.net/riding_metro/maps/images/15_min_map.pdf
- 10% for residential project
- 15% for residential projects located within 1,500 ft. of a transit stop

as defined by 12.24.Y

- 30% if the project has received a density bonus, however, this special incentive **shall not apply** to projects that received a parking reduction per section 12.22.A.25(d)
- The 10% or 15% replacement can be combined with the parking reduction per section 12.22A25(d).

If the number of bicycle parking spaces required by the code would not maximize the reduction as permitted above, a developer may choose to provide more bicycle parking spaces up to the percentage allowed as long as four bicycle parking spaces are provided for each automobile parking space replaced.

Example 2 –

Part a)

An affordable residential project with 88 units located within 1,500 of a transit stop.

- Code required automobile parking spaces: 176
- Code required bicycle parking spaces: 9 (short term) + 88 (long term) = 97
- Incentive: $97 \text{ bicycle parking} / 4 = 24 \text{ cars}$
- Check: $24/176 = 13.6\% < 15\%$ (since it is close to transit, this works)

Final requirement for the project is $176 - 24 = 152$ automobile spaces and 97 bicycle spaces.

Example 2 –

Part b)

The owner wants to maximize the automobile reduction by 30%, by providing more bicycle parking spaces for the same project instead of one of the existing parking reductions allowed by the density bonus incentive.

- Maximum reduction permitted: $30\% \text{ of } 176 = 52.8$ automobile spaces (not to exceed 30%)
- Bicycle parking spaces required: $52 \times 4 = 208$ total bicycle parking spaces (instead of 97)
- Total Required automobile parking spaces after reduction = $176 - 52 = 124$ spaces
- Required bicycle parking spaces = 208 (9 short; 88 long; 111 either short or long)
- Final requirement is 124 automobile parking spaces and 208 bicycle parking spaces.

The developer does not have to replace the entire 30% if they wish to provide less bicycle parking spaces. The developer could replace only 20% if they provided 140 bicycle parking spaces.

How Many Existing Automobile Parking Spaces Can Be Swapped?

Another incentive: How many bicycle parking spaces can be swapped for existing automobile parking spaces. This can also be applied to an existing land use permit without a building on site.

- It can be useful when an old parking lot needs to be restriped but can't maintain the same number of automobile parking spaces designed with the latest parking lot requirements.
- It can be useful for any change of use permit that requires additional automobile parking spaces with limited space on site.

Any bicycle parking spaces beyond the code-required ones can be either short or long term as determined by the business or property owner. The % swapping is the same as mentioned above for replacement except for a smaller site with less than 20 onsite existing automobile parking spaces, up to 4 automobile parking spaces can be swapped. Each automobile parking space shall be swapped with four bicycle parking spaces.

Example 3

Change of use of an existing 3000 sf. of retail space to restaurant.

- Nonconforming required automobile parking spaces on site = existing automobile parking spaces provided = two on site (shall be maintained)
- Additional automobile parking spaces due to change of use:
 $3000/100 - 3000/250 = 18$

Swapping automobile parking spaces using bicycle parking spaces:

- Bicycle parking spaces required: $4 \times 4 = 16$ bicycle parking spaces (2 short and 2 long; 12 can be either long or short - With 20 or less provided on site, only 4 automobile parking spaces can be swapped).

Conclusion: Provide additional 14 automobile parking spaces with 16 bicycle parking spaces.

Locations and Design Requirements.

Specific requirements are outlined in the code, but in general terms each bicycle parking space should be designed as follows:


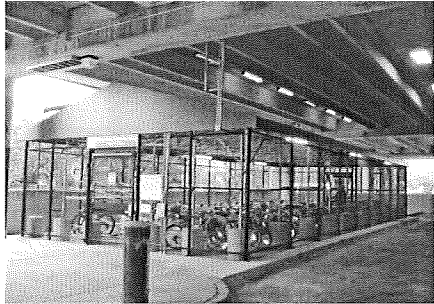


- Located close to the entrance (50 ft. short term, see code for long term)
- Provide a minimum dimension of 2 ft. wide x 6 ft. long
- Provide support for the bicycle in two places
- Allow easy access to and from the parking space
- Provide securely bike's anchor to the ground
- Installed to allow the use of a lock unless one is provided
- Provide signage and lighting
- Long-term bicycle parking shall be secured from the general public, roofed

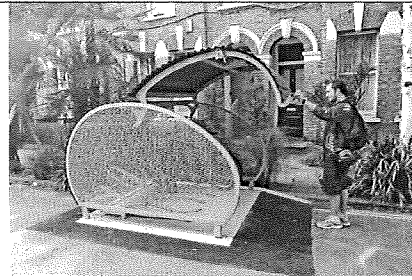
- and enclosed on all sides to protect the bicycle from inclement weather.
- Long-term bicycle including bicycle cages shall not be located in the required front yard, open space, landscaping area or within one of the dwelling units/guest rooms.
- Bicycle racks can be located within the front yard beyond the required landscaping area.
- Both bicycle racks and bicycle cages can be located in the passageway, side yard or rear yard.

Bicycle Parking Spaces In the Public Right of Way.

A bicycle corral or bicycle racks located in the public right of way within 500 feet from the project as approved by Department of Transportation may count towards the required short term bicycle parking spaces even for swapping. Any short term bicycle parking spots located within the public right-of-way shall be approved by BOE.

Examples of Good Bike Parking

Short Term	Long Term
U-Rack 	Outdoor Long-term 
Bicycle Corral 	Indoor Long-term 
Art Racks	Outdoor Long-term- bike cage

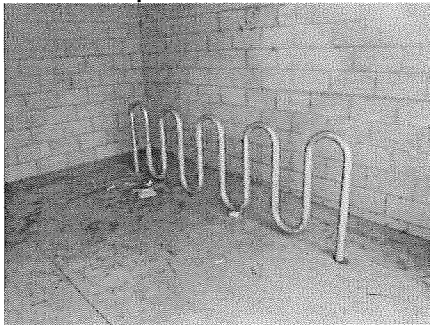


Indoor Long Term



Not permitted for Short or Long Term spaces:

Wave racks do not support bikes in more than one place.



Ladder racks only support front wheel.



Wheel-bender racks do not support the bike in two places and when the bike falls over it ruins the wheel.



Bicycle Parking Ordinance

ORDINANCE NO. 182386

An ordinance amending Sections 12.03, 12.21, and 12.21.1 of the Los Angeles Municipal Code (LAMC) to extend bicycle parking requirements to some multi-family residential developments; to increase the levels of bicycle parking required under the current code for new developments and additions to commercial, institutional, and industrial uses; to expand bicycle parking requirements to include commercial, industrial, and manufacturing uses of less than 10,000 sq. ft.; to define acceptable locations for bicycle parking; to require that both short-term and long-term bicycle parking be provided; to improve design standards; to amend the amount of bicycle parking that may be substituted for automobile parking; and to provide rules for the installation of bicycle parking within the public right-of-way by private businesses.

THE PEOPLE OF THE CITY OF LOS ANGELES DO ORDAIN AS FOLLOWS:

Section 1. Section 12.03 of the Los Angeles Municipal Code is amended to add the following terms in proper alphabetical order:

BICYCLE CAGE. A locked bicycle parking area that has been fenced off to prohibit access by the general public. Bicycle cages shall contain bicycle racks that provide a means of securing the bicycle frame at two points to a securely anchored rack.

BICYCLE CORRAL. Any on-street public parking space in which multiple short-term bicycle parking racks have been installed.

BICYCLE ROOM. A locked bicycle parking area that has been walled off to prohibit access by the general public. Bicycle rooms shall contain bicycle racks that provide a means of securing the bicycle frame at two points to a securely anchored rack.

Sec. 2. The definition of "Floor Area" in Section 12.03 of the Los Angeles Municipal Code is amended to read as follows:

FLOOR AREA. The area in square feet confined within the exterior walls of a Building, but not including the area of the following: exterior walls, stairways, shafts, rooms housing Building-operating equipment or machinery, parking areas with associated driveways and ramps, space dedicated to bicycle parking, space for the landing and storage of helicopters, and Basement storage areas.

Buildings on properties zoned RA, RE, RS, and R1, except properties in the Coastal Zone which are not designated as Hillside Area, are subject to the definition of Residential Floor Area.

Sec. 3. Subdivision 4 of Subsection A of Section 12.21 of the Los Angeles Municipal Code is amended to read as follows:

4. **Off-Street Automobile Parking Requirements.** A garage or an off-street automobile parking area shall be provided in connection with and at the time of the erection of each of the buildings or structures hereinafter specified, or at the time such buildings or structures are altered, enlarged, converted or increased in capacity by the addition of dwelling units, guest rooms, beds for institutions, floor area or seating capacity. The parking space capacity required in said garage or parking area shall be determined by the amount of dwelling units, guest rooms, beds for institutions, floor area or seats so provided, and said garage or parking area shall be maintained thereafter in connection with such buildings or structures.

New or existing automobile parking spaces required by the Code for all uses may be replaced by bicycle parking at a ratio of one automobile parking space for every four bicycle parking spaces provided. Notwithstanding the foregoing, no more than 20 percent of the required automobile parking spaces for nonresidential uses shall be replaced at a site. Automobile parking spaces for nonresidential projects or buildings located within 1,500 feet of a portal of a fixed rail transit station, bus station, or other similar transit facility, as defined by Section 12.24.Y, may replace up to 30 percent of the required automobile parking spaces with bicycle parking. For buildings with less than 20 required automobile parking spaces, up to 4 parking spaces may be replaced.

Residential buildings may replace 10 percent of the required automobile parking with bicycle parking. Automobile parking spaces for residential projects or buildings located within 1,500 feet of a portal of a fixed rail transit station, bus station, or other similar transit facility as defined by Section 12.24.Y may replace up to 15 percent of the required automobile parking spaces with bicycle parking. If a residential building has applied for and received a density bonus under Section 12.22.A.25, 30 percent of the required automobile parking may be replaced. In such cases, the replacement of automobile parking with bicycle parking shall be implemented in lieu of the parking options in Section 12.22.A.25(d).

Bicycle parking installed pursuant to this Section may be installed in existing automobile parking spaces and shall not be considered to violate the maintenance of existing parking as defined by Section 12.21.A.4(m). The ratio of short- to long-term bicycle parking provided for pursuant to this Section shall be provided in accordance with the requirements set forth for each use as defined by Section 12.21.A.16(a). If additional bicycle parking is provided beyond what is required by Section 12.21.A.16, the ratio of short-term to long-term bicycle parking provided may be determined by the business or property owner.

Sec. 4. Paragraph (c) of Subdivision 4 of Subsection A of Section 12.21 of the Los Angeles Municipal Code is amended to read as follows:

(c) **For Commercial and Industrial Buildings.** Except as otherwise provided in subparagraphs (1) through (7) below, there shall be at least one automobile parking space for each 500 square feet of combined floor area contained within all the office, business, commercial, research and development buildings, and manufacturing or industrial buildings on any lot.

A specific plan may impose less restrictive parking requirements, if it expressly states that the specific plan's parking provisions are intended to supersede the standards set forth in this paragraph.

Sec. 5. Subparagraph (2) of Paragraph (x) of Subdivision 4 of Subsection A of Section 12.21. of the Los Angeles Municipal Code is amended to read as follows:

(2) Notwithstanding any provisions of the Los Angeles Municipal Code to the contrary, for any structure designated on the National Register of Historic places or State or City list of historical or cultural monuments, no additional automobile or bicycle parking spaces need be provided in connection with a change of use. Nevertheless, a decision-making body, as part of a discretionary approval related to a change of use, may impose conditions requiring additional parking requirements in connection with the change of use. Existing parking for such buildings shall be maintained if the proposed use requires the same or more parking. If the floor area of such a building is increased, then automobile and bicycle parking shall be provided for the increased floor area as set forth in Sections 12.21.A.4 and 12.21.A.16. The parking requirements for existing buildings set forth in Section 12.21.A.4(m) shall still apply to an historic building and any change of use of that building.

Sec. 6. Subdivision 16 of Subsection A of Section 12.21 of the Los Angeles Municipal Code is amended to read as follows:

16. **Bicycle Parking and Shower Facilities.** Parking spaces for bicycles and facilities for employee showers and lockers shall be provided for new development and additions that increase the floor area of a building as follows:

(a) **Land Uses.**

(1) **Residential.** For all residential buildings containing more than three dwelling units or more than five guest rooms, long-

and short-term bicycle parking shall be provided. Long-term bicycle parking shall be provided at a rate of one per dwelling unit or guest room. In addition, short-term bicycle parking shall be provided at a rate of one per ten dwelling units or guest rooms. In such cases, a minimum of two short-term bicycle parking spaces shall be provided.

(i) In instances where a building may contain both dwelling units and guest rooms, the sum of dwelling units and guest rooms shall be used to determine the amount of long- and short-term parking. Any combination that results in more than five combined dwelling units and guest rooms will require bicycle parking.

(ii) Developments such as townhouses that include individually accessed private garages for each unit shall not be required to provide long-term bicycle parking.

(2) Commercial, Institutional, and Industrial Uses.

For all commercial, institutional, and industrial uses that require automobile parking under Subsections 12.21.A.4 (c), (d), (e), and (f), short- and long-term bicycle parking shall be provided as per Table 12.21.A.16(a)(2).

(i) For uses listed in Table 12.21.A.16(a)(2) a minimum of 2 short-term and 2 long-term bicycle parking spaces shall be provided.

(ii) After the first 100 bicycle parking spaces are provided for uses listed in Table 12.21.A.16(a)(2), additional spaces may be provided at the minimum required by the Los Angeles Green Building Code Article 99.05.106.4.

**Table 12.21 A.16(a)(2) Required Bicycle Parking Spaces
per building floor area as defined under Section 12.03**

Land Use	Short-term Bicycle Parking	Long-term Bicycle Parking
Commercial Uses		
<i>Office</i>	1 per 10,000 sq. ft. (minimum 2)	1 per 5,000 sq. ft. (minimum 2)
<i>Warehouse</i>	1 per 10,000 sq. ft. (minimum 2)	1 per 10,000 sq. ft. (minimum 2)
<i>Health Clubs</i>	1 per 2,000 sq. ft. (minimum 2)	1 per 2,000 sq. ft. (minimum 2)
<i>Restaurants and Bars, General</i>	1 per 2,000 sq. ft. (minimum 2)	1 per 2,000 sq. ft. (minimum 2)

<i>Restaurant, Small (floor area less than 1,000 sq. ft.)</i>	2 per restaurant	2 per restaurant
<i>Retail Stores, General</i>	1 per 2,000 sq. ft. (minimum 2)	1 per 2,000 sq. ft. (minimum 2)
<i>Retail, Furniture Stores</i>	1 per 10,000 sq. ft. (minimum 2)	1 per 10,000 sq. ft. (minimum 2)
<i>Trade Schools, Private Universities, and Private Colleges</i>	1 per 500 square feet or 1 per 50 fixed seats whichever is greater (minimum 2)	1 per 1,000 square feet or 1 per 100 fixed seats whichever is greater (minimum 2)
<i>Hotels and Hostels</i>	1 per 20 guest rooms (minimum 2)	1 per 20 guest rooms (minimum 2)
<i>All other Commercial Uses</i>	1 per 10,000 sq. ft. (minimum 2)	1 per 10,000 sq. ft. (minimum 2)
Institutional Uses		
<i>All Institutional Uses</i>	1 per 10,000 sq. ft. (minimum 2)	1 per 5,000 sq. ft. (minimum 2)
Industrial Uses		
<i>All Industrial Uses</i>	1 per 10,000 sq. ft. (minimum 2)	1 per 10,000 sq. ft. (minimum 2)
Other Uses		
<i>Auditoriums</i>	1 per 350 square feet or 1 per 50 fixed seats whichever is greater (minimum 2)	1 per 700 square feet or 1 per 100 fixed seats whichever is greater (minimum 2)
<i>Private Elementary Schools, Private High Schools, and Charter Schools</i>	4 per classroom (minimum 2)	1 per 10 classrooms (minimum 2)

(3) **Combination of Uses.** Where there is a combination of uses on a lot, the number of bicycle parking spaces required shall be the sum of the requirements of the various uses. The exceptions provided in Section 12.21 A.4(j) for automobile parking shall also apply to bicycle parking.

(4) **City Owned and Leased Buildings and Parking Lots.** In all buildings or parking lots used by the City of Los Angeles for government purposes, including government office buildings, both short-term and long-term bicycle parking shall be provided at a rate of 10 percent of the required parking available on the site. However, short- and long-term bicycle parking shall be no less than five spaces each for the entire site.

Buildings and lots owned by the City of Los Angeles that are leased for private uses shall meet the bicycle parking required for commercial uses as detailed in Table 12.21.A.16(a)(2).

(5) **Parks.** In Neighborhood Recreation Sites, Community Recreation Sites, Regional Parks, and School Playgrounds, as defined in Section 1 of the Service Systems Element – Public Recreation Plan of the City’s General Plan, short-term bicycle parking shall be provided at a rate of 10 percent of the required automobile parking with a minimum of 5 short-term bicycle parking spaces. In Neighborhood Recreation Sites, Community Recreation Sites, Regional Parks, and School Playgrounds where no automobile parking is provided, at least 5 short-term bicycle parking spaces will be provided, except that in park space of less than 2 acres in which there are no recreational facilities requiring building permits, no short term bicycle parking shall be required. Long-term bicycle parking shall be provided as required in the Green Building Code Article 99.05.106.4.

(6) **Unmanned Facilities.** No bicycle parking shall be required for unmanned facilities, such as stand-alone public restrooms in parks or unmanned cellular antenna facilities.

(b) **Fractions.** When the application of these regulations results in the requirement of a fractional bicycle space, any fraction up to and including one-half may be disregarded, and any fraction over one-half shall be construed as requiring one bicycle parking space.

(c) **Change of Use.** Buildings undergoing a change of use shall not be required to provide bicycle parking. This includes adaptive reuse projects pursuant to Section 12.22 A.26.

(d) **Bicycle Parking Requirements.**

(1) **Short-Term Bicycle Parking.** Short-term bicycle parking shall consist of bicycle racks that support the bicycle frame at two points. Racks that support only the wheel of the bicycle are not permissible.

(i) Racks shall allow for the bicycle frame and at least one wheel to be locked to the racks.

(ii) The bicycle rack shall allow for the use of a cable as well as a U-shaped lock.

(iii) If bicycles can be locked to each side of the rack, each side shall be counted toward a required space.

(iv) Racks shall be securely anchored to a permanent surface.

(v) If more than 20 short-term bicycle parking spaces are provided, at least 50 percent shall be covered by a roof or overhang.

(2) **Long-Term Bicycle Parking.** Long-term bicycle parking shall be secured from the general public and enclosed on all sides and protect bicycles from inclement weather.

(i) Acceptable examples of long-term bicycle parking include bicycle lockers, bicycle rooms, bicycle cages, or commercially operated attended bicycle facilities.

(ii) Except in the case of lockers and commercially operated attended bicycle parking, all long-term parking shall provide a means of securing the bicycle frame at two points to a securely anchored rack.

(e) **Design Standards.**

(1) **Dimensions.**

(i) Each bicycle parking space shall be a minimum six feet (72 inches) in length.

(1) Long-term bicycle parking may be mounted so that the bicycle is stored in a vertical fashion. In such cases, devices that hold the bicycle upright by wheel contact shall hold at least 180 degrees of wheel arc. Bicycle parking installed vertically shall be a minimum of 4 feet (48 inches) deep and six feet (72 inches) in height.

(ii) Short-term bicycle parking spaces shall be a minimum of two feet (24 inches) wide.

(1) Individual racks installed side by side to one another that allow bicycles to be locked to either side of the rack shall be spaced a minimum of 30 inches on center.

(2) Racks installed parallel to walls shall be a minimum of 30 inches from the wall.

(iii) Long-term bicycle parking spaces shall be a minimum of 18 inches wide.

(1) Individual racks installed side by side to one another within bicycle rooms or bicycle cages that allow bicycles to be locked to either side of the rack shall be spaced a minimum of 30 inches on center.

(2) Racks installed parallel to walls shall be a minimum of 30 inches from the wall.

(3) Triangular lockers with varying widths may be used so long as the opening is at least two feet (24 inches) wide.

(4) If more than 20 long-term bicycle parking spaces are provided, a workspace of 100 square feet shall be provided adjacent to the long-term bicycle parking to allow bicyclists to maintain their bicycles.

(iv) For single-tiered bicycle parking, minimum headroom of seven feet (84 inches) shall be provided. For facilities where two tiers of bicycle parking are installed one above another, minimum headroom of four feet (48 inches) shall be provided for each tier.

(v) Bicycle parking spaces shall be separated from automobile parking spaces or aisles by a wall, fence, or curb or by at least five feet of open space marked to prohibit parking.

(1) Where bicycle parking is adjacent to accessible automobile parking, aisles or loading areas provided for accessible spaces may count towards the open space requirement for bicycle parking so long as they are immediately adjacent to the bicycle parking.

(2) **Siting Requirements.**

(i) **Location.** Required bicycle parking shall be provided on the same lot as the use for which it is intended to serve.

(ii) **Short-Term Bicycle Parking.** For new construction, short-term bicycle parking shall be located outside buildings. For existing buildings where exterior space is inadequate, short-term bicycle parking may be located inside the building or on the level of the parking garage closest to the ground floor with a direct access to a public street.

(a) For new developments, short-term bicycle parking shall be located to maximize visibility from the main entrance. For existing buildings, where short-term bicycle parking is located within buildings or parking garages, signage is required at each building entrance as per Section 12.21 A.16(d)(4).

(b) Short-term bicycle parking spaces shall be located no farther than 50 feet of walking distance from a main pedestrian entrance or the walking distance from a main pedestrian entrance to the nearest off-street automobile parking space, whichever is closer.

(c) For buildings with more than one main pedestrian entrance, short term bicycle parking shall be split evenly among all main pedestrian entrances.

(iii) **Long-Term Bicycle Parking.** Long-term bicycle parking shall be located in such a manner to allow access for bicyclists entering and leaving the site.

(a) Long-term bicycle parking inside a parking garage shall be located along the shortest walking distance to the nearest pedestrian entrance of the building from the parking garage.

(b) Long-term bicycle parking inside a parking garage shall be located on the level of the parking garage closest to the ground floor with, and must provide direct access to, a public street.

(iv) **Combination of Uses.** Where there is a combination of uses on a lot, long-term bicycle parking shall be provided in separate bicycle parking facilities when a separate pedestrian entrance is provided for each use. In these cases, bicycle parking shall be located so that it is conveniently accessible for each use.

(v) **Multiple Buildings.** For a development site with multiple buildings, required bicycle parking shall be sited in smaller bicycle parking facilities located near the pedestrian entries for each building, rather than in one centralized facility in accordance with the rules for locating bicycle parking provided in this Paragraph.

(3) **Lighting.** Adequate lighting shall be provided to ensure safe access to bicycle parking facilities in accordance with Section 12.21 A.5(k).

(4) **Signage.** Where bicycle parking is not clearly visible from the street, legible reflectorized signs shall be permanently posted at the street entrances to each site indicating the availability and location of bicycle parking within the site. All signs must comply with Section 14.4.7.

(f) **Additional Requirements and Allowances.**

(1) **Bicycle Parking in the Public Right-of-Way.**

(i) Short-term bicycle parking spaces located immediately in front of a site within the public right-of-way may be counted towards the short-term bicycle parking requirements of said site.

(ii) Business operators or property owners may install and maintain their own racks within the public right-of-way unless a City owned rack already exists.

(a) Business operators or property owners are responsible for applying for a permit with the Bureau of Engineering to install short-term bicycle parking within the public right-of-way. A Bureau of Engineering permit may be issued only after the business operator or property owner receives issuance of plan approval or a permit by the Department of Transportation pursuant to LAMC Section 85.04.

(b) All bicycle parking installed in this manner shall meet the rules and regulations set out by the Bureau of Engineering Standard Plan S-671.

(c) Business operators or property owners who choose to install bicycle parking within the public right-of-way are responsible for maintaining the racks according to the standards set forth in a Covenant Maintenance Agreement with the Department of Transportation.

(2) Bicycle Corrals.

(i) Any site located within 500 feet of a City funded bicycle corral may count up to 4 bicycle parking spaces towards their required short-term bicycle parking spaces.

(ii) Business operators or property owners may submit an application to the Department of Transportation to install and maintain their own bicycle corrals immediately in front of their property in the public right of way.

(a) Businesses or property owners who do so may count all the bicycle parking within the bicycle corral towards their required number of short-term bicycle parking spaces. In such cases, short-term bicycle parking installed in such a manner shall not be counted towards the bicycle parking requirements of surrounding businesses.

(b) Business operators or property owners shall pay the construction and maintenance costs of building said bicycle corrals.

(c) Multiple businesses or property owners may submit an application to the Department of Transportation's Bicycle Program as a group and split the costs to construct and maintain the corral.

(1) In such cases, a single business shall be responsible for assuming the maintenance responsibilities detailed in a Covenant Maintenance Agreement as outlined below.

(2) The business responsible for maintaining the bicycle corral may count the full amount of bicycle parking in the corral towards its short-term bicycle parking requirements.

(3) All other businesses may count up to half of the bicycle parking spaces in the corral towards their required short-term bicycle parking spaces so long as they provide a financial contribution.

(d) Business operators or property owners shall be responsible for applying for a permit with the Bureau of Engineering to install bicycle corrals within the public right-of-way. A Bureau of Engineering permit may be issued only after the business operators or property owner receives issuance of plan approval or a permit by the Department of Transportation pursuant to LAMC Section 85.04.

(e) Business operators or property owners who choose to install bicycle corrals within the public right-of-way shall be responsible for maintaining the racks according to the standards set forth in a Covenant Maintenance Agreement with the Department of Transportation.

(f) If, for any reason, the responsibility for maintaining a bicycle corral is returned to the City of Los Angeles, it shall be considered a City funded bicycle corral.

(iii) If, for any reason, the City determines that a bicycle corral must be removed, business owners shall no longer be able to count the spaces removed toward their required bicycle parking. In such cases, said businesses shall be required to provide any bicycle spaces lost in the removal of the corral. Failure to comply may result in the revocation of a business's Certificate of Occupancy and a fine for Code Violation.

(3) **Showers and Personal Lockers.** Showers and personal lockers shall be provided as required per LAMC Section 91.6307. Personal lockers shall only be required for long-term bicycle parking in nonresidential uses.

(g) **Exceptions.** The provisions of this Section do not apply to any of the following projects, which shall comply with the regulations in effect prior to the effective date of this ordinance, as applicable:

(1) Any entitlement application filed and accepted as complete with the exception of CEQA review prior to the effective date of this ordinance as determined by the Department of City Planning.

(2) Any project for which the City has approved an entitlement application as of the effective date of this ordinance but that has not yet submitted plans and appropriate fees to the Department of Building and Safety for plan check, as determined by the Department of City Planning.

(3) Any project where plans were accepted by the Department of Building and Safety per Section 12.26 A.3.

Sec. 7. Subdivision 5 of Subsection A of Section 12.21.1 of the Los Angeles Municipal Code is amended to read as follows:

5. In computing the total floor area within a building, the gross area confined within the exterior walls within a building shall be considered as the floor area of that building, except for the space devoted to bicycle parking, stairways, elevator shafts, light courts, rooms housing mechanical equipment incidental to the operation of buildings, and outdoor eating areas of ground floor restaurants.

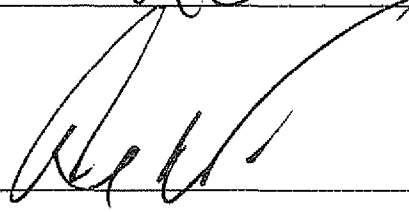
Sec. 8. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

I hereby certify that this ordinance was passed by the Council of the City of Los Angeles, at its meeting of JAN 16 2013.

JUNE A. LAGMAY, City Clerk

By  Deputy

Approved JAN 31 2013


Mayor

Approved as to Form and Legality

CARMEN A. TRUTANICH, City Attorney

By 
ADRIENNE S. KHORASANEE
Deputy City Attorney

Date 1/16/13

File No(s). 12-1297-S1
CF 09-2896; CPC-2011-309-CA

Pursuant to Charter Section 559, I approve this ordinance on behalf of the City Planning Commission and recommend that it be adopted

January 16, 2013

See attached report. *For ML*


Michael LoGrande
Director of Planning

DECLARATION OF POSTING ORDINANCE

I, MARIA VIZCARRA, state as follows: I am, and was at all times hereinafter mentioned, a resident of the State of California, over the age of eighteen years, and a Deputy City Clerk of the City of Los Angeles, California.

Ordinance No. 182386 – Amending Sections 12.03, 12.21, and 12.21.1 of the Los Angeles Municipal Code to allow business operators and property owners to install bicycle parking in the public right of way - a copy of which is hereto attached, was finally adopted by the Los Angeles City Council on **January 16, 2013**, and under the direction of said City Council and the City Clerk, pursuant to Section 251 of the Charter of the City of Los Angeles and Ordinance No. 172959, on **February 1, 2013** I posted a true copy of said ordinance at each of the three public places located in the City of Los Angeles, California, as follows: 1) one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; 2) one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; 3) one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

Copies of said ordinance were posted conspicuously beginning on **February 1, 2013** and will be continuously posted for ten or more days.

I declare under penalty of perjury that the foregoing is true and correct.

Signed this **1st** day of **February, 2013** at Los Angeles, California.



Maria Vizcarra, Deputy City Clerk

Ordinance Effective Date: **March 13, 2013**

Council File No. **12-1297-S1**



City of Los Angeles
Department of City Planning



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