



BUILDING CODE MANUAL

2902

Article 3

12-20-02

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PLUMBING FIXTURES GUIDELINES

The following policy establishes guidelines which are intended to develop minimum number of plumbing fixtures for various occupancies. This guideline was developed in conjunction with the Los Angeles Regional Uniform Code Program (LARUCP) and covers new construction, as well as additions and alterations.

The procedures outlined in this BCM are to be used by the building plan check engineers to determine the required number of plumbing fixtures. According to Section 2901 of the Los Angeles County Building Code (LACBC), all plumbing systems shall comply with the Los Angeles County Plumbing Code (LACPC).

The LACPC Tables 4-1, 4-2, 4-3, and 4-4 shall be used in determining the required number of plumbing fixtures. Table 4-1 applies to all occupancies, while the remaining tables apply to the specific occupancies governed by the adopting State Agencies. (See Matrix Adoption Tables in the LACPC)

For occupancies not listed in Table 4-1, the number of required plumbing fixtures shall be determined by the Administrative Authority, as stated in Section 413.4.3 of the LACPC.

In determining the required number of plumbing fixtures, the footnotes under item "F" below shall always be considered.

A. New Buildings

- A. Calculate the occupant load using Table 10-A of the 2002 LACBC.
- B. Determine the required number of fixtures using the appropriate LACPC tables.

B. Existing Buildings

- A. "Change of Occupancy" shall be treated as a new building.
- B. "Additions and Alterations" which increase the existing occupant load, may use one of the following options:

Option I

- Calculate the occupant load of the addition or altered area (Table 10-A LACBC).
- Determine the required number of fixtures using the applicable table in LACPC.
- Provide the required number of fixtures within the addition or altered area.
- The required number of new fixtures may be located in a common area

within the existing building as long as the common area is accessible to and from the addition or altered area.

Option II

- Calculate the occupant load of the existing building (Table 10-A LACBC).
- Determine the required number of fixtures from the applicable table in LACPC.
- Calculate the total occupant load for both the existing building and the addition, or alteration (Table 10-A LACBC).
- Determine the required number of fixtures from the applicable table in LACPC.
- Subtract the number of required existing fixtures from the number of required existing plus the addition or alteration fixtures.
- The difference is the required number of additional fixtures.

Option III

- Calculate the occupant load of the addition or alteration (Table 10-A LACBC).
- Determine the number of fixtures from the applicable table in LACPC.
- Determine the number of fixtures that was required for the existing building based on the Building Code under which the building was permitted.
- Subtract the number of required fixtures of the existing building from the actual number of fixtures of the existing building.
- Credit the difference to the number of fixtures required for the addition or alteration and provide additional required fixtures if needed.

- C. Alterations that do not increase the occupant load** and are not a change in occupancy classification but may be a change in use, may maintain their existing nonconforming rights.
- D. Relocated Buildings** shall be treated as new buildings.
- E.** The following guideline for occupancies not included in Table 4-1 of LACPC shall be considered:
 - 1. Retail spaces, markets, and wholesale stores**

Use 200 square feet per occupant to determine the occupant load for use in the following chart:

Type of Building	Water Closets* (fixtures per persons)	Lavatories (fixtures per person)
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	Male	Female	Male	Female
Retail, markets, or wholesale stores	1 : 1-50 2 : 51-100 3 : 101-400	1 : 1-50 2 : 51-100 3 : 101-200 4 : 201-300 5 : 301-400	One for each two water closets	
	over 400, add one fixture for each additional 500 males and one for each 150 females.			

*Where urinals are provided, one water closet less than the number specified may be provided for each urinal installed, except the number of water closets in such cases shall not be reduced to less than two-thirds (2/3) of the minimum specified.

2. Hotels and Motels

- Minimum required bathroom facilities at lobby area shall be one toilet facility for each sex.
- For lounge, bar, and restaurant areas, determine occupant load based on Table 10-A of LACBC and calculate the required number of plumbing fixtures using Table 4-1 of LACPC.
- Hotel guest rooms are required to have one toilet facility.
- For conference rooms, ballrooms, meeting and gathering areas, determine the occupant load (OL) based on Table 10-A of LACBC. If OL is fifty (50) or more, use “assembly places” category of Table 4-1 of LACPC to determine the number of plumbing fixtures, otherwise, use “office or public buildings” category of Table 4-1.

3. Warehouses and Storage Buildings

Table 10-A of LACBC usually yields high number of occupant load for these categories. If submitted plans show fixed rack structures, machinery, equipment, etc. on the floor plans, the plan check engineers may deduct the footprint of these elements from the gross floor area and calculate the occupant load based on Table 10-A of LACBC items No. 20, 26, and 29 respectively. Consequently, a determination of the number of plumbing fixtures is performed by using Table 4-1 of LACPC “Industrial Warehouses” category.

4. Self Service Laundromats

The occupant load is determined by either using 30 square feet per occupant based on the gross floor area or based on the total number of washers and dryers by counting one occupant for every two machines (either a washer or a dryer). The number of plumbing fixtures is determined based on the chart below.

Regardless of the occupant load, facilities with a total floor area of 1500 square feet or less need only provide a unisex toilet facility designed for use by both sexes.

Type of Building	Water Closets* (fixtures per persons)		Lavatories (fixtures per person)	
	Male	Female	Male	Female
Laundromats	1 : 1-50 2 : 51-100 3 : 101-400	1 : 1-50 2 : 51-100 3 : 101-200 4 : 201-300 5 : 301-400	One for each two water closets	
	over 400, add one fixture for each additional 500 males and one for each 150 females.			

*Where urinals are provided, one water closet less than the number specified may be provided for each urinal installed, except the number of water closets in such cases shall not be reduced to less than two-thirds (2/3) of the minimum specified.

5. Sport Facilities

Sport facilities may be used for other events (i.e. concerts, shows, ceremonies, etc.). To determine the proper occupant load, the use of the facility shall be defined at the time of plan submittal.

The following guidelines shall be used to determine required number of plumbing fixtures.

a. Facility is used only for sport activities

- Facility with fixed seating: Calculate the occupant load based on Section 1003.2.2.2.3 of LACBC and determine the number of plumbing fixtures according to Table 4-1 of LACPC under “assembly places for public use.” Number of toilet fixtures for designated employee and player arenas shall be determined based on type of occupancies using Table 10-A of LACBC and utilizing Table 4-1 of LACPC.
- Facility without fixed seating: Calculate the occupant load for the event area based on Table 10-A of LACBC and determine the number of plumbing fixtures according to Table 4-1 of LACPC under “assembly places for public use.” The number of toilet fixtures for designated employees and player arenas shall be determined based on occupancy groups using both Table 10-A of LACBC (use an occupant load factor of 50) and Table 4-1 of LACPC.

b. Facility used for sport activities and other events

If the center court or other areas in the facility is used for special events and/or labeled as multi-purpose room, an additional occupant load for these areas shall be determined based on a mutual agreement between the

applicant, Building Plan Check Section, and Fire Department. This additional load shall be added to the numbers calculated in Section E.5.a.

6. Shell Buildings

The following guidelines shall be used to determine the number of plumbing fixtures and the size of sewer and water lines required:

- II. Calculate the occupant load based on the **gross** floor area and the **projected use and occupancy** of the building using Table 10-A of the 2001 LACBC.
- III. Determine the required number of fixtures using the appropriate LACPC tables.
- IV. Although restrooms need not to be shown on floor plans, a determination of the size of sewer and water lines based on the total number of plumbing fixtures per item II is required and must be shown on the approved Plumbing and Building Plans. Building permits shall not be finalized unless properly sized building sewer is installed. Keep in mind, Certificate of Occupancy is not issued for shell buildings.

F. Footnotes

- In multi-story buildings, Section 413.2.1 of LACPC requires that accessibility (meaning availability) of the required plumbing fixtures not exceed one vertical story.
- For facilities in mercantile and business occupancies serving customers, Section 413.5.1 of the LACPC allows a single set of restrooms to be accessible (meaning available) to both customers and employees. The required number of fixtures shall be the greater of the required number for employees or the required number for customers.
- Access to public facilities (for the customer) shall not be through areas designated "for employee use only."
- Accessibility Requirements for Persons with Disabilities:
New Facilities: When new facilities are provided, they must comply with disabled access regulations.
Existing Facilities: When the existing facility is to be used in determining the overall required plumbing fixtures count (for both proposed addition and existing area), the existing facilities must comply with disabled access regulations (unreasonable hardship may be granted as applicable in Chapters 11A and 11B).
- Conflicts between Codes:
Whenever there is a conflict between Codes or different provisions of the same Code, the most restrictive provision shall be applied.

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