



INFORMATION SHEET

NO. P-04

DATE : September 22, 2017

SUBJECT : Plumbing

TITLE : **Plumbing Fixtures**

REFERENCES : San Francisco Building Code (SFBC)
San Francisco Plumbing Code (SFPC)
California Health and Safety Code

DISCUSSION :

SFPC Section 422.0 is used to determine the minimum number of the plumbing fixtures required for each type of building occupancy.

In accordance with SFPC, the minimum number of plumbing fixtures are shown in Table 422.1, except that Table 4-2 shall be used for medical clinics licensed by the state, as required by SFPC Section 422.0. (See SFBC Section 304.2 and 202 for definition of 'Clinics').

The categories not shown in SFPC Table 422.1 are addressed by Section VIII of this Information Sheet. The minimum number of plumbing fixtures are assumed to be based on 50 percent male and 50 percent female users. The occupant load shall be determined using the 'Table A Occupant Load Factor' of SFPC Table 422.1.

I. GUIDELINE TO DETERMINE MINIMUM REQUIRED FIXTURES

A. New Buildings

1. Determine the occupant load based on the proposed floor area for each occupancy.
2. Determine the required number of plumbing fixtures for each occupancy.
3. Determine the total number of plumbing fixtures by adding the required number of the plumbing fixtures for each occupancy.

B. Existing Buildings

For the following cases, either options I or II may be used:

1. Change of occupancy classification or change of use for an existing tenant space or building.
2. Addition or alteration that increases the occupant load of the existing buildings may use any of the following options; however, alterations without an increase in occupant load, other than case 1 above, may maintain their existing non-conforming toilet facilities without complying with current plumbing fixture requirements. Examples shown below.
 - a. Option I.
 - i. Calculate the number of occupants within the addition or altered area.
 - ii. Determine the required number of fixtures from the applicable table in the plumbing code or this Information Sheet.
 - iii. Provide the required number of fixtures based on item ii within the addition or altered area, or in a common area of the existing building accessible from the addition or altered area per Section II of this Information Sheet.
 - b. Option II.
 - i. Calculate the occupant load for the existing building prior to the addition or alteration.
 - ii. Determine the required number of fixtures for the existing building from the applicable table in the plumbing code or this Information Sheet.
 - iii. Calculate the occupant load for the existing building with the addition or alteration.
 - iv. Determine the required number of fixtures, based on the occupant load from item iii above, from the applicable table.
 - v. Subtract the number of fixtures determined from item ii from those determined from item iv above. The difference will be the number of additional fixtures required, unless the number of the existing fixtures equal or exceed those determined from item iv above. In this case no additional fixtures will be required.
 - vi. Provide the required number of additional fixtures within the addition or altered area, or in a common area of the existing building accessible from the addition or altered area per Section II of this Information Sheet.

Examples:

- Addition:

An existing 100,000 square feet warehouse with a 20,000 square feet addition. The existing occupant load per SFPC Table A is 20 with the addition adding 4 more occupants. There are existing toilet rooms for men and women. The men's room has one water closets, two urinals, and two lavatories. The women's room contains two water closets and one lavatory.

- a. Option I.

The applicable table is SFPC Table 422.1. The addition would require one new water closet and one new lavatory for each gender.

b. Option II.

The applicable table is SFPC Table 422.1. The existing warehouse building with 20 occupants may be credited with one water closet and one lavatory in each of the men's and women's rooms. For 24 occupants after the addition, a total of two water closets and two lavatories would be required for each gender. By applying the credit, one new water closet but no new lavatory would need to be added to the men's room. Similarly, no new water closet but one new lavatory would need to be added to the women's room. Clearly there is an advantage to use Option II for this example.

- Alteration that increases the occupant load:

An existing 100,000 square feet warehouse with an alteration to convert 10,000 square feet into a wholesale accessory use. The existing occupant load per SFPC Table A is 20. The new occupant load with the alteration will be the total of 18 for warehouse and 50 for wholesale use. There are existing men's and women's toilet rooms. The men's room has one water closet, two urinals, and two lavatories. The women's room has two water closets and one lavatory.

a. Option I.

The applicable table is SFPC Table 422.1. The alteration converting 10,000 sf to wholesales would create 25 occupants for each gender. This alteration would require one new water closet, no new urinal, and one new lavatory for the men's room. Similarly one new water closet and one new lavatory will be required for the women's room.

b. Option II.

The applicable table is SFPC Table 422.1. The existing warehouse building with 20 occupants may be credited with one water closet and one lavatory in each of the men's and women's rooms. With the alteration, the men's room(s) would require for wholesales use, one water closet and one lavatory, and for warehouse use, one water closet and one lavatory. Thus a total of 2 water closets and 2 lavatories are required for the men's room. Similarly a total of 2 water closets and 2 lavatories are required for the women's room. By applying the credit, one new water closet needs to be added to the men's room and the existing water closet must be maintained. Since there are 2 existing lavatories in the men's room, no new lavatory is needed. For the women's room, since there are 2 existing water closets, no new water closet is needed. However, one new lavatory must be added to the women's room after applying the credit and the one existing lavatory must be maintained. Clearly there is an advantage to use option II for this example.

II. NUMBER OF FIXTURES PER FLOOR

SFPC Section 422.4.1 requires, in multi-story buildings, the availability of the required plumbing fixtures shall not exceed one vertical story.

Fixtures shall be provided on each floor based on the number of occupants on each floor or provided for each group of floors based on the number of occupants for that group of floors.

III. FLOORS SERVING CUSTOMERS AND EMPLOYEES

SFPC Section 422.4 allows a single set of restrooms accessible to both customers and employees for facilities in mercantile and business occupancies. This section will apply to a restaurant which is considered as a business that sells food to be consumed on the premises according to Footnote 2 of SFPC Table 422.1. The required number of fixtures shall be the greater of the required number for employees or the required number for customers. (See footnotes of SFPC Table 422.1 for additional requirements)

IV. LOCATION OF FIXTURES

Access to public facilities (for the customer) shall not be through areas designated "for employee use only" such as kitchens, storage rooms, closets or similar spaces.

V. ACCESSIBILITY REQUIREMENTS FOR PERSONS WITH DISABILITIES

New Facilities. When new facilities are provided, they must comply with the accessibility requirements.

Existing Facilities. When existing facilities are to be used as the required sanitary facilities for an addition or alteration, the existing facilities must comply with disabled access regulations (unreasonable hardship may be granted as applicable per disabled access regulations).

VI. CONFLICTS BETWEEN CODES

Whenever there is a conflict between codes or different provisions of the same code, the most restrictive provision shall be applied.

VII. FOOD SERVICE ESTABLISHMENTS

A food establishment such as a restaurant with an area of 1500 sf or less may be considered as a business according to Footnote 2 on SFPC Table 422.1, and may provide one toilet facility to be used by no more than one person at a time to serve customers and employees of both sexes per SFPC Section 422.2.

VIII. TYPES OF BUILDINGS OR OCCUPANCIES NOT SHOWN IN SFPC TABLE 422.1 AND TABLE 4-2

SFPC Section 422.3 and Table 422.1 allows for building occupancies and categories not shown in the adopted tables to be considered separately as deemed appropriate by the Authority Having Jurisdiction.

- Hostels are considered as Dormitories in SFPC Table 422.1 for fixture count.
- Community Facilities may use Table VIII-1 below.

Note: For the purposes of this section Community Facilities are defined as facilities containing a multi-purpose use of which the primary purpose is to provide non-profit assistance and services to the general public. Such multi-purpose use shall be related to social services, child care, job assistance, business assistance, educations, adult day care, cultural services, gyms or recreation, community meetings, auditoriums as an incidental service, and administrative offices. The following factors may be used for such a community facility.

TABLE VIII -1 MINIMUM PLUMBING IN COMMUNITY FACILITY

TYPE OF USE	OCC. LOAD (per SF unless noted)	PLUMBING FIXTURES (unit per person unless noted)				
		WATER CLOSETS ¹		URINALS	LAVATORIES (per water closet)	DRINKING FOUNTAIN
		MALE	FEMALE			
COMMUNITY FACILITY						
1. Gymnasiums and Multipurpose Rooms						
Gymnasiums and Multipurpose rooms that do not function as an Auditorium	1:30	1:75	1:40	1:75	1:2	1:75
Stage Only	1:30					
Storage rooms	1:5000					
2. Indoor or Outdoor Swimming Pool & Associated Bathhouse						
Pool Area	1:200	1:75	1:40	1:75	1:2	1:75
Pool Deck	1:30					
Cashier / Check room	1:200					
Dressing Area	1:200					
3. Child Care						
Outdoor Play Area	N/A	0	0	0	0	0
Classrooms – up to Age 16	1:50	1:75	1:40	1:75	1:2	1:75
Parent / Guest Waiting Area (Incidental to Main Use)	N/A	0	0	0	0	0

Cont'd

TYPE OF USE	OCC. LOAD (per SF unless noted)	PLUMBING FIXTURES (unit per person unless noted)				
		WATER CLOSETS ¹		URINALS	LAVATORIES (per water closet)	DRINKING FOUNTAIN
		MALE	FEMALE			
COMMUNITY FACILITY						
4. Associated Community Room Uses						
Activity – Craft Rooms	1:30	1:75	1:40	1:75	1:2	1:75
Billiard or Game Room	1:30 ⁶					
Dressing Rooms	1:200					
Office / Staff Area	1:200					
Office for consultation and associated community service functions	1:200	1: 1-100 2: 101-200 3: 201-400 ¹⁰	3: 1-50 4: 51-100 8: 101-200 11: 201-400 ¹⁰	1: 1-100 2: 101-200 3: 201-400 4: 401-600 ⁴	1: 1-200 2: 201-400 3: 401-750 ²	1:75
Dining Area	1:30	1: 1-50 2: 51-150 3: 151-300 ⁷	1: 1-50 2: 51-150 3: 151-300 ⁷	1:1-150 ⁸	1: 1-150 2: 151-200 3: 201-400 ⁹	N/A
Kitchen Area	N/A	0	0	0	0	0
Lobby Accessory to Assembly Occupancy	N/A					
Mechanical Room	N/A					
General Storage and Custodial Room	N/A					

Footnotes:

1. The total number of water closets for females shall be at least equal to the total number of water closets and urinals required for males.
2. Over 750 occupants, add one lavatory for each additional 500 persons.
3. Over 400 occupants, add one water closet for each additional 500 males and 1 for each additional 125 females.
4. Over 600 occupants, add 1 Urinal for each additional 300 males.
5. Over 750 occupants, add 1 Drinking Fountain for each additional 500 persons.
6. The occupant load shall be determined by dividing the superficial floor area (the area determined by deducting the area occupied by pool tables from the total floor area) by 15 sq. ft per occupant.
7. Over 300 occupants, add 1 Water Closet for each additional 200 persons.
8. Over 150 occupants, add 1 Urinal for each additional 150 males.
9. Over 400 occupants, add 1 Lavatory for each additional 400 persons.
10. Over 400 occupants, add one water closet for each additional 500 males and 1 for each additional 150 females.

