



MANUAL OF RECOMMENDED PRACTICE FOR

Toilet Room Design: All Gender, Health, Safety, Privacy and Security



IAPMO Manual 1-2023

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Foreword and Purpose

One of the several task groups formed through IAPMO Technical Services and Research addresses bathroom design. The scope of the Bathroom Design Task Group was to provide a Manual of Recommended Practice for Toilet Room Design. This Manual addresses toilet room design, particularly when it comes to all-gender, health, safety, privacy, and security needs.

While this document is developed as a guidance document, it is written in mandatory language so Authorities Having Jurisdiction can codify the requirements.

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Manual of Recommended Practices for Toilet Room Design: All Gender, Health, Safety, Privacy and Security

101.0 General

101.1 Applicability. The intent of this manual is to provide clarification of procedures for the design and approval of all-gender toilet facilities not specifically covered in other parts of the Plumbing or Building Code.

102.0 Definitions

102.1 Toilet Room. A room or space containing either one water closet; one water closet and lavatory; or one water closet, one lavatory, and one urinal.

103.0 Plumbing Provisions

103.1 Fixture Count. Plumbing fixtures shall be provided for the type of building occupancy and in the minimum number shown in Appendix B. The total occupant load and occupancy classification shall be determined in accordance with the building code. Occupancy classification not shown in Appendix B shall be considered separately by the Authority Having Jurisdiction. Plumbing Fixtures shall be located in separate gender toilet rooms or in all gender toilet rooms. Single occupant toilet rooms shall be all gender toilet rooms.

103.1.1 Fixture Calculations. Once the occupancy and occupant load are determined, Appendix B shall be applied to determine the minimum number of plumbing fixtures required. For toilet facilities designed for use by all genders, the minimum number of fixtures shall be the aggregate calculated at 50 percent female and 50 percent male in accordance with Appendix B. Where multi-user all-gender facilities are provided in lieu of or in addition to separate men's and women's facilities, the total number of fixtures collectively shall be used to determine the number of fixtures provided in an occupancy. The substitution of a water closet for each urinal shall be permitted provided the total number of fixtures installed complies with Appendix B to get the total required.

103.1.2 Single Use and Assisted-Use Toilet Facilities. Where single use or assisted-use toilet facilities are required in applicable building regulations, the facilities shall be installed in accordance with those regulations.

103.1.3 Required Facilities. At a minimum, Assisted-use toilet facilities shall have a water closet and one lavatory.

103.2 All Gender Toilet Facilities. At least one all-gender toilet facility shall be provided and shall contribute to the total number of required fixtures in accordance with Appendix B.

103.2.1 Single Use Toilet Facilities. Single use toilet facilities and family or assisted-use toilet facilities shall be identified with signage indicating use by any gender.

103.2.2 Family or Assisted-Use Toilet Facilities. Family or assisted-use toilet facilities shall be identified as all-gender toilet rooms.

103.3. Fixture Requirements for Special Occupancies. Additional fixtures shall be permitted to be required where unusual environmental conditions or referenced activities are encountered. In food preparation areas, fixture requirements shall be permitted to be dictated by health codes.

103.4 Toilet Facilities Serving Employees and Customers. Each building or structure shall be provided with toilet facilities for employees and customers. Requirements for customers and employees shall be permitted to be met with a single set of toilet facilities accessible to both groups.

Required toilet facilities for employees and customers located in shopping malls or centers shall be permitted to be met by providing a centrally located toilet facility accessible to several stores. The maximum travel distance from entry to any store to the toilet facility shall not exceed 300 feet (91 440 mm). Required toilet facilities for employees and customers in other than shopping malls or centers shall have a maximum travel distance not to exceed 500 feet (152 m).

103.4.1 Access to Toilet Facilities. In multi-story buildings, accessibility to the required toilet facilities shall not exceed one vertical story. Access to the required toilet facilities for customers shall not pass through areas designated as for employee use only such as kitchens, food preparation areas, storage rooms, closets, or similar spaces. Toilet facilities accessible only to private offices shall not be counted to determine compliance with this section.

103.5 Lavatory Locations. Lavatories shall be located either in the toilet room or grouped in an adjacent common area within the toilet facility.

104.0 Safety and Security

104.1 Partitions.

104.1.1 Water Closet Partitions walls are required when there is more than one water closet in a toilet facility. In all-gender toilet rooms, partitions shall comply with IAPMO/ANSI/CAN Z124.10-2022 Type A partitions requirements. Additionally, the maximum height of partition walls off the floor shall be one-inch.

104.1.2 Urinals. Where provided, urinals shall be located in an area visually separate from the rest of the toilet facilities. When partitions are used for visual separation, they shall comply with 104.1.1. In all-gender toilet rooms, urinals shall be located in separate compartments with partitions complying with IAPMO/ANSI/CAN Z124.10-2022 Type A.

104.2-Full Height Compartments. Where full height compartment walls and doors are used instead of partitions, each compartment shall comply with the Mechanical code for ventilation, Electrical code for lighting, Fire code for sprinklers and alarms.

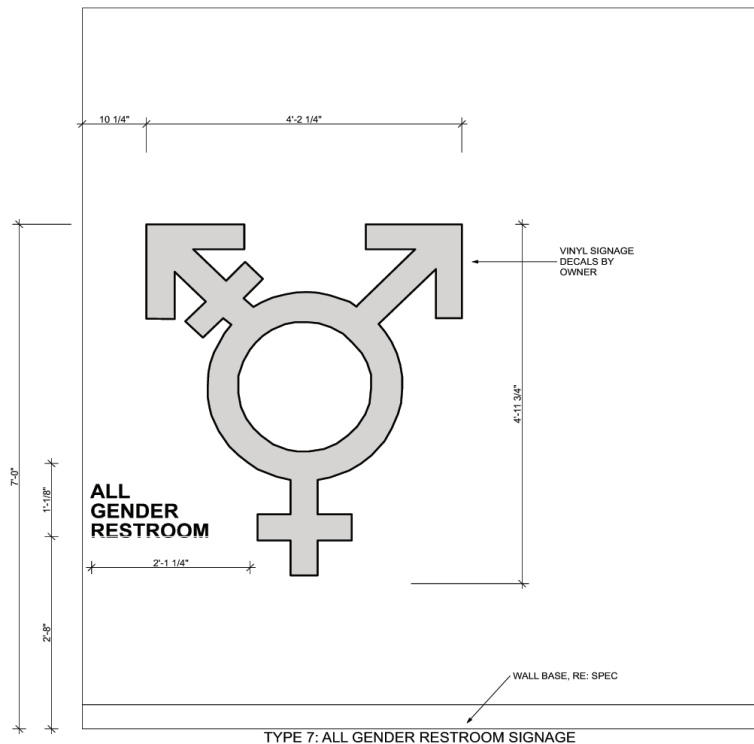
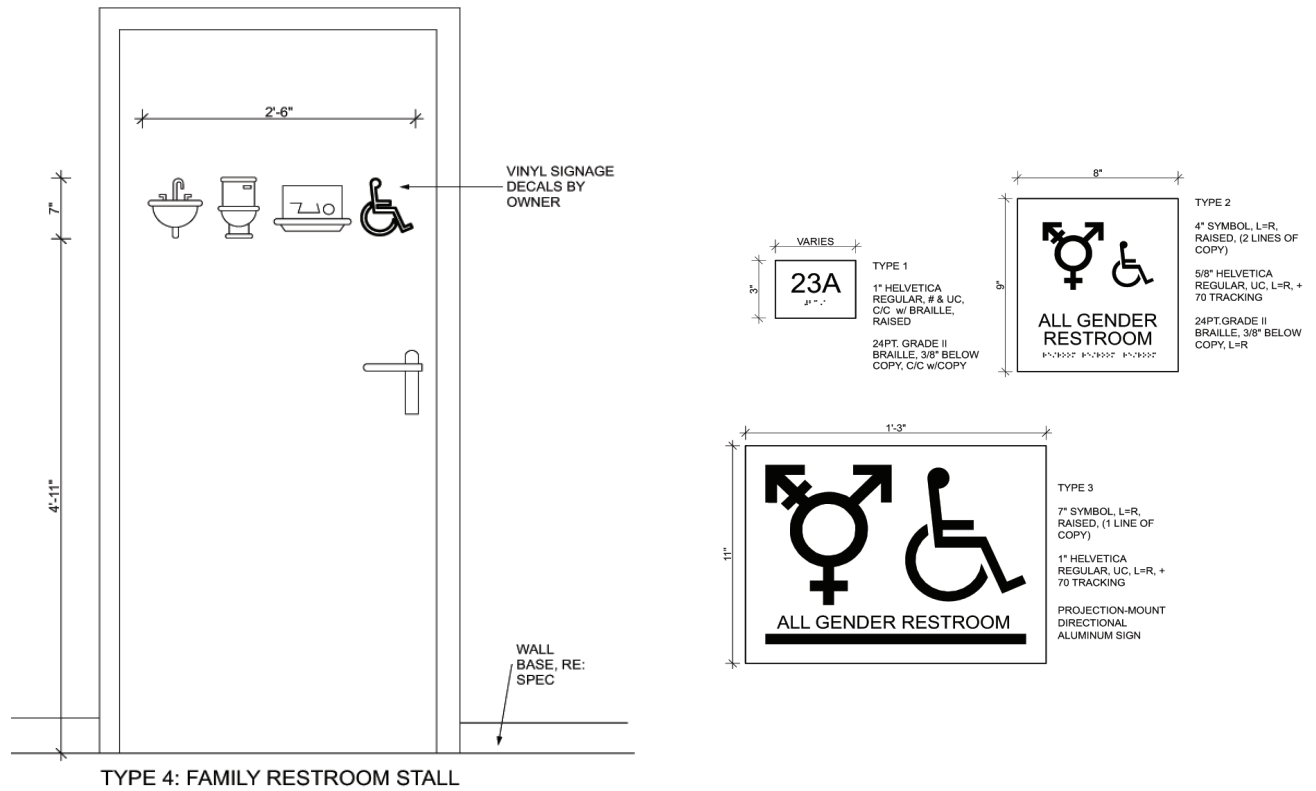
104.3 Locks. Doors shall be lockable from the inside of the compartment or partition enclosure. The door locking device shall be readily distinguishable as locked from the outside of the partition enclosure, with emergency access from maintenance personnel. In all-gender toilet rooms, the lock shall have a visual indication that the compartment is occupied when locked.

105.0 Signage

105.1 Signage for Toilet Facilities. Signage identifying the intended users shall be provided at the entrance of all toilet facilities. See Appendix A for sample signage.

105.2 Signage for Single Use, and Family or Assisted-Use Toilet Facilities. Single use, family or assisted-use toilet facilities shall have a sign on the entry indicating use by all-genders. See Appendix A for sample signage.

Appendix A: Sample Signage



Appendix B: Minimum Plumbing Facilities

TABLE 103.1
MINIMUM PLUMBING FACILITIES¹ [UNIFORM PLUMBING CODE: TABLE 422.1]

TYPE OF OCCUPANCY ²	WATER CLOSETS (FIXTURES PER PERSON) ³		URINALS (FIXTURES PER PERSON) ⁴	LAVATORIES (FIXTURES PER PERSON) ⁵		BATHTUBS OR SHOWERS (FIXTURES PER PERSON)	DRINKING FOUNTAINS/FACILITIES (FIXTURES PER PERSON)	OTHER ^{6,7}
	Male	Female	Male	Male	Female			
A-1 Assembly occupancy (fixed or permanent seating)- theaters, concert halls, and auditoriums	Male 1: 1-100 2: 101-200 3: 201-400	Female 1: 1-25 2: 26-50 3: 51-100 4: 101-200 6: 201-300 8: 301-400	Male 1: 1-200 2: 201-300 3: 301-400 4: 401-600	Male 1: 1-200 2: 201-400 3: 401-600 4: 601-750	Female 1: 1-100 2: 101-200 4: 201-300 5: 301-500 6: 501-750	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 125 females.		Over 600, add 1 fixture for each additional 300 males.	Over 750, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.		—	Over 750, add 1 fixture for each additional 500 persons.	
A-2 Assembly occupancy- restaurants, pubs, lounges, nightclubs and banquet halls	Male 1: 1-50 2: 51-150 3: 151-300 4: 301-400	Female 1: 1-25 2: 26-50 3: 51-100 4: 101-200 6: 201-300 8: 301-400	Male 1: 1-200 2: 201-300 3: 301-400 4: 401-600	Male 1: 1-150 2: 151-200 3: 201-400	Female 1: 1-150 2: 151-200 4: 201-400	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	Over 400, add 1 fixture for each additional 250 males and 1 fixture for each 125 females.		Over 600, add 1 fixture for each additional 300 males.	Over 400, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females		—	Over 750, add 1 fixture for each additional 500 persons.	
A-3 Assembly occupancy (typical without fixed or permanent seating)- arcades, places of worship, museums, libraries, lecture halls, gymnasiums (without spectator seating), indoor pools (without spectator seating)	Male 1: 1-100 2: 101-200 3: 201-400	Female 1: 1-25 2: 26-50 3: 51-100 4: 101-200 6: 201-300 8: 301-400	Male 1: 1-100 2: 101-200 3: 201-400 4: 401-600	Male 1: 1-200 2: 201-400 3: 401-600 4: 601-750	Female 1: 1-100 2: 101-200 4: 201-300 5: 301-500 6: 501-750	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 125 females.		Over 600, add 1 fixture for each additional 300 males.	Over 750, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.		—	Over 750, add 1 fixture for each additional 500 persons.	
A-4 Assembly occupancy (indoor activities or sporting events with spectator seating)- swimming pools, skating rinks, arenas, and gymnasiums	Male 1: 1-100 2: 101-200 3: 201-400	Female 1: 1-25 2: 26-50 3: 51-100 4: 101-200 6: 201-300 8: 301-400	Male 1: 1-100 2: 101-200 3: 201-400 4: 401-600	Male 1: 1-200 2: 201-400 3: 401-750	Female 1: 1-100 2: 101-200 4: 201-300 5: 301-500 6: 501-750	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 125 females.		Over 600, add 1 fixture for each additional 300 males.	Over 750, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.		—	Over 750, add 1 fixture for each additional 500 persons.	

TABLE 103.1
MINIMUM PLUMBING FACILITIES¹ [UNIFORM PLUMBING CODE: TABLE 422.1] (continued)

TYPE OF OCCUPANCY ²	WATER CLOSETS (FIXTURES PER PERSON) ³		URINALS (FIXTURES PER PERSON) ⁴	LAVATORIES (FIXTURES PER PERSON) ⁵		BATHTUBS OR SHOWERS (FIXTURES PER PERSON)	DRINKING FOUNTAINS/FACILITIES (FIXTURES PER PERSON)	OTHER ^{6,7}
	Male	Female	Male	Male	Female			
A-5 Assembly occupancy (outdoor activities or sporting events)- amusement parks, grandstands and stadiums	Male 1: 1-100 2: 101-200 3: 201-400	Female 1: 1-25 2: 26-50 3: 51-100 4: 101-200 6: 201-300 8: 301-400	Male 1: 1-100 2: 101-200 3: 201-400 4: 401-600	Male 1: 1-200 2: 201-400 3: 401-750	Female 1: 1-100 2: 101-200 4: 201-300 5: 301-500 6: 501-750	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 125 females.		Over 600, add 1 fixture for each additional 300 males.	Over 750, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.		Over 750, add 1 fixture for each additional 500 persons.		
B Business occupancy (office, professional or service type transactions)- banks, vet clinics, hospitals, car wash, banks, beauty salons, ambulatory health care facilities, laundries and dry cleaning, educational institutions (above high school), or training facilities not located within school, post offices and printing shops	Male 1: 1-50 2: 51-100 3: 101-200 4: 201-400	Female 1: 1-15 2: 16-30 3: 31-50 4: 51-100 8: 101-200 11: 201-400	Male 1: 1-100 2: 101-200 3: 201-400 4: 401-600	Male 1: 1-75 2: 76-150 3: 151-200 4: 201-300 5: 301-400	Female 1: 1-50 2: 51-100 3: 101-150 4: 151-200 5: 201-300 6: 301-400	—	1 per 150	1 service sink or laundry sink
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 150 females.		Over 600, add 1 fixture for each additional 300 males.	Over 400, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.				
E Educational occupancy- private or public schools	Male 1 per 50	Female 1 per 30	Male 1 per 100	Male 1 per 40	Female 1 per 40	—	1 per 150	1 service sink or laundry sink
F1, F2 Factory or Industrial occupancy-fabricating or assembly work	Male 1: 1-50 2: 51-75 3: 76-100	Female 1: 1-50 2: 51-75 3: 76-100	—	Male 1: 1-50 2: 51-75 3: 76-100	Female 1: 1-50 2: 51-75 3: 76-100	1 shower for each 15 persons exposed to excessive heat or to skin contamination with poisonous, infectious or irritating material	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	Over 100, add 1 fixture for each additional 40 persons.		—	Over 100, add 1 fixture for each additional 40 persons.			Over 750, add 1 fixture for each additional 500 persons.	
I-1 Institutional occupancy (houses more than 16 persons on a 24-hour basis)- substance abuse centers, assisted living, group homes, or residential facilities	Male 1 per 15	Female 1 per 15	—	Male 1 per 15	Female 1 per 15	1 per 8	1 per 150	1 service sink or laundry sink

TABLE 103.1
MINIMUM PLUMBING FACILITIES¹ [UNIFORM PLUMBING CODE: TABLE 422.1] (continued)

TYPE OF OCCUPANCY ²		WATER CLOSETS (FIXTURES PER PERSON) ³		URINALS (FIXTURES PER PERSON) ⁴	LAVATORIES (FIXTURES PER PERSON) ⁵		BATHTUBS OR SHOWERS (FIXTURES PER PERSON)	DRINKING FOUNTAINS/FACILITIES (FIXTURES PER PERSON)	OTHER ^{6,7}
I-2 Institutional occupancy-medical, psychiatric, surgical or nursing homes	Hospitals and nursing homes-individual rooms and ward room	1 per room		—	1 per room		1 per room	1 per 150	1 service sink or laundry sink
		1 per 8 patients		—	1 per 10 patients		1 per 20 patients		
	Hospital Waiting or Visitor Rooms	1 per room		—	1 per room		—	1 per room	—
	Employee Use	Male 1: 1-15 2: 16-35 3: 36-55	Female 1: 1-15 3: 16-35 4: 36-55	—	Male 1 per 40	Female 1 per 40	—	—	—
	Over 55, add 1 fixture for each additional 40 persons.								
I-3 Institutional occupancy (houses more than 5 people)	Prisons	1 per cell		—	1 per cell		1 per 20	1 per cell block/floor	—
	Correctional facilities or juvenile center	1 per 8		—	1 per 10		1 per 8	1 per floor	1 service sink or laundry sink
	Employee Use	Male 1: 1-15 2: 16-35 3: 36-55	Female 1: 1-15 3: 16-35 4: 36-55	—	Male 1 per 40	Female 1 per 40	—	1 per 150	—
	Over 55, add 1 fixture for each additional 40 persons.								
I-4 Institutional occupancy (any age that receives care for less than 24 hours)		Male 1: 1-15 2: 16-35 3: 36-55	Female 1: 1-15 3: 16-35 4: 36-55	—	Male 1 per 40	Female 1 per 40	—	1 per 150	1 service sink or laundry sink
		Over 55, add 1 fixture for each additional 40 persons.							
M Mercantile occupancy (the sale of merchandise and accessible to the public)		Male 1: 1-100 2: 101-200 3: 201-400	Female 1: 1-100 2: 101-200 4: 201-300 6: 301-400	Male 0: 1-200 1: 201-400	Male 1: 1-200 2: 201-400	Female 1: 1-200 2: 201-300 3: 301-400	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
		Over 400, add 1 fixture for each additional 500 males and 1 fixture for each 200 females.		Over 400, add 1 fixture for each additional 500 males.	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each 400 females.		—	Over 750, add 1 fixture for each additional 500 persons.	—
R-1 Residential occupancy (minimal stay)-hotels, motels, bed and breakfast homes		1 per sleeping room		—	1 per sleeping room		1 per sleeping room	—	1 service sink or laundry sink

TABLE 103.1
MINIMUM PLUMBING FACILITIES¹ [UNIFORM PLUMBING CODE: TABLE 422.1] (continued)

TYPE OF OCCUPANCY ²		WATER CLOSETS (FIXTURES PER PERSON) ³		URINALS (FIXTURES PER PERSON) ⁴	LAVATORIES (FIXTURES PER PERSON) ⁵		BATHTUBS OR SHOWERS (FIXTURES PER PERSON)	DRINKING FOUNTAINS/FACILITIES (FIXTURES PER PERSON)	OTHER ^{6, 7}
		Male	Female		Male	Female			
R-2 Residential occupancy (long-term or permanent)	Dormitories	Male 1 per 10	Female 1 per 8	Male 1 per 25	Male 1 per 12	Female 1 per 12	1 per 8	1 per 150	1 service sink or laundry sink
		Add 1 fixture for each additional 25 males and 1 fixture for each additional 20 females.		Over 150, add 1 fixture for each additional 50 males.	Add 1 fixture for each additional 20 males and 1 fixture for each additional 15 females.				
	Employee Use	Male 1: 1-15 2: 16-35 3: 36-55	Female 1: 1-15 3: 16-35 4: 36-55	—	Male 1 per 40	Female 1 per 40	—	—	
Over 55, add 1 fixture for each additional 40 persons									
	Apartment house/unit	1 per apartment		—	1 per apartment		1 per apartment	—	1 kitchen sink per apartment. 1 laundry sink or 1 automatic clothes washer connection per unit or 1 laundry sink or 1 automatic clothes washer connection for each 12 units
R-3 Residential occupancy (long-term or permanent in nature) for more than 5 but does not exceed 16 occupants)		Male 1 per 10	Female 1 per 8	—	Male 1 per 12	Female 1 per 12	1 per 8	1 per 150	1 service sink or laundry sink
		Add 1 fixture for each additional 25 males and 1 fixture for each additional 20 females.			Add 1 fixture for each additional 20 males and 1 fixture for each additional 15 females.				
R-3 Residential occupancy (one and two family dwellings)		1 per one and two family dwelling		—	1 per one and two family dwelling		1 per one and two family dwelling	—	1 kitchen sink and 1 automatic clothes washer connection per one and two family dwelling
R-4 Residential occupancy (residential care or assisted living)		Male 1 per 10	Female 1 per 8	—	Male 1 per 12	Female 1 per 12	1 per 8	1 per 150	1 service sink or laundry sink
		Add 1 fixture for each additional 25 males and 1 fixture for each additional 20 females.			Add 1 fixture for each additional 20 males and 1 fixture for each additional 15 females.				

TABLE 103.1
MINIMUM PLUMBING FACILITIES¹ [UNIFORM PLUMBING CODE: TABLE 422.1] (continued)

TYPE OF OCCUPANCY ²	WATER CLOSETS (FIXTURES PER PERSON) ³		URINALS (FIXTURES PER PERSON) ⁴	LAVATORIES (FIXTURES PER PERSON) ⁵		BATHTUBS OR SHOWERS (FIXTURES PER PERSON)	DRINKING FOUNTAINS/FACILITIES (FIXTURES PER PERSON)	OTHER ^{6,7}
	Male	Female		Male	Female			
S-1, S-2 Storage occupancy-storage of goods, warehouse, aircraft hanger, food products, appliances	1: 1-100	1: 1-100	—	1: 1-200	1: 1-200	—	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry sink
	2: 101-200	2: 101-200		2: 201-400	2: 201-400			
	3: 201-400	3: 201-400		3: 401-750	3: 401-750		Over 750, add 1 fixture for each additional 500 persons.	
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 150 females.			Over 750, add 1 fixture for each additional 500 persons.				

Notes:

- ¹ The figures shown are based upon one fixture being the minimum required for the number of persons indicated or any fraction thereof.
- ² A restaurant is defined as a business that sells food to be consumed on the premises.
 - a. The number of occupants for a drive-in restaurant shall be considered as equal to the number of parking stalls.
 - b. Hand-washing facilities shall be available in the kitchen for employees.
- ³ The total number of required water closets for females shall be not less than the total number of required water closets and urinals for males.
- ⁴ For each urinal added in excess of the minimum required, one water closet shall be permitted to be deducted. The number of water closets shall not be reduced to less than two-thirds of the minimum requirement.
- ⁵ Metering or self-closing faucets shall be installed on lavatories intended to serve the transient public.
- ⁶ Service sinks shall not be required for non-residential occupancies with an occupant load of 15 or less.
- ⁷ For business and mercantile occupancies, one common service sink shall be permitted when accessible to all businesses and mercantile within 300 feet (91 440 mm) and within the same story.

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