

POSTED

An ordinance amending Article 4 of Section IX of the Los Angeles Municipal Code.

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

Section 1. Division 1 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 1

ADMINISTRATION

SEC. 94.100.0. PLUMBING SYSTEMS. Appendices A, B, C, D, E, F, G, H, I and J of the 1994 edition of the Uniform Plumbing Code (UPC); Installation Standards Nos. IS 1-91, IS 2-90, IS 3-93, IS 4-92, IS 5-92, IS 6-93, IS 7-90, IS 8-92, IS 9-92, IS 10-93, IS 11-87, IS 12-93, IS 13-91, IS 15-82, IS 16-84, IS 18-85, IS 20-93, IS 21-89, of the 1994 Edition of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officials; Chapters 1 through 5 of the 1994 Edition of the Uniform Swimming Pool, Spa and Hot Tub Code published by the International Association of Plumbing and Mechanical Officials; and Chapter 15 of Part 5 of Title 24 of the California Code of Regulations (California Plumbing Code), are adopted by reference as part of this Code.

SEC. 94.101.0. GENERAL.

SEC. 94.101.1. Title. This article shall be known as the "Los Angeles Plumbing Code," a portion of the Los Angeles Municipal Code, and wherever the word "Code" is used in this article, it shall mean the "Los Angeles Plumbing Code."

SEC. 94.102.0. PURPOSE. The purpose of this Code is to safeguard health, life, property and public welfare by regulating the design, alteration, construction, installation, repair, and quality of materials for plumbing, fire sprinkler, rainwater piping, standpipe, subsurface drainage piping, swimming

pool piping, reclaimed water piping, underground fire-protection piping, medical gas piping and graywater piping systems installed in the City.

SEC. 94.103.0. PROHIBITED ACTS.

SEC. 94.103.1. No person shall add, alter, change, construct, install, locate, maintain, move, occupy, relocate, remove, renovate, repair, replace, or use any plumbing system, water-connected appliances, products or devices, fire sprinkler system, rainwater piping, standpipe, subsurface drainage piping, swimming pool piping, reclaimed water piping, underground fire protection piping, medical gas piping or graywater piping system except as provided by this Code.

SEC. 94.103.2. No person shall use or maintain any private sewage disposal system on any lot or parcel of land, that has failed, is in an overflowing condition or, in the judgment of the Department, is unsanitary or is a menace to life, health or property. Any such person shall connect all drainage piping to the public or private sewer when the lot or parcel of land abuts any public way or sewer easement in which a public or private sewer exists and is available.

SEC. 94.103.3. No person shall alter, add to or relocate any private sewage-disposal system on any lot or parcel of land which abuts any public way or sewer easement in which a public sewer exists and is ready for use.

SEC. 94.103.4. No person shall sell, offer for sale, display for sale, advertise for sale, loan, rent or lease, dispose of by way of gift or premium or otherwise for reuse or use, the items listed in Sections 94.103.4.1 and 94.103.4.2.

SEC. 94.103.4.1. Any plumbing fixture, appliance, apparatus, equipment, device, material or domestic gas appliance that has not been approved as to its fitness and safety for its intended use or purpose.

EXCEPTION: The sale of used gas ranges and used gas ovens is not prohibited.

SEC. 94.103.4.2. Any water-operated or water-using device, mechanism or equipment, the use of which may cause the pollution or contamination of the domestic water supply. Such device, mechanism or equipment may be allowed when properly equipped with approved backflow protection.

SEC. 94.104.0. EXEMPTIONS FROM CODE. The provisions of this Code shall not apply to the facilities or work described in Sections 94.104.1 through 94.104.9 of this Code.

SEC. 94.104.1. Public Sewers. Any sewer entirely within a public way or any private sewer installed under the jurisdiction of the Los Angeles City Department of Public Works or the Los Angeles County Flood Control District as an incident to improvement of a public way when no portion of the private sewer extends more than 6 feet into private property, as measured from the property line abutting the public way.

SEC. 94.104.2. Street Water Mains. Any water main, water service or water meter of the Los Angeles City Department of Water and Power or other utility.

SEC. 94.104.3. Street Gas Mains. Any street gas main or any gas service piping.

EXCEPTION: Seismic Gas Shutoff Valves installed on gas service piping where required by Section 94.1219.0 of this Code.

SEC. 94.104.4. Refineries and Wells (Gas Piping). Fuel gas piping that is part of a refinery or gas well, provided piping for fuel gas used on the premises conforms to the provisions of this Code.

SEC. 94.104.5. Portable Gas Cooking Appliances. Any portable gas cooking appliance designed for outdoor use and installed outdoors.

SEC. 94.104.6. Vehicles. Any work within an aircraft, railroad car, ship or other vehicle which is not classified as a building or structure.

SEC. 94.104.7. Manufactured Homes, Recreational Vehicles, Commercial Coaches, Special Purpose Commercial Coaches, Mobile Homes, Mobile Home Parks. Any work within any manufactured home, recreational vehicle, commercial coach, special purpose commercial coach, mobile home or any mobile home park, including accessory buildings, permanent buildings and on-site piping outside of buildings.

SEC. 94.104.8. One-and Two-Family Dwelling Private Sewage Disposal Systems. One and two-family dwelling private sewage disposal systems and minimum plumbing facilities when alternate facilities or installations have been approved by the local health authority, provided that such alternate facilities or installations provide substantially equivalent protection to health and safety.

SEC. 94.105.0. EXISTING CONSTRUCTION.

SEC. 94.105.1. Existing Systems. Nothing contained in this Code shall be construed to require any work to be altered, changed, demolished reconstructed or removed if that work was installed and maintained in accordance with City ordinances in effect prior to the date this Code became effective, or to require any work to be altered, changed, demolished, reconstructed or removed in any territory annexed to the City, except as follows:

EXCEPTION: When the Department finds that any condition is dangerous, unsafe, unsanitary, or a menace to life, health, or property, or that any cross-connection, water piping outlet, or other portion of any water piping is permitting or is reasonably likely to permit pollution or contamination of the water in any piping by reason of backflow, the Department may order any person, using or maintaining any such condition or responsible for the use or maintenance thereof, to discontinue that use or maintenance or correct the condition as the Department may consider necessary for the proper protection of life, health and property. In the case of any gas system, the Department may also order any person supplying gas to any such system to discontinue supplying gas thereto until such gas system is safe to life, health or property.

Each order, except for shutting off gas, shall be in writing and shall specify the existing conditions that are to be eliminated or corrected. It shall specify the time allowed to meet requirements of the order. The time allowed shall not be longer than the condition can be safely used or maintained, in the judgment of the Department.

No person shall refuse, fail or neglect to comply with any such order.

SEC. 94.105.2. Additions, Alterations and Repairs.

Additions, alterations or repairs may be made to any plumbing system without requiring the existing plumbing system to comply with all the requirements of this Code, provided the addition, alteration or repair conforms to that required for a new plumbing system. Additions alterations or repairs shall not cause an existing system to become unsafe, unsanitary or overloaded. Alterations, repairs and renovations may deviate from Code requirements where necessary so long as those deviations are approved by special permission of the Department.

EXCEPTIONS:

1. The replacement and the retention of original materials and the use of original methods of construction for alterations or repairs of Group R buildings shall be permitted provided the original materials and the original methods of construction comply with the rules and regulations adopted at the time of the original installation.

2. Changes of occupancy classification shall meet current Code requirements.

SEC. 94.105.3. Existing Sewers and Building Drains.

Existing building sewers and building drains may be used in connection with plumbing alterations or repairs if the sewers or drains have been properly maintained and were installed in accordance with applicable laws in effect at the time of installation. Any plumbing system existing on January 1, 1975, shall be deemed to have conformed to applicable laws in effect at the time of installation and to have been maintained in good condition if currently in good and safe condition and working

properly.

SEC. 94.105.4. Building Relocation.

SEC. 94.105.4.1. Existing Systems. Any apartment house or dwelling moved into or within the City and any other building moved within the City, may retain the existing plumbing, fire sprinkler and standpipe systems provided the residential building does not become or continue to be a substandard residential building or a residential building subject to repair as those terms are defined in Chapter IX of the Municipal Code. However, any system which is not in good and safe condition and not working properly shall be corrected. Existing systems in any building other than an apartment house or dwelling moved from outside the City to inside the City shall comply with all the requirements of this Code.

SEC. 94.105.4.2. New Systems. New systems which are installed in any building moved into or within the City shall comply with all the requirements of this Code.

SEC. 94.105.5. Demolished and Removed Buildings. Building sewers shall be capped and septic tanks, seepage pits, and cesspools shall have the sewage removed and shall be filled as provided in this Code before any building is demolished or removed from its site.

SEC. 94.105.6. Standpipes. When an existing standpipe system is altered or added to, it shall be made to comply with this Code for fire department connections and location of outlet valves. When building construction is changed so as to prevent required standpipe hose stream coverage, outlet valves shall be added as needed to obtain the coverage.

SEC. 94.105.7. Fire Sprinklers. When an existing fire sprinkler system is altered, or added to, it shall be made to comply with this Code for alarms, fire department connections and locations of sprinklers. When any change occurs that would cause conflict with this Code, the sprinkler system shall be modified as necessary to comply with this Code.

SEC. 94.105.8. Required Fixtures. Water closets, urinals, lavatories and drinking fountains, as required in Tables

C-1, C-2 and C-4 of the California Plumbing Code and C-3 of the Los Angeles Plumbing Code for public use, shall be installed in new construction and in those existing facilities with occupancy types listed in Tables C-1, C-2 and C-4 of the California Plumbing Code and Table C-3 of the Los Angeles Plumbing Code for public use, for which permits are sought to undertake construction, structural alterations, repairs or improvements which exceed 50 percent of the square footage of the entire facility.

Community and/or municipal parks with a bleacher capacity not exceeding 500 seats shall be exempt from the requirements of this section and Tables C-1 and C-4.

EXCEPTION: Notwithstanding the above, the minimum plumbing facilities for "Assembly places - Theaters, Auditoriums, Convention Halls, etc. - for public use" as found in Table C, as amended, shall be:

TABLE C OF THE LOS ANGELES PLUMBING CODE

Water Closets (Fixtures per Person)		Urinals (Fixtures per Person)	Lavatories (Fixtures per Person)		Bathtubs or Showers (Fixtures per Person)	Drinking Fountains ^{2,3} (Fixtures per Person)
Male	Female ¹	Male	Male	Female		1 per 75 ⁴
1:1-100	3:1-50	1:100	1:1-200	1:1-200		
2:101-200	4:51-100	2:101-200	2:201-400	2:201-400		
3:201-400	8:101-200	3:201-400	3:401-750	3:401-750		
	12:201-400	4:401-600	Over 750, add one fixture for each additional 500 persons			
	16:401-600	Over 600, add 1 fixture for each additional 500 males				
Over 600, add one fixture for each additional 500 males and 2 for each 250 females.						

1. The total number of water closets for females shall be equal to the total number of water closets and urinals required for males.
2. Drinking fountains shall not be installed in toilet rooms.
3. There shall be a minimum of one (1) drinking fountain per occupied floor in schools, theaters, auditoriums, dormitories, offices or public building.
4. Where food is consumed indoors, water stations may be substituted for drinking fountains. Theaters, auditoriums, dormitories, offices, or public buildings for use by more than six (6) persons shall have one (1) drinking fountain for the first seventy-five (75) persons and one (1) additional fountain for each one hundred and fifty (150) persons thereafter.

DECLARATION OF POSTING ORDINANCE

I, MARIA C. RICO, 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. 171239, entitled: Amended Article 4, Chapter 9 of L.A.M.C., & incorporating by reference portions of the Uniform Plumbing Code, a copy of which is hereto attached, was finally adopted by the Council of the City of Los Angeles on August 9, 1996, & under direction of said Council & said City Clerk, pursuant to Section 31 of the Charter of the City of Los Angeles, on August 16, 1996 I posted a true copy of said ordinance at each of three public places located in the City of Los Angeles, California, as follows: one copy on the bulletin board at the Main Street entrance to City Hall of said City, one copy on the bulletin board on the ground level at the Los Angeles Street entrance to the Los Angeles Police Department in said City, & one copy on the bulletin board at the Temple Street entrance to the Hall of Records of the County of Los Angeles in said City.

The copies of said ordinance posted as aforesaid were kept posted continuously & conspicuously for ten days, or more, beginning 8-16-96 to and including 9-25-96.

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

Signed this 16th day of August, 1996 at Los Angeles, California.

Maria C. Rico
Deputy City Clerk

Effective Date: September 25, 1996
(Rev. 2/95)

C.F. 96-0735

TABLE C-3 OF THE CALIFORNIA PLUMBING CODE

. Types of Emergency	Water Closets (Fixtures per Person)		Urinals ¹⁰		Lavatories (Fixtures per Person)		Bathtubs or Showers (Fixtures per Person) ⁷
	Male:	Female:					
Nonindustrial-Office buildings, public buildings and similar establishments	1	1-15	1	1-100	1	1-15	1 per 10 persons per shift required to shower
		1-15		2	2	16-	
	2	16-36	2	200	35		
		16-35		3	3	36-	
	3	36-55	3	400	50		
		36-55		4	4	61-	
	4	56-80	4	600	90		
		56-80					
	5	81-150	5	Over 600 add	1		
		81-110		1 fixture	additional		
6	111-150	6	for each	for each			
	111-150		additional	additional			
			300 males	45			
	1 additional for each additional 40 employees or fraction thereof			employees or fraction thereof			

Industrial-factories, warehouses, loft buildings and similar establishments	1 1-15	1	1	1-100	Up to 100, 1 per 10 persons	1 per 10 persons per shift required to shower
	1-15	2	2	101-		
	2 16-35	2	200			
	16-35		3	201-		
	3 36-55	3	400		Over 100, 1 per 15 persons ^{7,8}	
	36-55	4	4	401-		
	4 56-80	4	600			
	56-80					
	5 81-110	5	Over 600 add			
	81-110		1 fixture			
6 111-150	6	for each				
111-150		additional				
		300 males				
	1 additional for each additional 40 employees or fraction thereof					

Footnotes are contained in Table C-3 in the California Plumbing Code.

SEC. 94.106.0. COMPLIANCE WITH OTHER REQUIREMENTS.

The permissive provisions of this article shall not be presumed to waive any limitation imposed by other statutes or ordinances of the state or city or regulations promulgated pursuant thereto.

SEC. 94.107.0. RESERVED

SEC. 94.108.0. RESERVED

SEC. 94.109.0. RESERVED

SEC. 94.110.0. PERMIT REQUIRED.

SEC. 94.110.1. General. Except as otherwise provided in this Code, no person shall add, alter, construct, install, move, reconstruct, relocate, remove, repair or replace any plumbing, fire sprinkler, rainwater piping, standpipe, subsurface drainage piping, swimming pool piping, reclaimed water piping, underground fire protection piping, medical gas piping or graywater piping system unless a plumbing or fire sprinkler

permit for the work has been obtained from the Department.

SEC. 94.110.2. A permit shall be required where the Department has determined that the gas piping shall be retested for the following:

(1) The system has been out of service for a period of one year.

(2) Where the Department has determined there is system leakage creating an immediate hazard to persons or property.

SEC. 94.110.3. Relocated Buildings. Except as otherwise provided in this Code, no person shall connect any work in a relocated building to a supply pipe or drain pipe unless a permit for all the work in the relocated building has been obtained from the Department.

SEC. 94.110.4. Separate Permits Required. A separate plumbing and/or fire sprinkler permit shall be obtained for the work indicated on each building permit.

SEC. 94.110.5. No person shall be subject to fine, imprisonment, or payment of an investigation fee for starting or doing any such work without a permit being first obtained, if a permit is obtained for the work on or before 12:00 noon of the third day the office of the Department is open for public business after that work was started.

SEC. 94.111.0. PERMITS NOT REQUIRED.

SEC. 94.111.1. General. The work described in this section shall not require a permit, however, this waiver of permit shall not be deemed to allow any work to be added, altered, constructed, demolished, installed, reconstructed, relocated, removed, repaired or replaced contrary to the provisions of this Code.

SEC. 94.111.2. General Repairs. No permit shall be required for the repairing or replacement of faucets, ball cocks, exposed fixture traps or shut-off valves, or a residential garbage disposal.

SEC. 94.111.3. Stoppages and Leaks. No permit shall be required for the clearing of stoppages or repairing of leaks, except in gas piping, when such repairs do not require the removal and replacement of plumbing fixtures or any portion of the drainage system.

SEC. 94.111.4. Gas Piping. No permit shall be required for the installation or repair of a gas utility meter, nor for gas piping between the main and the nearest gas utility meter, nor for gas piping installed by the gas utility outside of private property, nor for the gas utility to disconnect defective gas piping and/or equipment when authorized by Section 94.1207, nor for any piping connection less than 6 feet in length between an existing gas outlet and a gas appliance in the same room.

SEC. 94.111.5. A separate plumbing permit shall not be required for the installation of any plumbing system for which a combined building-mechanical permit has been obtained pursuant to Section 91.107.2.1.1.1 of the Los Angeles Municipal Code.

SEC. 94.111.6. No permit shall be required for the capping of a private sewage disposal system where a grading permit is required.

SEC. 94.111.7. No permit shall be required where a "zero" discharger is approved by the Department of Public Works.

SEC. 94.111.8. Water Heater Repair. No permit shall be required for the repair of any gas-fired water heater, provided the water heater is not disconnected.

SEC. 94.111.9. Resetting of Fixtures. No permit shall be required for the resetting of existing plumbing fixtures on existing rough-in, which have been removed for the sole purpose of repairing or replacing walls or floors.

SEC. 94.111.10. Water Closets. No permit shall be required for installation of low-consumption water closets in existing residential dwelling units when done as part of the City's "Water Conservation Retrofit Program" pursuant to the City's water conservation regulations. These exempted installations shall be limited to the replacement of nonconforming water closets with new low-consumption water

closets installed on the existing rough-in plumbing. The provisions set forth in this subsection shall not apply to water closet installations in new construction, relocations, additions, or remodeling projects and shall not waive the requirement for a licensed plumbing contractor to perform the installation of a low-consumption water closet in apartment unit or nonowner-occupied single-family dwellings.

SEC. 94.111.11. Rainwater Systems. No permit shall be required for exterior exposed rainwater leaders.

SEC. 94.111.12. Exhibition. No permit shall be required for work set up for exhibition or for a television or motion picture set without any direct connection to any system for which a permit is required.

SEC. 94.111.13. Certified Licensed Contractors. No permit shall be required for the replacement of the following items when the work is done on a detached, single-family dwelling and the work is performed by a contractor with a valid Certificate of Registration as a Certified Licensed Contractor pursuant to Section 91.128.12.1 of the Los Angeles Municipal Code:

(1) Replacement of defective hot water heaters with one of equivalent gallonage, BTU rating, and vent capacity when the vent does not require relocation or replacement;

(2) Replacement of plumbing fixtures and solar panels with equal kind and quality;

(3) Replacement of defective domestic water piping within a dwelling with piping of equivalent size and quality; and

(4) Replacement of defective metallic water service piping with piping of equivalent size, quality, and conductivity. Metallic water service piping cannot be replaced with PVC under this provision.

(5) Replacement of shower pans with the same size and capacity.

A Certificate of Compliance pursuant to Section 91.108.12.3 of Los Angeles Municipal Code must be filed with the City in lieu of a permit.

SEC. 94.112.0. SCOPE OF PERMIT.

SEC. 94.112.1. No person shall do any work regulated by this Code, except the work provided for in a permit issued to the person as specified in the application for the permit.

SEC. 94.112.2. The issuance of a permit is not an approval or an authorization of the work specified therein. A permit is merely an application for inspection, the issuance of which entitles the permittee to inspection of the work which is described therein.

SEC. 94.112.3. Neither the issuance of a permit nor the approval by the Department of any document shall constitute an approval of any violation of any provision of this Code or of any other law or ordinance, and a permit or other document purporting to give authority to violate any law shall not be valid with respect thereto.

SEC. 94.113.0. WORK DONE WITHOUT A PERMIT.

SEC. 94.113.1. General. All work installed without the required permit shall be removed or made to conform to this Code.

SEC. 94.113.2. Investigation. Whenever any work for which a permit is required under the provisions of this Code has been commenced without authorization of a permit, a special investigation shall be made and fees paid as required by Section 98.0411 of the Los Angeles Municipal Code. Payment of an investigation fee shall not exempt any person from compliance with this Code.

SEC. 94.114.0. PERMIT APPLICATIONS.

SEC. 94.114.1. Forms. To obtain a permit, the applicant shall file an application on forms furnished by the Department. The application shall contain all information necessary for the lawful enforcement of this Code.

SEC. 94.114.2. The application shall be accompanied by approved plans (or evidence of plan approval) when and as required by Section 94.124 of this Code.

EXCEPTION: When the installation involves fixtures that discharge over 216 waste fixture units, only approved drainage and vent plans need accompany the application for the permit for fixtures. Plans for potable water piping shall be submitted and approved before any water piping is installed.

SEC. 94.114.3. Issuance.

SEC. 94.114.3.1. General. When the Department determines that the information on the application is in conformance with the Code, the Department shall issue a permit upon receipt of the total permit fees and any investigation fee which may be due as specified in Section 98.0411 of the Los Angeles Municipal Code.

SEC. 94.114.3.2. Swimming Pools. No permit shall be issued for any public swimming pool until written permission by the Health Authority is submitted to the Department. No permit shall be issued for any swimming pool utilizing a gaseous chlorinator until permission has been granted by the City Fire Department.

SEC. 94.115.0. EXPIRATION OF PERMIT. Permits may expire as provided in Section 98.0602.

SEC. 94.0116.0. REVOCATION OF PERMITS. Permits may be revoked as provided in Section 98.0601 of the Los Angeles Municipal Code.

SEC. 94.117.0. TRANSFER OF PERMITS AND PLAN CHECKS. No permit shall be transferable from the original permittee to any other person unless the original permittee authorizes that transfer in writing. Upon authorization, the new permittee shall file with the Department a new permit and pay to the Department a fee as specified in Section 98.0415 for issuing the new permit. This fee includes the issuing permit fee as specified in Section 94.118.1 of this Code. No plan check is transferable from one contractor to another unless prepared and signed by a

state-licensed engineer in the proper classification.

SEC. 94.118.0. PERMIT FEES

SEC. 94.118.1. Before any permit required by this Code is issued, the applicant shall pay to the Department the following fees for each building or structure:

The Department of Building and Safety shall impose a 12.5 percent surcharge on plumbing permit fees, Items 1 through 34, on work subject to disabled access regulations.

The Department of Building and Safety shall impose a one-stop surcharge of 2 percent of the subtotal, a minimum of \$1.00 when the subtotal is \$50.00 or less.

The Department of Building and Safety shall impose a surcharge of 6 percent of the permit fee for the development and implementation of a citywide automated permit processing service.

PLUMBING PERMIT FEE SCHEDULE

PERMIT	FEE
1. For issuing permits:	
For issuing each original permit	\$17.00
For issuing each supplementary permit	14.00
2. a. For each plumbing fixture and waste discharging device, including commercial garbage disposal, drainage, vent and water piping, and required backflow protection:	
Original installation	14.00
Replacement (fixture only)	6.50
Removal (fixture only and capping outlets)	6.50
b. For future stacks or branches, each waste inlet	6.50
c. For roof drains and/or overflow drains, each drain	15.00
d. For emergency drains, each drain	6.50
e. On-site drainage systems, each drain	15.00
f. Subsurface drainage piping systems, (not including sump pumps) each system	50.00
g. Sump pump and sewage ejectors, each	50.00
3. For repair or alteration of drainage and/or vent piping, each fixture	6.50

4. For each industrial waste, pretreatment clarifier sand or grease interceptor 24.50
5. For each separate septic tank, cesspool, seepage pit or drain field 40.00
6. For each complete private sewage disposal system (septic tank, seepage pits and/or drain fields). 100.00
7. For building sewer installations:
 For connections to the public sewer or to a private sewage disposal system, each building drain 25.00
 For dry sewers, each proposed building 25.00
 For each on-site manhole 100.00
8. For sewer alterations or repairing, each building or structure 15.00
 For sewer capping, each connection to the public sewer or cap on lot 15.00
9. For filling of each abandoned cesspool or private disposal system 15.00
10. For each piece of water treating or dispensing equipment connected to a potable water system 11.00
11. For each trap primer 11.00
12. For each water pressure regulator:
 a. 1-1/2 inch and smaller 11.00
 b. Larger than 1-1/2 inch 11.00
13. For each earthquake valve or each gas pressure regulator other than appliance regulators 14.00
14. Lawn sprinklers:
 1 to 3 control valves or vacuum breakers 15.00
 Over 3, each 5.00
15. For atmospheric-type vacuum breakers not included in Item 2:
 1 to 3 15.00
 Over 3, each 6.00
16. For each backflow protective device other than atmospheric-type vacuum breakers:
 2 inches and smaller 15.00
 Over 2 inches 35.00
17. For booster pumps for potable water systems (including tanks that are an integral part of the pump package), each system 55.00
18. For water tanks for potable water systems that are not part of a listed appliance or part of a booster pump package, each tank 45.00

19.	For potable water not covered elsewhere in fee schedule: On-site water distribution system when not covered in Item 2:	
	1-1/2 inches and smaller	40.00
	2 inches to 3 inches	60.00
	Over 3 inches	120.00
20.	For replacing water piping in a building, each fixture, each water treating device, each piece of water using or dispensing equipment or each branch or riser:	10.00
21.	For each system of gas piping on any one meter, or the alteration, extension or retesting of existing gas piping systems: Low pressure system:	
	5 outlets or less	20.00
	Additional fee for each outlet	6.50
	Medium-or high pressure system: Each system	75.00
22.	For cogeneration gas units, each	75.00
23.	For heat exchangers (except when an integral part of a listed appliance), each	25.00
24.	For each gas water heater less than:	
	75,000 BTU/h input	10.00
	75,000 BTU/h input and over	25.00
	For each electric water heater	10.00
25.	For each thermal expansion tank	10.00
26.	For each water heater vent	10.00
27.	For each swimming pool:	
	Public	150.00
	Private	70.00
28.	For replacing or relocating a swimming pool filter/or pump	10.00
29.	For alteration or replacement of swimming pool piping	75.00
30.	Chemical waste piping:	
	Each fixture	14.00
	Minimum fee	30.00
31.	Graywater piping system- Maximum of two inspections	50.00
32.	Reclaimed water piping system	100.00
	Annual testing 60.00 per hour (or fraction thereof)	
33.	Methane Gas Extraction System- Maximum of two inspections	75.00

34.	Medical gas systems:	
	5 inlets/outlets or less	40.00
	Additional inlets/outlets, each inlet/outlet	6.50
35.	Standpipes: wet, dry or combination (Class I, II or III) Class H or hand hoses for fire protection:	
	Each outlet that has an integral pressure regulator	50.00
	Other outlets without pressure regulators	35.00
	Capping of outlets (each outlet)	7.50
36.	Water pressure regulators for fire protection systems (except regulators that are part of a standpipe outlet valve), each regulator	44.00
37.	Fire sprinkler piping removal or alteration, or the replacement or addition of valves, attachments or devices	42.50
38.	Underground fire sprinkler piping, or yard piping system for fire sprinklers (when permit has not been obtained for complete fire sprinkler system)	100.00
39.	Replacing fire sprinkler heads (except fused or broken heads):	
	1 to 10 heads	20.00
	11 to 50 heads	40.00
	51 to 100 heads	81.50
	plus 81.50 for each 100 heads or fraction thereof over 100 heads.	
40.	Fire sprinkler piping installations:	
	From 1 to 10 sprinkler heads	45.00
	From 11 to 25 sprinkler heads	85.00
	From 26 to 50 sprinkler heads	135.00
	From 51 to 100 sprinkler heads	250.00
	From 101 to 200 sprinkler heads	380.00
	From 201 to 300 sprinkler heads	450.00
	From 301 to 500 sprinkler heads	850.00
	From 501 to 1000 sprinkler heads	1200.00
	From 1001 to 2000 sprinkler heads	2000.00
	From 2001 to 3000 sprinkler heads	3000.00
	From 3001 to 4000 sprinkler heads	3500.00
	From 4001 to 5000 sprinkler heads	4000.00
	From 5001 to 6000 sprinkler heads	4500.00
	Over 6000 fire sprinkler heads	5500.00
	Plus \$100.00 for each 100 heads or fraction thereof over 6000 heads.	

41. Fire hydrant:
 1 to 3 hydrants 242.00
 Over 3, each 81.50
42. The fee for relocation of heads or for converting a system from upright to pendant heads, or from pendant heads to upright heads, shall be as set forth for a new installation.
43. Fire pumps:
 Serving Class II (wet) or Class H standpipes:
 For each installation pump 80.00
 Original test of pump 80.00
 Additional test of pump 80.00
 Serving Class III (combination), combined and/or Fire sprinkler systems:
 For each installation of pump 200.00
 Test of each pump (each test) 375.00
44. Tanks for fire protection systems, each tank 44.00
45. Class I (dry) standpipe flush:
 One or two risers 93.00
 Each additional riser 56.00
46. Solar systems components:
 For collectors (including related piping and regulating devices):
 Not over 500 sq. ft. 15.00
 Over 500 sq. ft. 20.00
 For each storage tank, including related piping and regulating devices 12.50
47. Transfer of Permits and Plan Checks 35.00
48. Except for the minimum inspection fee as specified in Section 98.0412, no permit fee and no issuing fee shall be charged for the installation of a single plumbing fixture or plumbing appliance on an existing plumbing outlet when no other work is included on the permit.
49. Minimum Inspection Fee:
 A minimum fee as specified in Section 98.0412(a) shall be paid to the Department for each plumbing installation for which a permit is required by this Code. Where the cumulative fees set forth in this Code are less than the minimum fee, the minimum fee shall be paid. The fee required by this section shall include the issuing fee required by Item 1 of this subsection.

- (a) Minimum inspection fee 65.00
- (a.1) Single fixtures 40.00

SEC. 94.119.0. FEES FOR MISCELLANEOUS EQUIPMENT AND PIPING PERMITS.

SEC. 94.119.1. Miscellaneous Equipment. A minimum fee as specified in Section 98.0412(c) shall be paid for inspection of any installation of equipment regulated by this Code which requires inspection for determination of Code compliance and where such installation inspection is not provided for in the permit fee schedule specified in Section 94.118. This fee is in addition to the permit-issuing fee specified in Section 94.118.1 65.00

SEC. 94.119.2. Miscellaneous Piping. When special permission has been obtained from the Department, a miscellaneous permit shall be issued for fire sprinkler, fire protection underground, domestic water, waste or vent piping installed underground or in walls or ceilings of installations where a fire protection or a plumbing permit cannot be issued until the required plans have been approved. The miscellaneous permit shall not be an authorization to install any additional piping. A fee as specified in Section 98.0412(c) shall be collected for the inspection of this installation and shall be limited to one inspection trip and one reinspection trip. This fee is addition to the permit issuing fee specified in Section 94.118.1. 65.00

SEC. 94.120.0. FEES FOR ADDITIONAL INSPECTIONS.

SEC. 94.120.1. If more inspection trips than specified in this Article are found necessary due to fault or error on the part of the qualified installer or his employees, an additional fee as specified in Section 98.0412(b) shall be paid for each additional inspection trip. This fee is in addition to the permit issuing fee specified in Section 94.118.1.....65.00/hr.

SEC. 94.121.0. FEES FOR SPECIAL INSPECTIONS.

SEC. 94.121.1. Off-Hour Inspections. The Department may, at its discretion, make inspections at other than normal working hours upon application therefor by a permittee \$100.00 per hour with a minimum of \$300.00.

SEC. 94.121.2. Off-Site Inspection. The Department may, at its discretion, make inspections at locations other than the site upon which a building will be located, provided such location is within 60 miles of the Los Angeles City Hall. A fee as specified in Section 98.0412(e), in addition to fees charged elsewhere in this Code, shall be charged for such inspections. The time shall include travel to and from the place of inspections \$75.00 per hour, \$200.00 minimum.

SEC. 94.122.0. FEES FOR CHANGE OF ADDRESS AND TRANSFER OF PERMIT OR PLAN CHECKS. Applications for plan check and permits shall indicate the correct legal street address. If the Department determines a job address or the location of a job is incorrect, then the permit becomes void. If the applicant files a separate application (showing the correct information) and pays a filing fee as specified in Section 98.0415(a), then no additional permit fee will be required.

SEC. 94.123.0. CRITICAL SOIL SURVEY. The fee for a survey of location for a proposed private sewage disposal system, and/or percolation test, shall be \$92.00. On premises where a public sewer is not available for use, a survey and percolation test may be required to determine if a private sewer disposal system can be installed to adequately serve the intended use.

SEC. 94.124.0. PLANS REQUIRED.

SEC. 94.124.1 General.

SEC. 94.124.1.1. Before starting any work and at any time during the progress of any work regulated by this Code, the Department may require the submission of plans, specifications, drawings and such other information it deems necessary. The issuance of a permit upon approved plans shall not prevent the Department from requiring the correction of errors in them and stopping work on construction based on these plans when in violation of this Code or of any other applicable ordinance, or from revoking any approval when issued in error.

SEC. 94.124.1.2. Signature. Plans and specifications shall bear the signature and registration or license number of an engineer, contractor or other person licensed in the appropriate

classification by the State of California.

SEC. 94.124.1.3. Plans for work in new high-rise buildings, new covered mall buildings, new buildings with multifloor open atriums, buildings with emergency smoke-control systems and new Group I Occupancies shall be prepared by and bear the signature and registration number of a professional engineer in an appropriate discipline who is duly registered by the State of California Board of Registration for Professional Engineers and Land Surveyors or other professional authorized to do so by the State of California.

EXCEPTION: Plans may be designed and submitted by a California state-licensed contractor with the proper classification in accordance with State law and within 90 days of issuance of the building permit.

SEC. 94.124.1.4. Risers and Isometrics. System riser or isometric diagrams shall be provided for systems with outlets on more than one floor level.

Plans shall be suitable for use by office engineers and field inspectors.

SEC. 94.124.1.5. Quality of Plans. Plans shall be legible, clear, of 1/8 inch per foot scale or larger, except risers and isometrics need not be to scale.

SEC. 94.124.1.6. Stamped Plans on Job. The set of plans and specifications stamped and issued to the applicant by the Department shall be kept at the site of the construction or work and shall be available to the authorized representative of the Department. There shall be no deviation from the stamped or approved application, plans or specifications without Department approval.

SEC. 94.124.2. Types of Plans Required to be Submitted. Plans signed by a qualified submitter shall be filed with and approved by the Department before any work listed below is started:

1. Building sewers serving fixtures totaling 217 or more fixture units.

2. Drainage systems.
 - a. Drainage and vent systems for a building or structure involving fixtures that discharge 217 or more drainage fixture units.
 - b. Drainage pumps and ejectors.
3. Combination waste and vent systems.
4. Fuel gas piping with any of the following:
 - a. Systems requiring a 2-inch or larger supply and having six or more outlets.
 - b. Systems described in Section 94.1218 of this Code.
 - c. Medium pressure gas systems.
 - d. Methane gas extraction systems.
5. Potable water piping with any of the following:
 - a. Systems requiring a 2-inch or larger supply.
 - b. Systems having a cold-water developed length, from the source or supply to the most remote outlet, of over 200 feet.
 - c. Systems designed from the procedure in Section 94.610.5 of this Code.
 - d. Systems involving fixtures that discharge 217 or more drainage fixture units.

EXCEPTION: Plan check is not required for existing systems, that are added to or altered, with branch lines that serve less than 20 fixture units and sized by Table 6-4 of this Code.

6. Rainwater piping systems with either six or more rainwater drains, six or more overflow drains, roofs with an area of 4400 square feet or greater, or a rainwater pump.

7. Non-potable water piping systems for the following:
 - a. Chemical waste piping systems.
 - b. Graywater piping systems.
 - c. Reclaimed water piping systems.
8. Medical gas systems.
9. Dental vacuum systems.
10. Lawn sprinkler systems required for irrigation of cut-and-fill slopes in hillside areas.
11. Subsurface drainage piping.
12. Swimming pool circulating water systems.
13. Water heater vents designed from one of the methods described in Section 94.512.4 of this Code.
14. Seismic strapping for water heaters over 52 gallons.
15. Fire Protection.
 - a. Class H Standpipes.
 - b. Standpipes: Wet, Dry, or Combination.
(Class I, II, III)
 - c. Fire pump systems.
 - d. Fire hydrant systems.
 - e. Hand hose systems connected to fire sprinkler piping.
 - f. Monitor nozzle systems.
 - g. Underground fire protection piping.

h. Water spray systems.

i. Wet (Class II) standpipes.

ii. Fire sprinkler systems.

EXCEPTIONS:

1. Raising or lowering of sprinklers due to change in ceiling height.

2. Replacing of sprinklers of the same type, orifice size and temperature rating.

3. Relocation of sprinklers in previously occupied buildings or tenant spaces, provided that the distance between existing and new location does not exceed five (5) feet, and that the number of sprinklers being relocated does not exceed twenty (20). A plan drawn to scale showing the scope of work shall be provided to the Department at the time the permit is obtained.

SEC. 94.125.0. PLAN CHECK FEE SCHEDULES. Before plans required by the Code are checked, the applicant shall pay the following plan check fees to the Department:

SEC. 94.125.1. Plumbing drainage and vent piping, fuel gas piping, gas vents, rainwater piping, subsurface drainage piping and water piping.

Apartments and condominiums, three or fewer stories, and dwellings: 40% of the permit fee,
. \$65.00 minimum per building.

All others: 70% of the permit fee,
. \$65.00 minimum per building.

Partial plans showing portions of installations:

Hot and cold water: 60% of the above fee,
. \$65.00 min. per building.
Hot water or cold water: 40% of the above fee,
. \$65.00 min. per building.
Conventional waste and vent systems, only:
50% of the above fee, . . . \$65.00 min. per building.

SEC. 94.125.2. For plan checking individual systems not included in plans listed in Section 94.125.1.

Combination waste and vent piping systems, each.....\$150.00

Potable water piping systems:

Where the largest building supply is 1-1/2 inch or less, and one or two family dwellings, each building..\$60.00
\$300.00 maximum

Where the largest building supply is 2 inches or larger, each building.....\$85.00
\$425.00 maximum

Irrigation sprinkler piping systems, each,

One lot.....\$60.00
2 or 3 lots.....\$100.00
4 or 5 lots.....\$120.00
6 or 7 lots.....\$140.00
8 or 9 lots.....\$160.00
10 lots.....\$180.00
Over 10 lots..... \$180.00 plus \$10.00 for each lot over 10.

Soil remediation systems, each.....\$150.00

Methane gas venting systems, each.....\$150.00

Hydraulic calculations of standpipe systems serving 2-1/2 fire hose valves and fire sprinklers, each fire protection zone.....\$500.00

Fire protection, swimming pool piping and all other systems not covered by Section 94.125.1

70% of the permit fee, \$65.00 min. per building.

SEC. 94.125.3. The Department may collect a plan check fee, based on an hourly rate of \$75.00 per hour or major portion of each hour, for any item not included in the plan check schedule.

SEC. 94.125.4. Additional Fees.

SEC. 94.125.4.1. Plan check fees required in this section are in addition to fees required elsewhere in this Code.

SEC. 94.125.4.2. A surcharge of 10 percent of the permit fee shall be paid for checking compliance with Title 20, California Code of Regulations, Section 1403.

SEC. 94.125.4.3. A surcharge of 12.5 percent of the permit fee shall be paid for checking compliance with Chapter 15 of Part 5 or Title 24 of the California Code of Regulations.

SEC. 94.125.4.4. A surcharge of 6 percent of the permit fee shall be paid for the development and implementation of a City-wide automated permit processing service as enacted by Ordinance No. 167,303.

SEC. 94.130.0. POWERS OF DEPARTMENT AND BOARD. The powers of the Department and Board shall be as specified in Section 98.0403 of the Los Angeles Municipal Code.

SEC. 94.131.0. INTERPRETATIONS. When two or more pertinent requirements are not identical, the requirements shall prevail that provide the greatest safeguard for the purpose of this Code as described in Section 94.102. The Superintendent of Building or an authorized representative shall make all interpretations of provisions of this Code.

SEC. 94.132.0. APPEALS. Requests for slight modifications in individual cases from the requirements of this Code and appeals to the Board shall be made and fees paid as required in Section 98.0403 of the Los Angeles Municipal Code.

Expiration of slight modifications shall be in accordance with Section 98.0605 of the Los Angeles Municipal Code. Revocation of slight modifications shall be in accordance with Section 98.0602 of the Los Angeles Municipal Code.

SEC. 94.133.0. NEW MATERIALS AND METHODS OF CONSTRUCTION. New or alternate materials and methods of construction may be approved by the Department as provided in Article 8, Chapter 9 of the Los Angeles Municipal Code. When any material or method of construction requires a California Environmental Quality Act (CEQA) initial study or review, all costs and fees for reports, studies, testing and processing shall be the responsibility of the applicant as specified in Section 98.0504 of the Los Angeles Municipal Code.

SEC. 94.134.0. USE. No work shall be put into use until it has been tested, inspected and approved as provided in this Code.

No building, structure or premises shall be occupied or used until all work within such building, structure or premises has been tested, inspected and approved as provided in this Code.

SEC. 94.135.0. INSPECTIONS.

SEC. 94.135.1. Inspections Required. All new work for which a permit is required and portions of existing systems as may be affected by new work or any changes, shall be subject to inspection by an authorized employee of the Department to determine compliance with this Code and with any approved plans. The Department may inspect work that does not require a permit.

EXCEPTION: Approved Fabricators. The inspections provided for in this section shall not be required for construction or installation work done on the premises of a Type II Fabricator to whom an approval has been issued pursuant to the provisions of Division C of Article 6 of Chapter IX of the Los Angeles Municipal Code.

SEC. 94.135.2. Advance Notice. It shall be the duty of the person doing the work authorized by the permit to notify the Department when work is ready for inspection. Such notification shall be given not less than 24 hours before the

work is to be inspected.

SEC. 94.135.3. Covering and Uncovering. All work shall be maintained in an open, uncovered and accessible condition so that it is convenient for inspection until such work has been inspected and approved. Any obstruction which interferes with a complete and thorough inspection of any work shall be removed upon written notice from the Department and shall not be replaced until such work has been inspected and approved. Suitable ladders shall be provided when requested by the Department. The City shall not be liable for the cost of such exposing, recovering or ladders.

SEC. 94.135.4. Right of Entry. Right of entry for inspection by the Superintendent of Building or his authorized representative shall be as provided in Section 98.0105 of the Los Angeles Municipal Code.

SEC. 94.135.5. Tests.

SEC. 94.135.5.1. Testing Required. Work shall be tested as provided in the Code before approval.

EXCEPTIONS:

(1) **Moved Structures.** Walls or floors need not be removed during tests of systems of any building, or part thereof, that is moved from one foundation to another or one location to another when other equivalent means of inspection acceptable to the Department are provided.

(2) **Impractical or Minor.** Where costs would be impractical or installation or repairs are minor, the Department in its discretion may waive the tests, provided all inspections that it deems advisable are made and the work inspected is found to comply with the intent of the Code.

SEC. 94.135.5.2. Tightness. Joints and connections in the plumbing system shall be gastight and watertight for the pressures required by test.

SEC. 94.135.5.3. Responsibility. It shall be the duty of the permittee to make sure that the work will withstand the required tests before requesting inspection.

SEC. 94.135.5.4. Test Equipment. The equipment, material, and labor necessary for inspection or tests shall be furnished at no cost to the City.

SEC. 94.135.5.4.1. Test Gauges. Tests required by this Code, which are performed utilizing dial gauges, shall be limited to gauges having the following pressure graduations or incrementation.

SEC. 94.135.5.4.1.1. Required pressure tests of ten pounds or less shall be performed with gauges of 1/10 pound incrementation or less.

SEC. 94.135.5.4.1.2. Required pressure tests exceeding ten pounds but less than one hundred pounds shall be performed with gauges of one pound incrementation or less.

SEC. 94.135.5.4.1.3. Required pressure tests exceeding one hundred pounds shall be performed with gauges incremented for two percent or less of the required test pressure.

SEC. 94.135.5.4.1.4. Test gauges shall have a pressure range not greater than twice the test pressure applied.

SEC. 94.135.5.5. Witness. Tests shall be conducted in the presence of a duly authorized representative of the Department.

SEC. 94.135.5.6. Retesting. When the Department finds that the work will not pass the test, necessary corrections shall be made and the work shall be retested.

SEC. 94.135.6. Corrections.

SEC. 94.135.6.1. Corrections Required. Whenever any work does not conform to this Code such work shall not be accepted or approved until it has been corrected so as to conform to this Code.

SEC. 94.135.6.2. Time Limit. Upon order from the Department, such work shall be corrected within the time limit set by the Department. Every order shall be in writing. When the order is mailed, it shall be mailed to the last known address of the person notified. Twenty-four hours, not including Sundays or holidays, shall be allowed for mail delivery.

SEC. 94.135.7. Number of Inspections.

SEC. 94.135.7.1. Minimum Inspection Fee Installations.

Two inspection trips will be allowed without an additional fee for each permit for jobs which may be completely inspected on one inspection trip. Each additional inspection shall be charged at the rate specified in Section 98.0412.

SEC. 94.135.7.2. Single Fixture Installations. One inspection trip will be allowed for each single fixture installation which may be completely inspected on one inspection trip. Each additional inspection shall be charged at the rate specified in Section 94.412.

SEC. 94.135.7.3. Progress Jobs. A progress job is one where circumstances beyond the control of the installer does not allow proper inspection of the entire installation on one inspection trip. The number of inspection trips allowed for progress jobs shall not be limited except that only one inspection trip shall be allowed without an additional fee for checking a correction.

SEC. 94.135.8. Change of Address. Whenever it shall be necessary to make an extra inspection trip because the applicant has given an incorrect address or wrong location when obtaining a permit required by the Code, an additional fee, as listed in Section 94.122, shall be paid for correcting the address or location given in such permit.

SEC. 94.135.9. Emergency Inspection. The Department may make emergency inspections at other than normal working hours upon request of the permittee. An additional fee, as listed in Section 94.121, shall be paid for such inspection.

SEC. 94.135.10. Notice to Stop Work. Whenever any work is being done contrary to any law or ordinance enforced by

the Department, the Department may issue an order to stop work on that portion of the work on which the violation has occurred and may order its removal. Each order shall state in writing the nature of the violation, that no new work shall be done on that portion until the violation has been corrected and approved, and a time limit for compliance. No person shall fail to comply with such order unless otherwise directed by the Department.

SEC. 94.135.11. Other Inspections. In addition to the inspections required by this Code, the Administrative Authority may require other inspections of any plumbing work to ascertain compliance with the provisions of this Code and other laws which are enforced by the Administrative Authority.

SEC. 94.135.12. Defective Systems. An air test shall be used in testing the sanitary condition of the drainage or plumbing system of any building premises when there is reason to believe that it has become defective. In buildings or premises condemned by the proper Administrative Authority because of unsanitary condition of the plumbing system or part thereof, the alterations in such system shall conform to the requirements of this Code.

SEC. 94.135.13. Certificate of Final Inspection.

SEC. 94.135.13.1. Fees. No Certificate of Final Inspection shall be issued until all fees required by the Code have been paid to the Department.

SEC. 94.135.13.2. Approval. A Certificate of Final Inspection shall be issued for work that has been inspected and approved, upon demand, provided that no Certificate of Final Inspection for gas piping shall be issued until all required fire sprinklers, standpipes and fire hydrants are approved and ready for use.

SEC. 94.135.13.3. To Whom Issued. No Certificate for Final Inspection shall be issued to any person, other than the owner of the building, structure, or premises, the person who did such work, or the agent of that owner or person.

SEC. 94.140.0. QUALIFIED INSTALLER. It is unlawful for any person who is not a Qualified Installer as defined in

Section 94.202 to alter, install, or repair any plumbing regulated by this Code, except as provided in Sections 94.142 and 94.143 of this division.

SEC. 94.141.0. MAINTENANCE CERTIFICATE OF REGISTRATION.

SEC. 94.141.1. Scope. A Maintenance Certificate of Registration as defined in Section 94.202 may be issued to the owner or occupant of specified premises for the sole purpose of adding to, altering, maintaining or repairing existing plumbing only on the premises designated.

SEC. 94.141.2. Issuance. Every applicant who passes the required examination or has in his employ a qualified maintenance supervisor as defined in Section 94.202 who is properly registered with the Department shall be issued a Maintenance Certificate of Registration for specified premises upon payment of a fee.

SEC. 94.141.3. Validity. A Maintenance Certificate of Registration issued to an owner or occupant of premises by virtue of the fact that an employee of such person is registered with the Department as a holder of a valid Certificate of Qualification as a maintenance supervisor shall become invalid when the owner or occupant ceases to have in his or her employ a certified maintenance supervisor properly registered with the Department.

SEC. 94.141.4. Maintenance Permits. Permits may be issued to the holder of a valid Maintenance Certificate of Registration for the addition to, alteration, maintenance or repair of existing plumbing on premises owned by or under the legal control of the applicant, provided all work authorized by the permit is performed by or is under the direct supervision of the holder of a Certificate of Qualification as a Maintenance Supervisor, registered with the Department for the premises.

SEC. 94.142.0. CERTIFICATE OF QUALIFICATION REQUIRED.

SEC. 94.142.1. Scope. No person except a Qualified Installer as defined in Section 94.202 shall supervise or perform the labor of altering, installing or repairing any plumbing

regulated by this Code.

EXCEPTION: A person in the employ of a Qualified Installer and who supervises plumbing work shall be required to have a Certificate of Qualification.

SEC. 94.142.1.1. Apprentices and Helpers. No Certificate of Qualification shall be required for an apprentice or helper, as defined in Section 94.202, who is working under the continuous supervision of a Qualified Installer or journeylevel plumber. Supervision shall be considered continuous if the Qualified Installer or journeylevel plumber is not absent for more than one hour continuously nor more than two hours total during any one day. No more than one apprentice or helper shall be employed for each Qualified Installer or journeylevel plumber on any lot.

SEC. 94.142.2. Gas Fitting. A person who holds a valid Certificate of Qualification as a journeylevel gas fitter may perform the labor of gas fitting in the employ of and under the supervision of a Qualified Installer.

SEC. 94.142.3. Maintenance Supervisor. No person shall act as a Maintenance Supervisor unless the person holds a valid Certificate of Qualification in the proper classification issued pursuant to the provisions of this Division. No person shall act in the capacity of a Maintenance Supervisor for more than one firm at any one time.

SEC. 94.142.4. Employment. No Qualified Installer, Maintenance Supervisor or any other person shall employ any journeylevel plumber for the installation of plumbing work covered in this Code unless such journeylevel plumber holds a valid Certificate of Qualification in the proper classification except by special permission of the Department. No person shall hire or employ an apprentice or helper in violation of any provision of this Code.

SEC. 94.143.0. APPLICATIONS.

SEC. 94.143.1. Forms. Application for any certificate shall be made on a form furnished by the Department.

SEC. 94.143.2. Information Necessary. The application shall bear the name and address of the applicant, and if a corporation, the names of the principal officers. The application shall carry other information deemed necessary by the Department.

SEC. 94.143.3. Verification of Application. The application shall be verified under oath by the applicant.

SEC. 94.143.4. Fees. The application shall be accompanied by the required examination fee as follows:

FEE SCHEDULE

Application	Fees
For application for Certificate of Registration	\$150.00
For Certificate of Qualification issued as a result of examination given by Board of Examiners of Plumbing and Gas Fitters	\$50.00
For Certificate of Qualification issued under a reciprocal licensing agreement in accordance with Section 94.145.1	\$50.00

SEC. 94.144.0. EXAMINATIONS.

SEC. 94.144.1. Examination Required. Before any person shall be issued a Certificate of Registration or Qualification, he or she shall have successfully passed the examination required for the issuance of the Certificate within 90 days preceding the date of issuance.

In lieu of an examination, the Superintendent of Building may accept a valid journeylevel plumber qualification certificate issued pursuant to an examination by other organizations or governmental agencies within the County of Los Angeles, provided that the examination shall be, in the opinion of the Department, equivalent in scope and character to the examination for journeylevel plumbers given by the City of Los Angeles. The Department's acceptance of this certificate shall be in writing and renewable every three years.

SEC. 94.144.2. Experience Required. To be eligible for the examination for a Certificate of Registration applicant shall have had at least two years experience as a journeylevel plumber.

To be eligible for the examination for journeylevel plumber the applicant shall have had at least four years experience as an apprentice or helper.

Special training or education acceptable to the Department may be credited as the equivalent of up to one year of the required experience.

The applicant shall be required to furnish satisfactory evidence of his or her experience and training.

SEC. 94.144.3. Board of Examiners. Examinations may be conducted by a Board of Examiners composed of three qualified persons appointed by the Superintendent of Building.

The results of every examination shall be subject to the approval of the Superintendent of Building.

Each examiner shall be appointed by the Superintendent of Building. Each Examiner shall serve for a period of two years unless reappointed by the Superintendent.

SEC. 94.144.4. Scope of the Examination. The examination shall, in the judgment of the Department, be such as to fairly determine the ability of the applicant to perform properly the work which he or she would be authorized to do by the certificate for which he or she applied. The examination shall include a written part and may also include the following:

- (1) Practical test as may be required.
- (2) An oral interview may be required.
- (3) Such other tests as may be required by the Department.

SEC. 94.144.5. Rules and Regulations. The Department shall have the authority to establish rules and regulations for the conduct of examinations.

SEC. 94.144.6. Fitness of Applicant. Any applicant for a Certificate may be required to submit satisfactory proof of his fitness to carry out the intent of this Code.

SEC. 94.144.7. Failure to Pass. Every applicant who fails to pass an examination shall not be eligible for another examination until four weeks after taking the previous examination. Any applicant who fails to pass upon the third trial shall not be eligible until six months thereafter.

SEC. 94.145.0. ISSUANCE OF CERTIFICATES.

SEC. 94.145.1. Certificate of Registration. Every applicant who passes the required examination for a Maintenance Certificate of Registration or who registers with the department the holder of a valid Certificate of Qualification as a maintenance supervisor shall be issued a Maintenance Certificate of Registration upon the payment of a fee.

SEC. 94.145.2. Certificate of Qualification. Every applicant who passes the required examination for journeylevel plumber, journeylevel gas fitter or Maintenance Supervisor shall be issued a Certificate of Qualification.

SEC. 94.145.3. Every Certificate of Registration or Qualification shall be issued by the Department.

SEC. 94.145.4. Public Utility Corporation. A public utility corporation engaged in the distribution or sale of gas in the City shall be issued, without examination, a Certificate of Registration as Master Gas Fitter upon the payment of a fee as specified in Section 98.0414(b)1. Such public utility corporation shall be subject to this Code with respect to the certifying and examination of journeylevel gas fitters.

SEC. 94.145.5. Partnership, Firm and Corporation. Upon the payment of a fee as specified in Section 98.0414(b)1, a partnership, firm or corporation may be issued a Certificate of Registration as a Master Gas Fitter. If a person in effective

authority and control over all work regulated by Divisions 5 and 12 of the Plumbing Code has passed the required examination within the time prescribed by Section 91.145.1 of this Code.

SEC. 94.146.0. RENEWAL OF CERTIFICATES.

SEC. 94.146.1. Certificate of Registration. Every Certificate of Registration shall expire one year from the date of issuance. A certificate may be renewed, upon application, within the 30 days following the date of expiration upon the payment of a renewal fee.

SEC. 94.146.2. Certificate of Qualification. Every Certificate of Qualification shall expire one year from the date of issuance but may be renewed from year to year upon the payment of an annual renewal fee. Application for renewal shall be made within 30 days following the date of expiration.

SEC. 94.146.3. Delinquent Certificates. Expired certificates may be renewed at any time within 12 months following the date of expiration provided that, after the first month, the renewal fee shall be increased by 10% for each month after the first.

After a certificate has been expired for one year, it may not be renewed.

SEC. 94.147.0. EXHIBITION OF CERTIFICATE.

SEC. 94.147.1. Every person having a fixed place of business shall keep their Certificate of Registration posted in some conspicuous place at their place of business during the time the certificate is in force.

SEC. 94.147.2. Every person not having a fixed place of business shall carry their Certificate of Registration at all times while doing any construction or work regulated by this Code.

SEC. 94.147.3. Every journeylevel plumber shall carry his or her Certificate of Qualification at all times while doing any construction or work regulated by this Code.

SEC. 94.148.0. REVOCATION OF CERTIFICATE. Any Certificate may be suspended or revoked in accordance with the provisions of Section 98.0201 (c).

SEC. 94.149.0. TRANSFER OF CERTIFICATE. No Certificate shall be transferable. A Certificate of Registration issued to a firm or corporation shall be the property of that firm and may be transferred along with the other assets but may not be transferred separately. The dissolution of a firm, partnership, or corporation renders the certificate void.

Sec. 2. Division 2 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 2

DEFINITION OF TERMS

SEC. 94.201.0. GENERAL. Section 201 of the C.P.C. is adopted by reference.

SEC. 94.202.0. DEFINITION OF TERMS. Section 202 of the C.P.C. adopted by reference with the following additions and amendments.

Accessibility. Accessibility is the combination of various elements in a building or area which allows access, circulation and the full use of the building and facilities by the handicapped.

Applicant. An applicant is the person signing an application and paying the fees therefor.

Apprentice. An apprentice is a person who is enrolled in an apprenticeship program approved by the Department of Industrial Relations of the State of California.

Approved. Approved means:

(a) With reference to new materials or methods of construction, approved by the Superintendent of Building;

(b) With reference to other than new materials or methods of construction, approved by the Superintendent of Building or an authorized agent, for which standards are listed in Table A of the Uniform Plumbing Code.

NOTE: This definition does not apply in residential occupancies that are governed by the Uniform Building Code or the Uniform Plumbing Code.

Board means the Board of Building and Safety Commissioners.

California Building Code. The most recent edition of Title 24, Part 2, California Code of Regulations.

California Plumbing Code (C.P.C.). The California Plumbing Code or C.P.C. is also known as the California Code of Regulations (C.C.R), Title 24, Part 5, a portion of the California Building Standards. The California Plumbing Code adopts the 1994 edition of the Uniform Plumbing Code by reference with necessary state amendments.

Department means the Department of Building and Safety.

Emergency Drains. Emergency floor drains are floor drains located within a building and serving only areas used for the parking of motor vehicles. They are intended solely to receive water from automobile drippage, fused sprinkler heads, ruptured piping, or storage tanks, and other similar conditions.

Equipment. Equipment is a general term which includes materials, fittings, devices, appliances, fixtures or apparatus used in connection with installations covered in this Code.

Fire Separation Area. A fire separation area is an area enclosed by construction having a fire-resistive rating of at least one hour with all openings protected by minimum three-fourths-hour self-closing fire assemblies or a water curtain.

Food Establishment. Food establishment is any room, building, place, or portion thereof, maintained, used or operated for the purpose of storing, preparing, serving, packaging, transporting, salvaging or otherwise handling food at the retail level.

Helper. A helper is a person who is employed full time by a qualified installer and whose primary duty is to assist a qualified installer or journeylevel plumber in the installation or repair of plumbing systems.

High-rise Building. A high-rise building is a building (over 75 feet high) included within the scope of Section 91.403.1 of the Los Angeles Municipal Code.

Journeylevel Gas Fitter. A journeylevel gas fitter is a person who has a valid Certificate of Qualification as provided in this Code, to perform the labor of gas fitting, when in the employ of and under the supervision of a qualified installer.

Journeylevel Plumber. A journeylevel plumber is a person who has a valid Certificate of Qualification, to install, alter, construct or repair any plumbing when in the employ of and under the supervision of a qualified installer.

Lavatory. A lavatory is a plumbing fixture used for washing the hands, arms, face and head.

Limited-density Owner-built Dwelling. A limited-density owner-built dwelling is any structure consisting of one or more habitable rooms intended or designed to be occupied by one family with facilities for living or sleeping, with use restricted to rural areas designated by local jurisdictions.

Listed or Listing. Listed and Listing are terms referring to equipment and materials which are shown in a list published by an approved testing or listing agency qualified and equipped for experimental testing and/or maintaining an adequate periodic inspection of current production and whose listing states that the equipment or

material complies with recognized safety standards.

Maintenance Certificate of Registration. A Maintenance Certificate of Registration is a certificate issued to the owner or occupant of specified premises for the sole purpose of adding to, altering, maintaining or repairing existing plumbing, only on the premises specified.

Maintenance Supervisor. A maintenance supervisor is a person holding a valid Certificate of Qualification as a maintenance supervisor and who is in the employ of a person holding a valid Maintenance Certificate of Registration.

Monitor Nozzle. A monitor nozzle is a water spray nozzle that is connected to a fixed piping system or hydrant and discharges over 250 g.p.m., but is not part of a water spray system.

Noncarriage Toilet Facility. A noncarriage toilet facility is a toilet facility not connected to a sewer.

Plumbing Contractor. A plumbing contractor is a person or entity which holds a valid license in the proper classification, issued by the State of California, and provides a means for a supply of safe water, ample in volume and of suitable temperature for the purpose intended and the proper disposal of fluid waste from the premises in all structures and fixed works. This classification includes but is not limited to:

(a) Complete removal of waste from the premises or the construction and connection of on-site waste disposal systems;

(b) Piping, storage tanks and venting for a safe and adequate supply of gases and liquids for any purpose, including vacuum, compressed air and gases for medical, dental, commercial and industrial uses;

(c) All gas appliances, flues and gas connections for all systems including suspended space heating units. This does not include forced warm air units;

(d) Water and gas piping from the property owner's side of the utility meter to the structure or fixed works;

(e) Installation of any type of equipment to heat water, or fluids, to a temperature suitable for the purposes listed in this section, including the installation of solar equipment for this purpose; and

(f) The maintenance and replacement of all items described above and all health and safety devices such as, but not limited to, gas earthquake valves, gas control valves, backflow preventers, water conditioning equipment and regulating valves.

Qualified Installer. A qualified installer:

(a) A person who holds a valid contractor's license in the proper classification issued by the State of California;

(b) A person who holds a valid Maintenance Certificate of Registration issued pursuant to the provision of this code; or

(c) A person who is the owner of a single-family dwelling and has demonstrated to the satisfaction of the department his or her qualifications to satisfactorily perform plumbing work in the dwelling which is, or is intended to be, occupied by the owner, and the buildings accessory thereto, provided:

1. The dwelling is a detached building containing no other dwelling unit or other occupancy; and

2. There are no buildings other than the dwelling and buildings accessory thereto located on the premises; and

3. The owner files a statement with the department certifying to all the foregoing facts.

(d) A person who is employed by a governmental agency required to comply with the provisions of this code and who is qualified, as determined by the department, to supervise or control any work regulated by this code.

Rainwater Drains. Rainwater drains are drains that serve roofs or other drains for the purpose of conveying rainwater. This definition does not include emergency drains, site drains or subsurface drains.

Reclaimed Water. Reclaimed water is water which is a result of treatment of wastewater by an authorized agency which is suitable for a direct beneficial use or a controlled use as defined under State of California Title 22 requirements.

Specialty Event Center. A specialty event center is an open arena used for rallies, concerts, exhibits, etc., with no permanent structure for the purpose of assembly.

Toilet Room. A toilet room is a room within or on the premises containing water closets, urinals and other required facilities.

Urinal. A urinal is a plumbing fixture which is used for urination.

Water Closet. A water closet is a plumbing fixture (which may be used for both defecation and urination) in which waste matter is removed by flushing with water.

Zero Discharger. A zero discharger is a clarifier that neither receives nor discharges waste.

Sec. 3. Division 3 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 3

GENERAL REGULATIONS

SEC. 94.301.0. Materials--Standards and Alternates.

SEC. 94.301.1. Minimum Standards.

SEC. 94.301.1.1. Approvals. Section 301.1.1 of the C.P.C. is adopted by reference.

SEC. 94.301.1.2. Marking. Section 301.1.2 of the C.P.C. is adopted by reference.

SEC. 94.301.1.3. Standards. Section 301.1.3 of the C.P.C. is adopted by reference.

SEC. 94.301.1.4. Existing Buildings. Section 301.1.4 of the C.P.C. is adopted by reference.

SEC. 94.301.1.5. Health and Safety. Whenever compliance with all the provisions of this Code fails to eliminate or alleviate a nuisance, or any other dangerous or unsanitary condition which may involve health or safety hazards, the owner or the owner's agent shall install such additional plumbing and drainage facilities, fire protection systems or shall make such repairs or alterations as may be ordered by the Administrative Authority.

SEC. 94.301.2. Alternate Materials and Methods. Section 301.2 of the C.P.C. is adopted by reference.

SEC. 94.302.0. Iron Pipe Size (I.P.S.) Pipe. Section 302.0 of the C.P.C. is adopted by reference.

SEC. 94.303.0. Disposal of Liquid Waste. Section 303.0 of the C.P.C. is adopted by reference.

SEC. 94.304.0. Connections to Plumbing Systems Required. Section 304.0 of the C.P.C. is adopted by reference.

SEC. 94.305.0. Sewers Required. Section 305.0 of the C.P.C. is adopted by reference.

SEC. 94.306.0. Damage to Drainage System or Public Sewer. Section 306.0 of the C.P.C. is adopted by reference.

SEC. 94.307.0. Industrial Wastes. Section 307.0 of the C.P.C. is adopted by reference.

SEC. 94.308.0. Location. Section 308.0 of the C.P.C. is adopted by reference.

SEC. 94.309.0. Improper Location. Section 309.0 of the C.P.C. is adopted by reference.

SEC. 94.310.0. Workmanship. Section 310.0 of the C.P.C. is adopted by reference.

SEC. 94.311.0. Prohibited Fittings and Practices. Section 311.0 of the C.P.C. is adopted by reference.

SEC. 94.312.0. Independent Systems. Section 312.0 of the C.P.C. is adopted by reference.

SEC. 94.313.0. Independent Systems. Section 313.0 of the C.P.C. is adopted by reference.

SEC. 94.313.1. Section 313.1 of the C.P.C. is adopted by reference.

SEC. 94.313.2. Section 313.2 of the C.P.C. is adopted by reference.

SEC. 94.313.3. Section 313.3 of the C.P.C. is adopted by reference.

SEC. 94.313.4. Section 313.4 of the C.P.C. is adopted by reference.

SEC. 94.313.5. Section 313.5 of the C.P.C. is adopted by reference.

SEC. 94.313.6. Section 313.6 of the C.P.C. is adopted by reference.

SEC. 94.313.7. Section 313.7 of the C.P.C. is adopted by reference.

SEC. 94.313.8. Section 313.8 of the C.P.C. is adopted by reference.

SEC. 94.313.9. Protectively Coated Pipe. Inspection and repair shall conform to IAPMO Installation Standards IS-13, listed in Table 14-1.

SEC. 94.314.0. Hangers and Supports.

SEC. 94.314.1. Section 314.1 of the C.P.C. is adopted by reference.

SEC. 94.314.2. Section 314.2 of the C.P.C. is adopted by reference.

SEC. 94.314.3. Section 313.4 of the C.P.C. is adopted by reference.

SEC. 94.314.4. Section 314.4 of the C.P.C. is adopted by reference.

SEC. 94.314.5. All piping, fixtures, appliances, and appurtenances shall be adequately supported to the satisfaction of the Administrative Authority. Perforated strap iron (Plumber's tape) may be installed to support pipe 4 inches or smaller in wood construction only. Perforated strap iron shall be galvanized and not less than 1/32 inch thick or No. 22 gage, and 3/4 inch wide, securely nailed or screwed to the structure. The strap iron shall be formed around the pipe and secured with a 1/4-inch stove bolt. Ring hangers may support piping of all sizes.

SEC. 94.314.6. Section 314.6 of the C.P.C. is adopted by reference.

SEC. 94.314.7. Section 314.7 of the C.P.C. is adopted by reference.

SEC. 94.315.0. Trenching, Excavation, and Backfill. Section 315.0 of the C.P.C. is adopted by reference.

SEC. 94.316.0. Trenching, Excavation, and Backfill. Section 316.0 of the C.P.C. is adopted by reference.

SEC. 94.317.0. Increases and Reducers. Section 317.0 of the C.P.C. is adopted by reference.

Sec. 4. Division 4 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 4

PLUMBING FIXTURES

SEC. 94.401.0. Materials--General Requirements.

SEC. 94.401.1. Quality of Fixtures. Section 401.1 of the C.P.C. is adopted by reference.

SEC. 94.401.2. Lead. Section 401.2 of the C.P.C. is adopted by reference.

SEC. 94.402.0. Permitted Amounts of Water for Water Closets and Urinals. All new and replacement water closets shall be approved "ultra low-consumption" water closets as specified in Ordinance Nos. 164,093 and 165,004 (Section 122.03 of the Los Angeles Municipal Code, Emergency Water Conservation Plan).

All urinals shall be approved as listed and shall use no more than one gallon of water per flush.

SEC. 94.403.0. Materials--Alternates. Section 403.0 of the C.P.C. is adopted by reference.

SEC. 94.404.0. Overflows. Section 404.0 of the C.P.C. is adopted by reference.

SEC. 94.405.0. Strainers and Connections. Section 405.0 of the C.P.C. is adopted by reference.

SEC. 94.406.0. Prohibited Fixtures. Section 406.0 of the C.P.C. is adopted by reference.

SEC. 94.407.0 Special Fixtures and Specialties.
Section 407 of the C.P.C. is adopted by reference.

SEC. 94.408.0. Installation. Section 408.0 of the C.P.C. is adopted by reference.

SEC. 94.409.0. Urinals. Section 409.0 of the C.P.C. is adopted by reference.

SEC. 94.410.0. Floor Drains and Shower Stalls.
Section 410.0 of the C.P.C. is adopted by reference.

SEC. 94.411.0. Plumbing Fixtures Required.
Section 411.0 of the C.P.C. is adopted by reference.

SEC. 94.412.0. Future Fixtures. Section 412.0 of the C.P.C. is adopted by reference.

SEC. 94.413.0. Whirlpool Bathubs. Section 413.0 of the C.P.C. is adopted by reference.

Sec. 5. Division 5 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 5

WATER HEATERS

SEC. 94.501.0. General. Section 501.0 of the C.P.C. is adopted by reference.

SEC. 94.502.0. Definitions. Section 502.0 of the C.P.C. is adopted by reference.

SEC. 94.503.0. Permits. Section 503.0 of the C.P.C. is adopted by reference.

SEC. 94.504.0. Inspection. Section 504.0 of the C.P.C. is adopted by reference.

SEC. 94.505.0. Gas-Fired Water Heater Approval Requirements. Section 505.0 of the C.P.C. is adopted by reference.

SEC. 94.506.0. Oil-Burning and Other Water Heaters. Section 506.0 of the C.P.C. is adopted by reference.

SEC. 94.507.0. Combustion Air. Section 507.0 of the C.P.C. is adopted by reference.

SEC. 94.508.0. Clearances. Section 508.0 of the C.P.C. is adopted by reference.

SEC. 94.509.0. Prohibited Locations. Section 509.0 of the C.P.C. is adopted by reference.

SEC. 94.510.0. Protection From Damage. Section 510.0 of the C.P.C. is adopted by reference.

SEC. 94.511.0. Access and Working Space. Section 511.0 of the C.P.C. is adopted by reference.

SEC. 94.512.0. Venting of Water Heaters--General. Section 512.0 of the C.P.C. is adopted by reference.

SEC. 94.513.0. Limitations. Section 513.0 of the C.P.C. is adopted by reference.

SEC. 94.514.0. Vent Connectors. Section 514.0 of the C.P.C. is adopted by reference.

SEC. 94.515.0. Location and Support of Venting Systems. Section 515.0 of the C.P.C. is adopted by reference.

SEC. 94.516.0. Length, Pitch, and Clearance. Section 516.0 of the C.P.C. is adopted by reference.

SEC. 94.517.0. Vent Termination. Section 517.0 of the C.P.C. is adopted by reference.

SEC. 94.518.0. Area of Venting System. Section 518.0 of the C.P.C. is adopted by reference.

SEC. 94.519.0. Multiple Appliance. Section 519.0 of the C.P.C. is adopted by reference.

SEC. 94.520.0. Existing Venting System. Section 520.0 of the C.P.C. is adopted by reference.

SEC. 94.521.0. Draft Hoods. Section 521.0 of the C.P.C. is adopted by reference.

SEC. 94.522.0. Gas Venting Into Existing Masonry Chimneys. Section 522.0 of the C.P.C. is adopted by reference.

SEC. 94.523.0. Chimney Connectors. Section 523.0 of the C.P.C. is adopted by reference.

SEC. 94.524.0. Mechanical Draft Systems. Section 524.0 of the C.P.C. is adopted by reference.

SEC. 94.525.0. Venting Through Ventilating Hoods and Exhaust Systems. Section 525.0 of the C.P.C. is adopted by reference.

SEC. 94.526.0. Solar Energy Collectors Water Piping.

SEC. 94.526.1. Approvals. Only approved solar energy collectors for potable water or swimming pool water shall be installed.

SEC. 94.526.2. Vacuum-Relief Valves. When drain down systems are installed, an automatic vacuum relief valve shall be installed as follows:

1. **Domestic Hot Water or Space Heating.** At a minimum of two feet above the solar hot-water storage tank and collectors.

2. **Swimming Pools and Spas.** At a minimum of two feet above the water surface.

SEC. 94.526.3. Temperature and Pressure Limiting Requirements.

SEC. 94.526.3.1. Glazed Collectors. When glazed collectors are installed, the temperature of domestic water systems shall be controlled by a tempering valve.

SEC. 94.526.3.2. Closed Piping Systems. When collectors are in a closed system of piping, a listed temperature and pressure-relief valve or listed pressure-relief valve shall be installed on the closed-system piping.

SEC. 94.526.3.3. Valved-Off Collectors. A listed pressure-relief valve shall be installed between the shutoff valves and the collectors.

SEC. 94.526.3.4. Relief Valves. Pressure-relief valves shall be set to relieve at 150 psi or less. Temperature-relief valves shall be set to relieve at 210 degrees Fahrenheit or less. Relief valves shall be of at least 3/4-inch size.

SEC. 94.526.3.5. Swimming Pools, Spas and Hot Tubs. Plastic pipe shall not be installed closer than five 5 feet developed length from the collectors unless the collectors drain down when the pump is off.

Sec. 6. Division 6 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 6

WATER SUPPLY AND DISTRIBUTION

SEC. 94.601.0. Running Water Required. Section 601.0 of the C.P.C. is adopted by reference.

SEC. 94.602.0. Unlawful Connections.

SEC. 94.602.1. Section 602.1 of the C.P.C. is adopted by reference.

SEC. 94.602.2. Section 602.2 of the C.P.C. is adopted by reference.

SEC. 94.602.3. Section 602.3 of the C.P.C. is adopted by reference.

SEC. 94.602.4. No plumbing fixture, device, or construction shall be installed or maintained or shall be

connected to any domestic water supply when such installation or connection may provide a possibility of polluting such water supply or may provide a cross-connection between a distributing system or water for drinking and domestic purposes and water which may become contaminated by such plumbing fixture, device, or construction unless there is provided a backflow prevention device approved for the potential hazard. Pressure regulators shall not be installed in underground yard boxes.

SEC. 94.602.5. Section 602.5 of the C.P.C. is adopted by reference.

SEC. 94.603.0. Cross-Connection Control.
Section 603.0 of the C.P.C. is adopted by reference.

SEC. 94.604.0. Materials.

SEC. 94.604.1. Section 604.1 of the C.P.C. is adopted by reference.

SEC. 94.604.1.1. All piping devices and appurtenances installed in nonpotable water systems shall be approved or listed to appropriate national standards where adopted as part of this code.

SEC. 94.604.2. Section 604.2 of the C.P.C. is adopted by reference.

SEC. 94.604.3. Section 604.3 of the C.P.C. is adopted by reference.

SEC. 94.604.4. Section 604.4 of the C.P.C. is adopted by reference.

SEC. 94.604.5. Section 604.5 of the C.P.C. is adopted by reference.

SEC. 94.604.6. Section 604.6 of the C.P.C. is adopted by reference.

SEC. 94.604.7. Section 604.7 of the C.P.C. is adopted by reference.

SEC. 94.604.8. Section 604.8 of the C.P.C. is adopted by reference.

SEC. 94.604.9. Section 604.9 of the C.P.C. is adopted by reference.

SEC. 94.604.10. Section 604.10 of the C.P.C. is adopted by reference.

SEC. 94.605.0. Valves. Section 605.0 of the C.P.C. is adopted by reference.

SEC. 94.606.0. Joints and Connections. Section 606.0 of the C.P.C. is adopted by reference.

SEC. 94.607.0. Gravity Supply Tanks. Section 607.0 of the C.P.C. is adopted by reference.

SEC. 94.608.0. Water Pressure, Pressure Regulators, and Pressure Relief Valves. Section 608.0 of the C.P.C. is adopted by reference.

SEC. 94.609.0. Installation, Unions and Location. Section 609.0 of the C.P.C. is adopted by reference.

SEC. 94.610.0. Size of Potable Water Piping. Section 610.0 of the C.P.C. is adopted by reference.

Sec. 7. Division 7 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 7

SANITARY DRAINAGE

SEC. 94.701.0. Materials. Section 701.0 of the C.P.C. is adopted by reference.

SEC. 94.702.0. Fixture Unit Equivalentents. Section 702.0 of the C.P.C. is adopted by reference.

SEC. 94.703.0. Size of Drainage Piping. Section 703.0 of the C.P.C. is adopted by reference.

SEC. 94.704.0. Fixture Connections (Drainage).

Section 704.0 of the C.P.C. is adopted by reference.

SEC. 94.705.0. Joints and Connections.

Section 705.0 of the C.P.C. is adopted by reference.

SEC. 94.706.0. Changes in Direction of Drainage Flow.

Section 706.0 of the C.P.C. is adopted by reference.

SEC. 94.707.0. Cleanouts.

Section 707.0 of the C.P.C. is adopted by reference.

SEC. 94.708.0. Grade of Horizontal Drainage Piping.

Section 708.0 of the C.P.C. is adopted by reference.

SEC. 94.709.0. Gravity Drainage Required.

Section 709.0 of the C.P.C. is adopted by reference.

SEC. 94.710.0. Drainage of Fixtures Located Below the

Next Upstream Manhole or Below the Main Sewer Level.

SEC. 94.710.1.

Section 710.1 of the C.P.C. is adopted by reference.

SEC. 94.710.2.

Section 710.2 of the C.P.C. is adopted by reference.

SEC. 94.710.3.

Section 710.3 of the C.P.C. is adopted by reference.

SEC. 94.710.4.

Section 710.4 of the C.P.C. is adopted by reference.

SEC. 94.710.5.

Section 710.5 of the C.P.C. is adopted by reference.

SEC. 94.710.6.

Section 710.6 of the C.P.C. is adopted by reference.

SEC. 94.710.7.

Section 710.7 of the C.P.C. is adopted by reference.

SEC. 94.710.8. Section 710.8 of the C.P.C. is adopted by reference.

SEC. 94.710.9. Section 710.9 of the C.P.C. is adopted by reference.

SEC. 94.710.10. Sumps and receiving tanks shall be provided with substantial covers having a bolt and gasket type manhole or equivalent opening to permit access for inspection, repairs, and cleaning. The sump or receiving tank shall be provided with a vent pipe which shall extend separately through the roof, or when permitted may be combined with other vent pipes. The vent shall originate above the highest inlet to the sump. The vent shall be large enough to maintain atmospheric pressure within the sump under all normal operating condition and, in no case, shall be less in size than that required by Table 7-5 for the number and type of fixtures discharging into the sump, nor less than one and one-half inches (38.1 mm) in diameter. When the foregoing requirements are met and the vent, after leaving the sump, is combined with vents from fixtures discharging into the sump, the size of the combined vent need not exceed that required for the total number of fixtures discharging into the sump. No vent from an air-operating sewage ejector shall combine with other vents.

SEC. 94.711.0. Suds Relief. Section 711.0 of the C.P.C. is adopted by reference.

SEC. 94.712.0. Testing. Section 712.0 of the C.P.C. is adopted by reference.

SEC. 94.713.0. Sewer Required. Section 713.0 of the C.P.C. is adopted by reference.

SEC. 94.714.0. Damage to Public Sewer or Private Sewage Disposal System. Section 714.0 of the C.P.C. is adopted by reference.

SEC. 94.715.0. Building Sewer Materials. Section 715.0 of the C.P.C. is adopted by reference.

SEC. 94.716.0. Markings. Section 716.0 of the C.P.C. is adopted by reference.

SEC. 94.717.0. Size of Building Sewers. Section 717.0 of the C.P.C. is adopted by reference.

SEC. 94.718.0. Grade, Support, and Protection of Building Sewers. Section 718.0 of the C.P.C. is adopted by reference.

SEC. 94.719.0. Cleanouts. Section 719.0 of the C.P.C. is adopted by reference.

SEC. 94.720.0. Sewer and Water Pipes. Section 720.0 of the C.P.C. is adopted by reference.

SEC. 94.721.0. Location. Section 720.0 of the C.P.C. is adopted by reference.

SEC. 94.722.0. Abandoned Sewers and Sewage Disposal Facilities.

SEC. 94.722.1. Section 722.1 of the C.P.C. is adopted by reference.

SEC. 94.722.2. Every cesspool, septic tank, and seepage pit which has been abandoned or has been discontinued otherwise from further use or to which no waste or soil pipe from a plumbing fixture is connected, shall have the sewage removed therefrom and be completely filled with earth, sand, gravel, concrete, or other approved material. A grading permit shall be required for filling any private sewage disposal system

SEC. 94.722.3 Section 722.3 of the C.P.C. is adopted by reference.

SEC. 94.722.4. Section 722.4 of the C.P.C. is adopted by reference.

SEC. 94.722.5. Section 722.5 of the C.P.C. is adopted by reference.

Sec. 8. Division 8 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby amended to read as follows:

DIVISION 8

INDIRECT AND SPECIAL WASTE

SEC. 94.801.0. Indirect Waste Connections.

Section 801.0 of the C.P.C. is adopted by reference.

SEC. 94.802.0. Approvals. Section 802.0 of the C.P.C.

is adopted by reference.

SEC. 94.803.0. Indirect Waste Piping. Section 803.0

of the C.P.C. is adopted by reference.

SEC. 94.804.0. Indirect Waste Receptors.

SEC. 94.804.1. Section 804.1 of the C.P.C. is adopted

by reference.

SEC. 94.804.2. Section 804.2 of the C.P.C. is adopted

by reference.

SEC. 94.804.3. No indirect waste receptor shall be

installed in any air duct or plenum (for outside air, supply or return-air supply) where loss of trap seal air would cause air to be taken from an unsanitary location (for example, the sanitary drainage system).

SEC. 94.805.0. Pressure Drainage Connections.

Section 805.0 of the C.P.C. is adopted by reference.

SEC. 94.806.0. Sterile Equipment. Section 806.0 of

the C.P.C. is adopted by reference.

SEC. 94.807.0. Appliances. Section 807.0 of the

C.P.C. is adopted by reference.

SEC. 94.808.0. Cooling Water. Section 808.0 of the

C.P.C. is adopted by reference.

SEC. 94.809.0. Drinking Fountains. Section 809.0 of

the C.P.C. is adopted by reference.

SEC. 94.810.0. Steam and Hot Water Drainage Condensers and Sumps. Section 810.0 of the C.P.C. is adopted by reference.

SEC. 94.811.0. Chemical Wastes. Section 808.0 of the C.P.C. is adopted by reference.

SEC. 94.812.0. Dental Vacuum Drainage Systems.

SEC. 94.812.1. General. Material and installation of dental vacuum drainage systems shall conform to the applicable requirements for plumbing drainage systems:

EXCEPTIONS:

(1) Cleanouts may be omitted on piping 1-1/2 inch size and smaller.

(2) Pipe size may conform to the equipment manufacturer's recommendations.

(3) When a water seal trap is not provided on an inlet, an approved means shall be installed to prevent the back passage of air.

SEC. 94.812.2. Number of Inlets. The number of inlets on each vacuum unit shall not exceed the equipment manufacturer's recommendations.

SEC. 94.812.3. Plastic Pipe.

SEC. 94.812.3.1. Ducts and Plenums. No plastic piping shall be installed in any air duct or plenum.

SEC. 94.812.3.2. Fire Separations. Piping penetrating a fire rated assembly shall comply with the requirements of the Los Angeles Building Code.

SEC. 94.812.3.3. Building Construction. ABS and PVC DWV piping installations shall be limited in commercial buildings where combustible construction is permitted. ABS and PVC DWV piping shall be approved by the Department in accordance with Los Angeles Municipal Code Section 98.0502.

SEC. 94.812.4. Drain Termination. Dental vacuum drainage systems shall terminate in an approved separator. The separator drain shall terminate in an approved receptor and shall not be directly connected to any drainage system. A minimum one inch air gap shall be provided. The separator vent shall run independently and terminate outside of the building.

SEC. 94.812.5. Make Up Air. Dental vacuum unit make up air shall be obtained from an area outside of the dental vacuum drainage termination room.

SEC. 94.812.6. Tests. Dental vacuum drainage systems shall withstand an air pressure test at a gauge pressure of 15 psi or sufficient to balance a column of mercury 30 inches in height. The pressure shall be held for at least 15 minutes without any perceptible drop in pressure.

Sec. 9. Division 9 is hereby added to Article 4 of Chapter IX of the Los Angeles Municipal Code to read as follows:

DIVISION 9

VENTS

SEC. 94.900.0. Basic Provisions. Chapter 9 of the C.P.C. is hereby adopted by reference.

Sec. 10. Division 10 is hereby added to Article 4 of Chapter IX of the Los Angeles Municipal Code to read as follows:

DIVISION 10

TRAPS

SEC. 94.1000.0. Basic Provisions. Chapter 10 of the C.P.C. is hereby adopted by reference.

Sec. 11. Division 11 is hereby added to Article 4 of Chapter IX of the Los Angeles Municipal Code to read as follows:

DIVISION 11

STORM DRAINAGE

SEC. 94.1100.0. Storm Drainage.

SEC. 94.1101.0. Purpose. To define terminology and to provide minimum installation requirements for rainwater drainage systems for roof areas, courts, courtyards, garage ramps and other areas subject to rainwater. Additionally, the requirements for planter, subsurface and emergency drainage systems are provided and shall be installed as required by this Division.

EXCEPTIONS:

(1) Hillside drainage systems installed at the base of berms and cut and fill slopes as determined by the Grading Division.

(2) Retaining walls which are not part of a building or structure.

(3) Site drainage piping over eight inches in diameter installed under Public Works specifications.

SEC. 94.1102.0. Definitions.

Area Drain or Stairwell Drain - See rainwater drains.

Catch Basin - A receptor used to collect rainwater.

Deck or Balcony Drain - A drain installed to collect rainwater from a deck or balcony.

Emergency Drain - Floor drain located within a building and serving only the areas used for the parking of motor vehicles. They are intended solely to receive water from automobile drippage, fused sprinkler heads, ruptured piping or storage tanks, and other similar conditions.

Groundwater - Water emanating from a subterranean source. The presence and elevation of ground water shall be determined by a Soils or Geotechnical Engineer.

Overflow Drain - A drain having the same size as its adjacent roof drain and used for detection or malfunction of the roof drain.

Overflow Scupper - An opening in a vertical wall or parapet used in lieu of an overflow drain.

Perimeter Drain - A drainage system at the building perimeter footings for the collection of percolated surface water, or water from landscape irrigation or surface rainwater. These drains are not intended for groundwater drainage.

Planter Drain - A drain installed within an area or box where plants are grown which is used to convey excess water.

Rainwater Drain - A drain that serves roof or other drains for the purpose of conveying rainwater. This definition does not include emergency, perimeter, planter, or subsurface drains. (See balcony, deck, and roof drain.)

Ramp Drain - A drain usually located at the base of a driveway slope which is used only to collect rainwater.

Roof Drain - Approved or listed drains used to collect rainwater from the roof of a building, structure or roof deck. (See Deck Drain.)

Roof or Rainwater Leader - Rainwater piping on the exterior of a building or structure which conveys rainwater from a roof, scupper, or gutter of a building or structure.

Site or On-Site Drains - Drainage systems for grade level surfaces located outside of a building or within a building open to atmosphere, for the collection of rainwater. (See Area Drains)

Subsurface Drainage - Below grade piping systems which convey water (groundwater or perimeter water) away from building foundations.

Swimming Pool Deck Drains - Drains surrounding the perimeter of a swimming pool, spa or hot tub for the

collection of water from overflow or splashing of pool water.

SEC. 94.1103.0. General Requirements.

SEC. 94.1103.1. The following general provisions are in addition to those provisions adopted elsewhere in this Code.

SEC. 94.1103.2. Material, installation and testing of storm water systems located within the interior of a building or run within the interior of a shaft or underground within a building shall conform to the applicable requirements for plumbing drainage systems.

SEC. 94.1103.3. No storm drainage piping shall connect to any building drainage system.

SEC. 94.1103.4. The interior of the building shall be adequately protected from flooding. Methods for the protection from flooding in the interior of a building, in case of stoppage, shall be approved prior to the installation of such system (i.e. backwater valves).

SEC. 94.1103.5. The interior of the building shall be adequately protected from flooding in case of a stoppage in the rainwater drain.

SEC. 94.1103.6. Whenever practicable, storm water systems shall drain by gravity. Storm water which cannot be drained by gravity may terminate in an approved sump which shall discharge to an approved point of disposal.

SEC. 94.1103.7. Storm drainage systems (rainwater drains, subsurface drains, emergency drains, etc.) may discharge to a common sump provided each system is piped independently.

SEC. 94.1103.8. Storm drainage piping shall discharge to an approved point of disposal. Storm drainage piping shall not discharge into any building drainage system. Storm drainage piping may terminate through the curb face or storm drain with Department of Public Works approval.

SEC. 94.1104.0. Rainwater Drains.

SEC. 94.1104.1. Rainwater drainage systems, emergency drainage systems, and subsurface drainage systems may discharge to a common sump provided each system is piped independently.

SEC. 94.1104.2. On site fabricated roof drains shall not be installed unless they have been submitted to the City of Los Angeles Mechanical Testing Laboratory for review and approval. Overflow drain systems shall be completely independent from roof drain systems.

SEC. 94.1104.3. An overflow scupper may be installed in lieu of an overflow drain in a parapet wall when a roof drain is adjacent to the parapet wall. Overflow scuppers shall have an area three times the area of the adjacent roof drain with the inlet flow line located a maximum of two inches above the low point of the roof and having a minimum opening height of four inches.

EXCEPTION: Piping used as an overflow drain does not have to meet the scupper requirement of being three times the area of the roof drain. Overflow drain piping is required to be the same size as the approved adjacent roof drain piping.

SEC. 94.1104.4. When the roof drains and/or overflow piping is within the building construction, the materials shall be cast iron, copper, lead, or other corrosion resistant materials. ABS and PVC installations are limited to residential construction not more than two stories in height.

SEC. 94.1104.4.1. Piping five feet or more outside the building line may be of approved materials specified in the Uniform Plumbing Code Installation Standard for Non-Metallic Building Sewers (IS-1).

SEC. 94.1104.5. Strainers.

SEC. 94.1104.5.1. Roof drains and overflow drains shall have strainers. Strainers shall extend a minimum of four inches above the roof surface immediately adjacent to the drain to prevent debris from clogging the drain. Dome type strainers shall be used to accomplish this requirement.

SEC. 94.1104.5.2. Strainers shall have a minimum inlet area of one and one-half times the area of the pipe to which it is connected.

SEC. 94.1104.5.3. Strainers used for roof decks, parking decks, sun decks, courtyards and other similar occupied areas where there is foot traffic, may be of an approved flat surface type which is level with the deck. These drains shall have a minimum inlet area of two times the area of the pipe to which it is connected.

SEC. 94.1104.6. A deck drain located on a roof, used as a deck or in an area of vehicular traffic, need not have an additional overflow drain adjacent to it. The deck drain shall be sized to handle the total proposed rainwater flow pursuant to the Uniform Plumbing Code. All drains shall be approved for their intended use and shall be made watertight at every roof, deck or wall penetration.

SEC. 94.1104.7. Sizing.

SEC. 94.1104.7.1. Sizing of rainwater drains shall conform to the Uniform Plumbing Code, Appendix D, based on two inches of rainfall per hour. The minimum flow of 0.021 gallons per minute per square foot may be used.

SEC. 94.1105.0. Subsurface Drains.

SEC. 94.1105.1. General. Required subsurface drainage systems located within a building and all pumped subsurface drainage piping shall conform to the applicable requirements for sanitary drainage systems.

EXCEPTIONS:

(1) ABS and PVC or other approved or listed factory perforated piping for subsurface drainage may be installed underground beneath a concrete slab for any building where in the determination of the Administrative Authority these systems are required. Installations shall be in accordance with the manufacturer's or a licensed civil engineer's recommendations, or the pipe shall be centered in a

square cross section trench filled with No. 2 washed gravel at the rate of one cubic foot per linear foot of pipe. When rainwater is diverted through or underneath a building for disposal to a sump pump, approved drainage materials shall be used.

(2) Cleanouts, traps and vents shall not be required.

SEC. 94.1105.2. Subsurface drainage systems, emergency drainage systems, and rainwater drainage systems may discharge to a common sump provided each system is piped independently.

EXCEPTION: Subsurface drainage systems may be combined in a common sump with rainwater, ramp and emergency drains when backwater valves are installed to prevent flooding of the garage from outside rainwater or subsurface water or in the case of sump pump failure. No system shall be installed in such a manner as to create a nuisance or insanitary condition.

SEC. 94.1105.3. Sizing. Subsurface drainage systems shall be adequate for the required flows. The required flows shall be established by a Geotechnical or civil engineer. Sump vent sizes shall be based on two fixture units per gallon per minute of pump or ejector discharge, but not less than 1-1/2 inches.

SEC. 94.1106.0. Emergency Drains.

SEC. 94.1106.1. Emergency drainage systems, subsurface drainage systems, and rainwater drainage systems may discharge to a common sump provided each system is piped independently.

SEC. 94.1106.2. Plumbing drainage, plumbing vent or condensate piping shall not be connected to the sump.

SEC. 94.1106.3. Emergency drains shall not be trapped and vented.

SEC. 94.1106.4. Emergency drainage systems shall be sized on the anticipated flow in gallons per minute to be discharged. The minimum size pipe for emergency drains is two

inches.

SEC. 94.1106.5. Hose bibbs shall not be installed on parking garage levels having emergency drains.

SEC. 94.1107.0. Groundwater Drainage.

SEC. 94.1107.1. Groundwater drainage systems may discharge to a below grade storm drain system only. Groundwater drainage piping shall not discharge to any building drainage or sewer system, on grade or through a curb face.

SEC. 94.1107.1.1. Groundwater drainage systems may require separate approvals from the Water Master and permits from the following agencies:

- (1) Department of Industrial Waste.
- (2) Department of Public Works.
- (3) Southern California Regional Water Quality Control Board.

SEC. 94.1107.2. Perimeter Drains.

SEC. 94.1107.2.1. Perimeter drainage systems may terminate through the curb face or storm drain with Department of Public Works approval.

SEC. 94.1108.0. Planter Drains.

SEC. 94.1108.1. Planter drains exposed to the sky may discharge through the curb face or to the storm drain with Department of Public Works approval.

SEC. 94.1108.2. Planter drains installed within a building which are not subject to rainwater shall be trapped and vented and shall discharge to the building drainage system in accordance with this Division and Division 7 of the Plumbing Code.

SEC. 94.1109.0. Sump Requirements.

SEC. 94.1109.1. Vents may terminate a minimum of six feet above the solid sump cover. Sumps shall be installed in accordance with this section and Chapter 7 of the Uniform Plumbing Code.

SEC. 94.1109.2. Airtight covers may be omitted from sumps.

SEC. 94.1110.0. Pump Requirements.

SEC. 94.1110.1. Dual pump systems shall be required for any on-site storm drainage system that cannot be drained by gravity.

EXCEPTIONS:

(1) Emergency drains.

(2) Single-Family Dwellings when not specifically required by the Administrative Authority.

SEC. 94.1110.2. Sizing. Each pump shall be sized to discharge the maximum capacity of the flow into the sump basin. The minimum size pump shall be 25 g.p.m. The sump pump system shall be designed as required by the Uniform Plumbing Code, Appendix D, for a minimum of two inches per hour of rainfall or 0.021 g.p.m. per square foot of area. Shut-off valves are not required on pump discharge lines.

Sec. 12. Division 12 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 12

FUEL PIPING

SEC. 94.1201.0. General. Section 1201.0 of the C.P.C. is adopted by reference.

SEC. 94.1202.0. Definitions. Section 1202.0 of the C.P.C. is adopted by reference.

SEC. 94.1203.0. Workmanship. Section 1203.0 of the C.P.C. is adopted by reference.

SEC. 94.1204.0. Inspection. Section 1204.0 of the C.P.C. is adopted by reference.

SEC. 94.1205.0. Certificate of Inspection. Section 1205.0 of the C.P.C. is adopted by reference.

SEC. 94.1206.0. Authority to Render Gas Service. Section 1206.0 of the C.P.C. is adopted by reference.

SEC. 94.1207.0. Authority to Disconnect. Section 1207.0 of the C.P.C. is adopted by reference.

SEC. 94.1208.0. Temporary Use of Gas. Section 1208.0 of the C.P.C. is adopted by reference.

SEC. 94.1209.0. Gas Meter Locations. Section 1209.0 of the C.P.C. is adopted by reference.

SEC. 94.1210.0. Material for Gas Piping. Section 1210.0 of the C.P.C. is adopted by reference.

SEC. 94.1211.0. Installation of Gas Piping. Section 1211.0 of the C.P.C. is adopted by reference.

SEC. 94.1212.0. Appliance Connectors. Section 1212.0 of the C.P.C. is adopted by reference.

SEC. 94.1213.0. Liquefied Petroleum Gas Facilities and Piping. Section 1213.0 of the C.P.C. is adopted by reference.

SEC. 94.1214.0. Leaks. Section 1214.0 of the C.P.C. is adopted by reference.

SEC. 94.1215.0. Interconnection of Gas Piping Systems. Section 1215.0 of the C.P.C. is adopted by reference.

SEC. 94.1216.0. Required Gas Supply. Section 1216.0 of the C.P.C. is adopted by reference.

SEC. 94.1217.0. Required Gas Piping Size.

Section 1217.0 of the C.P.C. is adopted by reference.

SEC. 94.1218.0. Medium Pressure Gas Piping Systems.

Section 1218.0 of the C.P.C. is adopted by reference.

SEC. 94.1219.0. Seismic Gas Shutoff Valves.

SEC. 94.1219.1. Definitions. For purposes of this section, certain terms shall be defined as follows:

Downstream of Gas Utility Meter shall mean that portion of a gas piping which is away from the gas utility meter and is on the user or customer side of the meter serving a building or structure.

Residential Building shall mean any single family dwelling, duplex, apartment building, condominium, townhouse, lodging house, congregate residence, hotel, or motel.

Seismic Gas Shutoff Valve shall mean a system consisting of a seismic sensing means and actuating means designed to automatically actuate a companion gas shutoff means installed in a gas piping system in order to shut off the gas downstream of the location of the gas shutoff means in the event of a severe seismic disturbance. The system may consist of separable components or may incorporate all functions in a single body. The terms "Seismically Activated Gas Shutoff Valves" and "Earthquake Sensitive Gas Shutoff Valves" are synonymous.

Upstream of Gas Utility Meter shall mean that portion of a gas piping between a utility meter and a gas main line in the street.

SEC. 94.1219.2. Scope. An approved seismic gas shutoff valve shall be installed downstream of the gas utility meter on each fuel gas line where the line serves the following buildings or structures:

SEC. 94.1219.2.1. A building or structure containing fuel gas piping for which a building permit was first issued on

or after September 1, 1995.

SEC. 94.1219.2.2. An existing building or structure which is altered or added to; and

SEC. 94.1219.2.2.1. That building or structure has fuel gas piping supplying the existing building or structure or the addition to the building or structure; and

SEC. 94.1219.2.2.2. The alteration or addition is valued at more than \$10,000 and a building permit for the work is first issued on or after September 1, 1995.

SEC. 94.1219.2.2.3. This provision shall not apply to the following:

1. Existing residential buildings.
2. Residential portions of mixed use buildings or structures which contain both residential and non-residential uses as determined by the Department.

EXCEPTIONS:

(1) Seismic gas shutoff valves may be installed upstream of a gas utility meter provided they meet the requirements of this section.

(2) Seismic gas shutoff valves installed on a building or structure prior to September 1, 1995, are exempt from the requirements of this section provided they remain installed on the building or structure and are maintained for the life of the building or structure.

(3) Notwithstanding Subsections 94.1219.2.1 and 94.1219.2.2 above, these provisions shall not apply to a building or structure if the Department determines that a building or structure satisfies all three of the following criteria:

(A) That the building or structure is owned, operated, and maintained by a governmental entity

or public entity; or that the building or structure is owned by a private concern and provides a public benefit, such as a co-generation facility which shares its excess power with a public entity or with a large industrial facility which has governmental contracts;

(B) That the building or structure has available 24-hour, year-round, maintenance staffing; and

(C) That the gas piping system contained in the building or structure is designed to withstand seismic effects of earthquakes.

SEC. 94.1219.3. General Requirements. Seismic Gas Shutoff Valves installed either in compliance with Section 94.1219.0, et seq. or voluntarily with a permit issued on or after September 1, 1995 shall comply with the following requirements.

SEC. 94.1219.3.1. Be installed by a contractor licensed in the appropriate classification by the State of California.

EXCEPTION:

(1) A person who has been determined by the Department to meet the qualifications of a Qualified Installer pursuant to the definition of a Qualified Installer set forth in Division 2 of this Code may install a seismic gas shutoff valve to a single family dwelling which is or is intended to be occupied by the Qualified Installer.

(2) Seismic gas shutoff valves may be installed by a gas utility provided a permit is obtained and the valves are installed and approved in accordance with this section.

SEC. 94.1219.3.2. Be mounted rigidly to the exterior of the building or structure containing the fuel gas piping.

EXCEPTION: This requirement need not apply if the Department determines that the seismic gas shutoff valve has been tested and listed for an alternate method of installation.

SEC. 94.1219.3.3. Be listed by an approved testing laboratory and certified by the Office of the State Architect.

SEC. 94.1219.3.4. Be approved by the Department of Building and Safety, Mechanical Testing Laboratory.

SEC. 94.1219.3.5. Have a thirty year warranty which warrants that the valve is free from defects and will continue to properly operate for thirty years from the date of installation.

SEC. 94.1219.3.6. Where seismic gas shutoff valves are installed as required by this section, they shall be maintained for the life of the building or structure or be replaced with a valve complying with the requirements of this section.

SEC. 94.1219.3.7. In addition to complying with all requirements of Standard 12-23-1 of Chapter 12-23 of the California State Referenced Standards Code, the following requirements shall be met in lieu of those required in State Standard 12-23-125, b2 and b3:

The sensing means of a valve or system shall not actuate the shutoff means when subjected for five seconds to horizontal, sinusoidal oscillations having:

(A) A peak acceleration of 0.2g with a period of vibration of 0.4 second; and

(B) A peak acceleration of 0.2g with a period of vibration of 1.0 second.

Sec. 13. Division 13 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 13

SPECIAL PIPING AND STORAGE SYSTEMS

SEC. 94.1300.0. GENERAL. Chapter 13 of the California Plumbing Code is adopted by reference.

Sec. 14. Division 14 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 14

REFERENCED STANDARDS

SEC. 94.1400.0. GENERAL. Chapter 14 of the California Plumbing Code is adopted by reference.

Sec. 15. Division 15 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 15

PLUMBING REQUIREMENTS FOR DESIGN SAFETY FOR ACCESSIBILITY

SEC. 94.1500.0. GENERAL. Chapter 15 of the California Plumbing Code is adopted by reference.

Sec. 16. Division 16 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 16

UNFIRED PRESSURE VESSELS

SEC. 94.1600.0. GENERAL. Chapter 16 of the California Plumbing Code is not adopted.

Sec. 17. Division 17 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 17

SERVICE PIPING FOR WELDING AND CUTTING

SEC. 94.1700.0. GENERAL. Chapter 17 of the California Plumbing Code is not adopted.

Sec. 18. Division 18 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 18

RESERVED

Sec. 19. Division 19 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 19

RESERVED

Sec. 20. Division 20 of Article 4 of Chapter IX of the Los Angeles Municipal Code is hereby added to read as follows:

DIVISION 20

FIRE PROTECTION SYSTEMS

SEC. 94.2000.0. GENERAL.

SEC. 94.2001.0. Scope. This standard provides the minimum requirements for the design and installation of automatic fire protection systems. The design of all fire protection systems shall be in conformity with accepted engineering practices and shall be of such character as to secure the results sought to be obtained by this Code.

Automatic fire sprinkler systems shall be installed in locations required by the Building Code, and all fire sprinkler systems shall be in conformance with the approved plans and this

Code.

SEC. 94.2002.0. Adopted Standards. All fire sprinkler and standpipe design, installation and materials shall be in conformity with the 1994 edition of the Uniform Building Code, and to the applicable portions of standards as specified in Table 20-1, except when specified in this Division as modified or not adopted.

**TABLE 20-1
FIRE PROTECTION STANDARDS**

	STANDARD*
Installation of Sprinkler Systems	UBC 9-1,1994 and NFPA 13-1994
Installation of Sprinkler Systems in Group R Occupancies Four or fewer Stories Standpipe and Hose Systems	UBC 9-3,1994 and NFPA 13R-1994 UBC 9-2,1994 and NFPA 14-1993
Centrifugal Fire Pumps	NFPA 20-1993
Water Tanks for Private Fire Protection	NFPA 22-1993
Private Fire Service Mains	NFPA 24-1992
Cutting and Welding Processes	NFPA 51B-1994
General Storage	NFPA 231-1990
Rack Storage of Materials	NFPA 231C-1991
Hose Threads	NFPA 1963-1993
Power Piping	ANSI/ASME B31-1-1986

NFPA - Published by the National Fire Protection Association.

ANSI/ASME - Published by the American Society of Mechanical Engineers.

Other NFPA Standards as applicable in Section 10-1.2 of NFPA-13, 1994 may be used by reference except when specified in this Division 20.

Wherever reference is made to the Uniform Fire Code it shall mean the Los Angeles Fire Code.

SEC. 94.2002.1. Fire Protection Standards. Fire extinguishing systems shall comply with the standards listed in Table 20-1.

EXCEPTIONS:

1. Automatic fire extinguishing systems not covered by the Los Angeles Plumbing Code shall be approved and installed in accordance with the Los Angeles City Fire Code.

2. Automatic sprinkler systems may be connected to the domestic water supply main when approved by the Superintendent of Building, provided the domestic water supply is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements. In such case, the sprinkler system connection shall be made between the public water main or meter and the building shutoff valve, and there shall not be intervening valves or connections. The Fire Department connection may be omitted when approved by the Los Angeles City Fire Department.

3. Automatic sprinkler systems in Group R Occupancies of four or fewer stories may be in accordance with U.B.C. Standard 9-3.

SEC. 94.2003. Definitions.

Acceptance is acceptance by the building official or Administrative Authority.

Approved means:

1. With reference to new materials or methods of construction, approved by the Superintendent of Building.

2. With reference to other than new materials or methods of construction, approved by the Superintendent of Building or an authorized agent, and for which standards are listed in Table 20-1 of Section 94.2002

of Division 20.

Authority Having Jurisdiction is the building official or the administrative authority.

Building Official is the Superintendent of Building and Safety, or an authorized representative, charged with the administration and enforcement of this Code.

Compact Storage is a system of mobile shelving units, mounted on rails, and designed to provide the maximum number of rows in a minimum area of floor space.

Listed or Listing are terms referring to equipment and materials which are shown in a list published by an approved testing or listing agency qualified and equipped for experimental testing and/or maintaining an adequate periodic inspection of current production and whose listing states that the equipment or material complies with recognized safety standards.

Pilot Heads are wet fire sprinklers installed over piping in unsprinklered areas to protect them from fire damage.

Residential Occupancies are Group R Occupancies.

Shall indicates a mandatory requirement.

Should indicates a recommendation or that which is advised but not required.

Sprinkler Alarm is a local alarm unit assembly or apparatus approved for the service and so constructed and installed that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler will result in an audible alarm signal on the premises.

Sprinkler System, for fire-protection purposes, is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The installation includes a water supply, such as a gravity tank, fire pump, reservoir or pressure tank

and/or connection by underground piping to a City main.

The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

Standard is a document containing only mandatory provisions, using the word shall to indicate requirements. Explanatory material may be included only in the form of fine print notes, in footnotes, or in an appendix.

Standpipe System is a wet or dry system of piping, valves, outlets and related equipment designed to provide water at specified pressures and installed exclusively for the fighting of fires, including the following:

Class I is a standpipe system equipped with 2 1/2-inch outlets.

Class II is a wet standpipe system directly connected to a water supply and equipped with 1 1/2-inch outlets intended for use by the building occupants.

Class III is a combination standpipe system directly connected to a water supply and equipped with both 1 1/2-inch outlets for use by the building occupants and 2 1/2-inch outlets for use by the fire department or trained personnel. Hose connections for Class III systems may be made through 2 1/2-inch hose valves with easily removable 2 1/2-inch by 1 1/2-inch reducers.

Thermal Barrier is a material that will limit the average temperature rise of all unexposed surfaces to not more than 250° F (121° C) after 15 minutes of fire exposure complying with nationally recognized standards.

Water Curtain is a line of closely spaced fire sprinklers (or a single sprinkler) aligned adjacent to openings to keep fire from penetrating those openings.

Water Spray Nozzle is a normally open water discharge device which, when supplied with water under pressure, will distribute the water in a special directional pattern peculiar to the particular device.

Water Spray System is a special fixed-pipe system connected to reliable source of fire-protection water supply, and equipped with water spray nozzles for specific water discharge and distribution over the surface or area to be protected. The piping system is connected to the water supply through an automatically or manually actuated valve which initiates the flow of water. An automatic valve is actuated by operation of automatic detection equipment installed in the same areas as the water spray nozzles. (In special cases, the automatic detection equipment may also be located in another area.) Water spray systems used to cool tanks containing combustibles shall be included in this definition.

SEC. 94.2004.0. Material and Devices, All Fire Protection Systems. All material and equipment used in the construction and installation of fire protection systems shall be new and free from defects, and shall be listed and/or approved for their intended use.

Other types of pipe or tube and fittings may be used when listed for such use by an approved testing and inspection agency when approved by the administrative authority.

EXCEPTION: The following need not be listed:

1. Fittings. Ferrous fittings conforming to the standards listed in Table 2-4.1 of NFPA 13.

2. Pipe. Steel pipe that conforms to the standards listed in Table 2-3.1 of NFPA 13 for pressures up to 300 psi. Steel pipe that conforms to ANSI/ASME Standard B31.1-1986 for pressures of 300 psi or more.

Brazing metal and soldering metal for sprinkler application shall comply with Section 2-3.1 of NFPA 13-1994 except that solder metal shall be Grade Sb 5 instead of Grade 95TA.

When the pressure exceeds 300 psi, pipe and tube shall be listed for the pressure or shall conform to the standards for power piping ANSI/ASME Standard B31.1-1986.

SEC. 94.2005.0. Location. No fire-protection system shall be located on any lot other than the lot which is the site of the building, structure or premises served by such system.

SEC. 94.2006.0. All fire-protection equipment and piping shall be adequately protected from mechanical damage.

SEC. 94.2007.0. Reserved

SEC. 94.2008.0. Reserved

SEC. 94.2009.0. Reserved

SEC. 94.2010.0. NFPA 13-1994 is hereby adopted by reference with the following exceptions, modifications, and additions:

1. Sec. 1-1 is amended by changing the note to read as follows:

Consult other recognized and accepted standards for additional requirements relating to water supplies.

2. Sec. 1-3 is not adopted.

3. Sec. 1-4.1 is amended by Section 94.2003 of this Division.

4. Sec. 1-4.7 is amended to read as follows:

1-4.7. For the purpose of determining the level of protection to be provided by required sprinkler system installations, Table No. 1.4.7 shall be used.

For hazard classifications other than those indicated, see appropriate nationally recognized standards for design criteria.

When fire sprinkler systems are required in buildings of undetermined use, they shall be designed and installed to have a sprinkler density of not less than that required for an Ordinary Hazard Group 2 use with a minimum design area of 3,000 square feet. Use is considered undetermined if not specified at time permit is issued.

Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant and/or owner to upgrade the system to the required density for the new occupancy.

TABLE NO. 1.4.7

HAZARD CLASSIFICATION

OCCUPANCY OF BUILDING OR PORTION THEREOF	HAZARD CLASSIFICATION
<p>Group A Occupancies used as meeting rooms, library reading rooms, restaurant seating areas, clubs, theaters, museums, health clubs, educational classrooms and churches.</p> <p>Group B Occupancies used as offices, data processing areas, colleges and universities.</p> <p>Group E Occupancies other than shops and laboratories.</p> <p>Group I Occupancy living and sleeping areas</p> <p>Group R, Division I Occupancies¹. Typically these uses are such that the quantity and combustibility of contents is such that relatively low-rate-of-heat-release fires would be expected.</p>	<p>Light</p>

<p>Groups B, F, S and U Occupancies used for light manufacturing, commercial kitchens, laundries, automobile parking garages, bakeries, canneries, electronic plants, beverage manufacturing and glass products manufacturing plants not producing dust or fibers. Typically these uses are such that the quantity of combustibles is relatively low, the combustibility of contents is moderate, storage does not exceed 8 feet in height, and moderate-rate-of-heat-release fires would be expected.</p>	<p>Ordinary Group I</p>
<p>Groups B, F, M, and S Occupancies used for chemical plant laboratories, mercantile, machine shops, printing plants, library stack areas, metal working, wood product assembly, textile manufacturing, confectionery products, cold storage warehouses², cereal mills, service stations and repair garages. Typically these uses are such that the quantity of combustibles is moderate. The combustibility of contents is moderate, storage does not exceed 12 feet in height (2) and moderate-rate-of-heat-release fires would be expected.</p> <p>Also:</p> <p>Group A Occupancies such as exhibition halls.</p> <p>Groups B, F and S Occupancies used as tobacco products manufacturing, paper and pulp mills, piers and wharfs, and warehousing (2) of higher combustible contents (including packaging).</p> <p>Group H Occupancies used as feed mills, tire manufacturing, chemical plants, repair garages and woodworking. Group H, Division 6 Occupancies (except extra-hazard areas). Typically these uses are such that high-rate-of-heat-release fires would be expected and the spread of fire would be rapid.</p>	<p>Ordinary Group 2</p>

<p>Group H Occupancies used for printing (using inks with flashpoints below 100 degrees F.) combustible hydraulic fluid-use areas such as die casting and metal extruding, upholstering with plastic foam, rubber reclaiming, compounding, drying, milling, vulcanizing, plywood and particle board manufacturing, saw mills, textile picking, opening, blending, garnetting, carding and combining of cotton, synthetics, wool shoddy or burlap. Typically these uses are such that a significant fire hazard exists.</p>	<p>Extra Hazard Group I</p>
<p>Group H Occupancies used as asphalt saturating, flammable liquids spraying, flow coating, open oil quenching, varnish and paint dipping, solvent cleaning and manufactured home or modular building manufacturing (where the finished building enclosure is present and has combustible interiors). These uses are such that a severe fire hazard exists.</p>	<p>Extra Hazard Group 2³</p>

¹ See also Section 5-3.2

² For high-piled storage, see NFPA 231, 1990 and 231 C, 1991.

³ For additional and more stringent criteria, see Uniform Fire Code Article 79 or 80 and the Los Angeles Fire Code.

5. Sec. 1-6.1 is revised to read:

1-6.1. A building, when protected by an automatic sprinkler system installation, shall be provided with sprinklers in all areas, including concealed spaces, except for omissions permitted by the Los Angeles Building Code and this code.

6. Sec. 2-1.1 is revised to read as follows:

2-1.1. All materials and devices shall be listed and approved.

7. Sec. 2-3.5 is not adopted.
8. Sec. 2-4.2 is not adopted.
9. Sec. 2-5.2 is revised by adding the following:

The provisions of this section shall be subject to approval by the administrative authority.

10. The exception to section 2-6.1 is revised to read: Hangers designed by a registered structural or civil engineer for lateral loads in accordance with Sec. 1630 of the Uniform Building Code shall be acceptable.

11. Exception 3 to section 2-7.1.1 is not adopted.

12. Sec. 2-9.1 is revised by changing the last line as follows: "on the premises within two minutes after such flow begins."

EXCEPTION: As provided for high-rise buildings in Section 94.2060.

13. Sec. 3-9.1 is revised by changing "(See NFPA 96, Standard for Vapor Removal from Cooking Equipment)" to "(See the Los Angeles Mechanical Code)."

14. The exception to section 3-9.2 is not adopted.

15. The exception to section 4-3.1.1 is revised to read by adding "Subject to the approval of the Administrative Authority."

16. Exception No. 1 of Sec. 4-3.1.3.1 is revised to read:

Exception No. 1. Where maximum ceiling temperatures exceed 100° F. sprinklers with temperature ratings in accordance with the maximum ceiling temperatures of NFPA Table 2-2.3.1 shall be used, provided in residential occupancies ordinary temperature-rated sprinklers rated 150°F to 170°F shall be installed.

17. Sec. 4-3.2 is revised by adding "Subject to the approval of the Authority Having Jurisdiction" in the beginning of the text.

18. Section 4-3.6.1 is revised by substituting "Sec. 94.1514" of the Los Angeles Municipal Code for "NFPA 13R, standard for the installation of sprinkler systems in residential occupancies up to and including four stories in height," and by deleting references to NFPA 13D.

19. Exception 3 of Sec. 4-4.1.4.2 is revised to read: Exception No. 3. Where sprinklers are installed under composite wood joists less than 16 inches in depth, sprinkler deflectors shall be a minimum of 1 inch and a maximum of 6 inches below the bottom of the composite wood joist and the joist channels shall be fire-stopped the full depth of the joist with a material equivalent to the web construction so that individual channel areas do not exceed 300 square feet. Where the depth of the composite wood joist is 16 inches or greater, protection shall be provided by using one or more of the following methods:

(a) Provide a sprinkler in each joist channel. The distance between sprinklers within the joist channel shall not exceed 15 feet.

(b) Protect the composite wood joist with $\frac{5}{8}$ -inch Type X gypsum wallboard attached directly to the bottom of the composite wood joist. Joist channels shall be fire-stopped the full depth of the joist with material equivalent to the web construction so that the volume of individual channels do not exceed 160 cubic feet.

(c) Completely fill the channel with noncombustible insulation. The insulation shall be secured to prevent the insulation from falling. Joist channels shall be fire-stopped the full depth of the joist with material equivalent to the web construction so that the volume of the individual channels does not exceed 160 cubic feet.

20. Exception 7 of Section 4-4.1.7.1.1 of NFPA 13 is revised to read:

EXCEPTION: 7. Small spaces, over rooms, not exceeding 55 square feet in area provided they do not exceed 160 cubic feet in volume.

21. Sec. 4-5.3.2 is revised to read:

4-5.3.2 Stairs enclosed in shafts of combustible or noncombustible construction shall have sprinklers provided at each floor landing.

22. The exception to section 4-5.3.4 is revised to read:

EXCEPTION: Except as required by the Building Code closely spaced sprinklers and draft stops are not required around large openings such as those found in shopping malls, atrium buildings, and similar structures where all adjoining levels and spaces are protected by automatic sprinklers in accordance with this standard and where openings have all horizontal dimensions between opposite edges of 20 ft or greater and an area of 1000 sq ft or greater.

23. Sec. 4-6.1.1.3 is revised by changing the last paragraph to read:

All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically monitored where the number of sprinklers are:

1. Twenty or more in Group I, Division 1.1 and 1.2 Occupancies.
2. One hundred or more in all other occupancies.

Valve monitoring and water-flow alarm and trouble signals shall be distinctly different and shall be automatically transmitted to an approved

central station, remote station or proprietary monitoring station as defined by national standards, or, when approved by the building official with the concurrence of the chief of the fire department, sound an audible signal at a constantly attended location.

EXCEPTION: Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be monitored.

24. Sec. 4-6.1.1.5 is hereby revised to read:

4-6.1.1.5 An approved check valve shall be installed in each water-supply connection. When foam, antifreeze or other additive is to be in the system, and the system is supplied from a domestic water-supply main, the check valve shall be an approved backflow preventor. Check valves shall be installed in a vertical or horizontal position in accordance with their listing.

25. Sec. 4-6.1.1.9 is hereby added to read:

4-6.1.1.9 Floor (Level) Control Valves.

1. Where required. In buildings with over two levels or two floors, supervised valve(s) capable of independently controlling the fire sprinkler system on each level, penthouse, roof structure, mezzanine and basement level shall be installed.

EXCEPTIONS:

1. Floor control valves need not be provided for levels, penthouses, roof structures, mezzanines and basement levels with 20 fire sprinklers or less.

2. In partially sprinklered

buildings, sprinklers serving window openings along an exitway or property line, or stair shafts and adjacent doors may have a sectional control valve to control the system in each of these area instead of a floor control valve.

3. Valves required for hazardous locations may be located downstream of floor control valves.

4. One and two family dwellings.

2. **Locations.** Floor control valves shall be within a stairway enclosure or within the vestibule or on the access balcony of a smokeproof enclosure.

EXCEPTION:

1. In buildings 3 stories or less or when there is no stairway that serves a floor, control valves may be located elsewhere on the floor level.

2. Unenclosed stairways in parking garages.

26. Sec. 4-5.1.1.10 is hereby added to read:

4-5.1.1.10. Special Hazard Locations and Hazardous Occupancies. The piping serving each linen chute, each paint spray booth, each trash chute, including trash room, and each separate trash room shall be controlled by valves that control no other sprinklers.

27. Sec. 4-5.1.1.11 is hereby added to read:

4-5.1.1.11. Valve Access. All valves controlling water supplies for sprinkler systems or portions thereof shall be accessible. These valves shall be within 6 feet 6 inches of the floor or shall be

operable from fixed ladders or clamped tread ladders on risers, or using chains within 6 feet 6 inches of the floor connected to valve hand wheels or other suitable means. All valves shall be provided with adequate clearance for normal operation.

28. Sec. 4-6.1.2.5 is hereby added to read:

4-6.1.2.5. Identification Pressure Regulators. Signs shall be posted at pressure regulators for fire sprinklers stating the maximum and minimum allowable static pressures.

29. Sec. 4-7.1.1.1 is revised to read as follows:

4-7.1.1.1. Water-Flow Alarm. A local water-flow alarm shall be provided when the system contains more than 5 sprinklers.

30. Sec. 4-7.2 is revised to read:

4-7.2. Fire Department Connection. See Section 94.2020 of this Division for additional requirements.

31. Sec. 5-2.3.1.1 is revised by substituting "nationally recognized" for "NFPA" in the first line of Exception 1.

32. Sec. 5-2.3.1.3(e) is revised by substituting the Phrase "Sec. 94.2020 of this Division" for "NFPA 14, Standard for Installation of Standpipe and Hose Systems" in the fourth line of the text and where located in the two exceptions.

33. Sec. 5-3.4.1 is revised by substituting "nationally recognized" for "NFPA" in the second line of the text.

34. Sec. 5-3.7 is revised by adding:

5-3.7. Water Curtains.

1. Water curtains may be permitted in lieu of fire assemblies in protected openings when approved by the Administrative Authority.

2. Hydraulic Design.

1. **General.** Water curtains shall be hydraulically designed to produce the required flow.

2. **Sprinklers Operating.** Unsprinklered areas. When the water curtain is located in an otherwise unsprinklered area, the design shall include all the sprinklers in each fire separation area being protected.

3. Atria.

1. The glass shall be protected on both sides by a sprinkler system equipped with quick-response sprinklers. The sprinkler system shall completely wet the entire surface of the glass wall when actuated.

2. Obstruction such as curtain rods, drapery traverse rods, curtains, drapes or similar materials, shall not be installed between the sprinkler and the glass.

3. Valves shall be installed so that the water supply to the water curtains in atria may be shut off independently of the supply to any other sprinklers and the supply to any other sprinklers may be shut off independently of the supply to any atrium water curtains.

35. Sec. 6-1.1.1(1) is revised to read as follows:

6-1.1.1(1). Manufacturing data sheets for sprinkler heads which contain at least the following information:

- Make
- Type
- K-factor
- National orifice size
- Temperature rating
- Minimum operating pressure and discharge rates for proposed area of coverage.

36. Sec. 7-1.3 is not adopted.

37. Section 7-2.2.1 is revised by substituting "nationally recognized standards" for "NFPA 20, Standard for the Installation of Centrifugal Pumps" and by adding "Except where other provisions of this code require more than one pump."

38. Sec. 7-2.3.1.1 is revised by substituting "Nationally recognized Standards" for "NFPA 22, Standard for Water Tanks for Private Fire Protection."

39. Figures 8-1(a) and 8-1(b) are not adopted.

40. Sec. 8-4 is not adopted.

41. Chapter 10 is deleted.

SEC. 94.2011.0 Pilot Heads.

SEC. 94.2011.1. Pilot head systems shall be hydraulically designed. The design area shall include all the pilot heads flowing within each fire-separation area.

SEC. 94.2011.2. Pilot heads shall be installed no farther than 10 feet apart (on center) along the piping protected.

SEC. 94.2011.3. Valves shall be installed so that pilot heads may be serviced without interrupting the supply to the piping being protected.

SEC. 94.2012.0. Compact Storage (Moveable Files).

SEC. 94.2012.1. All compact storage rooms shall be separated from any occupancy by at least a one-hour fire-resistive separation. All compact storage rooms shall be provided with smoke detection which is connected to the fire control panel.

SEC. 94.2012.2. The maximum area of the compact storage room shall be limited to 1500 square feet for systems designed as Ordinary Hazard Group 2 and 5000 square feet for systems designed as Extra Hazard Group 1. The design area shall be the entire compact storage room.

SEC. 94.2012.3. Clear space below sprinklers shall be a minimum of 18 inches between the top of the storage and the ceiling sprinkler deflector.

SEC. 94.2013.0. NFPA 13R-1994 is hereby adopted by reference with the following exceptions, modifications, and additions:

1. Sec. 1-3 is revised by Section 94.2003 of this Division.

2. Sec. 1-6.2.1 is revised by changing the reference to "NFPA 13" to "Section 94.2010 of this Division."

3. Sec. 2-1.3.2 is revised by changing the reference to "NFPA 13" to "Section 94.2010 of this Division."

4. Sec. 2-3.2 is revised by changing the reference to "NFPA 20 and 22" to "nationally recognized standard" and changing the reference to "NFPA 13" to "Section 2010 of this Division."

5. Sec 2-3.3.2 is revised by changing the reference to "NFPA 13" to "Sec. 94.2010 of this Division."

6. Sec 2-4.2 is revised to read:

2-4.2 Fire Department Connection. See Section 94.2020 of this Division for requirements.

EXCEPTION: One and two family dwellings shall meet the following requirements (For the purpose of this section, area separation walls shall not define one and two family dwellings):

1. A fire department connection shall be provided for system protection over 10,000 square feet of dwelling.

2. A single fire department connection pipe may be as small as the sprinkler rise provided the riser is 3 inches and smaller.

3. The hose inlet fitting may be 1 1/2 inches with 1.5-9 N.H. threads instead of 2.5-7.5 N.H. standard threads.

7. Sec. 2-4.4 is revised by changing the reference to "NFPA 13" to "Sec. 94.2010 of this Division."

8. Sec. 2-4.6 is adopted by reference except single family dwellings and manufactured homes having smoke detectors in accordance with NFPA 72.

9. Sec. 2-5.2 is revised by changing the reference to "NFPA 13" to "Sec. 94.2010 of this Division"

10. Sec. 2-5.3 is revised by changing the reference to "NFPA 13" to "Sec. 94.2010 of this Division."

11. Sec 2-6 is revised by changing the reference to "NFPA 220" to "the Building Code."

12. For other than one and two family dwellings exceptions 3 and 4 of Section 2-6 are not adopted. For the

purpose of this section, area separation walls shall not define one and two family dwellings.

SEC. 94.2020.0. NFPA 14-1993 is hereby adopted by reference with the following exceptions, modifications, and additions:

1. Sec. 1-3 is not adopted
2. Sec. 1-4 is revised by Section 94.2003 of this Division.
3. Sec. 2-2.5 is not adopted.
4. Sec. 2-4.2.3 is revised by deleting "or manufactured in accordance with Table 2-3.1." in the first sentence.
5. Sec. 2-4.2.5 is revised by substituting "(See NFPA 13)" with "(See Section 94.2010 of this Division)" in the exception.
6. Sec. 2-4.2.8.1 is revised by adding the following:
Welding performed in accordance with this section shall be subject to inspection by the Administrative Authority prior to the installation of the pipe.
7. The exception to Section 2-5.1 is revised to read:

Hangers designed by a registered engineer, in the proper classification, licensed by the state for lateral loads in accordance with Sec. 1630 of the Uniform Building Code, shall be acceptable.
8. Sec. 2-7.4 is hereby revised to read:

2-7.4 Nozzles. Nozzles provided for Class II standpipe outlets shall be listed variable fog nozzles.
9. Sec. 2-7.6 is hereby added to read:

2-7.6 Hose Outlet Location. One and one-half inch outlets shall be between 3 feet 6 inches and 5

feet above the floor.

10. Section 2-9.2 is revised to read:

2-9.2* Each fire department connection shall have at least two 2¹/₂-in. internal threaded swivel fittings having NH standard threads, as specified in NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections.

The number of Fire department hose connection inlets shall be installed at least as required in Table No. 2-9.2. Fire department connections shall be equipped with caps to protect against entry of debris into the system.

TABLE 2-9.2

NUMBER OF FIRE DEPARTMENT CONNECTION

HEIGHT OF HIGHEST OUTLET ABOVE FIRE DEPARTMENT CONNECTION, FEET	NUMBER OF FIRE DEPARTMENT CONNECTION	
	1 or 2 Risers	3 or more Risers
Less than 50	2	2
50 and over	4	6

11. Section 3-1.2 is revised to read:

3-1.2. The spacing and location of standpipes and hose connections shall be in accordance with the Los Angeles Building Code. (See Section 91.904.5 of the LABC.)

12. Section 3-1.3 is not adopted.

13. Section 3-3.3 is revised to read:

3-3.3. Class III Systems. Class III is a standpipe system directly connected to a water supply and equipped with 2¹/₂-inch outlets or 2¹/₂-inch and 1¹/₂-inch outlets when a 1¹/₂-inch hose is required. Hose connections for Class III systems may be made through 2¹/₂-inch hose valves with easily removable 2¹/₂-inch by 1¹/₂-inch reducers.

14. Section 3-5.1 is not adopted.

15. Section 3-6.2 is revised to read:

3-6.2 A valved outlet for a pressure gauge shall be installed on the upstream and downstream sides of every pressure regulating device.

EXCEPTION: Class I and Class III hose outlets.

16. Sec. 4-1.2.5 is revised by substituting "NFPA 13, Standard for the Installation of Sprinkler Systems" with Section 94.2010 of this Division.

17. Sec.4-2.4.1 is hereby added to read:

4-2.4.1 Valves shall be within 6 feet 6 inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or using chains within 6 feet 6 inches of the floor connected to valve hand wheels or other suitable means.

18. The exception to Section 4-2.8 is not adopted.

19. Section 4-3.5.3 is revised to read:

4-3.5.3 Fire department inlets shall supply all Class I and Class III standpipes except for buildings with multiple zones.

In buildings which have multiple zones, each zone shall be provided with separate inlet connections. Where the fire department inlet connection does not serve the entire building, the portions served shall be

suitably identified.

The fire department connection shall be adequate to supply the required flow and pressure.

EXCEPTION: When the risers are at least 6-inch size and there are at least six fire department inlets, the supply shall be considered adequate.

20. Section 5-3 is hereby revised to read:

5-3 Fire Department Outlets. Fire Department outlets shall be installed in such a manner as to be easily accessible for use by the Fire Department. A wrench clearance on all sides of the outlet shall be provided to ensure that a 12-inch long wrench can be used to connect hose to outlet. There shall be at least 1-inch clearance around the hose valve handle.

Outlets shall be provided with a listed hose valve protected by a 2½-inch by 1½-inch reducer and 1½-inch cap and attachment chain.

21. Sec.5-9.1.3.1 is revised by substituting "NFPA 13, Standard for the Installation of Sprinkler Systems" with Section 94.2010 of this Division in the exception.

22. Section 7-1 is hereby revised to read:

7-1. Required Water Supply. Automatic standpipe systems shall be attached to an approved water supply capable of supplying the system demand.

Manual standpipe systems shall have an approved water supply accessible to a fire department pumper.

An automatic water supply shall be capable of supplying the systems demand for the required duration.

23. Subsection (c) and (e) of Section 7-1.1 are not adopted.

24. Section 7-2.1 is hereby added to read:

7-2.1. Buildings over 150 Feet High.

1. **Redundancy.** The system shall be adequate when either one pump, one pump driver, one riser or zone pressure regulator is out of operation.

2. **Power.** Pumps shall be either diesel engine or electric motor driven. Electric fire pump motors shall be supplied from both normal and the emergency standby power system. At least 750 g.p.m. shall be supplied by an electric motor driven pump.

25. Sec. 7-4 is hereby revised to read:

7-4. System Zoning Requirements.

7-4.1. Height Limit. Buildings shall be zoned so that standpipe system risers do not exceed 275 feet in height unless control of the nozzle pressure under both flow and static conditions is attained at each standpipe outlet by the installation of a listed pressure-regulating device and provided further that all of the following three limitations are met:

1. The pressure on the listed pressure-regulating device inlet side is not in excess of the rated working pressure of the listed pressure-regulating device and the remaining portions of the standpipe system are rated for not less than the maximum system pressure.

2. The hose valve outlet pressure is limited as required in Section 5-8.2.

3. The zone height does not exceed 400 feet.

7-4.2. Zoned systems shall comply with Alternate 1 or 2, below.

1. **Alternate 1.** The pumping system shall be adequate when three pumps are out of operation.

2. **Alternate 2.** Design shall comply with the following:

When fire pumps are required, separate fire pumps shall be required to serve each zone. Fire pumps which individually serve separate zones and which are located at the same level may be installed in series.

7-4.3. Direct supply piping from the higher-zone fire pump to the higher-zone system piping shall be provided when the fire pump for the higher zone is on the same level as the fire pump serving the lower zone. Two direct supply lines to the higher zone shall be provided. The size of the direct supply piping to the higher zone shall be not less than the size of the largest standpipe riser served.

Lower-zone standpipe piping used to supply a zone above shall be not less than the size of the largest standpipe riser of the higher-zone system which is being supplied. The two zones shall be connected by a minimum of two supply pipes of which one shall be automatically providing water to the higher zone from the lower zone. A secondary method of supply is required when a residual pressure of 100 psi cannot be provided.

26. Section 8-2.3 is hereby added to read:

8-2.3. Flushing the System Risers. Water shall flow from the topmost outlet of each riser until the system is clear of all debris as follows.

8-2.3.1. Roof Outlets. Standpipe systems shall be designed so that all risers can be flushed through outlets located on the roof.

8-2-3.2. Flow. All standpipe risers shall be flushed individually through the roof outlets residual pressure of at least 65 psi until the system is clear of debris. The flow for Class I and Class III standpipes shall be at least 500 gpm through each riser.

27. Section 8-5.5.1 is hereby added to read:

8-5.5.1. Pressure Regulator Valve Test.

8-5.5.1.1. Test Required. When required by the department 2 1/2-inch pressure-regulator valves installed on standpipe outlets shall be tested for proper operation at a flow of 300 gpm in the presence of a representative of the department.

8-5.5.1.2. Safety. Test nozzles and other equipment shall be adequately secured so as to eliminate danger to personnel.

8-5.5.1.3. Opening. An accessible 2 1/2-inch capped or plugged test opening shall be installed adjacent to each pressure regulator valve.

8-5.5.1.4. Drain. The test openings shall drain to a minimum 3-inch drain line constructed and installed as required for fire sprinkler drains. The drains shall not discharge where they may cause damage.

8-5.5.1.5. Interconnection. The test drain shall either be separate, connect to a fire sprinkler drain, combine with a rainwater drain or drain to a fire protection tank.

28. Sec. 8-8 is revised by deleting Subsection (b).

29. Chapter 9 is adopted in addition the following provision shall apply:

Temporary Standpipes. Temporary standpipes may be provided in place of permanent systems if they are designed to furnish 500 gallons of water per minute at 50-pound-per-square-inch pressure with a standpipe size of not less than 4 inches. All outlets shall be not less than 2¹/₂ inches. Pumping equipment sufficient to provide this pressure and volume shall be available at all times when a standpipe system is over 150 in height.

30. Chapter 10 is not adopted.

SEC. 94.2021.0. Class H Standpipes.

SEC. 94.2021.1. Class H standpipes are fire lines equipped with a 1¹/₂-inch hose outlets and intended for use by trained personnel in fighting fires on helicopter landing pads.

SEC. 94.2021.2. At Least one Class H standpipe outlet shall be located outdoors to serve each helicopter landing facility. Every point shall be covered with a 20-foot stream of water from a nozzle connected to not more than 100 feet of hose.

SEC. 94.2021.3. Class H standpipe outlets shall be located below the glide path. The glide path shall be based on 1-foot vertical to 8-foot horizontal travel.

SEC. 94.2021.4. Class H standpipe hose outlets shall be readily accessible to the fire department.

SEC. 94.2021.5. Class H standpipes components, material, identification, protection and installation shall comply with the applicable requirements for standpipe systems.

SEC. 94.2021.6. Class H standpipes shall be flushed for at least one minute.

SEC. 94.2021.7. Water Supply.

SEC. 94.2021.7.1. Class H standpipes shall be designed to automatically provide a flow of at least 100 g.p.m. at 65 psi residual pressure.

SEC. 94.2021.7.2. The emergency supply for Class H standpipes in buildings over 75 feet in height shall have at least 2500 gallons usable capacity in case of failure of the normal power and water services. A fire department inlet connection shall be acceptable as this source, provided it complies with the requirements for the fire department connection for automatic sprinklers.

SEC. 94.2021.7.3. When the maximum working pressure exceeds 200 psi at a Class H standpipe outlet, a pressure regulator shall be installed to reduce the static pressure from the outlet to 200 psi or less.

SEC. 94.2021.8. A minimum 2-inch bypass shall be made between the City water main and the downstream side of any pump when that connection will provide the minimum required flow and pressure for a Class H standpipe.

SEC. 94.2021.9. Hoses.

SEC. 94.2021.9.1. Each Class H standpipe outlet shall have a hose valve, fire hose and nozzle.

SEC. 94.2021.9.2. Fire hoses shall be listed.

SEC. 94.2021.9.3. Fire hoses shall be 1½ inch in diameter and not over 100 feet long.

SEC. 94.2021.9.4. Fire hoses shall be lined.

SEC. 94.2021.9.5. Hose nozzles shall be listed 1½ inch combination fog and straight stream type and shall be of a design acceptable to the fire department.

SEC. 94.2021.9.6. Fire hoses exposed to the weather shall be protected by hose cabinets.

SEC. 94.2021.10. Hose Racks, Reels and Cabinets.

SEC. 94.2021.10.1. Hose racks and reels shall be listed.

SEC. 94.2021.10.2. Any hose cabinet that can be locked shall have an opening with a pane of single-strength glass at least 7 inches high as wide as the construction of the door will permit.

SEC. 94.2021.10.3. Hose cabinet that can be locked shall be labeled "CAUTION--FOR FIRE FIGHTING BY TRAINED PERSONNEL ONLY" in contrasting letters at least 3 inches high.

SEC. 94.2021.11. Outlets shall not be under control of fire sprinkler floor control valves.

SEC. 94.2030.0. FIRE PUMPS AND DRIVERS. Fire pumps, their drivers and associated piping and equipment shall conform to the requirements set forth in NFPA 20-1993 with the following exceptions and modifications:

1. Sec. 1-2.2 of NFPA-20 is not adopted.
2. In lieu of Sec.2-2 of NFPA-20, the following is hereby adopted to read:

2-2. Listed Pumps.

2-2.1. Fire pumps, equipment used with fire pumping systems, devices and attachments shall be listed. A copy of the manufacturer's certified pump test characteristic curve shall be available for comparison of results of field acceptance test. The fire pump as installed shall equal the performance as indicated on the manufacturer's certified shop test characteristic curve within the accuracy limits of the test equipment.

3. Sec. 2-6 of NFPA-20 is adopted by reference with the following exception:

The relief valve shall discharge to an approved location.

4. Sec. 2-7.1.1 of NFPA-20 is revised to read:

2-7.1.1. Location. Every fire pump room shall be provided with an enclosure in accordance with the requirements of C.B.C. Section 413A. Fire pump rooms or enclosures shall contain only equipment needed for the fire pump system.

EXCEPTION: Electric driven fire pumps less than 750 g.p.m.

5. Sec. 2-7.1.1 of NFPA-20 is revised to read:

2-7.1.2. Water Hammer Device (Shock Absorbers). A listed or approved water hammer device or hydraulic shock absorber shall be installed downstream of every fire pump having either a rated capacity in excess of 750 g.p.m. or having a net rated pressure above 300 psi. Devices that may require replenishment of air are prohibited. A single water hammer device may be installed in each fire pump room. Sizes and locations of water hammer arresters shall be in accordance with their manufacturer's recommendation.

6. Sec. 2-9.1.1 of NFPA-20 is revised to read:

2-9.1.1. General. Installation of above ground suction piping shall conform to the requirements for fire sprinkler piping.

7. In lieu of Sec. 2-9.5 of NFPA-20, the following is adopted to read:

2-9.5. Pump Bypass. A fullway pump bypass with checkvalve shall be connected downstream of the firepump shutoff valve when available pressure will supply useful protection with the pump off. There shall be two control valves to isolate check valves in each bypass.

8. Sec. 2-9.11 of NFPA-20 is revised to read:

2-9.11. Fire Department Connections. Fire department connections shall not be connected on the suction side of a fire pump.

9. Sec. 2-12 of NFPA-20 is not adopted. See Section 4-6.4.3.4 of NFPA 13-1994 for the required clearance.

10. The exception to Sec. 2-13.1 of NFPA-20 is not adopted.

11. The exception to Sec. 2-13.7 of NFPA-20 is not adopted.

12. Sec. 2-14.3.5 is revised to read:

2-14.3.5. Label. Where test headers are used instead of flow meters, hose valves shall be labeled TEST CONNECTIONS.

EXCEPTION: Temporary fire pumps and standpipe outlets.

13. In lieu of Sec. 2-19 of NFPA-20, the following is adopted to read:

2-19. Pressure Maintenance (Jockey or Makeup) Pumps. A pressure maintenance pump shall be installed with each fire pump system.

EXCEPTION: Fire pump serving Class II standpipes, temporary standpipes and fire pumps serving fire sprinkler systems in one-and two-family dwellings.

14. Sec. 5-1.2 of NFPA-20 is adopted by reference with the following exception:

Substitute Sec. 2010 of Division 20 with "NFPA 13 Standard for the Installation of Sprinkler System" and Section 2020 of Division 20 with "NFPA 14 Standard for the Installation of Standpipe and Hose Stream."

15. Chapter 6 of NFPA-20 is not adopted.

16. Chapter 7 of NFPA-20 is not adopted.

17. In lieu of Sec. 8-3.2 of NFPA-20, the following is adopted to read:

8-3.2. Ventilation. An adequate supply of combustion and ventilation air from outside shall be provided for each engine. No device shall be installed that could shut off the required air supply for any engine. The installation of ventilation systems shall comply with the requirements of the Los Angeles Mechanical Code.

18. In lieu of Sec. 8-4 of NFPA-20, the following is adopted to read:

Fuel supply and arrangement shall be installed as required by the Los Angeles Fire Code.

SEC. 94.2040.0. Underground Fire Protection Piping.

This section regulates underground fire protection piping between the City main or other source of supply and fire hydrants, fire sprinkler risers, and monitor nozzles. Aboveground standpipe piping and water spray system risers shall conform to all applicable code requirements for fire sprinkler piping and to the requirements set forth in NFPA 24-1992 with the following exceptions and modifications:

1. In lieu of Sec. 2-1 of NFPA-24, the following is adopted to read:

2-1. Water Supplies. Water supplies for fire hydrant, monitor nozzle and water spray systems shall be approved by the fire department.

2. In lieu of Sec. 2-6.1 of NFPA-24, the following is adopted to read:

2-6.1. General. Fire department connections shall comply with the applicable requirements for fire sprinkler systems.

3. Sec. 2-6.1.1 of NFPA-24 is revised to read:

2-6.1.1. Control Valve. A control valve shall be installed between the City check valve and the point of connection of the fire department connection to the underground piping.

4. Sec. 4-1.1.1 of NFPA-24 is revised to read:

4-1.1.1. Hydrant Valves. Each fire hydrant shall be isolated by a listed key-type gate valve within 10 feet of the fire hydrant. The valve shall not be located in a parking space. No fire sprinkler riser valve shall control any fire hydrant.

5. Chapter 9 of NFPA-24 is not adopted.

SEC. 94.2050.0. Fire Protection Tanks. Tanks for water storage for fire protection systems and associated piping shall conform to the requirements of NFPA 22-1993 with the following exceptions and modifications:

1. In lieu of Sec. 1-5.1 of NFPA-22, the following is adopted to read:

1-5.1. Size. Tanks shall be designed to supply the required water flow for the required duration.

2. Sec. 3-2.6.1 of NFPA-22 is revised to read:

3-2.6.1. Air Pressure Gage. The minimum required air pressure of the tank shall be clearly and permanently posted next to the air pressure gage.

3. Sec. 11-1.12.3 of NFPA-22 is adopted by reference with the following exception:

"High and low level alarms shall be closed circuitelectric alarms that sound an alarm and turn on an indication light at a permanently staffed location when the water level is not within 10 percent of the design volume."

4. Sec. 11-2.3 of NFPA-22 is adopted by reference with the following exception:

"Water fill and tank discharge, piping and valves shall conform to the material and installation requirements for fire sprinkler piping."

5. Sec. 11-2.12.3 of NFPA-22 is revised to read:

11-2.12.3. Valve. A readily accessible indicating-type control valve shall be installed in the water filling piping so as to isolate each tank.

6. Sec. 11-4.1 of NFPA-22 is adopted by reference with the following exception:

"When the water supply from the city water main is capable of providing useful fire protection, a full-way bypass around the tanks shall be installed. When horizontal centrifugal fire pump is installed downstream of the tank, the bypass shall supply the suction side of the pump. A pressure regulator may be installed in the bypass adjacent to the pump even when the maximum working pressure is less than 175 psi. A check valve shall be installed when and as necessary to maintain pressure on the system."

SEC. 94.2060.0. High-Rise Buildings.

SEC. 94.2060.1. Water Tank.

SEC. 94.2060.1.1. One or more water tanks shall be installed to serve the fire sprinklers and standpipes in a high-rise building. No tank shall serve more than one building or structure, or more than one tower over 75 feet high. The supply shall be automatically available when the water service fails; however, one water service may supply tanks for more than one building, structure or tower.

SEC. 94.2060.1.2. The tanks shall have a useable capacity equal to 30 minutes (duration) for light hazards as specified in Table No. 5-2.3 of NFPA 13-1994, but not less than 45,000 gallons.

Flow shall be based on 500 g.p.m. for a tank serving one standpipe and an additional 250 g.p.m. for each additional

standpipe that extends to a height of over 75 feet, maximum 1,250 g.p.m.

SEC. 94.2060.1.3. The tank shall be supplied from at least a 6-inch line from the City water main. An approved tank-fill line connected to the fire department connection shall also be installed. This line shall have a shutoff valve. The tank need not be on the roof.

SEC. 94.2060.1.2. In buildings over 275 feet high, fire sprinklers serving each floor shall be supplied from two standpipe risers. The supply shall be adequate with one connection shut off. Each connection to a riser shall have a shutoff valve and a check valve.

Sec. 21. Section 98.0504 is hereby added to the Los Angeles Municipal Code to read:

SEC. 98.0504. ENVIRONMENTAL REPORTS.

(a) A processing fee of \$600.00 shall be charged each applicant when the Department is required to perform an initial study or a negative declaration, to comply with the California Environmental Quality Act (CEQA). This fee shall include eight (8) hours of processing time.

(b) A processing fee of \$1200.00 shall be charged each applicant when the Department is required to perform a mitigated negative declaration or Environmental Impact Report, to comply with the California Environmental Quality Act (CEQA) and shall be in addition to the fee charged for an initial study or a negative declaration. This fee shall include twelve (12) hours of processing time.

(c) The Department shall charge the applicant hourly fees for all staff time over the minimum number of hours specified above. The fee shall be \$75.00 per hour or fraction thereof for each additional hour involving the project California Environmental Quality Act (CEQA) review.

(22941)

Sec. 22. The City Clerk shall certify to the passage of this ordinance and cause the same to be published by posting for ten days in three public places in the City of Los Angeles, to wit: one copy on the bulletin board located at the Main Street entrance to the City Hall of the City of Los Angeles; one copy on the bulletin board located at the ground level at the Los Angeles Street entrance to the Los Angeles Police Department in City; and one copy on the bulletin board located at the Temple Street entrance to the Hall of Records in the City.

I hereby certify that the foregoing ordinance was introduced at the meeting of the Council of the City of Los Angeles AUG 02 1996 and was passed at its meeting of AUG 09 1996

Approved AUG 14 1996

E

CITY CLERK

BY 

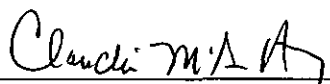
Deputy

E

Approved as to form and legality


Mayor *RL*

JAMES K. HAHN, City Attorney

By 
CLAUDIA MCGEE HENRY
Senior Assistant City Attorney

File No. C.E. No. 9596-0735

ORDINANCE NO. 165311

An ordinance amending Article 4, Chapter IX of the Los Angeles Municipal Code.

NOW THEREFORE;

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

Section 1. Paragraph (f) is amended and a new paragraph (g) is added to Subdivision (2) of Subsection (a) of Section 94.0208 of the Los Angeles Municipal Code to read:

- f. Subsurface drainage piping systems (not including sump pumps) each system....30.00
- g. Sump pump and sewage ejectors, each...15.00

Sec. 2. Subsection (e) is hereby added to Section 94.0210 of the Los Angeles Municipal Code to read:

(e) Whenever special enforcement procedures are required to obtain compliance with properly executed department notices or orders, a fee, as specified in Section 98.0407 of the Los Angeles Municipal Code, shall be assessed in addition to the added trip fee specified in Subsection (b) of this section.

Sec. 3. Subdivision (2) of Subsection (a) of Section 94.0214 of the Los Angeles Municipal Code is hereby amended to read:

2. Signature. Plans and specifications shall bear the signature and registration or license number of an engineer, contractor or other person licensed in the appropriate classification by the State of California provided designs submitted by a contractor shall only be for work which the contractor has contracted to perform.

Sec. 4. Subdivision 6 of Subsection (b) of Section 94.0214 of the Los Angeles Municipal Code is hereby amended to read:

6. Rainwater piping systems with either six or more interconnected drains, six or more overflow drains or a rainwater pump.

Sec. 5. Subdivision (11) of Subsection (b) of Section 94.0214 of the Los Angeles Municipal Code is hereby repealed.

Sec. 6. Section 94.0215 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0215. PLAN CHECK SCHEDULES.

Before plans required by the code are checked, the applicant shall pay the following fees to the department:

(a) Plumbing drainage and vent piping, fuel gas piping, gas vents, rainwater piping, subsurface drainage piping and water piping.

Apartments and condominiums, three stories and less, and dwellings:

25% of the permit fee

\$30.00 minimum per building

All others:

40% of the permit fee

\$30.00 minimum per building

Exception: Portions of installations:

Hot and cold water:

60% of the above fee, \$30.00 min.
per building

Hot water or cold water:

30% of the above fee, \$30.00 min.
per building

Plumbing drainage and vents:

40% of the above fee, \$30.00 min.
per building

(b) Fire protection, irrigation sprinkler piping, swimming pool piping and all others:
40% of the permit fee, \$30.00 min.
per building.

(c) Additional Fees.

1. Plan check fees required in this section are in addition to fees required elsewhere in this code.

2. A surcharge of 10 percent of the permit fee shall be paid for checking compliance with Title 20, California Code of Regulations, Section 1403.

3. A surcharge of 12.5 percent of the permit fee shall be paid for checking compliance with Chapter 15 of Part 5 of Title 24 of the California Code of Regulations.

Sec. 7. The definitions of "Listed and Listing" and "Rainwater Drains" in Section 94.0502 of the Los Angeles Municipal Code are hereby amended to read:

LISTED OR LISTING. Terms referring to equipment and materials which are shown in a list published by an approved testing or listing agency qualified and equipped for experimental testing and/or maintaining an adequate periodic inspection of current production and whose listing states that the equipment or material complies with recognized safety standards.

RAINWATER DRAINS. Drains that serve roofs or other drains for the purpose of conveying rainwater. This definition does not include emergency drains, site drains or subsurface drains.

Sec. 8. Sec. 94.0502 of the Los Angeles Municipal Code is hereby amended by adding the following terms and definitions in the proper alphabetical order to read:

HIGH RISE BUILDING: A building (over 75 feet high) included within the scope of Section 91.1807(a) of the Los Angeles Municipal Code.

TOILET ROOM. A room within or on the premises containing at least one water closet.

URINAL. A plumbing fixture which is used for urination.

WATER CLOSET. A plumbing fixture (which may be used for both defecation and urination) in which the waste matter is removed by flushing with water.

Sec. 9. Section 94.0601 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0601. PLUMBING SYSTEMS.

General. Chapters 1 through 13, Appendices A, B, C, D, G, H and I of the 1988 edition of the Uniform Plumbing Code, and Installation Standards No. I 1-85, IS 2-82, IS 3-87, IS 4-82, IS 5-87, IS 6-82, IS 7-83, IS 8-86, IS 9-87, IS 10-86, IS 11-87, IS 12-85, IS 13-84, IS 15-82, IS 16-84, IS 17-82, IS 18-85, and IS 21-80 published by the International Association of Plumbing and Mechanical Officials and Chapter 15 of Part 5 of Title 24 of the California Code of Regulations (California Plumbing Code), as amended in 1989, are adopted by reference as part of this Code with the exceptions, modifications and additions specifically provided in this Division.

Sec. 10. Table B of Section 94.0602 of the Los Angeles Municipal Code is hereby amended to read:

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TABLE B - STANDARDS

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Materials, Products and Procedures	Standards*
Brazing Filler metal	AWS A5.8-1981
Cast iron pressure fittings	ANSI/AWWA C110/A21.10-1987
Compounds, plumbing and setting	FS TT-P-1536A-1975
Rubber gasketed joints for cast iron and ductile iron pressure pipe and fittings	ANSI/AWWA C111/A21.11-1985
Whirlpool bath piping and fittings	ASME/ANSI A112.19.7M-1987
Welding	1986 ASME Boiler and Pressure Vessel Code, Section IX, Part QW or AWS B2.1-1984

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*ANSI American National Standards Institute

ASME American Society of Mechanical Engineers

ASTM American Society for Testing and Materials

AWS American Welding Society

FS Federal Specifications

IAPMO International Association of Plumbing
and Mechanical Officials

Sec. 11. Section 94.0602.3 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0602.3 (Reference Section 316 of the Uniform Plumbing Code.) PLUMBER'S TAPE AND RING HANGERS.

The following Subdivision (3) is in addition to Subsection (c) of Section 316 of the Uniform Plumbing Code:

3. Plumber's Tape may be installed to support pipe 4 inches or smaller in wood construction only. Ring hangers may support piping of all sizes. Hangers for plumbing shall comply with the following:

A. Plumber's Tape. Perforated strap iron (plumber's tape) shall be galvanized and not less than 1/32-inch thick or 22 gauge and 3/4-inch wide, securely nailed or screwed to the structure. The strap-iron shall be formed around the pipe and secured with a 1/4-inch stove bolt.

B. Ring hangers shall be steel or iron with rods as follows:

Pipe and Tube Size, Inches	Minimum Rod Size, Inches
1/2 through 4	3/8
5, 6, and 8	1/2
10 and 12	5/8

Sec. 12. Sec. 94.0602.4-1 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0602.4-1. (Reference Section 318 of the Uniform Plumbing Code) AIR TEST-PLASTIC PIPE.

Subdivision 4 of Subsection (b) of Section 318 of the Uniform Plumbing Code is hereby amended to read:

(4) Air Test--The air test shall be made by attaching an air compressor testing apparatus to any suitable opening, and after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gage pressure of five (5) pounds per square inch (34.5 KP) or sufficient to balance a column of mercury ten (10) inches (254 mm) in height. The pressure shall be held without introduction of additional air for a period of at least fifteen (15) minutes.

EXCEPTION: Air pressure shall not be used to test aboveground plastic piping.

Sec. 13. Section 94.0602.10 of the Los Angeles Municipal Code is hereby repealed.

Sec. 14. Section 94.0602.13 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0602.13. (Reference Section 909 of the Uniform Plumbing Code.) SHOWER COMPARTMENTS.

The exception to Subsection (c) of Section 909 of the Uniform Plumbing Code is hereby modified to read:

EXCEPTION: Special use shower compartments to accommodate wheel chair users may eliminate the curb or threshold. The required slope and depth shall be maintained from the door or entry to the drain opening. The minimum distance between the door or entry to the drain opening shall be 3 feet 6 inches.

Sec. 15. Section 94.0602.14 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0602.14. (Reference Section 1001 of the Uniform Plumbing Code.) RESIDENTIAL WATER CLOSET'S WATER USE.

This paragraph is in addition to Section 1001 of the Uniform Plumbing Code.

All new water closets installed in buildings constructed on or after July 1, 1989 and any replacement water closet in any existing building shall be approved "low consumption" water closets as specified in Ordinances Nos. 164093 and 165004 (Section 122.03 of the Los Angeles Municipal Code, Emergency Water Conservation Plan).

Sec. 16. Section 94.0602.15 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0602.15. (Reference Section 1004 of the Uniform Plumbing Code.) WATER MATERIALS. Subsection (a) of Section 1004 of the Uniform Plumbing Code is hereby modified to read:

(a) Water pipe and fittings shall be of brass, copper, cast iron, galvanized malleable iron, galvanized wrought iron, galvanized steel, or other approved materials. Asbestos cement, CPVC, PE, or PVC water pipe manufactured to recognized standards may be used for cold-water distribution systems outside a building. All materials used in the water supply system, except valves and similar devices, shall be a like material except where otherwise approved by the administrative authority.

Sec. 17. Section 94.0602.17 of the Los Angeles Municipal Code is hereby repealed.

Sec. 18. Section 94.0602.20 of the Los Angeles Municipal Code is hereby repealed.

Sec. 19. Section 94.0602.22 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0602.22 (Reference Appendix D of the Uniform Plumbing Code) RAINWATER SYSTEMS.

Subsection (c) of Section (D1) of Part A of Appendix D of the Uniform Plumbing Code is hereby modified to read:

(c) Rainwater piping located underground within a building shall conform to the applicable requirements for plumbing drainage systems.

Sec. 20. Section 94.0605 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0605. SUBSURFACE DRAINS.

(a) General. Subsurface drainage systems located within a building and all pumped subsurface drainage piping shall conform to the applicable requirements for plumbing drainage systems.

EXCEPTION: ABS and PVC factory perforated Sch. 40 piping may be installed in any building underground beneath a concrete slab. Installation shall be in accordance with the manufacturer's or a licensed civil engineer's recommendations, or pipe shall be centered in a square cross-section trench filled with #2 permeable gravel at the rate of 1 cu. ft. per linear foot of pipe.

(b) Independent Systems. Subsurface drainage systems located within a building shall be independent of any other systems, except emergency drain systems or rainwater systems, such as ramp drains.

(c) Point of Disposal. Subsurface drainage systems located within a building shall discharge to an approved point of disposal. They shall not discharge to the street curb or public sewer.

NOTE: Connections to a public storm drain or a public storm drain catch basin require a permit from the Los Angeles City Department of Public Works or Los Angeles County Department of Public Works, Flood Control Division.

(d) Sizing. Subsurface drainage systems shall be adequate for the required flows. The required flows shall be as established by a civil engineer. Sump vent sizes shall be based on two fixture units per gallon per minute

of pump or ejector discharge, but not less than 1 1/2 inch size.

Sec. 21. Subdivision (3) of Subsection (d) of Section 94.0606 of the Los Angeles Municipal Code is hereby amended to read:

3. Building Construction. ABS and PVC DWV piping installations shall be limited to residential buildings not over two stories in height. ABS and PVC DWV piping shall be approved by the department in accordance with Section 98.0502 of this code.

Sec. 22. Subsection (c) of Section 94.0609 of the Los Angeles Municipal Code is hereby amended to read:

(c) General. Material, installation and testing of rain water systems located within the interior of a building or run within the interior of a shaft or underground within a building shall conform to the applicable requirements for plumbing drainage systems.

EXCEPTIONS: 1. Cleanouts and traps may be omitted. 2. Airtight covers may be omitted from sumps. 3. Exterior exposed rainwater leaders need only conform to size and slope requirements.

Sec. 23. The following sections of the Los Angeles Municipal Code are hereby repealed:

94.0701.2, 94.0701.4 through and including 94.0701.32, and 94.0701.35 through and including 94.0701.44.

Sec. 24. Section 94.0701 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0701. AUTOMATIC SPRINKLERS AND STANDPIPE SYSTEMS.

Sections 3801, 3802, 3803, 3804, 3805 and 3806 of the 1988 edition of the Uniform Building Code and Standards Nos. 38-1 and 38-2 of the 1988 edition of the Uniform Building Code Standards published by the International Conference of Building Officials are hereby adopted by reference as part of this code with the exceptions, modifications, additions and deletions specifically provided in this division.

All fire sprinkler and standpipe installations and materials shall be in conformity with the above sections and standards of the 1988 edition of the Uniform Building Code except when specified in this division as modified or not adopted.

Sec. 25. Section 94.0701.33 is hereby amended to the Los Angeles Municipal Code to read:

SEC. 94.0701.33. WATER CURTAINS AND SPRINKLERS
REQUIRED TO PROTECT OPENINGS.

(a) Definition. A water curtain is a line of closely spaced fire sprinklers (or a single sprinkler) that is intended to retard the passage of fire through an opening.

(b) Hydraulic Calculations. Water curtains in a completely sprinklered fire separation area shall be hydraulically designed as provided in Subsection (g). Water curtains not within a completely sprinklered fire separation area shall be hydraulically designed based on all the fire sprinklers flowing in the fire separation area.

(c) Spacing. Sprinklers shall be spaced not farther than 6 feet (on center) apart along the water curtain. There shall not be over 3 feet between the edge of the protected opening and the nearest sprinkler.

(d) Protection of Horizontal Openings. Draft stops shall be installed to serve water curtains required to be installed around horizontal openings. These draft stops shall conform to Subsection (g).

EXCEPTION: Draft stops for escalator openings in completely sprinklered Group B Occupancies may conform to Exception 2 of Subsection (a) of Section 91.1706 of this code.

(e) Protection of Vertical Openings. Sprinklers in water curtains shall be between 6 inches and 12 inches from the vertical protected opening unless otherwise specified by the Department. When installed to protect an opening between an exitway and the interior of the building, the water curtain shall be installed on the interior of the building. When protecting against an exposure fire, the sprinklers shall be outside the building.

(f) Atriums.

1. Draft Stops. When a water curtain is required along openings into an atrium, draft stops shall be installed to serve the water curtain. The draft stops shall conform to Subsection (g).

2. Valves. Valves shall be installed so that the water supply to the water curtains in atriums may be shut off independently of the supply to any other sprinklers and the supply to any other sprinklers may be shut off independently of the

supply to any atrium water curtain.

(g) Design Standard. Design and construction shall conform to Sec. 4-4.7.2.3 of NFPA 13 as specified in Section 94.0701.55 of this code.

Sec. 26. Section 94.0701.45 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0701.45. FIRE-PROTECTION STANDARDS.

TABLE 201

FIRE-PROTECTION STANDARDS

=====	
STANDARD*	
=====	
Flammable and Combustible Liquid Storage (densities, demand and duration flow as recommended in Appendix D of standard)	NFPA 30-1987
Hose Threads	NFPA 1963-1985
Installation of Sprinkler Systems	NFPA 13-1989**
One- and Two-family Dwellings	NFPA 13D-1989
Power Piping	ANSI/ASME B31.1-1986
Pyroxylin Plastic Storage	NFPA 40E-1986
Types of Building Construction	NFPA 220-1985

*NFPA - Published by the National Fire Protection Association

ANSI/ASME - Published by the American Society of Mechanical Engineers

** As corrected in "Erratas" copyright 1989 by NFPA.

NOTE: 1. When an updated NFPA standard is referred to, the applicable date shall be as shown in Table 201

2. Other applicable NFPA Standards are in Section 10-1.2 and 10-1.3 of NFPA 13 as specified above.

Sec. 27. Subsection (b) of Sec. 94.0701.47 of the Los Angeles Municipal Code is hereby amended to read:

(b) All material and equipment used in the construction and installation of fire-protection systems shall be new and free from defects, and shall be listed.

EXCEPTION:

1. Fittings. Ferrous fittings conforming to Table 3-8.1.1 of NFPA 13 as specified in Sec. 94.0701.55.

2. Pipe. Steel pipe that conforms to Section 38.104 of Uniform Building Code Standard 38-1 for pressures up to 300 psi. Steel pipe that conforms to ANSI/ASME B31.1 (as specified in Table 201 of Section 94.0701.45 of this code) for pressures of 300 psi or more.

Sec. 28. Section 94.0701.49 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.49 Subsection (c) of Section 3805 of the Uniform Building Code is hereby modified to read:

(c) Location of Class I Standpipes. There shall be a Class I standpipe outlet connection at every floor-level landing of every required stairway above or below grade and on each side of the wall adjacent to the exit opening of a horizontal exit. Outlets at stairways shall be located within the exit enclosure or, in the case of smokeproof enclosures, within the vestibule or exterior balcony, giving access to the stairway.

Risers and laterals of Class I standpipe systems not located within an enclosed stairway or smokeproof enclosure shall be protected by a degree of fire resistance equal to that required for vertical enclosures in the building in which they are located.

EXCEPTION: In buildings equipped with an approved automatic sprinkler system, risers and laterals which are not located within an enclosed stairway or smokeproof enclosure need not be enclosed within fire-resistive construction.

Roof outlets shall conform to the Los Angeles Plumbing Code.

In buildings where more than one standpipe is provided, the standpipes shall be interconnected at the bottom.

Sec. 29. Section 94.0701.50 is hereby added to the Los Angeles Plumbing Code to read:

SEC. 94.0701.50. Line 1 of Table No. 38-A of the Uniform Building Code is hereby modified to read:

OCCUPANCY	NONSPRINKLERED BUILDING ¹		SPRINKLERED BUILDING ^{2 3}	
	Standpipe Class	Hose Requirement	Standpipe Class	Hose Requirement
1. Occupancies exceeding 150 ft. in height and more than one story	III	YES	III	NO

Sec. 30. Section 94.0701.51 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.51. Subdivision (8) of Subsection (b) of Section 38.103 of Uniform Building Code Standard 38-1 is hereby modified to read:

8. Residential. An automatic wet sprinkler system utilizing listed residential sprinklers. For fire department connection requirements, for systems protecting Group R, Division 3 Occupancies, see Section 94.0701.64 of this code.

Sec. 31. Section 94.0701.52 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.52. Subsection (c) of Section 38.103 for Uniform Building Code Standard No. 38-1 is hereby modified to read:

(c) Sizing. Sprinkler systems shall be hydraulically sized using the Hazen and Williams approach or sized in accordance with pipe schedules contained in NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code and shall satisfy the following criteria contained in Section 38.103(d) and (e) provided that:

1. Ordinary Hazard Group 3. Sprinkler systems in Ordinary Hazard Group 3 Occupancies shall be hydraulically sized.

2. Extra Hazard Occupancies. Sprinkler systems in Extra Hazard Occupancies shall be hydraulically sized except piping in paint spray booths located beneath ceiling sprinklers where not over eight

sprinklers are installed in any fire separation area may be pipe schedule sized.

3. High-Rise Buildings. Sprinklers systems in high-rise buildings shall be hydraulically sized.

Sec. 32. Section 94.0701.53 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.53. SPACING.

Subdivision (2) of Subsection (d) of Section 38.103 of the Uniform Building Code Standard 38-1 is hereby modified to read:

2. Spacing. The spacing of sprinklers along branch lines, spacing between branch lines, spacing of sprinklers and branch lines from walls and maximum area of protection for each sprinkler shall be as required in Sec. 4-2 of NFPA 13 as adopted in Section 94.0701.55 of this code.

Clearance of sprinklers from horizontal and vertical obstructions shall be in accordance with Sec. 4-2 of NFPA 13 as adopted in Sec. 94.0701.55 and Figure No. 38-1-2. No sprinkler deflector shall be installed within 6 in. of any ceiling mounted obstruction.

Sec. 33. Section 94.0701.54 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.54. Subsection (e) of Section 38.103 of Uniform Building Code Standard No. 38-1 is hereby modified to read:

(e) Water Supplies. The water supply to which an automatic sprinkler system is connected shall be automatic, reliable, adequate in quality and quantity, and approved.

The minimum water supply for sprinklers and hose streams shall be as shown in Table No. 38-1-B for hydraulically designed systems (unless otherwise required in the Code) and as shown in Table No. 38-1-B(PS) for systems sized with pipe schedules.

Sec. 34. Section 94.0701.55 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.55. Subdivision (1) of Subsection (a) of Section 38.104 of Uniform Building Code Standard 38-1 is hereby modified to read:

1. General. The design and installation of automatic fire sprinkler systems shall comply with the Building Code, this standard and NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code as follows:

Chapters Exceptions to NFPA 13

- 1 Sec. 1-5, 1-7, 1.8.1.2, 1-8.1.3, 1-9, 1-10 and 1-11 (Note: Portions of Sec. 1-11 are adopted in 94.0701.61) and 1-12.
- 2 Sec. 2-1, 2-2.1 (Note: Table 2-2.1.1 (A) is adopted in part in Section 94.0701.68), 2-2.2.1, 2-2.2.2, 2-2.2.4, 2-2.3.1, 2-2.4.2, 2-2.4.5, 2-6.1.3 and 2-7 (Note: Portions of Sec. 2-7 are adopted in Sec. 94.0701.62).
- 3 Sec. 3-1 (Note: This Section is adopted in Section 94.0701.60 of this code.). Sec. 3-3.4.1 and 3-3.4.2. The "1-inch close nipple" in Figure 3-3.5.2(b) shall be changed to "Nipple (4" maximum length)". Sec. 3-3.8 shall be as modified in Section 94.0701.73 of this code. Sec. 3-5.3.2(c) shall be as modified in Section 94.0701.74 of this code. Exception 4 of Sec. 3-5.3.5.4. Sec. 3-9.2.5 shall be as modified in Section 94.0701.75 of this code. In Sec. 3-10.3.1, the words "by a testing laboratory", K factors in nominal sizes smaller than 5/8-in. in Table 3-11.5. Exception 1 of Sec. 3-11.6.2 shall be as modified in Section 94.0701.77 of this code. Exception 2 of Sec. 3-11.6.2. Sec. 3-12.1 shall be as modified in Section 94.0701.78 of this code. Sec. 3-12.2 and 3-12.6. (Note: Some requirements of Sec. 3-12.6 are in Section 94.0701.65 of this code.)
- 4 Sec. 4-1.1.3, 4-1.2, Exception 2 of Sec. 4-2.1.4, hydraulically calculated sprinklered systems in Sec. 4-2.2.1. Sec. 4-2.2.4 shall be as modified in Section 94.0701.79 of this code. Exception 7 of Sec. 4-4.4.1 shall be as modified in Section 94.0701.80 of this code. Exception 9 of Sec. 4-4.4.1, Sec. 4-4.7.2.4 and 4-4.8. Sec. 4-4.16.3 shall be as modified in Section 94.0701.81 of this code. The exception to Sec. 4-4.17.2. Sec. 4-4.17.8.3 shall be as modified in Section 94.0701.82 of this code. The exception to 4-4.18, Sec. 4-4.19.2, 4-4.19.3 and 4-5.5.2
- 5 The exception to Sec. 5-2.4.1. Sec. 5-6.1.10 and 5.6.1.12
- 6 None
- 7 Sec. 7-2, 7-3. 7-4.3.1.6, 7-4.3.1.7, 7-4.3.2 and 7-4.4 (Note: Portions of Sec. 7-4.4 are adopted in Sec. 94.0701.67).
- 8, 9, and 10 Sec. 10-1.1

Note: When NFPA refers to Table 2-2.1.1(a), it shall mean Table 38-1-B(PS) (Section 94.0701.68 of this code). When

it refers to Table 2-2.1.1(b), it shall mean Table 38-1-B of UBC Standard 38-1 (Section 94.0701 of this code).

Sec. 35. Section 94.0701.56 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.56. Subdivision (4) of Subsection (a) of Section 38.104 of Uniform Building Code Standard 38-1 is hereby repealed.

Sec. 36. Section 94.0701.57 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.57. Paragraph (A) of Subdivision (6) of Subsection (a) of Section 38.104 of Uniform Building Code Standard 38-1 is hereby modified to read:

A. General. High-Piled Stock and Other Specific Hazards. Water supplies, sprinkler densities, location of sprinklers, areas of application, protection areas per sprinkler, hazard classifications and control valves shall conform to the applicable standards in Sec. 10-1.2 of NFPA 13 as specified in Section 94.0701.45 of this code or other standards specified in Table 201 of Section 94.0701.45 of this code unless otherwise required in U.B.C. Standard 38-1.

Buildings requiring an automatic fire sprinkler system throughout shall be completely protected, including concealed spaces, except for omissions permitted by the Building Code and this standard. When only portions of a building are to be sprinklered, the requirements of this standard shall be used for the area to be protected.

In buildings that are not fully sprinklered, alternate approved protection may be installed to protect commercial-type cooking equipment.

Stairs enclosed in shafts of combustibile or noncombustible construction shall have sprinklers provided at each floor landing.

Sec. 37. Section 94.0701.58 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.58. CONCEALED SPACES.

Subparagraphs (v) and (vii) of Paragraph (B) of Subdivision (6) of Subsection (a) of Sec. 38.104 of Uniform Building Code Standard 38-1 are hereby modified to read:

(v) Small spaces, over rooms, not exceeding 50 sq. ft. in area provided they do not exceed 100 cu. ft. in volume.

(vii) In spaces below combustible ground floors: as provided in Sec. 4-4.3 of NFPA 13 as specified in Section 94.0701.55 of this code.

Sec. 38. Section 94.0701.59 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.59. The second paragraph of Subsection (b) of Section 38.104 of Uniform Building Code Standard 38-1 is hereby modified to read:

Hangers and piping shall be designed for lateral load in accordance with Section 2312(g) of the Uniform Building Code or shall be designed and detailed in accordance with Sec. 3-5 and 3-10 of NFPA 13 as specified in Section 94.0701.55 of this code.

Sec. 39. Section 94.0701.60 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.60. Subsection (c) of Section 38.104 of Uniform Building Code Standard 38-1 is hereby modified to read:

c. Materials and Devices.

1. General. Fittings, connections, panels, alarms, devices and appurtenances thereto shall be approved for use in the system.

Materials, devices and appurtenances to sprinkler systems shall be listed for their intended purpose when listing service is provided for such items.

Pipe or tube used in the sprinkler system shall meet the minimum requirements of the materials specified below.

Pipe and tube used in sprinkler systems shall be designed to withstand a working pressure of 175 psi. Other types of pipe and tube may be used when listed for such use by a testing and inspection agency and when approved by the building official.

Acceptable pipe, tube, brazing metal and soldering metal for sprinkler application:

As specified in Sec. 3-1 of NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code.

EXCEPTION: Solder metal shall be Grade Sb 5 instead of Grade 95TA.

Where the pressure exceeds 300 psi, pipe and tube shall be so listed or pipe shall conform to the standard for Power Piping as specified in Table 201 of Section 94.0701.45 of this code.

2. Sprinklers. Sprinklers shall be listed for the use intended in the system by an approved agency and shall be marked to indicate the date of manufacture and operating temperature.

3. Waterflow alarm. A local waterflow alarm shall be provided when the system contains more than 20 sprinklers.

Sec. 40. Section 94.0701.61 of this code is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.61. Sec. 38.105 of Uniform Building Code Standard 38-1 is hereby modified to read:

(a) General. Automatic fire sprinkler systems shall be installed in locations required by the Building Code and all fire sprinkler systems shall be in conformance with the approved plans and this standard. 1 1/2-inch hose connections shall be installed when and as required in the applicable standard in Sec. 10-1.2 of NFPA 13 in Section 94.0701.55 of this code or other applicable standard in Table 201 of Section 94.0701.45 of this code.

(b) Workmanship. Automatic fire sprinkler systems shall be installed in a workmanlike manner conforming to generally accepted standard practice for the trades involved and to the results sought to be obtained by all sections of this standard.

(c) System Test and Certification. 1. Flushing of the system. Underground portions of the system shall be flushed prior to connection and acceptance testing. The flushing shall be continued until all materials have been removed. Accepted standard practice for flushing flow rates is specified in Paragraph 1-11.1 of NFPA 13 as specified in Section 94.0701.55 of this code.

2. Acceptance tests. The system shall be tested in accordance with paragraphs 1-11.2.1, 1-11.2.3 through 1-11.2.5 and 1-11.3 through 1-11.5 of NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code.

Hydrostatic tests of the system shall be conducted in an approved manner. If evidence of any leakage is determined during the conduct of the tests, the leakage shall be located and repaired.

Sec. 41. Section 94.0701.62 is hereby added to the Los Angeles Municipal Code to read:

SEC 94.0701.62. Fire Department Connections.

(a) General. Fire department connections shall comply with Sec. 2-7 of NFPA 13, as specified in Table 201 of Sec. 94.0701.45, except Sec. 2-7.5 and except Sec. 2-7.2 and 2-7.6.1 shall be as modified in Subsection (b), below.

(b) NFPA 13 Modifications. Sec. 2-7.2 and 2-7.6.1 of NFPA 13 are hereby modified to read:

2-7.2* Size. Pipe size shall be 4 in. for fire engine connections and 6 in. for fire boat connections.

EXCEPTION No. 1: A single fire department hose connection may be piped to a 3-in. or smaller connection.

2-7.6.1 The fire department connection (s) shall be internal threaded swivel fitting (s) having 2.5-7.5 NH standard thread, as specified in NFPA 1963.

(c) Location. The location of the fire department connection shall meet the requirements for fire department inlet connections for standpipes. See Section 38.207 of Uniform Building Code Standard No. 38-2.

(d) Flow and Pressure Required. The fire department connection shall be adequate to supply the required flow and pressure.

EXCEPTION. When the risers are at least 6 inch size and there are at least six fire department inlets, the supply shall be considered adequate.

(e) Sizing and Material Ratings. Sizing shall be based on 250 psi at the fire department pumper inlets. The flow shall be assumed to be through parallel 50 feet long, 2 1/2 inches in diameter rubber-lined hoses connected to the fire department inlets. Material ratings shall be based on required pressure.

Sec. 42. Section 94.0701.63 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.63. Valves for Floor Control and Hazardous Locations.

(a) Floor Control Valves.

1. Where required. In buildings with over two levels or two floors, supervised valves capable of independently controlling the fire sprinkler system on each floor and each basement level shall be installed.

EXCEPTIONS

A. In penthouses and roof structures, the fire sprinkler system may be installed downstream of the control valves of the floor beneath, provided valves are installed that control only the penthouses and roof structures and provided the combined area of such penthouses and roof structures does not exceed 5000 square feet.

B. In partially sprinklered buildings, sprinklers serving window openings along an exit way or property line, or stair shafts and adjacent doors may have a sectional control valve to control the system in each of these areas instead of a floor control valve.

C. Valves required for hazardous locations may be located downstream of floor control valves.

2. Locations. Floor control valves shall be within a stairway enclosure or within the vestibule or on the access balcony of a smokeproof enclosure.

EXCEPTION: When there is no stairway on a floor, floor control valves may be located elsewhere on the floor level.

3. Supervision. Valve supervision shall be of a type specified in Sec.3803 of the Uniform Building Code.

(b) Hazardous Locations. The piping serving each linen chute, each paint spray booth, each trash chute (including trash room) and each separate trash room shall be controlled by valves that control no other sprinklers.

Sec. 43. Section 94.0701.64 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.64. ONE- AND TWO-FAMILY DWELLINGS.

General. Fire sprinkler systems for one- and two-family dwellings including attached private garages (where fire sprinklers are not required to be installed by

the Los Angeles Building Code) may conform to NFPA 13D, (as specified in Table 201 of Section 94.0701.45 of this code) instead of Sec. 3801(d) of the Uniform Building Code, Sec. 38.103 and 38.104 of Uniform Building Code Standard 38-1, Subsection (b) of Sections 94.0701.47 and 94.0702.2-2 of this code under the following conditions:

1. Garages and Mechanical Equipment Rooms. Fire sprinkler systems serving garages over 500 sq. ft. in area or mechanical equipment rooms over 500 sq. ft. in area shall conform to the Plumbing Code.

2. NFPA 13D Modifications. Sec. 1-5.1.2 of NFPA 13D as specified in Table 201 of Sec. 94.0701.45 is hereby modified to read:

1-5.1.2 Only listed and approved devices and approved materials shall be installed in sprinkler systems.

EXCEPTION: Hangers and pumps, 50 gpm and lower rating, need not be listed.

3. Fire Department Connection. A fire department connection shall be installed for systems protecting over 5000 sq. ft. of dwelling. The fire department connection shall conform to Sec. 94.0701.62.

EXCEPTIONS:

A. A single fire department connection pipe may be as small as the sprinkler riser (instead of minimum 1 1/2 inch) provided the riser is 2 in. or smaller.

B. Size. The hose inlet fitting may be 1 1/2 in. with 1.5-9NH threads instead of 2.5-7.5 NH standard threads.

C. Listing. 1 1/2 inch hose inlet fittings need not be listed.

4. Floor Control Valves. Floor control valves shall be installed as required in Sec. 94.0701.63 for systems serving over 5000 sq. ft. of dwelling.

Sec. 44. Section 94.0701.65. is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.65. HIGH-RISE BUILDINGS.

a. Outside Alarms. Outside alarms shall not be required for high-rise buildings.

b. Floor Alarms. In high-rise buildings, a waterflow alarm shall be installed so that the individual floors

and basement levels on which a sprinkler has been activated is automatically annunciated at the central fire control station. An approved alarm shall sound on the floor or level where the sprinkler is activated. Separate annunciation shall be provided for each tower over 75 feet high.

c. Trouble Signals. In high-rise buildings, a distinct trouble signal shall be automatically annunciated at the central fire control station when any condition exists that would impair the satisfactory operation of the fire sprinkler system. This includes conditions such as position of control valves (open or closed), fire pump power supplies and running conditions, fuel and water tank levels and pressure within pressure tanks.

d. Unattended Fire Control Stations. When the central control station is not to be constantly attended in an approved manner, alarms and trouble signals shall be supervised by an appropriate approved service.

e. Water Tank.

1. General. One or more water tanks shall be installed to serve the fire sprinklers in a high-rise building. No tank shall serve more than one building or structure or tower over 75 feet high. The supply shall be automatically available when the water service fails, however, one water service may supply tanks for more than one building, structure or tower.

2. Capacity. The tanks shall have a usable capacity equal to 30 minutes (duration) for residential hazards as specified in Table 38-1-B of U.B.C. Standard 38-1 for other hazards.

f. Pump.

1. General. An automatic pumping system shall be installed that will pump the required flow to the system at the required pressure from the above tank.

2. Redundancy. In buildings over 150 ft. high, the system shall be adequate when either one pump, one pump driver or one system pressure regulator is out of operation.

3. Power. Pumps shall be either diesel engine or electric motor driven. Electric motors shall be supplied from the standby system. In buildings over 150 ft. high, at least 750 gpm shall be supplied by an electric motor driven pump.

g. Combined Systems. For fully sprinklered buildings the water supply required for the standpipe need not be added to the sprinkler demand.

h. Over 275 Feet--Supply Connection. In buildings over 275 feet high, fire sprinklers shall be supplied from two standpipe risers. The supply shall be adequate with one connection shutoff. Each connection to a riser shall have a shut off valve and a check valve.

Sec. 45. Section 94.0701.66 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0701.66. a. The first note to Table No.38-1-A of Uniform Building Code Standard 38-1 is hereby modified to read:

*For high-piled storage, see Sec. 38.104(a-6A) of Uniform Building Code Standard 38-1 as amended in Section 94.0701.57 of this code.

b. The hazard classification of automobile parking garages in Table 38-1-A of Uniform Building Code Standard 38-1 is hereby changed to "Ordinary Group 1".

Sec. 46. Section 94.0701.67 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0701.67. (a) The second reference to the phrase "Ordinary Group 1" listed under the column "Hazard Classification" of Table 38-1- B of Uniform Building Code Standard 38-1 is here by modified to read:

Ordinary Group 2

(b) Notes 4 and 8 of Table 38-1-B of Uniform building Code Standard 38-1 are hereby modified to read:

4. Also see Section 94.0701.65.

⁸Water supplies serving a dwelling unit or guest room shall be capable of furnishing 18 gpm to any single sprinkler, 26 gpm to two sprinklers, or in accordance with the residential sprinkler device listing, whichever is greater, and shall also conform to the requirements of Sec. 7-4.4.2 through 7-4.4.5 of NFPA 13 as specified in Section 94.0701.55 of this code.

Note 9 is not adopted.

Sec. 47. Section 94.0701.68 is hereby added to the Los Angeles Municipal Code to read:

TABLE NO. 38-1-B (PS)

MINIMUM WATER SUPPLY REQUIREMENTS
FOR PIPE SCHEDULE SPRINKLER SYSTEMS

Residual Pressure Hazard Classification	Flow at Base of Riser psi (See Note 1)	Total Comb. Hose Stream gpm (See Note 2)	Demand (gpm)	Duration in Minutes
Light Hazard	15	500 (See Note 3)	100	30
Ordinary Group 1	15	700	250	60
Ordinary Group 2	15	850	250	60
Extra Hazard	15	200 See Note 4	250	60

NOTES:

1. The pressure required at the base of the sprinkler riser is the residual pressure required at the elevation of the highest sprinkler plus the pressure required to reach this elevation.
2. Flow shall be equal to the number of sprinklers in the largest fire-separation area times 20 gpm, (25 gpm for Extra Hazard) but need not exceed flows shown below.
3. The requirement may be reduced to 250 gpm in buildings of noncombustible construction.
4. This is based on the eight head sprinkler limitation in Section 94.0701.52, Item 2 of this case. (for pipe schedule, extra hazard, paint spray booths)

Sec. 48. Section 94.0701.69 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.69. Table 38-1-C of Uniform Building Code Standard 38-1 is hereby repealed.

Sec. 49. Section 94.0701.71 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.71. Figure of 38-1-1 of Uniform Building Code Standard 38-1 is not adopted.

Sec. 50. Section 94.0701.72 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.72. In addition to NFPA 13 2-3 (as specified in Table 201 of Section. 94.0701.45 of this code.):

Water flow test data shall take into account long-term minimum pressure conditions due to heavy water demand and local conditions.

Sec. 51. Section 94.0701.73 is hereby added to the Los Angeles Municipal Code:

SEC. 94.0701.73. Section 3-3.8 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

3-3.8. Hose Connections for Fire Department Use. In buildings of Light or Ordinary Hazard occupancy, 2 1/2-in. Hose valves for fire department use may be attached to wet-pipe sprinkler system risers (See NFPA 13 Section 2-2.4.2). The following restrictions apply:

(a) Sprinklers shall be under separate floor control valves.

(b) The minimum size of the riser shall be as required in Sec. 38.204 of Uniform Building Code Standard 38-2 (Section 94.0701.84 of this code).

(c) Each combined sprinkler and standpipe riser shall be equipped with a riser control valve to permit isolating a riser without interrupting the supply to other risers from the same source of supply.

(d) For fire department connections serving standpipe and sprinkler systems, refer to Section 94.0701.62 of the Los Angeles Municipal Code.

Sec. 52. Section 94.0701.74 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.74. Subsection (c) of Section 3-5.3.2 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

(c) On each side of concrete or masonry walls 2 to 3 ft. from the wall surface.

Sec. 53. Section 94.0701.75 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.75. Section 3-9.2.5 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

3-9.2.5 An approved check valve shall be installed in each water supply connection. When foam, antifreeze or other additive is to be in the system, and the system is supplied from a domestic water-supply main, the check valve shall be an approved backflow preventor.

Sec. 54. Section 94.0701.76 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.76. VALVE ACCESS is in addition to NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) to read:

Valve Access. All valves controlling water supplies for sprinkler systems or portions thereof, shall be accessible.

These valves shall be within 7 feet 6 inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or using chains within 7 feet 6 inches of the floor connected to valve hand wheels or other suitable means.

Sec. 55. Section 94.0701.77 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.77. Exception No. 1 of Section 3-11.6.2 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

EXCEPTION No. 1: Where maximum ceiling temperatures exceed 100°F (38°C), sprinklers with temperature ratings in accordance with the maximum ceiling temperatures of NFPA 13 Table 3-11.6.1 shall be used, provided ordinary temperature rated sprinklers shall be installed where the maximum ceiling temperature is less than 150°F and provided their temperature rating is at least 30°F above the maximum ceiling temperature.

Sec. 56. Section 94.0701.78 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.78. Fire Sprinkler Alarms, Definition. Section 3-12.1 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

3-12.1 Definition. A local alarm unit is an assembly of apparatus approved for the service and so constructed and installed that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler of the smallest orifice size installed on the system will activate an audible alarm installed on the outside of the building within 1 1/2 minutes after such flow begins. For remote sprinkler waterflow alarm transmission, see 3-12.7.1.

EXCEPTION: As provided for high rise buildings in Section 94.0701.65 of this code.

Sec. 57. Section 94.0701.79 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.79. Section 4-2.2.4 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

4-2.2.4 Extra Hazard Occupancy. The protection area per sprinkler shall not exceed 100 sq. ft. (9.3 m²) for any type of building construction.

EXCEPTION: The protection area per sprinkler for pipe schedule systems shall not exceed 90 sq. ft. (8.4 m²).

Sec. 58. Section 94.0701.80 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.80. CONCEALED SPACES OVER 50 SQ. FT. ROOMS. Exception No. 7 of Sec. 4-4.4.1 of NFPA 13 (as specified in Table 201 of Sec. 94.0701.45) is hereby modified to read:

Exception No. 7. Small spaces over rooms not exceeding 50 sq. ft. in area provided they do not exceed 100 cu. ft. in volume.

Sec. 59. Section 94.0701.81 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.81. Section 4-4.16.3 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

4-4.16.3 Sprinklers shall be listed old-style having orifice sizes selected to provide as closely as possible but not less than 20 gal per min (76 L/min) per sprinkler, based on the water pressure available.

NOTE: See NFPA 81, Standard on Fur Storage, Fumigation and Cleaning. For tests of sprinkler performance in fur vaults see Fact Finding Report on Automatic Sprinkler Protection for Fur Storage Vaults of Underwriters Laboratories Inc., dated November 25, 1947.

Sec. 60. Sec. 94.0701.82 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.82. Sec. 4-4.17.8.3 of NFPA 13 (as specified in Table 201 of Section 94.0701.45 of this code) is hereby modified to read:

4-4.17.8.3 The operation of any cooking equipment sprinkler or automatic spray nozzle shall automatically

shut off all sources of fuel and heat to all equipment. All shutdown devices shall be of the type that requires manual resetting prior to fuel or power being restored and shall automatically shutdown when their power supplies fail (fail safe).

When the ventilation equipment is part of an emergency smoke control system and electrical power is shut off to the cooking equipment, such shut off shall not affect ventilation equipment operation.

Sec. 61. Section 94.0701.83 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0701.83. In addition to NFPA 13 4-4.17 (as specified in Table 201 of Section 94.0701.45 of this code to read:

Other sprinklers shall be arranged so that their runoff does not fall into deep fat fryers. This may be accomplished by the use of a shield or unducted hood placed above the deep fat fryer. The shield or hood shall be placed above the sprinkler protecting the deep fat fryer and so located that it will not interfere with the sprinkler discharge.

Sec. 62. Section 94.0701.84 is hereby added to the Los Angeles Municipal Code to read:

Sec. 94.0701.84. Standpipe Systems. Uniform Building Code Standard No. 38-2 is modified to read:

UNIFORM BUILDING CODE STANDARD NO.38-2
STANDPIPE SYSTEMS
Installation Standard of the
International Conference of Building Officials

SCOPE

Sec. 38.201. This standard applies to the design, testing and maintenance of standpipe systems.

DEFINITIONS

Sec. 38.202. Certain terms in this standard are defined as follows:

FIRE DEPARTMENT INLET CONNECTION is a connection through which the fire department can pump water into a standpipe system, or sprinkler system.

STANDPIPE SYSTEM is a wet or dry system of piping, valves, outlets and related equipment designed to provide water at specified pressures and installed exclusively for the fighting of fires, including the following:

Class I is a standpipe system equipped with 2 1/2-inch outlets.

Class II is a standpipe system directly connected to a water supply and equipped with 1 1/2-inch outlets and hose.

Class III is a standpipe system directly connected to a water supply and equipped with 2 1/2-inch outlets or 2 1/2-inch and 1 1/2-inch outlets when a 1 1/2-inch hose is required. Hose connections for Class III systems may be made through 2 1/2-inch hose valves with easily removable 2 1/2-inch by 1 1/2-inch reducers.

REQUIRED WATER SUPPLIES

Sec. 38.203. (a) Source. The source of water supply for standpipe systems shall be reliable and capable of meeting the requirements of this section. The source shall be capable of providing the required supply for not less than 30 minutes.

(1) Class I Standpipes. Class I standpipes shall be supplied from the fire department connection as provided in Par. (b).

(2) City Water Main. Class II and III standpipes shall be supplied from the public water main.

(3) Buildings Over 150 ft High. The following shall apply to Class III standpipes (except temporary standpipes) in buildings over 150 ft high.

A. Water Tank.

i. General. One or more water tanks shall be installed to serve the stand pipes. No tank shall serve more than one building or structure or tower over 150 ft. high. The supply shall be automatically available when the water service fails, however, one water service may supply tanks for more than one building, structure or tower.

ii. Capacity. The tank shall have a usable capacity equal to 30 minutes (duration) for residential hazards and as specified in Table 38-1-B of U.B.C. Standard 38-1 for other hazards, but not less than 45,000 gal.

Flow shall be based on 750 gpm for a tank serving one stand pipe and an additional 250 gpm for each additional standpipe that extends to a height of over 150 ft, maximum 1500 gpm.

iii. Fill. The tank shall be supplied from at

least a 6-inch line from the City water main. An approved tank-fill line connected to the Fire Department connection shall also be installed. This line shall have a shut off valve. The tank need not be on the roof.

B. Pump.

i. General. An automatic pumping system shall be installed that will pump the required flow to the system at the required pressure from the above tank.

ii. Redundancy. The system shall be adequate when either one pump, one pump driver, or one system or zone pressure regulator is out of operation.

iii. Power. Pumps shall be either diesel engine or electric motor driven. Electric motors shall be supplied from the standby system. At least 750 gpm shall be supplied by an electric motor driven pump.

(b) Minimum Water Supply. The minimum water supply for standpipe systems shall be as follows:

Class I systems shall receive from their source a supply sufficient to provide 750 GPM for a single standpipe and 250 GPM for each additional standpipe. The total supply need not exceed 2500 GPM. The supply system shall be capable of maintaining a residual pressure of 100 psi at each topmost outlet with 750 GPM flowing from the most remote standpipe and 250 GPM flowing from each additional standpipe up to a maximum of 2500 GPM flowing. If available, fire apparatus of adequate capacity are acceptable in meeting the supply requirements for Class I service.

Class II systems shall receive from their source a supply sufficient to provide a minimum of 100 GPM. The supply system shall be capable of maintaining a residual pressure of 65 psi at the topmost outlet with 100 GPM flowing plus the fire sprinkler demand.

Class III systems shall receive from their source a supply sufficient to provide 750 GPM for a single standpipe and 250 GPM for each additional standpipe. The total supply need not exceed 2500 GPM. The supply system shall be capable of maintaining a residual pressure of 100

psi at each topmost outlet with 750 GPM flowing from the most remote standpipe and 250 GPM flowing from each additional standpipe up to a maximum 2500 GPM flowing.

(c) Water Supply for Combined Standpipe and Sprinkler Risers. Standpipe piping may be used to supply water for automatic fire sprinkler systems. For fully-sprinklered buildings, the water supply required for sprinklers need not be added to the standpipe demand as specified in this section. The standpipe supply required in a fully sprinklered building need not exceed 1500 GPM.

(d) Domestic Supply. When standpipes are supplied from the domestic water system, domestic water demand shall be added to the standpipe demand to determine the required flow for sizing the stand pipes.

(e) Class H Standpipes. The demand for Class H Standpipes need not be added to the Class I, II or III Standpipe demand.

(f) Minimum Residual Pressure. When determining the minimum residual pressure at a hose valve outlet, the following flows through the hose valve shall be used:

(1) 2 1/2 in. Hose Outlets, 300 gpm.

(2) 1 1/2 in. Hose Outlets, flow based on the hose nozzle in its maximum flow position.

STANDPIPE AND SUPPLY PIPING DESIGN

Sec. 38.204. All standpipe systems shall be hydraulically designed in accordance with the hydraulic design methods prescribed by U.B.C. Standard No. 38-1 for the minimum flow specified in Section 38.203 except 4 inches shall be the minimum size allowed for Class I and Class III systems.

HEIGHT LIMIT

Sec. 38.205. Buildings shall be zoned so that standpipe system risers do not exceed 275 feet in height unless control of the nozzle pressure under both flow and static condition is attained at each standpipe outlet by the installation of a listed pressure-regulating device and provided further that all of the following three limitations are met:

1. The pressure on the listed pressure-regulating device inlet side is not in excess of the

rated working pressure of the listed pressure-regulating device and the remaining portions of the standpipe system are rated for not less than the maximum system pressure.

2. The hose valve outlet pressure is limited as required in Section 38.211 of this code

3. The zone height does not exceed 400 feet.

SYSTEM ZONING REQUIREMENTS

Sec. 38.206. (a) Provisions to sustain a positive pressure to all zones in multiple-zoned systems is required.

(b) Zoned systems shall comply with Alternate (1) or (2), below.

1. Alternate 1.

The pumping system shall be adequate when three pumps are out of operation.

2. Alternate 2.

Design shall comply with the following:

When fire pumps are required, separate fire pumps shall be required to serve each zone.

Fire pumps which individually serve zones and which are located at the same level may be installed in series.

Direct supply piping from the higher-zone fire pump to the higher-zone system piping shall be provided when the fire pump for the higher zone is on the same level as the fire pump serving the lower zone. If the higher-zone system has more than one vertical riser, two direct supply lines to the higher zone shall be provided. The size of the direct supply piping to the higher zone shall be not less than the size of the largest standpipe riser served.

Lower-zone standpipe piping used to supply a zone above shall be not less than the size of the largest standpipe riser of the higher-zone system which is being supplied. The two zones shall be connected by a minimum of two supply pipes of which one shall be capable of automatically providing water to the higher zone from the lower zone. A secondary method of supply is required when a residual pressure of 100 psi cannot be provided.

FIRE DEPARTMENT INLET CONNECTIONS

Sec. 38.207. Each Class I or III and pipe system shall be equipped with one or more fire department inlet connections. Fire department inlet connection locations shall be subject to the approval of the fire department, and the connections shall be equipped with approved caps which the fire department can easily remove to make connection. Fire department inlet connections shall be protected against mechanical damage and shall be visible and accessible. Installation of a shutoff valve in the fire department inlet connection is prohibited.

The piping between the outside fire department inlet connection point and the connection to the system riser shall be provided with an approved check valve.

EXCEPTION: An approved check valve is not required for Class I standpipe systems without permanently connected water supply.

Fire department inlet connections shall be identified by an approved sign which specifies the type of system served and other information required by the Fire Department. The sign shall read "Standpipe" for those connections serving a standpipe system only and shall read "Standpipe and Auto. Spkr." for those connections serving both a standpipe and automatic sprinkler system.

In buildings which have multiple zones, each zone shall be provided with separate inlet connections. Where the fire department inlet connection does not serve the entire building, the portions served shall be suitably identified.

A means for the removal of debris from a dry standpipe shall be provided.

a. Flow and pressure required. The fire department connection shall be adequate to supply the required flow and pressure.

EXCEPTION: When all standpipes are at least 6 inch size and there are at least six inlets, the supply shall be considered adequate.

b. Sizing and Material Ratings. Sizing shall be based on 250 psi at the fire department pumper outlets. The flow shall be assumed to be through parallel 50 feet long, 2 1/2 inches in diameter rubber-lined hoses connected to the fire department inlets. Material ratings shall be based on required pressure.

c. Number of Inlets. Fire Department hose connection inlets shall be installed at least as required in Table No. 38.207.

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TABLE 38.207
NUMBER OF FIRE DEPARTMENT INLETS

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Height of Highest Outlet Above Fire Dept. Inlet, Feet	Number of Fire Dept. Inlets	
	1 or 2 Risers	3 or More Risers
Less than 50	2	2
50 and over	4	6

=====

d. Interconnection. All inlets shall supply all Class I and Class III standpipes except as provided in Section 38.206 for buildings with multiple zones.

GRAVITY TANKS AND PRESSURE TANKS

Sec. 38.208. (a) Tank System Connections. Except for tanks used to supply standpipes connected in several buildings or sections of a building, gravity tanks and pressure tanks shall be connected to the top of the standpipe system served. Gravity tanks and pressure tanks shall be connected to the base of the standpipe systems when such tanks serve standpipe systems in several buildings or sections of a building. An interconnection at the top of the risers of a standpipe system serving an individual building shall be provided when the standpipe system is tank supplied. Tank-to-standpipe connecting piping shall be not less than the size of the standpipe served.

(b) Avoiding Air Lock. When gravity tanks and pressure tanks are connected to a common riser, a method of preventing an air lock of the gravity tank check valve shall be provided. For additional information, see Section B-2-2.2 of NFPA 13.

PIPING, VALVES AND FITTINGS

Sec. 38.209. (a) Supply Piping. Supply piping shall be of a size capable of providing the flow rates and pressures specified within this standard.

(b) Indicator, Isolation and Check Valve. Check valves and indicating-type valves shall be installed as near as practical to all water supplies. Unless otherwise permitted by the building official and subject to concurrence by the Fire Department, a listed indicator post designed for use with an underground valve or an approved

integral indicator post and valve shall be provided for the control of the water supply from a public water supply to a standpipe system and suitable identification of the system being controlled shall be provided.

Isolation valves shall be installed in standpipe systems to prevent the loss of water supply to the remaining portion of a system by the failure of individual system risers.

The valves required by this subsection shall be listed and shall be rated for the maximum anticipated system pressure. These valves shall be provided with suitable permanent identification and shall be accessible. Embossed plastic tape, pencil, ink, crayon and the like shall not be considered permanent. Signs shall be secured with corrosion-resistant wire, chain or other suitable means.

These valves shall be within 7 feet 6 inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or using chains within 7 feet 6 inches of the floor connected to valve hand wheels or other suitable means.

(c) Pressure Ratings of Fittings. Fittings used in standpipe systems shall be rated for not less than the maximum anticipated system pressure.

(d) Pipe, Tube, and Fitting Specifications. Pipe and tube used in standpipe systems shall conform with the applicable requirements specified in Section 38.104(c) of U.B.C. Standard No. 38-1. Fittings shall comply with the applicable requirements for fire sprinklers.

(e) Threaded Joints, Welded Joints or Flexible Couplings. Piping shall be connected by means of threaded or flanged fittings, flexible couplings or other approved means.

Welding of joints may be approved provided such welding is done in the shop of an approved fabricator and approved welding fittings are utilized.

(f) Piping System Support. Hangers and piping shall be designed for lateral load in accordance with Section 2312(g) of the Uniform Building Code or shall be designed and detailed in accordance with Section 3-5.3 of NFPA 13 as specified in Section 94.0701.55 of this code.

(g) Pressure Gauges. A pressure gauge of an approved type shall be provided at the discharge pipe from fire pumps, the supply connection of the public waterworks and at the top of each standpipe riser. When pressure tanks are provided, a pressure gauge at the tank and the air pump shall also be provided. A valve for draining each gauge

shall be provided. Where several standpipes are interconnected at the top, a single gauge properly located may be substituted for the gauges at the top of each standpipe.

(h) Corrosion and Temperature Protection. Provisions to protect systems from detrimental corrosive or temperature effects shall be provided as required for fire sprinklers.

(i) General. Material, equipment and installation of standpipe systems shall comply with the applicable requirements for fire sprinklers unless otherwise specified.

FIRE DEPARTMENT OUTLETS

Sec. 38.210. a. Access and Clearance. Fire department outlets shall be installed in such a manner as to be easily accessible for use by the fire department. A wrench clearance on all sides of the outlets shall be provided to ensure that a 12-inch-long wrench can be used to connect hose to the outlet. There shall be at least 1-inch clearance around the hose valve handle.

b. Hose Valves. Outlets shall be provided with a listed hose valve protected by a 2 1/2 in. x 1 1/2 in. reducer and a 1 1/2 in. cap with attachment chain.

c. Height. Outlets shall be at least 18 inches but not over four feet above the adjacent floor.

d. Coverage. Outlets shall be located on each roof so that all portions of the roofs are within 30 feet of a nozzle attached to 100 feet of hose attached to an outlet.

e. Highest Roof. A three way outlet shall be installed on at least one standpipe above the highest roof.

OUTLET PRESSURE LIMITATION

Sec. 38.211. Pressure Control. a. 2 1/2 in. Outlets and 250 gpm Pumps. When the static pressure exceeds 150 pounds per square inch at a 2 1/2 in. outlet in a system with a 250 gpm or larger pump, a listed pressure reducing device shall be installed to reduce the maximum residual pressure (at a flow of 300 gpm) to not over 125 pounds per square inch. When the static pressure in such system is 135 through 150 pounds per square inch, an orifice plate, 12 B&S gage brass or 14 U.S. Standard gage stainless steel, with a 1 3/4 in. orifice shall be installed securely in a fixed position in such outlet. "1 3/4 in." shall be indented on each

plate to show the orifice size. Pressure produced by pumps rated under 250 gpm shall be ignored for determining pressures.

b. 2 1/2 in. Outlets and No 250 gpm Pump. When there is no pump rated at 250 gpm or more in the system, an orifice plate as specified in Subdivision (a), above, shall be installed on each 2 1/2 in. outlet that is less than 35 ft. above the fire department inlet.

c. 1 1/2 inch Standpipe Outlets. Outlet residual pressures in excess of 100 pounds per square inch shall be reduced to not more than 100 pounds per square inch at the required flow by installation of a listed pressure-reducing device. When determining outlet residual pressure, the flow shall be based on the hose nozzle being in the maximum flow position.

d. Adjustment. Unless otherwise permitted by the fire department, pressure-reducing devices shall not be of the type which can be adjusted for pressure above 125 pounds per square inch. When adjustable devices are permitted and the outlet residual pressure may exceed 150 pounds per square inch, signs denoting that fact shall be posted at the outlet.

HOSE, REELS, RACKS, AND CABINETS

Sec. 38.212. (a) Hose Cabinets. Hose cabinets housing the standpipe system outlet shall be of sufficient size and design to accommodate the required equipment to be housed therein. Adequate clearance to allow for the operation of the hose valves shall be provided. Cabinet doors may be secured by a latching device, and the latching device may be protected by an approved-type cover. A permanent label specifying the instructions for operating the equipment housed within the hose cabinet shall be provided. The hose cabinet doors for 1 1/2 inch outlets shall be legibly labeled "Fire Hose for Use by Occupants".

(b) Hose for 1 1/2-inch Outlets. 1 1/2-inch outlets shall be provided with a listed hose valve equipped with listed lined hose not less than 1 1/2 inches in diameter. Such hose shall be equipped with a listed variable fog nozzle.

EXCEPTION: Hoses may be omitted on outlets on unused roof areas.

(c) Hose Rack or Reels. A listed hose reel or rack shall be provided for hose required by Section 38.212(b) of this code. Hose reels or racks shall be appropriately protected against mechanical injury.

(d) Hose Outlet Location. 1 1/2-inch outlets shall be between 3 feet 6 inches and 5 feet above the floor.

INSTALLATION

Sec. 38.213. (a) General. Standpipe systems required by the Uniform Building Code shall be installed in locations required by the Uniform Building Code and all standpipe systems shall be in conformance with the approved plans and this standard. Details of the installation shall be in accordance with recognized paragraphs 7-5.2.1 and 7-6 of NFPA 14 as specified in Section 10-1.1 of NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code.

(b) Workmanship. Standpipe systems shall be installed in a workmanlike manner conforming to generally accepted standard practice for the trades involved and in accordance with this standard.

(c) Systems Tests.

1. Hydrostatic tests required. Standpipe systems including the supply piping thereto with design pressures not exceeding 150 psi shall be hydrostatically tested at not less than 200 psi for a duration of not less than two hours. For systems with design pressures exceeding 150 psi, the hydrostatic test shall be not less than 50 psi above the system design pressure for not less than a two-hour duration.

Leakage shall not be permitted. Accepted standard practice for hydrostatic testing is in Paragraphs 1-11.2.1 and 1-11.2.3 through 1-11.2.5 of NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code.

2. Functional flow test required. Standpipe systems shall be flow tested to demonstrate the capability of providing the required flow.

3. Flushing of the System, Underground. Underground portions of the systems shall be flushed prior to connection and acceptance testing. The flushing shall be continued until all materials have been removed. Accepted standard practice in flushing flow rates is in Paragraph 1-11.1 of NFPA 13 as specified in Table 201 of Section 94.0701.45 of this code.

4. Flushing the System, Risers.

Water shall flow from the top most outlet of each riser until the system is clear of all debris as

follows:

(A) Roof Outlets. Standpipe systems shall be designed so that all risers can be flushed through outlets located on the roof.

(B) Flow. All standpipe risers shall be flushed individually through the roof outlets at a residual pressure of at least 65 psi until the system is clear of debris. The flow for Class I and Class III standpipes shall be at least 500 gpm through each riser.

5. Pressure Regulator Valve Test. A. Test Required. When required by the department, 2 1/2-inch pressure regulator valves installed on standpipe outlets shall be tested for proper operation at a flow of 300 gpm in the presence of a representative of the department.

B. Safety. Test nozzles and other equipment shall be adequately secured so as to eliminate danger to personnel.

C. Opening. An accessible 2 1/2-inch capped or plugged test opening shall be installed adjacent to each pressure regulator valve.

D. Drain. The test openings shall drain in to a minimum 3-inch drain line constructed and installed as required for fire sprinkler drains. The drains shall not discharge where they may cause damage.

E. Interconnection. The test drain shall either be separate, connect to a fire sprinkler drain, combine with a rainwater drain or drain to a fire-protection tank.

Sec. 63. Section 94.0702 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702. FIRE PUMPS AND DRIVERS.

Fire pumps, their drivers, and associated piping and equipment shall conform to the requirements set forth in Section 94.0702.1-3 through 94.0702.11-2 of this code.

Sec. 64. Section 94.0702.1-3 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0702.1-3. OTHER PUMPS.

Pumps other than those specified in this Code and having different design features may be installed when

listed. They shall be limited to capacities of less than 500 gpm.

Sec. 65. Section 94.0702.1-7 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0702.1-7 FLOODED SUCTION.

When water flows from an atmospherically vented source to the pump, the system shall be designed so that the pressure at the pump inlet flange will not drop below atmospheric pressure with the pump operating at 150 percent of its rated capacity.

Sec. 66. Section 94.0702.2-2 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702.2-2. LISTING.

a. Listing. Fire pumps, devices and attachments shall be listed.

b. Dual Drive. Dual drive pumps shall not be installed, except as replacements.

Sec. 67. Section 94.0702.2-3.1 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0702.2-3.1 GROUP I AIRCRAFT HANGERS.

Pumping systems for fire protection of Group I Aircraft Hangers (as defined in NFPA Standard 409, as specified in Section 10-1.2 of NFPA 13 as specified in Table 201 in Section 94.0701.45 of this code), shall meet the required demand with the largest fire pump out of operation.

Sec. 68. Subsection (e) is hereby added to Section 94.0702.2-7 of the Los Angeles Municipal Code to read:

(e) Floor Drain. A floor drain shall be installed below the lowest pump, driver and controller so as to drain leaks.

Sec. 69. Section 94.0702.2-9 is hereby amended to the Los Angeles Municipal Code to read:

(a) General. Installation of suction piping shall conform to the requirements for fire sprinkler piping.

(b) Asbestos Cement. Asbestos-cement piping shall not be installed where the working pressure will be negative.

(c) Suction Size. The pressure at the pump inlet at 150 percent of rated flow with all pumps operating shall be designed to be positive. The suction pipe size shall conform to Table 2-19 of this code.

(d) Pump Bypass. A fullway pump bypass with check valve shall be connected downstream of the fire pump shutoff valve when available pressure will supply useful protection with the pump off.

(e) Air Pockets. The suction pipe shall be free of potential air pockets.

(f) Elbows. Unless impractical, no elbow shall be installed in a horizontal position in a suction pipe serving a split-case pump with a horizontal shaft.

(g) Reducer. When the suction pipe and connecting pump suction flange are not the same size, they shall be connected with an eccentric tapered reducer located so that there cannot be an air pocket in the reducer.

(h) Tests. Pump suction piping shall be tested as required for fire sprinkler underground piping.

(i) Settlement. Suction piping shall be protected from structural settlement by a means satisfactory to the department.

(j) Control Valve. An individual O.S. and Y gate valve shall be installed upstream of each fire pump that is under inlet pressure. Butterfly valves are prohibited in the suction pipe.

(k) Suction Screening. Approved suction screening shall be installed on water supplies not furnished from a street water main.

(l) Devices in Suction Piping. No restrictive device shall be installed in suction piping.

EXCEPTION: Required valves, required screens and devices that are arranged to activate an alarm when pump suction pressure falls below a predetermined pressure.

(m) Vortex Plate. A vortex plate shall be properly installed at the inlet to the pump suction piping when such inlet is in a tank. The vortex plate shall be at least 1/4 inch thick steel by at least twice the diameter of the inlet. A clearance shall be provided between the bottom of the tank and the suction inlet of at least one half the diameter of the suction pipe, but not less than 6 inches. The suction inlet shall face the tank bottom. The vortex plate shall be installed horizontally.

Sec. 70. Section 94.0702.2-10 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702.2-10. DISCHARGE PIPE AND FITTINGS.

(a) General. Discharge piping is the piping from the pump to the outlet of the pump discharge valve. Testing, material and installation of discharge piping shall conform to the requirements for fire sprinkler piping.

(b) Size. Discharge piping shall conform to Table 2-19 of this code.

(c) Pump Discharge Check Valve. An individual check valve shall be installed between the fire pump and its pump discharge valve.

(d) Pump Discharge Valve. An individual shutoff valve shall be installed on the discharge side of each fire pump.

Sec. 71. Section 94.0702.2-11 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702.2-11. PROTECTION OF PIPING AGAINST DAMAGE DUE TO MOVEMENT.

At least one inch clearance shall be provided around piping where it passes through walls or floors.

EXCEPTION: Holes through pump room walls may be packed with suitable fire proofing.

Sec. 72. Section 94.0702.2-12 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702.2-12. OVERPRESSURE RELIEF VALVE.

(a) Required. A relief valve shall be installed on each pump with an adjustable speed driver and on any pump with a constant speed driver where the pump shutoff pressure plus the static suction pressure exceeds the pressure for which the system components are listed or approved. Overpressure relief valves shall operate only during abnormal conditions so that the pressure will not exceed the pressure for which the system components are listed or approved.

(b) Setting. Relief valves shall be set to open at a pressure below the allowable pressure in the system.

(c) Valve Size. The relief valve size shall comply with Table No. 2-19 of this code.

(d) Location. The relief valve shall be connected between the pump and the pump discharge check valve.

(e) Repair. The relief valve shall be accessible for replacement without moving piping.

(f) Pilot Operated Relief Valve. When pilot operated relief valves serve vertical shaft turbine pumps, they shall be arranged to prevent relief of water at pressures lower than the relief setting of the valves.

(g) Water Flow Detection. A visible means shall be installed in the fire pump room (or other approved location) that indicates when the relief valve is discharging water.

(h) Discharge To Pump Suction. Relief valves shall not discharge to pump suction piping unless no approved point of disposal is available.

(i) Open Cone Pipe Size. Valve discharge piping from an open cone shall comply with Table No. 2-19 of this code. When piping has more than one elbow, the next larger pipe shall be installed.

(j) Relief Valve Discharge Line Size. Relief valve discharge lines shall be designed to prevent excessive pressure in the systems served.

(k) Discharge to Supply Tank. When a relief valve discharges into a tank supplying a fire pump, the discharge piping outlet shall be below the lowest required water level in the tank.

(l) Discharge Line. There shall be no shutoff valve in the relief valve discharge line. The end of this line shall not be threaded. This line shall discharge to a safe point of disposal.

Sec. 73. Subsection (b) of Section 94.0702.2-13 of the Los Angeles Municipal Code is hereby amended to read:

(b) Meters. When flow meters are provided, they shall be listed and installed as specified by their manufacturer. Meter capacity shall be at least 175 percent of pump-rated capacity. Size shall comply with Table 2-19 of this code. Hose valves shall be installed whether or not meters are installed. Return piping shall be free of potential air pockets that could reach the eye of the pump impeller.

When meter system piping exceeds 100 feet (length of straight pipe plus equivalent length of fittings, elevation and loss through meter), the piping size shall be at least one size larger than the required size.

Sec. 74. Subdivision (2) of Subsection (c) of Section 94.0702.2-13 is hereby amended to read:

(2) The number and size of hose valves shall conform to Table 2-19 of this code.

Sec. 75. Subsection (d) of Section 94.0702.2-13 of the Los Angeles Municipal Code is hereby amended to read:

(d) Test Header Size. Hose valve supply headers shall conform to Table 2-19 of this code. When the pipe between the hose valve header and the connection to the pump discharge valve exceeds 15 feet in length, this pipe shall be at least one size larger than the required hose header supply size.

Sec. 76. Section 94.0702.2-18 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0702.2-18. PRESSURE MAINTENANCE (JOCKEY OR MAKE-UP) PUMPS.

(a) Required. A pressure maintenance pump shall be installed with the fire pump in buildings over 150 ft high.

(b) Flow and Pressure. Each pressure maintenance pump shall be designed to discharge at least 1 gpm at a pressure required to maintain the system pressure without unnecessary starting of any fire pump.

(c) Check Valve. A check valve shall be installed in the pressure maintenance pump discharge.

(d) Isolation Valves. Shutoff valves shall be installed upstream of the pressure maintenance pump and downstream of the check valve so as to allow pressure maintenance pump servicing.

(e) Relief Valve. When the shutoff (churn) pressure exceeds the allowable pressure on the system components or a turbine vane (peripheral) or a positive displacement pressure maintenance pump is installed, a relief valve shall be installed on the pump discharge. The installation shall conform to the requirements for over pressure relief valves for setting, location, repair, water flow detection and discharge line. The relief valve and piping shall be at least 3/4 inches in size.

(f) Fire Pump. A fire pump shall not be installed to perform as a pressure maintenance pump.

Sec. 77. Table 2-19 is hereby added to Section 94.0702.2-13 of the Los Angeles Municipal Code to read:

TABLE 2-19 SUMMARY OF FIRE PUMP DATA

Minimum Pipe Sizes (Nominal)								
Pump Rating gpm	Suction in.*	Disch. in.*	Relief Valve in.	Relief Valve Disch. in.	Meter Device in.	Number and Hose Size of Header Hose Valves Supply in. in.		
25	1	1	3/4	1	1 1/4	1 -	1 1/2	1
50	1 1/2	1 1/4	1 1/4	1 1/2	2	1 -	1 1/2	1 1/4
100	2	2	1 1/2	2	2 1/2	2 -	1 1/2	2
150	2 1/2	2 1/2	2	2 1/2	3	1 -	2 1/2	2 1/2
200	3	3	2	2 1/2	3	1 -	2 1/2	2 1/2
250	3 1/2	3	2	2 1/2	3 1/2	1 -	2 1/2	3
300	4	4	2 1/2	3 1/2	4 1/2	1 -	2 1/2	3
400	4	4	3	5	4	2 -	2 1/2	4
450	5	5	3	5	4	2 -	2 1/2	4
500	5	5	3	5	5	2 -	2 1/2	4
750	6	6	4	6	5	3 -	2 1/2	6
1000	8	6	4	8	6	4 -	2 1/2	6
1250	8	8	6	8	6	6 -	2 1/2	8
1500	8	8	6	8	8	6 -	2 1/2	8
2000	10	10	6	10	8	6 -	2 1/2	8
2500	10	10	6	10	8	8 -	2 1/2	10
3000	12	12	8	12	8	12 -	2 1/2	10
3500	12	12	8	12	10	12 -	2 1/2	12
4000	14	12	8	14	10	16 -	2 1/2	12
4500	16	14	8	14	10	16 -	2 1/2	12
5000	16	14	8	14	10	20 -	2 1/2	12

*Actual pump flange may be less than pump size.

Sec. 78. Table 2-20 of Section 94.0702.2-13 of the Los Angeles Municipal Code is hereby repealed.

Sec. 79. Section 94.0702.3-2 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0702.3-2. HORIZONTAL PUMPS, FIELD PERFORMANCE.

Field performance of horizontal fire pump shall conform to Section 94.0702.11-2 of this code.

Sec. 80. Section 94.0702.3-3 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702.3-3. HORIZONTAL PUMPS, AUTOMATIC AIR RELEASE.

When automatically controlled fire pumps are installed, a minimum 1/2-inch float-operated air-release valve shall be installed so as to automatically release air from the pump.

Sec. 81. Section 94.0702.4-1 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0702.4-1. VERTICAL SHAFT PUMPS, FIELD PERFORMANCE.

Field performance of vertical shaft fire pumps shall conform to Section 94.0702.11-2 of this code.

Sec. 82. Section 94.0702.4-5 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0702.4-5. GEARDRIVES.

(a) Type. Gear drives and flexible connecting shafts shall be of the vertical hollow shaft type, permitting adjustment of the impellers for proper installation and operation of the equipment. The gear drive shall be equipped with a non reverse ratchet.

(b) Rating. Gear drives shall be rated by the manufacturer for maximum horse power and thrust of the pump.

Sec. 83. Subsection (b) of Section 94.0702.8-2.2 of the Los Angeles Municipal Code is hereby amended to read:

(b) Deductions. A deduction of three percent shall be made from engine horsepower ratings at standard S.A.E. conditions for each 1000 feet of altitude (or portion thereof) above 300 feet and an additional deduction of

one percent shall be made for every 10°F above 77°F ambient temperature. When determining the ambient temperature, the outside air temperature shall be assumed to be 107°F.

Sec. 84. Section 94.0702.8-2.3 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0702.8-2.3. ENGINE CONNECTION TO PUMP.

Flexible connections shall conform to the manufacturer's recommendation for angle of deflection, engine speed and power.

Sec. 85. Section 94.0702.8-2.4 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0702.8-2.4. CONTROL.

(a) Governor. Diesel engines shall have a governor capable of regulating engine speed within a range of 10 percent between shutoff and maximum load condition of the fire pump. The governor shall be field adjustable, set and secured to maintain rated pump speed at maximum pump load. If a manual control throttle is provided, it shall not permit reduction of engine speed below the governor's set and secured point.

(b) Over speed Shut down Device. Diesel engines shall have an over speed shut down device. It shall be arranged to shut down the engine at a speed approximately 20 percent above rated engine speed, and for manual reset. The position of the over speed shut down device shall be so supervised that the automatic engine controller will continue to show an overspeed trouble signal until the device is manually reset to normal operating position.

Sec. 86. Subsection (g) of Section 94.0702.8-2.7 of the Los Angeles Municipal Code is hereby amended to read:

(g) Pressure Regulator. Pressure regulators shall be designed to pass 120 percent of the required cooling water flow at maximum brake horse power of the engine while at 150 percent of the rated flow capacity of the fire pump.

Sec. 87. Section 94.0702.8-3.1 is hereby added to the Los Angeles Municipal Code to read:

SEC.94.0702.8-3.1. PUMP ROOM DRAINAGE.

Floor drains shall be installed as required by Section 94.0702.2-7 of this code.

Sec. 88. Subsection (e) of Section 94.0702.8-5 of the Los Angeles Municipal Code is hereby amended to read:

(e) Design. The exhaust system shall be designed to have a pressure loss not higher than the engine manufacturer recommends.

Sec. 89. Subsection (f) of Section 94.0702.8-5 of the Los Angeles Municipal Code is hereby repealed.

Sec. 90. Section 94.0702.11-1 of the Los Angeles Municipal Code is hereby repealed and Section 94.0702.11-2 is hereby added to read:

SEC. 94.0702.11-2. FIELD ACCEPTANCE TEST.

(a) General. Fire pump systems, both permanent and temporary, shall automatically discharge at least their required capacity at their required pressure, at least 150 percent of the required capacity at 65 percent of the required pressure and at shutoff, not over 140 percent of the required flow. They shall be tested at flows needed to show proper performance of the system, without overheating of bearings or of the pump driver.

(b) Controllers. Fire pumps shall be started at least 10 times automatically and 10 times manually and run for at least five minutes with the driver at full speed during each cycle. When emergency power is required, one-half of these cycles shall be run under emergency power.

(c) Emergency Governor. Emergency governor valves on steam turbines shall be tripped.

(d) Operation Check. Fire pumps shall start automatically when there is a flow that would occur with one outlet open or one sprinkler fused.

(e) Length of Test. Every fire pump shall be operated for at least one hour during testing.

Sec. 91. Section 94.0703.7-5 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0703.7-5. SIZE OF PIPE.

Piping shall be at least the size of the largest fire sprinkler riser that it serves. Fire hydrant mains shall be at least 6 inches.

Sec. 92. Section 94.0703.8-7 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0703.8-7. BACKFILLING AND TRENCHING.

Backfilling and trenching shall conform to the requirements for plumbing piping in Section 317 of the Uniform Plumbing Code of the edition adopted in Section 94.0601 of this code.

Sec. 93. Section 94.0704-1.10 is repealed and Section 94.0704.8-1.10 of the Los Angeles Municipal Code is hereby added to read:

SEC. 94.0704.8-1.10 CONNECTIONS FOR USES OTHER THAN FIRE PROTECTION (ALL TANKS)

Fire protection tanks shall not serve any other system except they may serve closed-loop piping arrangements using fire sprinkler piping to conduct water for heating and cooling as provided in Section 5-6 of NFPA 13.

Sec. 94. Section 94.0704.3-1.8 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0704.3-1.8. MARKING, WATER LEVEL INDICATOR (PRESSURE TANKS)

NOTE: For compressed air tanks, compressors and associated piping, contact the Elevator and Pressure Vessel Division.

The design water level shall be legibly and permanently marked next to the gauge glass for each pressure tank.

Sec. 95. Subdivision (2) of Subsection (b) of Section 94.0704.3-2 of the Los Angeles Municipal Code is hereby amended to read:

2. Valves. A horizontal bronze-seat check valve followed flow-wise by a renewable disc globe valve shall be installed in the water filling pipe near each pressure tank.

Sec. 96. Subdivision (3) of Subsection (c) of Section 94.0704.3-2 of the Los Angeles Municipal Code is hereby amended to read:

3. Valves. A horizontal bronze-seat check valve followed flow-wise by a renewable disc globe valve shall be installed in the air supply near each tank.

Sec. 97. Subsection (f) of Section 94.0704.3-2 of the Los Angeles Municipal Code is hereby amended to read:

(f) Emergency Drain. A minimum 1 1/2-inch drain shall be installed for each tank so as to allow each tank to be drained independently. A renewable disc

globe valve shall be installed in the drain line near the tank.

Sec. 98. Subsection (e) of Section 94.0704.8-2 of the Los Angeles Municipal Code is hereby added to read:

(e) Vortex Plate. When supplying a fire pump, a vortex plate shall be installed as required in Section 94.0702.2-9 of this code.

Sec. 99. Subsection (f) is hereby added to Section 94.0704.8-4 of the Los Angeles Municipal Code to read:

(f) Suction Tanks (only)

For suction (non-pressure tanks), the tank filling pipe shall discharge into the opposite half of the tank from the fire pump suction pipe inlet. When an over-the-top fill is installed, the outlet shall point downwards.

Sec. 100. Section 94.0704.8-7 is hereby added to the Los Angeles Municipal Code to read:

SEC. 94.0704.8-7. CONNECTIONS FOR OTHER THAN FIRE PROTECTION.

When connecting to closed-loop piping arrangements using fire sprinkler piping to conduct water for heating and cooling, all inlets and outlets that are installed to supply or withdraw heated or cooled water to or from the tank shall be above the required water level for fire protection. Piping for such inlets and outlets, that is within the tank shall be brass except steel pipe 3 1/2 inch and larger and cast-iron 6 inches and larger may be installed instead.

Sec. 101. Section 94.0801 of the Los Angeles Municipal Code is hereby amended to read:

SEC. 94.0801. GENERAL.

Chapters 1 through 5 of the 1988 edition of the Uniform Swimming Pool, Spa and Hot Tub Code published by the International Association of Plumbing and Mechanical Officials are adopted as part of this code with the exceptions, modifications and additions specifically provided in this division.

All installations shall be in conformity with the 1988 edition of the Uniform Swimming Pool, Spa and Hot Tub Code except as specified in this division.

Sec. 102. Table II of Section 94.0802.1 of the Los Angeles Municipal Code is hereby amended to read:

TABLE II - STANDARDS

MATERIALS AND PRODUCTS	STANDARDS*
Components for Circulating Systems	NSF 50-1985
Spa Outlet Fittings	ASME/ANSI A 112.19.8M-1987

*NSF - National Sanitation Foundation.
ASME/ANSI - American Society of Mechanical Engineers/
American National Standards Association.

Sec. 103. The City Clerk shall certify to the passage of this ordinance and cause the same to be published by posting for ten days in three public places in the City of Los Angeles, to wit: one copy on the bulletin board located at the Main Street entrance to the City Hall of the City of Los Angeles; one copy on the bulletin board located at the east entrance to the Hall of Justice in said City; and one copy on the bulletin board located at the Temple Street entrance to the Hall of Records in the said City.

I hereby certify that the foregoing ordinance was passed by the Council of the City of Los Angeles, at its meeting of NOV 21 1989

ELLAS MARTINEZ, City Clerk,

By *Ellas Martinez*

Deputy.

Approved NOV 21 1989

Approved as to Form and Legality

Tom Bradley
Mayor.

NOV 16 1989

JAMES K. HAHN, City Attorney,

By *Claudia McGee Henry*

CLAUDIA MCGEE HENRY

Senior Assistant City Attorney

File No. C.F. 88-0905

DECLARATION OF POSTING ORDINANCE

I, MELISSA M. HERNANDEZ, 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. 165311, entitled:

AN ORDINANCE AMENDING ARTICLE 4, CHAPTER II OF THE LOS ANGELES MUNICIPAL CODE - PLUMBING CODE

a copy of which is hereto attached, was finally adopted by the Council of the City of Los Angeles on NOVEMBER 7 19 89, and under direction of said Council and said City Clerk, pursuant to Section 31 of the Charter of the City of Los Angeles, on NOVEMBER 21 19 89

I posted a true copy of said ordinance at each of three public places located in the City of Los Angeles, California, as follows: one copy on the bulletin board at the Main Street entrance to City Hall of said City, one copy on the bulletin board at the east entrance to the Hall of Justice of the County of Los Angeles in said City, and one copy on the bulletin board at the Temple Street entrance to the Hall of Record of the County of Los Angeles in said City.

The copies of said ordinance posted as aforesaid were kept posted continuously and conspicuously for ten days, or more, beginning NOVEMBER 21 19 89 to and including JAN. 2 19 90.

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

Signed this 21st day of NOVEMBER, 19 89 at Los Angeles, California.

Melissa M. Hernandez
Deputy City Clerk

Effective Date: DEC. 31, 1989