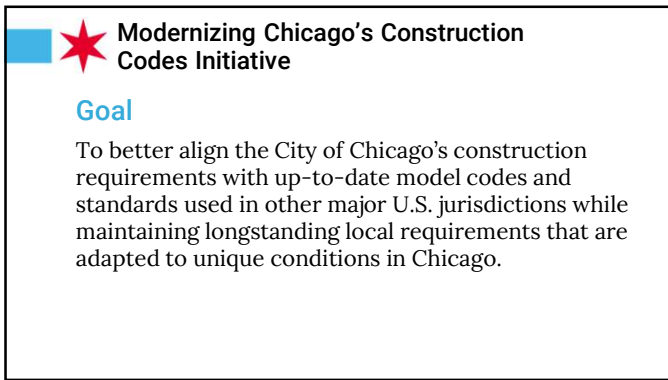




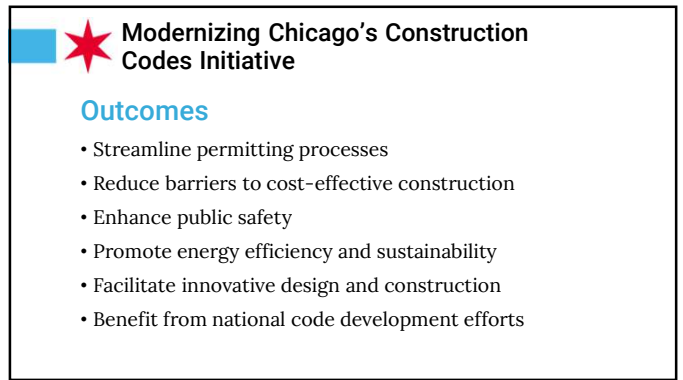
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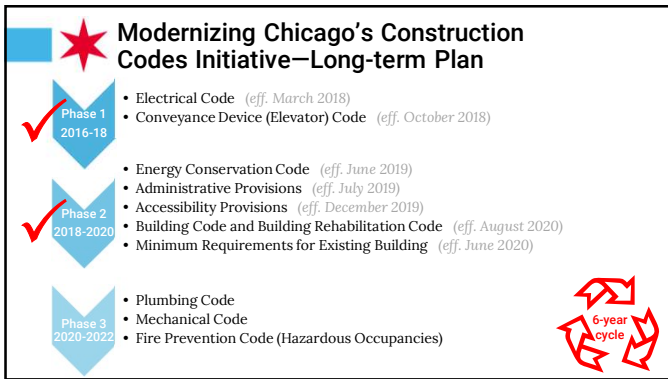
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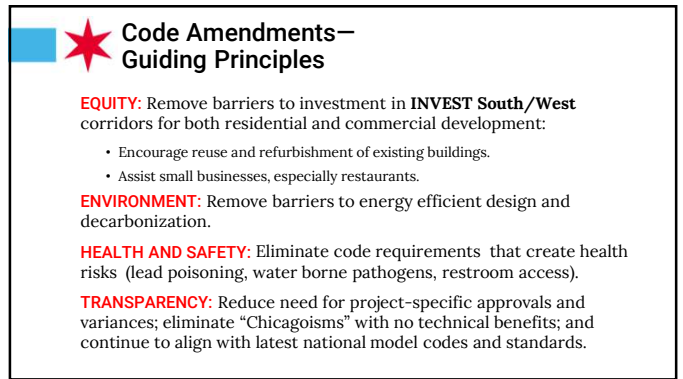
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9



10

Interim Amendments—Key Features

- September 2021:** 6 substantive interim amendments to 2003 Mechanical Code, plus coordination and cleanup.
- October 2021:** 9 substantive interim amendments to 2001 Plumbing Code, plus coordination and cleanup.
- Both:** streamline license requirements for related construction trades.
- Next:** Comprehensive Mechanical Code review in 2022, Fire Prevention Code and Plumbing Code to follow.



11

Overview
Plumbing Code
Interim Amendments

12

Interim Plumbing Code Amendments

- Expand allowance for PVC drain pipes for residential uses in low- and mid-rise buildings based on data from 4-year pilot program.
- Adopt provisions for optional all-gender restrooms.
- Align terminology in requirements for minimum plumbing fixtures with the 2019 Building Code and standardize requirements for very small occupancies.
- Align requirements for protecting sewer system from grease with national standards.
- Clarify requirements for water-conserving plumbing fixtures.

(continued)

13

Interim Plumbing Code Amendments


- Strengthen and clarify requirements to protect drinking water.
- Update standards for plumbing fixtures, consistent with Illinois Plumbing Code and 2021 *International Plumbing Code*.
- Align requirements for public swimming pools with 2014 Illinois Department of Public Health (IDPH) regulations.
- Streamline administration of trade licenses.

+ Improve coordination and consistency within *Chicago Construction Codes* while code modernization is ongoing.

14

Substantive Plumbing Code Amendments


- Expand recognition of PVC drain pipe for residential occupancies in low- and mid-rise buildings.
Allows PVC and other materials for residential occupancies in buildings up to 60 feet in building height. Includes building sewer. No change in materials for taller buildings and non-residential occupancies.



15

Substantive Plumbing Code Amendments

- Adopt provisions for optional all-gender restrooms.
Based on best practices from Vancouver (2014) and Denver (2019). Requires enhanced privacy in individual stalls. Will be among first in US to adopt clear requirements not requiring variance or "looking the other way."



16

Substantive Plumbing Code Amendments

3. Align terminology for minimum plumbing fixtures with 2019 Building Code and provide relief for very small occupancies.

Makes terminology consistent with 2019 Chicago Building Code and pre-2019 practices.

Provides relief for spaces with 30 or fewer occupants.



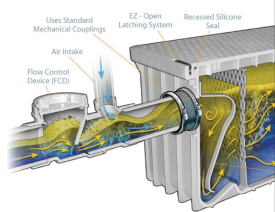
17

Substantive Plumbing Code Amendments

4. Align requirements for protecting sewer system from grease with national standards.

Modernizes requirements for commercial food establishments, consistent with current national standards.

Eliminates requirement for multi-family residential grease basins, which is no longer supported by building science.




18

Substantive Plumbing Code Amendments

5. Clarify requirements for water-conserving plumbing fixtures.

Clarifies inconsistent water usage requirements.

Consistent with 2016 amendment, all fixtures that are subject to US EPA's WaterSense standard will be required to meet this standard.




19

Substantive Plumbing Code Amendments

6. Strengthen and clarify requirements to protect drinking water.

Restates commitment to enforcing lead-free standards in new plumbing in clearer language.

Clarifies requirements for installation of copper water pipe and allowances for short lengths of flexible non-metallic hose at connection points.




20

Substantive Plumbing Code Amendments

7. Adopt the latest technical standards for plumbing fixture performance and safety.

Recognizes newer designs of faucets, toilets, showerheads, hot water heaters, steam generators, etc. without special approvals.



21

Substantive Plumbing Code Amendments

8. Align with state (IDPH) requirements for public swimming pool safety.

Defers to state for highly-specialized technical requirements for public swimming pools.

Eliminates overlapping and inconsistent regulations for private residential swimming pools.



22

Trade License Amendments

9. Streamline drainlayer license administration.

Consolidates responsibility for training, licensing, renewal and discipline in Department of Buildings.

Simplifies licensing provisions by not requiring highly-trained plumbers to obtain an additional license.

Transitions from calendar year license to rolling 365-day license. (2023)



23

ORDINANCE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

This ordinance is organized into 15 articles, as follows:

Article I: Amendments to Chapter 18-29, Article 1
 Article II: Amendments to Chapter 18-29, Article 2
 Article III: Amendments to Chapter 18-29, Article 3
 Article IV: Amendments to Chapter 18-29, Article 4
 Article V: Amendments to Chapter 18-29, Article 5
 Article VI: Amendments to Chapter 18-29, Article 6
 Article VII: Amendments to Chapter 18-29, Article 7
 Article VIII: Amendments to Chapter 18-29, Article 8
 Article IX: Amendments to Chapter 18-29, Article 9
 Article X: Amendments to Chapter 18-29, Article 10
 Article XI: Amendments to Chapter 18-29, Article 11
 Article XII: Amendments to Chapter 18-29, Article 12
 Article XIII: Amendments to Chapter 18-29, Article 13
 Article XIV: Coordinating Amendments
 Article XV: Implementation and Effective Date

Details

ARTICLE I: Chapter 18-29, ARTICLE 1

24

1 Administration

Ordinance p.1


25

Details Administration

- Plumbing work is subject to the general permitting requirements in Chapter 4 of the *Chicago Construction Codes Administrative Provisions*. (18-29-106)
- Plumbing work is subject to the licensing requirements for plumbers (and apprentices), plumbing contractors, and drainlayers. (18-29-107)
- Violations of the Plumbing Code are subject to the general enforcement and penalty provisions in Chapter 3 of the *Chicago Construction Codes Administrative Provisions*. (18-29-107)

26

Details Administration



27

2 Definitions

Ordinance p.2

28

★ Details Definitions

- Definitions are better coordinated across the Chicago Construction Codes. (18-29-201.3, 18-29-202)
- “Approved” does not have the same meaning as in the other titles of the Chicago Construction Codes. (18-29-202)
- Definitions to coordinate energy efficiency and water conservation: (18-29-202)
 - Circulating hot water system
 - Demand recirculation hot water system
 - Dual flush device

(continued)

29

★ Details Definitions

- Definitions related to grease: (18-29-202)
 - Flow control
 - Grease interceptor
 - Grease-laden waste
 - Grease removal device (GRD)
- Definitions of “private” and “public.” (18-29-202)
- Definitions related to product testing and certification. (18-29-202)

(continued)

30

★ Details Definitions

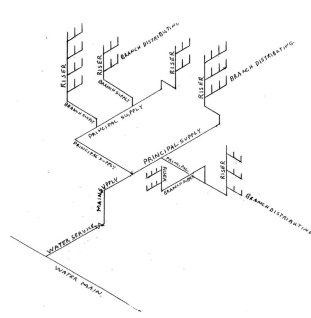
- Definitions of “toilet facility” and “single-user toilet room.” (18-29-202)
- Definition of “residential occupancy.” (18-29-202)
- Definitions related to fixtures and fixture fittings: (18-29-202)
 - Drinking fountain, water cooler, water dispenser
 - Emergency floor drain
 - Fill valve
 - Fixture fitting
 - Full-open valve
 - Group wash fixture
 - Water heater

(continued)

31

★ Details Definitions

- Definitions related to “water pipe”: (18-29-202)
 - Branch distributing pipe
 - Branch supply pipe
 - Distributing pipe
 - Main supply pipe
 - Principal supply pipe
 - Riser pipe
 - Service pipe



32

★

3 General Regulations

Ordinance p.8


33

★ Details General Regulations

- Clarify that plumbing is restricted in stair/exit enclosures and electrical rooms. (18-29-301.6)
- If conflicts between code and manufacturer’s requirements, stricter requirement applies. (18-29-301.7)
- Materials must be listed and labeled to ensure conformance with manufacturing standards. (18-29-303)
- Coordination to prevent damage to plumbing and damage to the building from plumbing work. (18-29-304, to -309, -315)
- Construction worker toilet facilities per OSHA. (18-29-311)


(continued)

34

 Details
General Regulations

- Equipment efficiencies (esp. water heaters) must meet requirements in *Energy Conservation Code*. (18-29-313)
- Condensate drainage/disposal for mechanical equipment must be per *Plumbing Code*. Must be handled on site or sent down drain, cannot drain to public way. (18-29-314)


35



4 Fixtures, Faucets and Fixture Fittings

Ordinance p.16

36

 Details
Fixtures, Faucets and Fixture Fittings

- Chicago Plumbing Code overrides Illinois Plumbing Code re: fixtures, faucets and fixture fittings. (18-29-401.6)
- Minimum plumbing fixture table terminology updated, requirements the same. New details in notes. (Table 18-29-403.1)
- New details for calculating and configuring toilet facilities. (18-29-403)
- Accessibility for plumbing fixtures/facilities per accessibility provisions of the *Building Code* and A117.1-2009. (18-29-404)
- Updated details for clearances and partitions. (18-29-405.3)

(continued)

37

 Details
Fixtures, Faucets and Fixture Fittings

- Updated requirements for automatic clothes washers. Waste may discharge through air break into laundry sink. (18-29-406)
- Updated requirements for dishwashing machines – commercial and residential. (18-29-409)
- Updated requirements for drinking fountains and allowances to substitute alternative sources of free drinking water. (18-29-410)
- Updated requirements for floor and trench drains. (18-29-412)
- Updated requirements for food waste disposers. (18-29-413)

(continued)


38

 Details
Fixtures, Faucets and Fixture Fittings

- Updated requirements for lavatories, including provisions for group wash fixtures and movable (height adjustable) lavatories. (18-29-416)
- Updated provision on urinal substitution. (18-29-419.2)
- Updated provision on water closet seats. (18-29-420.3)
- Updated requirements for floor and trench drains. (18-29-412)
- Updated requirements for food waste disposers. (18-29-413)
- Requirements for temporary toilet facilities now covered in Table. (Table 18-29-403.1)

(continued)

39

 Details
Fixtures, Faucets and Fixture Fittings

- Updated requirements for footbaths and pedicure baths. (18-29-423)
- Updated standards for faucets and fixture fittings. (18-29-424)
- Add standard for floor sinks. (18-29-426)

40

★ Minimum Plumbing Fixture and Toilet Facility Requirements

- Three types of toilet facilities
 - Single-user toilet room
 - Separate (male/female) facilities
 - Nonseparate facilities (all gender)
- Determine occupant load
 - Start with occupant load for egress
 - Separate rule for Mercantile (Group M) (18-29-403.1.1, ex. 3)
 - Reduce: nonsim. use or access ctrl.
- Determine occupancy and use for Table 18-29-403.1

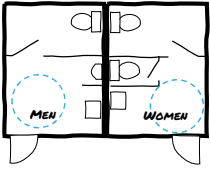



Coming Soon (continued)

41

★ Minimum Plumbing Fixture and Toilet Facility Requirements

- Separate facilities (male / female)
 - Fixtures / partitions
 - Accessibility (5% each type)
 - Signage
 - Door locks
 - Access / location

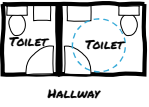




(continued)

42

★ Minimum Plumbing Fixture and Toilet Facility Requirements

- Single-user toilet rooms (Family / assisted use)
 - Fixtures
 - Accessibility (50% per cluster)
 - Signage
 - Enclosure (privacy)






(continued)

43

★ Minimum Plumbing Fixture and Toilet Facility Requirements

- Nonseparate facilities
 - Fixtures / partitions
 - Enhanced privacy at partitions
 - Accessibility (5% each type)
 - Signage
 - Door locks
 - Proximity to single-user toilet room
 - Urinals

(continued)

44

★ Minimum Plumbing Fixture and Toilet Facility Requirements

- Other issues
 - Urinal substitution in toilet facilities
 - Drinking fountains
 - Service sinks


45

★

5 Water Heaters


Ordinance p.36

46

 Details
Water Heaters

- Water heaters must be third-party certified and labeled as meeting acceptable standard. (18-29-501.5)
- Plastic pans allowed for non-gas-fired storage hot water heaters. (18-29-504.8)
- Installation of pan drain not required as part of water heater replacement work. (18-29-504.8.2)
- Tank insulation requirements consistent with *Energy Conservation Code*. (18-29-505.1)


47



6 Water Supply and Distribution

Ordinance p.37


48

 Details
Water Supply and Distribution

- Clarify roles and responsibilities of DOB and DWM. (Art. 6)
- Inspections and enforcement per *Chicago Construction Codes Administrative Provisions*. (18-29-601)
- Updated language regarding water services. (18-29-603)
 - Water service for domestic use sized per plumbing code.
 - CFD is responsible for sizing for fire protection, not DWM or DOB.
 - Separation language updated to match IEPA regulations. (recognition of PVC sewer pipe and “impractical” not “impossible”)
- Updated fixture flow rates. (18-29-604.4)

(continued)


49

 Details
Water Supply and Distribution

- Water-hammer arrestors (ASSE 10) instead of old-fashioned air chambers. (18-29-604.9)
- Supply pipe sizing language updated to clarify it is for domestic demand, not including fire demand. (18-29-604.10)
- Lead content language updated to include exact standard in the code instead of reference to federal regs. (18-29-605.3)
- Flexible water connectors allowed up to 30 inches for sink and lavatory faucets and water closets; can't be concealed in wall without access panel. (18-29-605.10)


(continued)

50

 Details
Water Supply and Distribution

- Additional methods recognized for joining copper pipe (incl. brazed, mechanical, threaded, welded) (18-29-605.14)
- Testing of distribution pipes no longer requires plumbing inspector to be present. (18-29-606.6)
- Hot water supply language completely updated. (18-29-607)

51



7 Sanitary Drainage

Ordinance p.53

52

★ Details Sanitary Drainage

- Updated materials for pipe. (18-29-702)
 - Additional materials recognized for areas of residential occupancy in building up to 60 feet in building height.
 - PVC also allowed for underground and building sewer.
 - No change to materials recognized in larger buildings and non-residential occupancies.
- If existing sanitary drainage is substantially modified, portions to be reused must be internally examined by the owner/contractor and DOB may disallow reuse. (18-29-703.4)
- Updated drainage fixture units (DFUs). (Table 18-29-709.1)

(continued)

53


★ Details Sanitary Drainage

- Exception for 3-inch stack with water closets modified. (18-29-710.1.2)
- Minimum size for underground/underfloor drainage reduced. (18-29-710.3)

54

★ 5 Steps for Checking Materials and Installation Requirements for DWV Pipe

- Determine building height.
- Identify areas of "residential occupancy."
- Identify recognized pipe material standards.
- Check for pipe protection and support (notes).
- Check for penetration firestopping (notes).

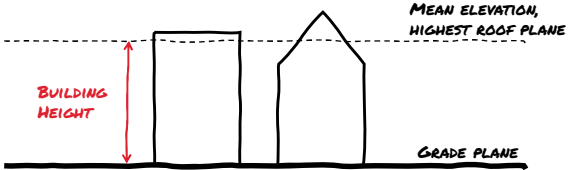


Coming Soon

55

★ Step 1 Building Height

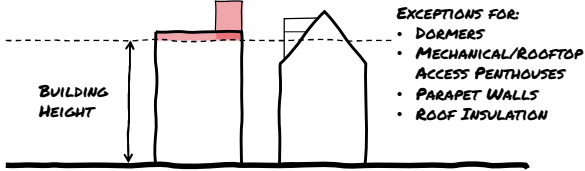
A broader range of plumbing materials is allowed in residential occupancies in buildings up to **60 feet** in building height.



56

★ Step 1 Building Height

Building height must be indicated on the construction documents for new construction. Building height can be determined by a design professional for rehab work.



EXCEPTIONS FOR:

- DORMERS
- MECHANICAL/ROOFTOP
- ACCESS PENTHOUSES
- PARAPET WALLS
- ROOF INSULATION

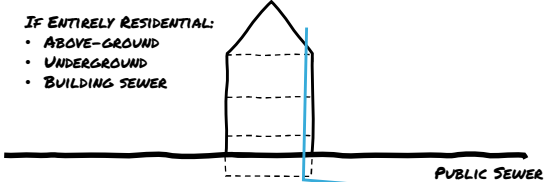
57

★ Step 2 Residential Occupancy

RESIDENTIAL OCCUPANCY. A building or portion of a building classified as a Group I-1 or R occupancy in accordance with the Chicago Building Code together with areas of the same building providing amenities primarily for residents and their guests.

IF ENTIRELY RESIDENTIAL:

- ABOVE-GROUND
- UNDERGROUND
- BUILDING SEWER



58

Step 2 Residential Occupancy

RESIDENTIAL OCCUPANCY. A building or portion of a building classified as a Group I-1 or R occupancy in accordance with the Chicago Building Code together with areas of the same building providing amenities primarily for residents and their guests.

OK:

- RESIDENT PARKING
- LOUNGE/Common AREA
- RESIDENT FITNESS CTR.
- RESIDENT STORAGE
- MANAGEMENT OFFICE
- RESIDENT SERVICES

NOT OK:

- PUBLIC PARKING
- PUBLIC GYM
- PUBLIC STORAGE
- RETAIL OPEN TO PUBLIC
- "GRAY" OR "WHITE" BOX

59

Step 2 Residential Occupancy

18-29-702.11 Mixed-occupancy buildings. Where the plumbing system in a mixed-occupancy building uses both combustible and noncombustible drainage and vent pipe materials . . . the noncombustible pipe material shall extend as least **4 inches** beyond the fire-resistance-rated assembly separating the residential occupancy from other areas of the building that are not eligible to use combustible pipe materials.

60

Option 1

No PVC pipe within 36" of occupancy separation

Key

- A PVC pipe
- B Noncombustible pipe
- C Fire-resistance-rated floor/ceiling assembly
- D Unrated wall (or no wall)
- E Fire-resistance-rated membrane
- F Fireblocking
- G Penetration firestop system
- H 36" min. above penetration

61

Option 2

PVC pipe protected with fire-resistance-rated construction equivalent to occupancy separation

Key

- A PVC pipe
- B Noncombustible pipe
- C Fire-resistance-rated floor/ceiling assembly
- D Unrated wall (or no wall)
- E Fire-resistance-rated membrane
- F Fireblocking
- G Penetration firestop system
- H 36" min. above penetration

62

Step 3 Recognized Materials

Table 18-29-702.1 Above-ground Drainage and Vent Pipe

| Material | Standard |
|--|--|
| Cast-iron pipe, hub and spigot ^a | ASTM A74; ASTM A888; CISPI 301 |
| Cast-iron pipe, hub and spigot ^b | |
| Cast-iron pipe, hubless ^a | |
| Copper or copper-alloy pipe | ASTM B42; ASTM B43; ASTM B302 |
| Copper or copper-alloy tubing (Type K, L or M) | ASTM B75; ASTM B88; ASTM B251; ASTM B306 |
| Copper or copper-alloy tubing (Type DWV) ^a | |
| Galvanized steel pipe | ASTM A53 |
| Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140), with a solid wall ^a | ASTM D2665; CSA B181.2 |
| Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D. and a solid wall ^a | ASTM D2949 |
| Stainless steel drainage systems, Types 304 and 316L | ASME A112.3.1 |

^a For SL 1 inch = 25.4 mm.
^b Limited to areas of residential occupancy in buildings with a building height not exceeding 60 feet (18.3 m).
^c Lead and cadmium pipes only.


63

Step 4 Pipe Support and Protection


Notes on drawings for:

- Protection against contact: 18-29-305.1
- Protection against freezing: 18-29-305.6
- Shield plates required: 18-29-305.8
- Pipe material exposed within a plenum: 18-29-307.6
- Hangar spacing: 18-29-308.5


64

 **Step 5 Penetration Firestopping**

When pipe (combustible or noncombustible) penetrates a wall, floor, or ceiling required to have a fire-resistance rating, that penetration must be protected to prevent the spread of fire in accordance with Section 714 of the Chicago Building Code.



65



8 Indirect/Special Waste

Ordinance p.66

66

 **Details Indirect/Special Waste**

- Requirements for indirect waste connections reworded. Retains exception from Illinois Plumbing Code. [\(18-29-802\)](#)
- Additional detail on requirements for air breaks and air gaps. [\(18-29-802.3\)](#)
- Additional detail on requirements for waste receptors. [\(18-29-802.4\)](#)


67



9 Vents


Ordinance p.69

68

 **Details Vents**

- Vents must terminate at least 7 feet above an occupiable rooftop within 10 feet horizontally. [\(18-29-904.1.2\)](#)
- Additional restrictions on sidewall vents near lot lines and below soffit vents. [\(18-29-904.1.4\)](#)
- Restrictions on vents in relation to openings adjusted. [\(18-29-904.5\)](#)
- Vent pipe sizing provisions revised. [\(18-29-916\)](#)


69



10 Traps, Separators and Interceptors


Ordinance p.74

70

 Details
Traps, Separators and Interceptors

- Reduce minimum size of basement floor drains. (18-29-1002.1.4)
- All requirements for interceptors/separators in code, no separate standards in DWM regulations. (18-29-1003.1)
- Interceptors/separators or AGRDs only required for commercial food preparation areas. (18-29-1003.3)
- Can be required by DWM for other types of buildings (except 1-6 unit residential) where the wastewater has a significant concentration of FOGs or the building sewer has a visible accumulation of FOGs. (18-29-1003.3.1)


71



11 Storm Drainage


Ordinance p.78

72

 Details
Storm Drainage

- Where downspouts disconnection allowed, cannot drain across property lines, including on to street/alley. (18-29-1101.2.1)
- When designing roof structure, assume all primary means of roof drainage are blocked. (18-29-1101.7)
- **Note:** design rain load updated to 4.03 in/hr in 2020 based on new data from the Illinois Water Survey (14B-16-1611.1)


73



12 Swimming Pools


Ordinance p.80

74

 Details
Swimming Pools

- Most swimming pools are “nonprivate” and primarily regulated by IDPH. (18-29-1201.1)
- Private residential swimming pools, greater than 4 feet deep, have Chicago-specific requirements. (18-29-1201.1,-1204)
- Requirements for nonprivate pools and bather prep facilities are largely aligned with 2014 IDPH regs. (18-29-1202,-1203)
- Private residential pools have Chicago-specific setback, security, and operational requirements. (18-29-1204)


75



13 Referenced Standards

Ordinance p.88

76

 Details
Referenced Standards

- As a transitional measure, may use referenced standard listed in Art. 13 of the *Chicago Plumbing Code* or newer edition listed in Ch. 15 of the 2021 *International Plumbing Code* or the Illinois Plumbing Code
- If a standard is not listed in Art. 13, refer to Ch. 15 of the 2021 *International Plumbing Code* for applicable edition


77



Coordinating Amendments


Ordinance p.89

78

 Details
Coordinating Amendments

- Drainlayer license records transferred from DWM to DOB
- Drainlayer license will transition to rolling renewal in 2023
- Plumbing contractor can do drainlayer work without paying additional license fee
- Fee waiver for owner-initiated lead service line replacement (up to \$3,100) available to owners of all buildings 1/1/2022.


79



Implementation and Effective Date


Ordinance p.94

80

 Details
Implementation and Effective Date

- Drainlayer changes effective **January 1, 2022**
- Other ordinance changes become optional **October 19, 2021** (when ordinance was signed by Mayor Lightfoot)
- Ordinance changes are mandatory for permit applications started on or after **March 1, 2022**
- Department rules and regulations which conflict with the changes made by the ordinance are superseded.

81



Thank you.

83