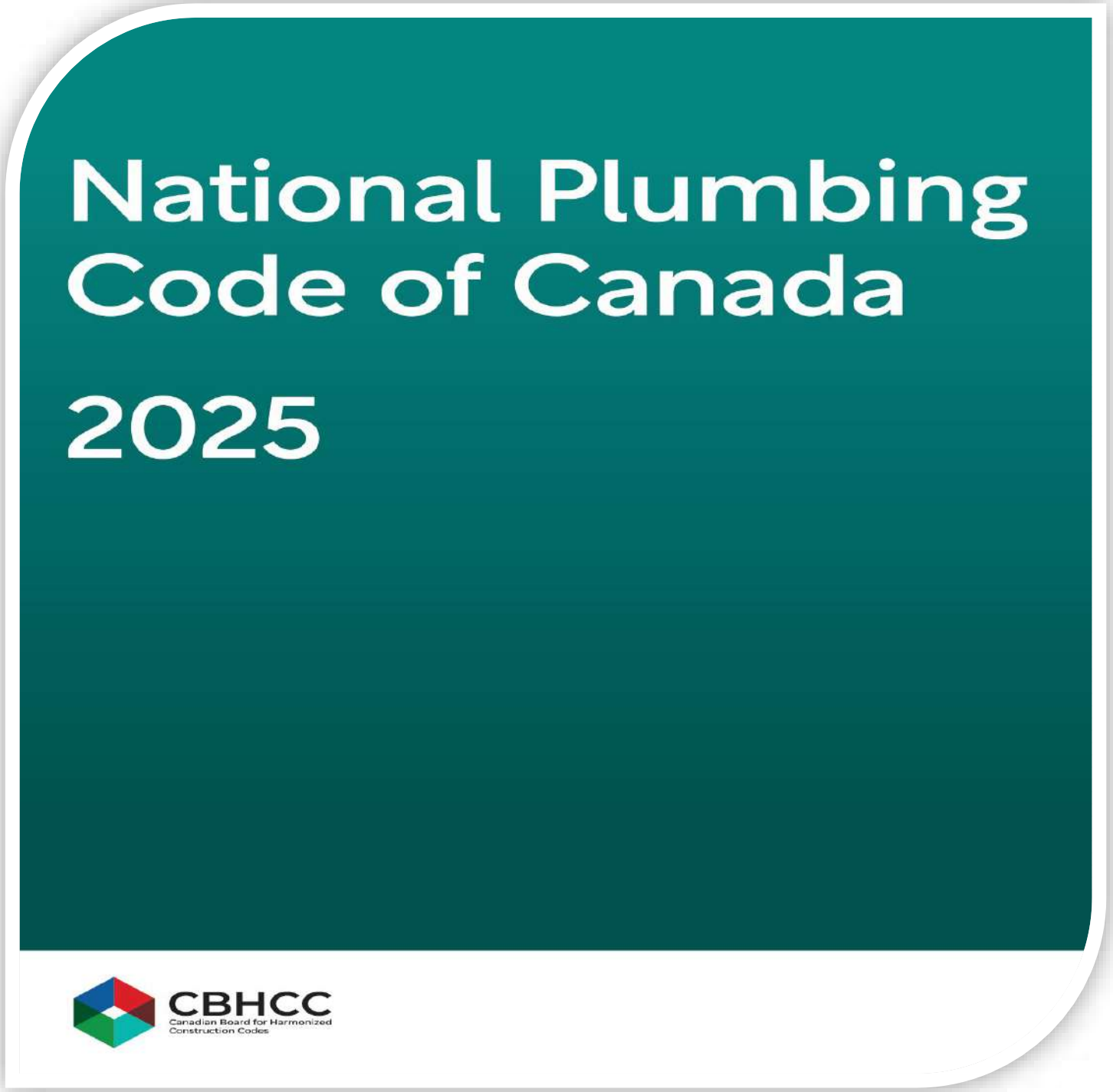
2025 Plumbing Code Updates

Presented by: Doug Vance



Agenda

01 Introduction

02 Preface & Division A

03 Section 1.4 – Terms and Abbreviations

05 Division B

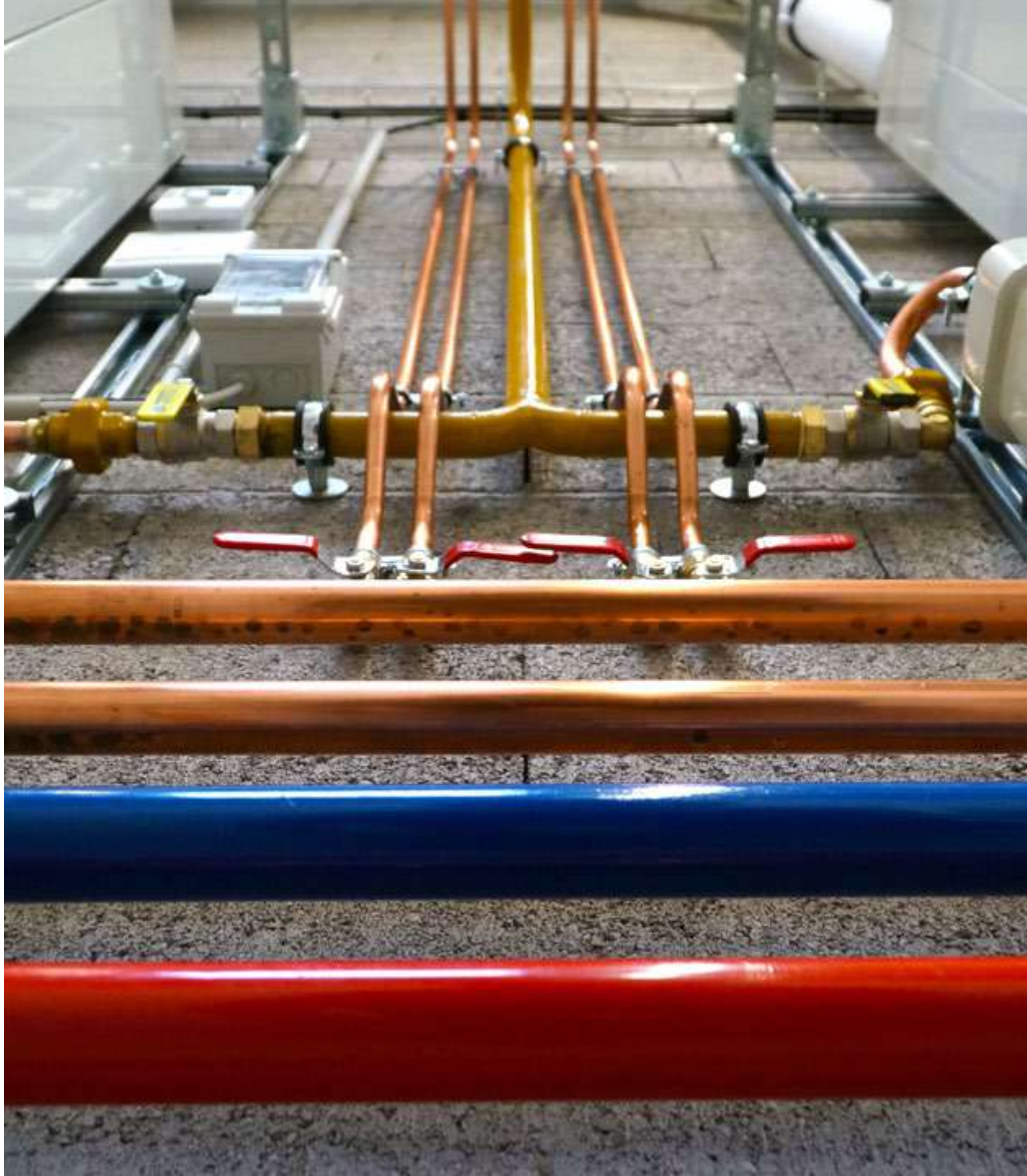
06 Table 1.3.1.2. – Referenced Documents

07 Part 2 (Changes & Deletions)

08 Wrap-up and Questions

Introduction

- This presentation is a comparison between 2020 (Original Release) and 2025 National Plumbing Code (NPC).
- As was the process for the 2024 BC Building Code (BCBC), it is likely The 2025 NPC will be adopted as Book II (Plumbing Systems), without changes.
- Since this is the intended action, this presentation should accurately reflect the requirements for plumbing systems in the 2027 BCBC.



Preface & Division A

Preface

- Significant changes have been made to the National Code Development Process
- This is especially relevant in regard to Code Development. The Canadian Board for Harmonized Construction Codes (CBHCC) has taken this over from the Canadian Commission on Building and Fire Codes (CCBFC)
- The Preface is worth reviewing for identifying these changes

Care

New definition added to the NPC from the NBC,

Definition:

- *Care** means the provision of services other than *treatment* by or through care facility management to residents who require these services because of cognitive, physical or behavioural limitations.

Care Occupancy (Group B, Division 3 - from NBC)

Replaces the term *care or detention occupancy*,

Definition:

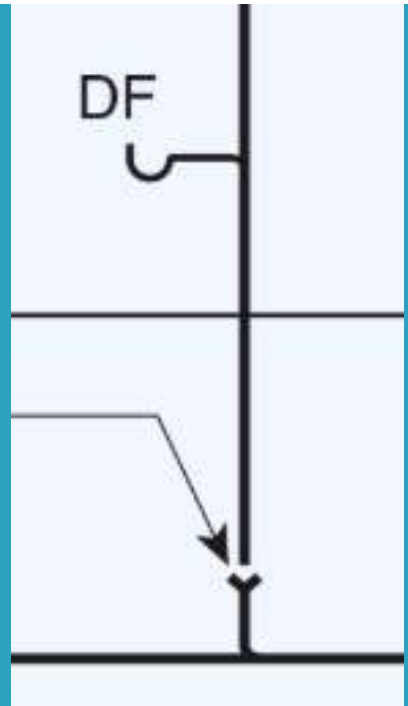
- *Care occupancy** (Group B, Division 3) means the *occupancy* or use of a *building* or part of a *building*, other than a *home-type care occupancy*, where *care* is provided to residents. (See Note A-1.4.1.2.(1).)

Clear-water waste

Revised as below,

Definition:

- *Clear-water waste* means waste water with impurity levels that will not be harmful to health and may include cooling water or condensate drainage from heating (including neutralized condensate from a combustion process), refrigeration and air-conditioning equipment and cooled condensate from steam heating systems, but does not include *storm water*. (See Note A-1.4.1.2.(1).)



Condensate Drainage System

New definition in the NPC,

- *Condensate drainage system* means a *drainage system* that conducts condensate.
- This adds a new type of system to the NPC and will require some time to review the implications.

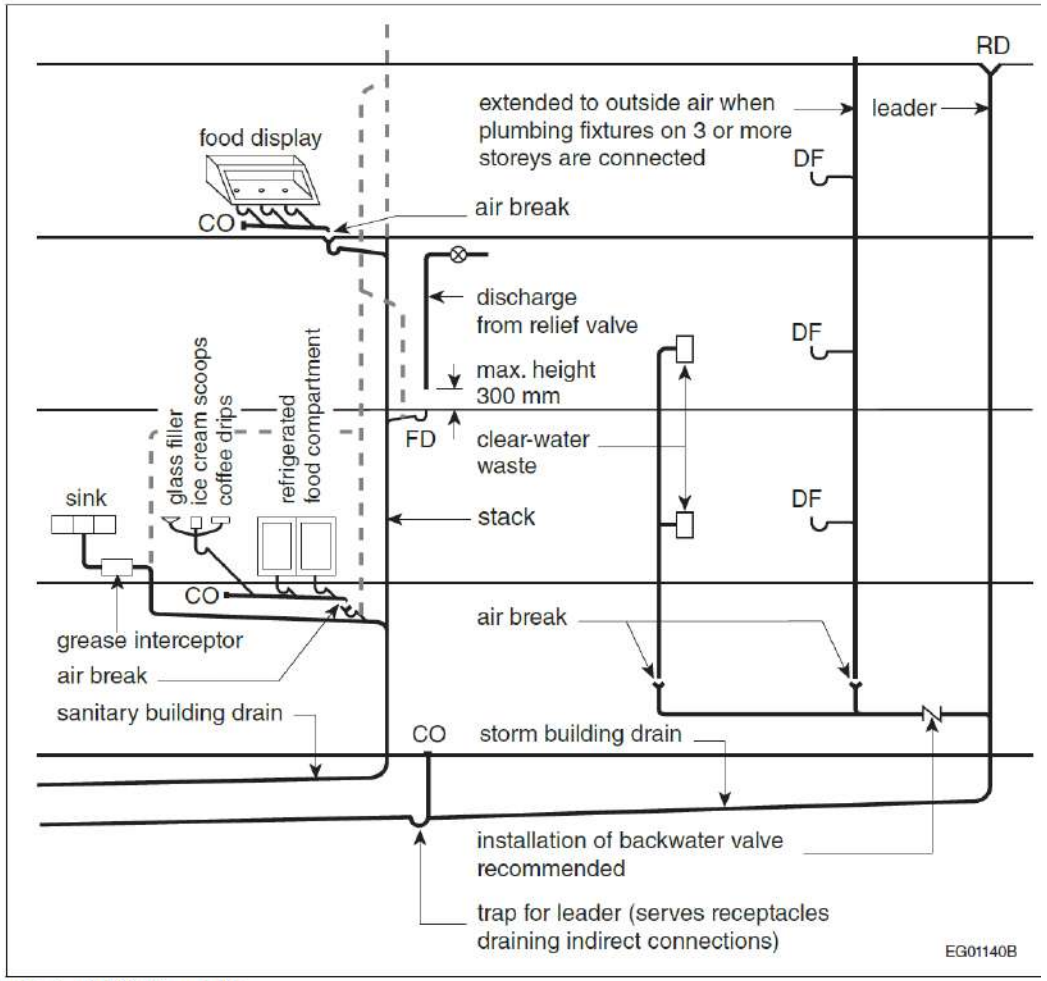


Figure A-2.4.2.1.(1)(a)(ii) and (2)
Indirect connections

Detention Occupancy (Group B, Division 1 - from NBC)

New definition in the NPC,

- *Detention occupancy** (Group B, Division 1) means the *occupancy* by persons who are restrained from or are incapable of evacuating to a safe location without the assistance of another person because of security measures not under their control.

Drainage System

Revised to include condensate drainage system,

- *Drainage system* means an assembly of pipes, fittings, *plumbing fixtures*, *traps* and appurtenances that is used to convey *sewage*, *clear-water waste* or *storm water* to a public sewer, a *private sewage disposal system* or a *condensate drainage system*, but does not include *subsoil drainage pipes*. (See Figure A-1.4.1.2.(1)-F in Note A-1.4.1.2.(1).)

Home-type Care Occupancy

New definition taken from the NBC,

Definition:

- *Home-type care occupancy* (Group B, Division 4)* means the *occupancy* or use of a *building* consisting of a single detached housekeeping unit where *care* is provided to residents and may include the living space of the caregiver and their family. (See Note A-1.4.1.2.(1).)

Macerating Toilet System

New defined term,

Definition:

- *Macerating toilet system* means a system comprised of a sump with a macerating pump and with connections for a water closet and other *plumbing fixtures*, which is designed to accept, grind and pump waste to a *sanitary drainage system*.

Plumbing Fixture

Replaces the term *fixture,*

Note that this will be changed in numerous locations throughout the NPC.

Definition:

- *Plumbing fixture* means a receptacle, appliance, apparatus or other device that discharges *sewage* or *clear-water waste*, and includes a floor drain.

Private Washroom

New defined term in the NPC,

Definition:

- *Private washroom* means a *washroom* containing *plumbing fixtures* intended for *private use*.

Public Use

Revised definition in the NPC,

Definition:

- *Public use* (as applying to the classification of *plumbing fixtures*) means *plumbing fixtures* that are not intended for *private use*.

Public Washroom

New defined term in the NPC,

Definition:

- *Public washroom* means a *washroom* containing *plumbing fixtures* intended for *public use*.

Treatment

New defined term from the NBC,

Definition:

- *Treatment** means the provision of medical or other health-related intervention to persons, where the administration or lack of administration of these interventions may render them incapable of evacuating to a safe location without the assistance of another person. (See Note A-1.4.1.2.(1).)

Treatment Occupancy

New defined term from the NBC,

Definition:

- *Treatment occupancy** (Group B, Division 2) means the *occupancy* or use of a *building* or part thereof for the provision of *treatment*, and where overnight accommodation is available to facilitate the *treatment*. (See Note A-1.4.1.2.(1).)

Washroom

New defined term in the NPC,

Definition:

- *Washroom* means a room containing at least one water closet and at least one lavatory or similar *plumbing fixture* for hand-washing. (See Note A-1.4.1.2.(1).)

Article 1.4.2.1.
Symbols and Other Abbreviations

- Lpf changed to LPF (litre(s) per flush
- New abbreviation LPM (litre(s) per minute)
- New abbreviation PS (pipe stiffness)
- New abbreviation SDR (standard dimension ratio)

1.4.2. Symbols and Other Abbreviations

1.4.2.1. Symbols and Other Abbreviations

1) The symbols and other abbreviations in this Code shall have the meanings assigned to them in this Article and in Article 1.3.2.1. of Division B.

ABS	acrylonitrile-butadiene-styrene
AL	aluminum
cm^2	square centimetre(s)
CPVC	chlorinated polyvinyl chloride
°	degree(s)
°C	degree(s) Celsius
diam.	diameter
DWV	drain, waste and vent
h	hour(s)
in.	inch(es)
kg/m^3	kilogram(s) per cubic metre
kPa	kilopascal(s)
L	litre(s)
LPF	litre(s) per flush

Notes to Part 1
A-1.4.1.2.(1) Defined Terms

Commentary added on the following;

- Care Occupancy
- Home-type Care Occupancy
- Treatment
- Treatment Occupancy
- Washroom

Division B

Section 1.3
Referenced Documents and Organizations

Table 1.3.1.2.
Documents Referenced in the National Plumbing Code of Canada 2025(1)
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number(2)	Title of Document	Code Reference
ANSI/CSA	ANSI Z21.22-2015/CSA 4.4-2015	Relief Valves For Hot Water Supply Systems	2.2.10.11.(1)
ARCSA/ASPE/ANSI	63-2013	Rainwater Catchment Systems	A-2.7.2.4.(1)
ASHRAE	2019	ASHRAE Handbook – HVAC Applications	A-2.6.3.1.(2)
ASHRAE	2021	ASHRAE Handbook – Fundamentals	A-2.6.3.1.(2)
ASME/CSA	ASME A112.3.4-2018/CSA B45.9-18	Macerating Toilet Systems and Waste-Pumping Systems for Plumbing Fixtures	2.2.2.2.(1)
ASME/CSA	ASME A112.4.2-2021/CSA B45.16:21	Personal hygiene devices for water closets	2.2.2.2.(1)
ASME/CSA	ASME A112.4.14-2022/CSA B125.14:22	Manually or automatically operated valves for use in plumbing systems	2.2.10.6.(7)
ASME/CSA	ASME A112.18.1-2018/CSA B125.1-18	Plumbing Supply Fittings	2.2.10.6.(1) 2.2.10.7.(1)
ASME/CSA	ASME A112.18.2-2020/CSA B125.2:20	Plumbing Waste Fittings	2.2.3.3.(1) 2.2.10.6.(6)
ASME/CSA	ASME A112.18.6-2017/CSA B125.6-17	Flexible water connectors	2.2.10.19.(1)
ASME/CSA	ASME A112.19.1-2024/CSA B45.2:24	Enamelled cast iron and enamelled steel plumbing fixtures	2.2.2.2.(1)
ASME/CSA	ASME A112.19.2-2018/CSA B45.1-18	Ceramic Plumbing Fixtures	2.2.2.2.(1)
ASME/CSA	ASME A112.19.3-2022/CSA B45.4:22	Stainless steel plumbing fixtures	2.2.2.2.(1)
ASME/CSA	ASME A112.19.7-2020/CSA B45.10:20	Hydromassage bathtub systems	2.2.2.2.(1)
ASME	A112.6.1M-1997	Floor-Affixed Supports for Off-The-Floor Plumbing Fixtures for Public Use	2.2.2.6.(1)
ASME	B16.3-2021	Malleable Iron Threaded Fittings: Classes 150 and 300	2.2.6.6.(1) A-2.2.5. to 2.2.8.
ASME	B16.4-2021	Gray Iron Threaded Fittings: Classes 125 and 250	2.2.6.5.(1) A-2.2.5. to 2.2.8.
ASME	B16.5-2020	Pipe Flanges and Flanged Fittings: NPS ½ through NPS 24 Metric/Inch Standard	2.2.6.12.(1)

Table 1.3.1.2.

Article 1.3.2.1.
Abbreviations of Proper Names

- Added Canadian Board for Harmonized Construction Codes (CBHCC)
- ULC Standards now UL Solutions in Canada

CAN	National Standard of Canada designation (https://scc-ccn.ca)
CBHCC	Canadian Board for Harmonized Construction Codes (www.cbhcc-cchcc.ca)
CCBFC	Canadian Commission on Building and Fire Codes (see CBHCC)
CSA	CSA Group (www.csagroup.org)
IAPMO	International Association of Plumbing and Mechanical Officials (www.iapmo.org)
ICC	International Code Council (www.iccsafe.org)
NBC	National Building Code of Canada 2025
NFC	National Fire Code of Canada 2025
NFPA	National Fire Protection Association (www.nfpa.org)
NIST	National Institute of Standards and Technology (www.nist.gov)
NPC	National Plumbing Code of Canada 2025
NRC	National Research Council of Canada (https://nrc.canada.ca)
NSF	National Sanitation Foundation International (www.nsf.org)
TIAC	Thermal Insulation Association of Canada (www.tiac.ca)
ULC	UL Solutions in Canada (formerly ULC Standards) (https://canada.ul.com)

2.2.1.3.(1)(b)

Added the word “permanently”,

(1) Every length of pipe and every fitting shall

(a) have cast, stamped or indelibly marked on it the maker's name or mark and the weight or class or quality of the product, and

(b) be marked **permanently** in accordance with the relevant standard.

2.2.1.3.(3)

New requirement for UG *sanitary* and *storm drainage systems* to be labeled prior to covering,

(3) Underground *sanitary drainage systems* and *storm drainage systems* shall be labeled according to their application before being covered.

2.2.2.5.(1)

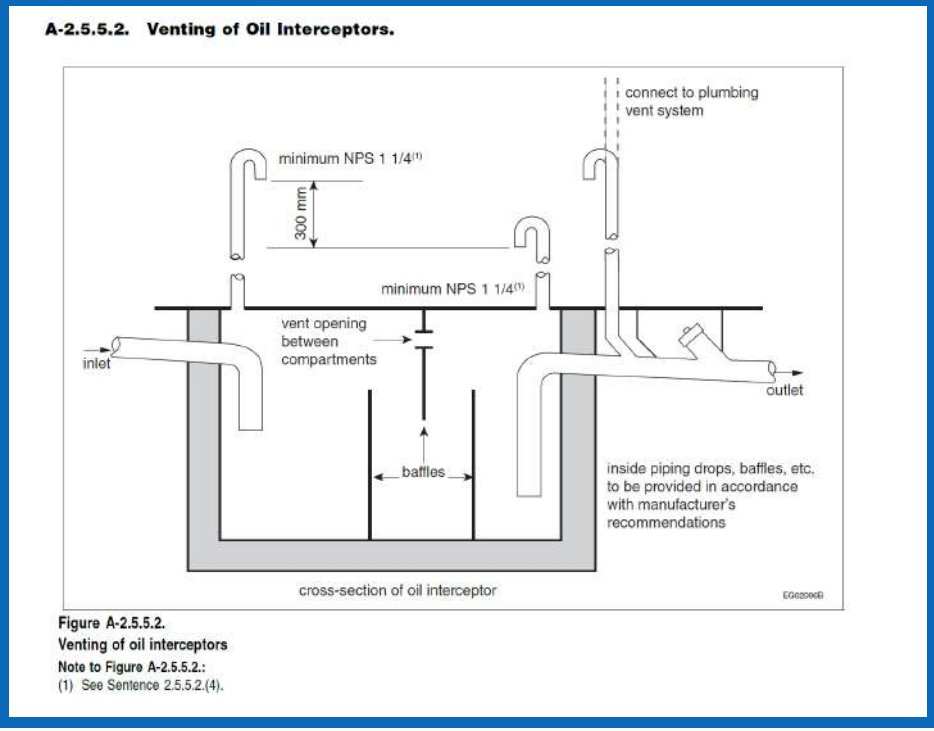
Wording revised from a washroom for *“public use”* to *“public washroom”,*

(1) Where a water closet is installed in a *public washroom*, it shall be of the elongated type and provided with a seat of the open front type.

2.2.2.6.(1)

New referenced Standard for water closet wall carriers attached to the floor,

(1) Where the wall carrier referred to in Sentence 2.3.3.8.(5) is attached to the floor, the wall carrier shall conform to ASME A112.6.1M, “Floor-Affixed Supports for Off-The-Floor Plumbing Fixtures for Public Use.”



2.2.3.2.(4)

New referenced Standard for oil interceptors,

(4) Oil *interceptors* intended for the collection and separation of non-soluble, non-emulsified petroleum and allied petroleum products shall conform to CAN/ULC-S656, “Standard for Oil-Water Separators.”

2.2.6.8.(1)

Revised title of referenced Standard for corrugated steel pipe,

(1) Corrugated steel pipe and couplings shall conform to CSA G401, “Corrugated steel pipe and buried structures.”

2.2.6.10.(1)(a)

Revised title of referenced Standard for stainless steel pipe,

(1) Stainless steel pipe shall conform to

(a) ASME B36.19, “Welded and Seamless Wrought Stainless Steel Pipe,” and

2.2.6.10. to 2.2.6.14.

New Requirement for stainless steel pipe, tube, butt weld fittings, flanges, and threaded fittings used in a *potable water system* to conform to NSF 61,

(2) Stainless steel pipe used in a *potable water system* shall conform to NSF/ANSI/CAN 61, “Drinking Water System Components - Health Effects.”

2.2.7.1. to 2.2.7.4.

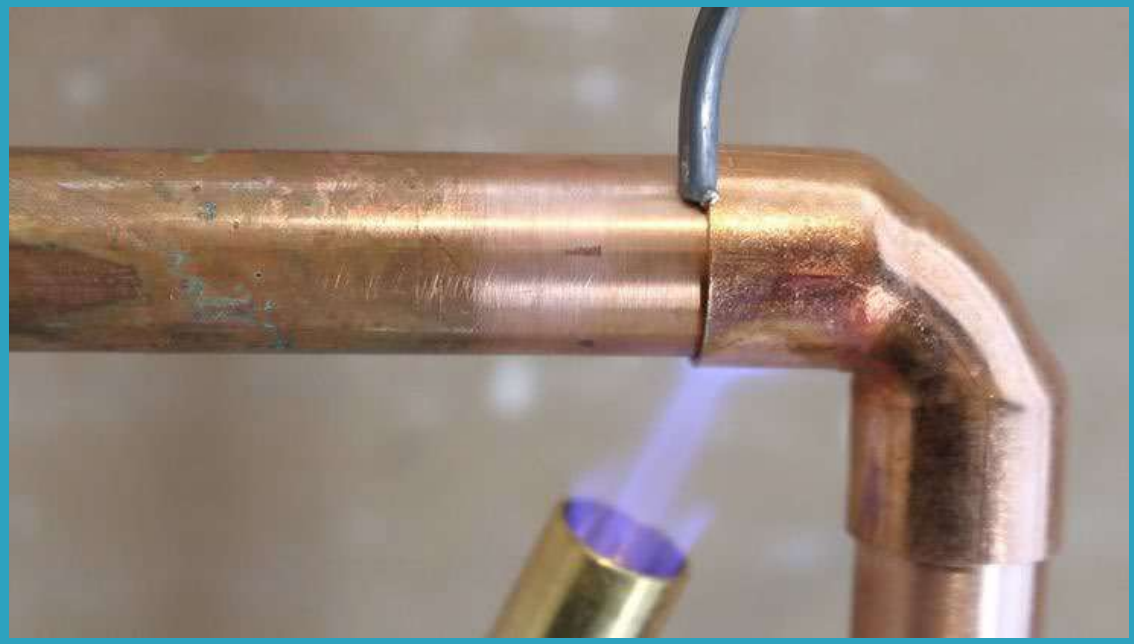
New requirement for copper and brass pipe, brass or bronze pipe flanges or flanged fittings, brass or bronze threaded fittings and copper tube used in a *potable water system* to conform to NSF 61,

(3) Copper and brass pipe used in a *potable water system* shall conform to NSF/ANSI/CAN 61, “Drinking Water System Components - Health Effects.”

Table 2.2.7.6.(1) & (2)

Sentences revised to read “in a water system” not “for water systems”,

(1) Except as provided in Sentence (2), solder-joint fittings used **in a *water system*** shall conform to



2.2.7.6.(3)

New requirement for solder joint fittings used in a *potable water system* to conform to NSF 61,

(3) Solder-joint fittings used in a *potable water system* shall conform to NSF/ANSI/CAN 61, “Drinking Water System Components - Health Effects.”

Title of Article 2.2.7.7.

Title revised to “Flared-Joint Fittings used in a Copper Water System” instead of “for Copper Water Systems”

2.2.7.7.(1) & (2)

Sentences revised to read “Flared-joint fittings used in a copper tube *water system”* instead of “for a copper tube *water system*”,

(1) Flared-joint fittings used in a copper tube *water system* shall conform to ASME B16.26, “Cast Copper Alloy Fittings for Flared Copper Tubes.”

2.2.7.7.(3)

New requirement for flared-joint fittings to conform to NSF 61,

(3) Flared-joint fittings used in a copper tube *potable water system* shall conform to NSF/ANSI/CAN 61, “Drinking Water System Components - Health Effects.”

2.2.9.2.(3)

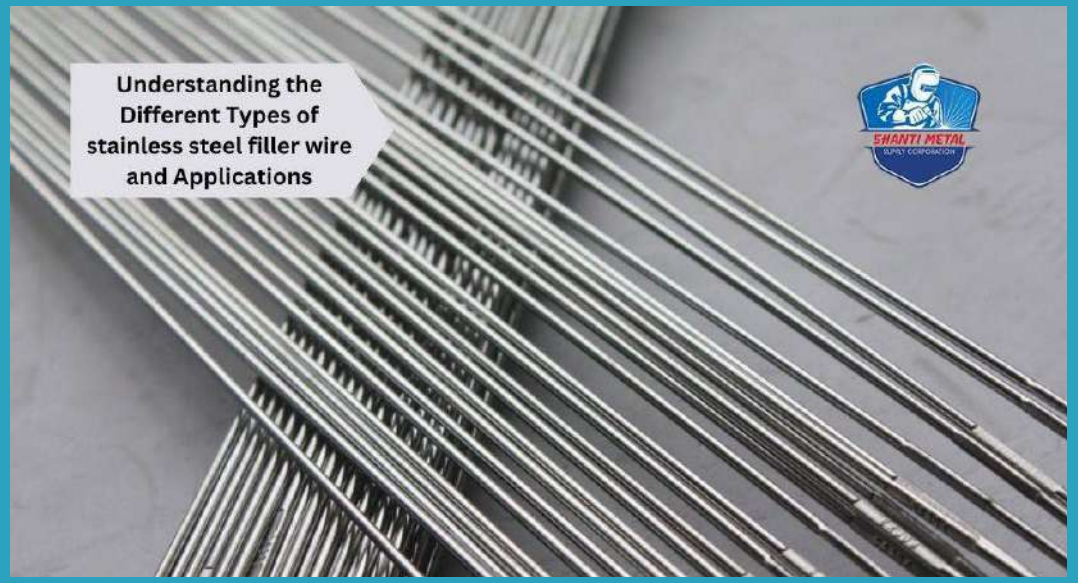
New requirement for solders and fluxes used in a *potable water system* to conform to NSF 61,

(3) Solders and fluxes used in a *potable water system* shall conform to NSF/ANSI/CAN 61, “Drinking Water System Components - Health Effects.”

2.2.9.3.(1)

New requirement for filler metals for stainless steel welded joints in a *potable water system* to conform to NSF 61,

(1) Filler metals for stainless steel welded joints used in a *potable water system* shall conform to NSF/ANSI/CAN 61, “DrinkingWater System Components - Health Effects.”



2.2.10.4.(2)

New referenced Standard for plain-end mechanical couplings for pressure applications,

(2) Plain-end-type mechanical couplings for pressure applications shall conform to ANSI/AWWA C227, “Bolted, Split-Sleeve Couplings.”

2.2.10.6.(7)

Revised title of referenced Standard to “Manually or automatically operated valves for use in a plumbing systems”, used to read “Manually operated” only,

(7) Manually operated valves of *NPS* 4 or less for use in *plumbing systems* shall conform to ASME A112.4.14/CSA B125.14, “Manually or automatically operated valves for use in plumbing systems.” (See Note A-2.2.10.6.(7).)

2.2.10.12.(1)

Revised referenced Standard for pressure reducing valves to ASSE 1003/CSA B356,

(1) Direct-acting water-pressure-reducing valves for domestic water supply systems shall conform to ASSE 1003/CSA B356, “Water pressure reducing valves for potable water distribution systems.”

2.2.10.18.(1)

New requirement for storage tanks used in a *potable water system* to conform to NSF 61,

(1) Except for tank-type water closets and *storage-type service water heaters*, where storage tanks are used in a *potable water system*, they shall conform to NSF/ANSI/CAN 61, “Drinking Water System Components - Health Effects.”

2.3.2.4.(1)

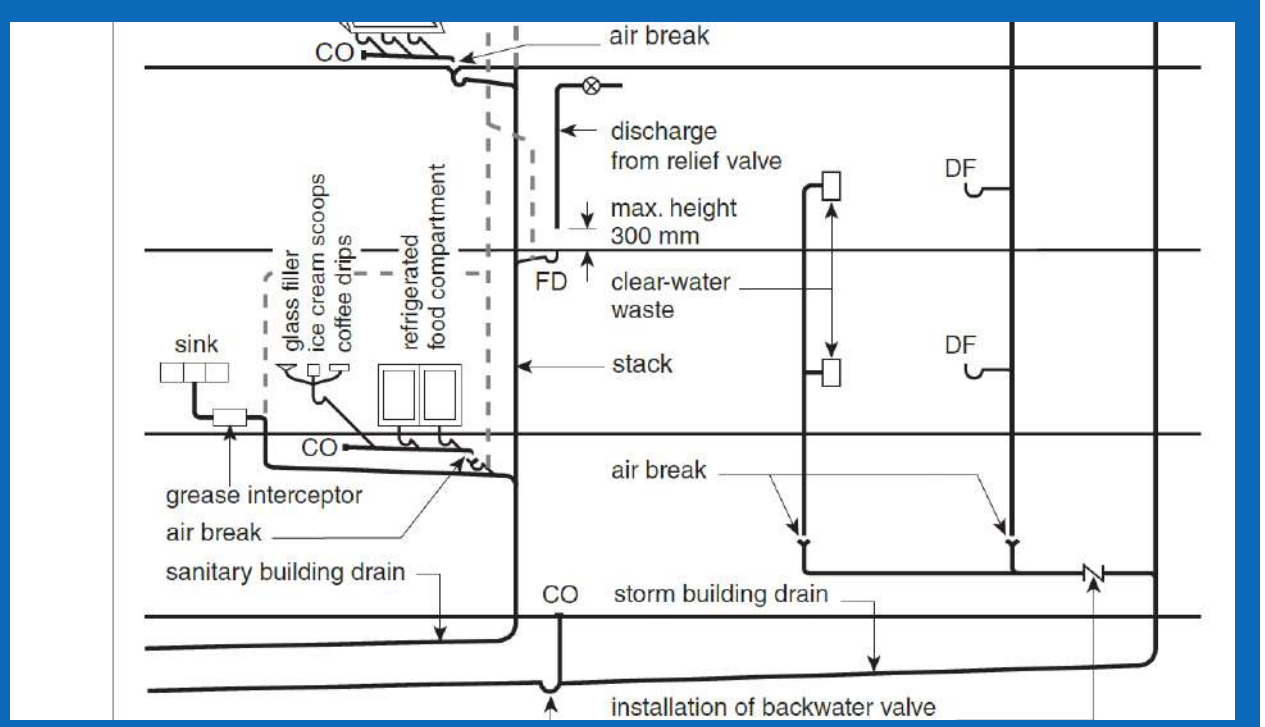
Title of referenced Standard for soldered joints edited to “Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings.” from “Standard Specification”,

(1) Soldered joints shall be made in accordance with ASTM B828, “Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings.”

Table 2.3.4.5.

Cellular core PVC and ABS added to Table and maximum spacing for larger diameter solid wall PVC pipe added to Table.

PE-RT tube	0.8	None
PP-R plastic pipe	1.0	At the end of *branches* and at changes in direction and elevation
Solid wall PVC pipe		
• diameter < *NPS* 4	1.2	At the end of *branches* or *fixture drains* and at changes in direction and elevation
• diameter ≥ *NPS* 4 and < *NPS* 12	2.0	
• diameter ≥ *NPS* 12	3.0	
Stainless steel pipe		
• diameter ≥ *NPS* 1	3.0	None
• diameter < *NPS* 1	2.5	
Stainless steel tube		



2.4.1.1.(1)

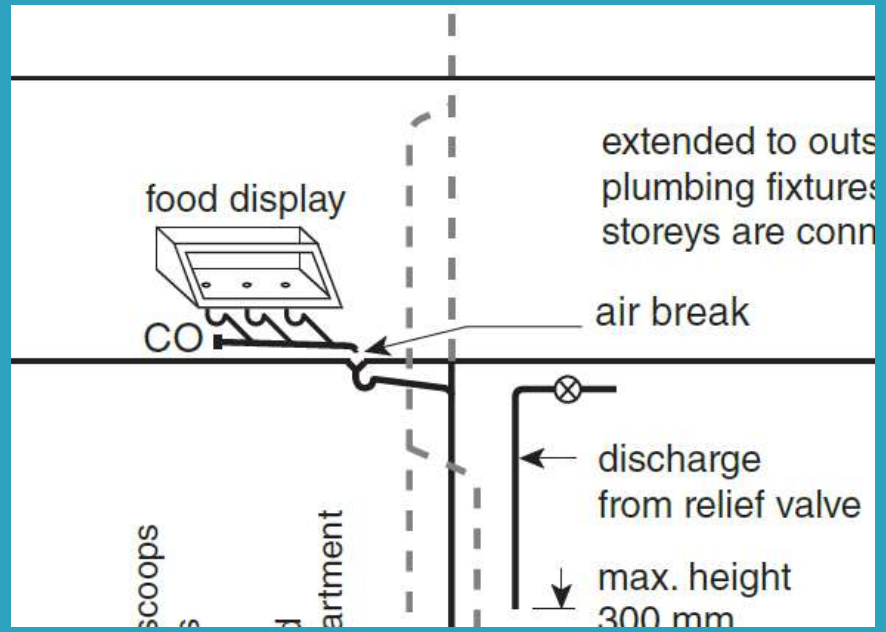
Condensate drainage systems added to Sentence.

(1) This Section applies to *sanitary drainage systems*, *storm drainage systems*, *condensate drainage systems*, *combined building drains* or *combined building sewers*.

2.4.2.1.(1)

Revised wording to add exception for Sentence (2),

(1) Except as provided in Sentence (2), *plumbing fixtures* shall be *directly connected* to a *sanitary drainage system*, except that



2.4.2.1.(1)(b)

Condensate drainage systems serving HVAC systems added to Clause,

(b) drainage pans on heating/cooling units and *condensate drainage systems* serving heating, ventilating and air-conditioning systems are permitted to be connected to a *storm drainage system*, provided that where the system is subject to *backflow*, a *backwater valve* is installed,

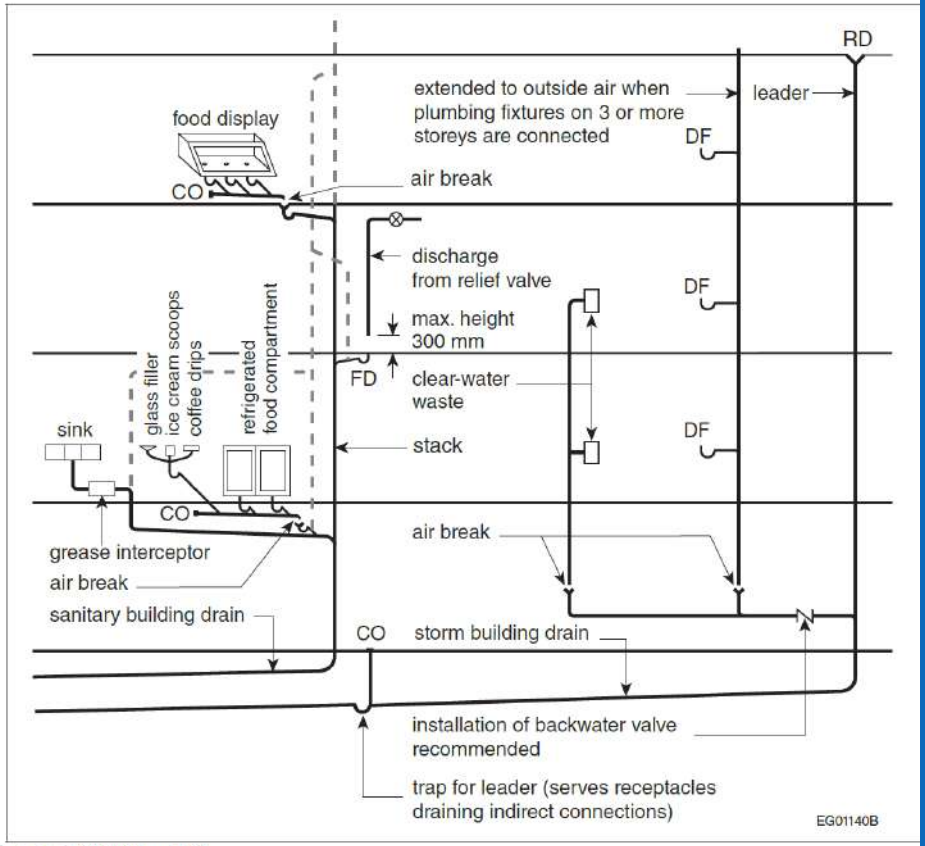
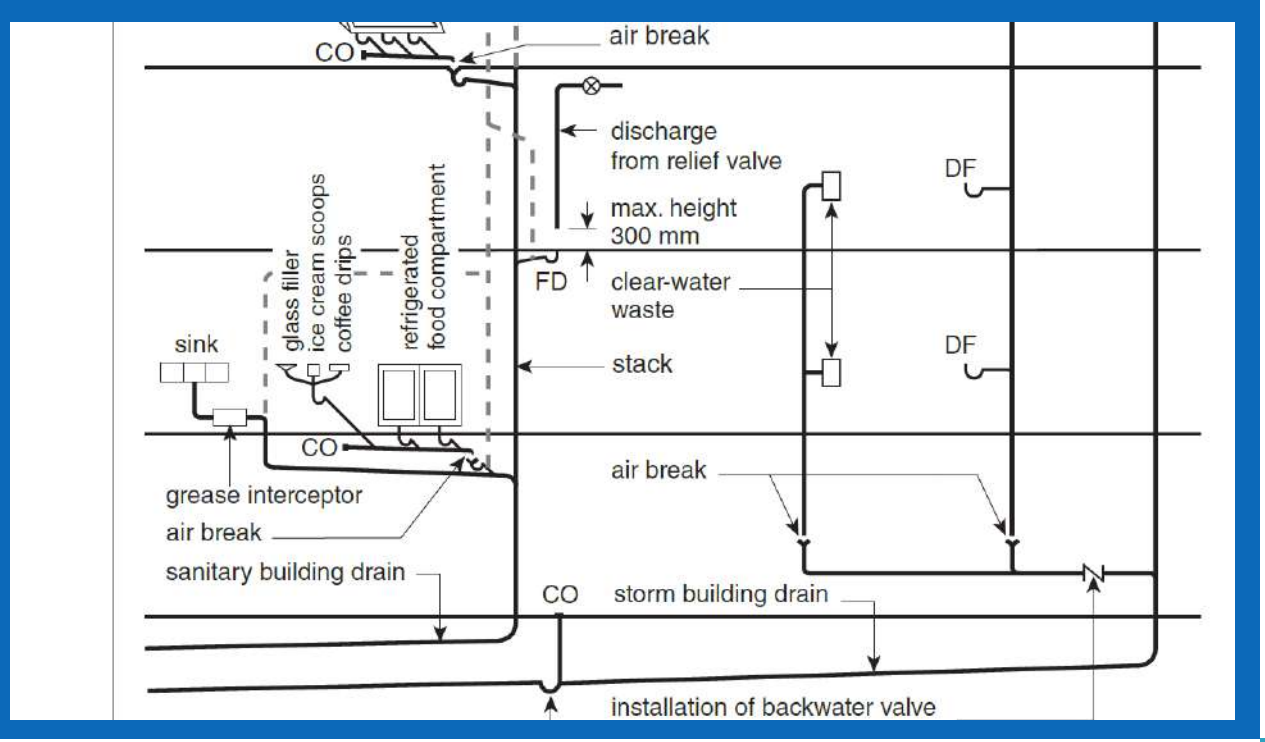


Figure A-2.4.2.1.(1)(a)(ii) and (2)
Indirect connections



2.4.2.1.(2)

This is a new Sentence that was previously Clause 2.4.2.1.(1)(e) in the 2020 NPC. In addition, two new clauses have been added,

(2) Except as provided in Sentences 2.4.2.3.(2) and (3), the following devices shall be *indirectly connected* to a *drainage system*:

2.4.2.1.(2)

Two new clauses have been added, as below, and reference to Note changed to reflect new Sentence (2), from (e)(vi),

(g) a device that produces *clear-water waste* as condensate, and

(h) a device that produces condensate from a combustion process.

(See Note A-2.4.2.1.(1)(a)(ii) and (2).)

A-2.4.2.1.(1)(a)(ii) and (2) Indirect Connections. See Sentence 2.4.5.1.(4) for trapping requirements for indirectly connected plumbing fixtures.

See Sentence 2.4.7.1.(9) for cleanouts on drip pipes for food receptacles or display cases.

A-2.4.2.1.(3) Sanitary Drainage Pipe Connections.

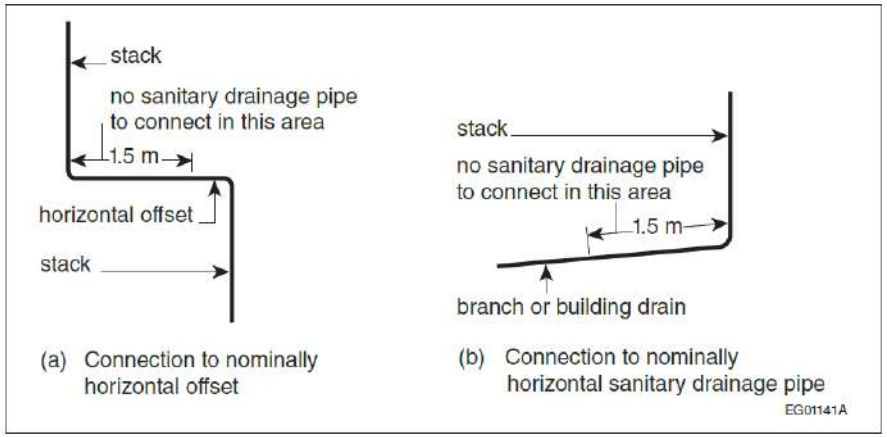


Figure A-2.4.2.1.(3)
Sanitary drainage pipe connections

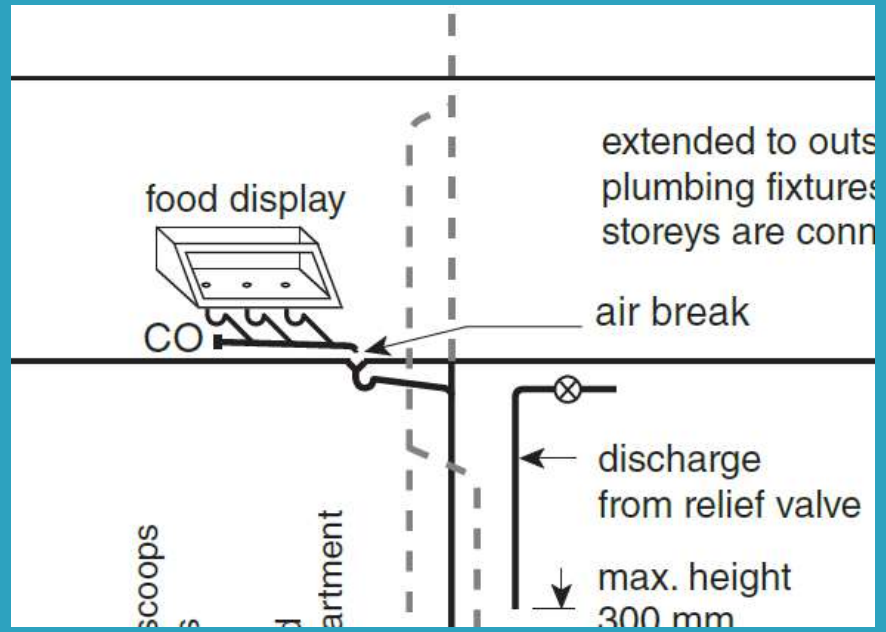
2.4.2.1.(3), (4), (5) and (6)

Sentences renumbered only and reference to Notes renumbered to match.

2.4.2.3.(1)

Revised to reference new Sentence 2..4.2.1.(2).

(1) Two or more *fixture outlet pipes* that serve outlets from a single *plumbing fixture* that is listed in **Sentence 2.4.2.1.(2)** are permitted to be *directly connected* to a *branch* that
a) has a *nominal pipe size* of not less than *NPS* 1¼, and
b) is terminated above the *flood level rim* of a *directly connected plumbing fixture* to form an *air break*.



A-2.4.2.1.(1)(a)(ii) and (2) Indirect Connections. See Sentence 2.4.5.1.(4) for trapping requirements for indirectly connected plumbing fixtures.

See Sentence 2.4.7.1.(9) for cleanouts on drip pipes for food receptacles or display cases.

2.4.2.3.(2) and (3)

Revised to reference new Sentence 2.4.2.1.(2).

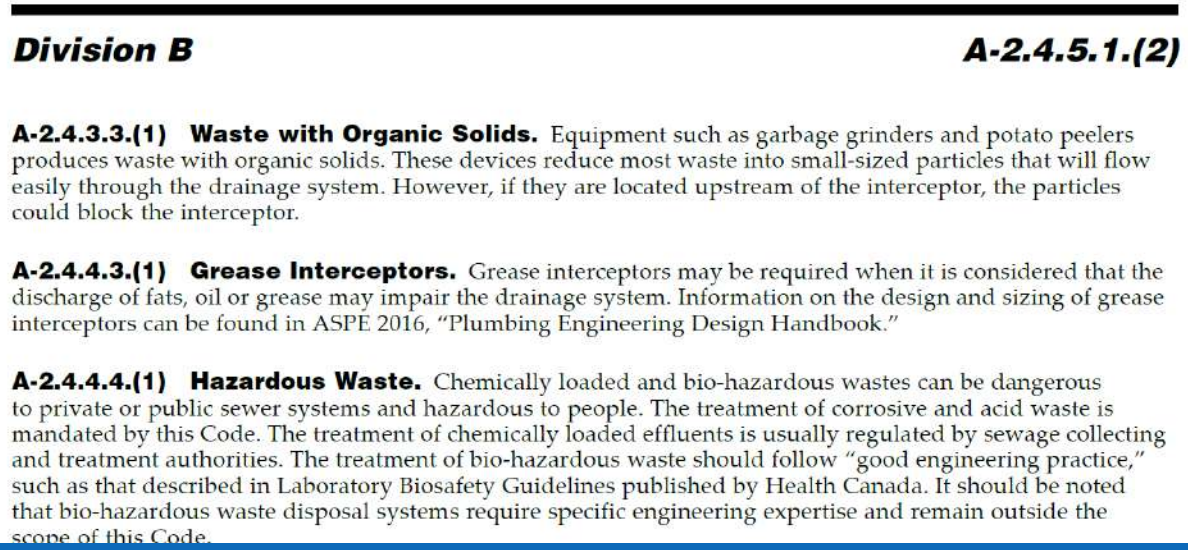
2.4.3.6.(1)

New Sentence regarding piping less than *NPS* 1¼ for *condensate drainage systems* and *macerating toilet systems,*

(1) Piping in *condensate drainage systems* and *macerating toilet systems* that is less than *NPS* 1¼ shall comply with Subsections 2.2.5. to 2.2.7. (See Note A-2.2.5. to 2.2.8.)

Table A-2.2.5. to 2.2.8. (Continued)

NPC References	Types of Piping and Fittings	Standard References	Use of Piping and Fittings[1][2]								
			Drainage System			Venting System		Potable Water System			
								Aboveground		Underground	
			Above-ground inside building	Under-ground under building	Building sewer	Above-ground	Under-ground	Cold	Hot	Under building	Outside building
2.2.5.8.	CPVC water pipe	CSA B137.6	N[4]	N	N	N	N	P[5][6][9]	P[5][6][9]	P[9]	P[9]
2.2.5.9.	ABS Schedule 40 DWV pipe with a cellular core	ASTM F628	P[5][6]	P	P	P[5][6]	P	N	N	N	N
	Plastic sewer pipe PS ≥ 320 kPa	CSA B182.1	N	P	P	N	N	N	N	N	N
	PVC sewer pipe (PSM type) ≤ 35-SDR	CSA B182.2	N	P	P	N	P	N	N	N	N
	Profile PVC sewer pipe PS ≥ 320 kPa	CSA B182.4	N	P	P	N	P	N	N	N	N
	Profile PE sewer pipe PS ≥ 320 kPa	CSA B182.6	N	P	P	N	P	N	N	N	N
2.2.5.9. and 2.2.5.10.	ABS DWV pipe	CSA B181.1	P[5][6]	P	P	P[5][6]	P	N	N	N	N
	PVC DWV pipe	CSA B181.2	P[5][6]	P	P	P[5][6]	P	N	N	N	N
2.2.5.12.	PE/AL/PE pressure pipe	CSA B137.9	N[4]	N	N	N	N	P[5][6]	N	P	P
2.2.5.13.	PEX/AL/PEX pressure pipe	CSA B137.10	N[4]	N	N	N	N	P[5][6]	P[5][6]	P	P
2.2.5.14.	PP-R pressure pipe	CSA B137.11	N[4]	N	N	N	N	P[5][6]	P[5][6]	P	P
2.2.5.15.	PE-RT tube	CSA B137.18	N	N	N	N	N	P[5][6]	P[5][6]	P	P
2.2.5.16.	Cellular core PVC pipe	ASTM F3128	P[5][6][10]	P[10]	N	P[5][6][10]	P[10]	N	N	N	N
2.2.6.1.	Cast-iron soil pipe	CSA B70	P	P	P	P	P	N	N	N	N
2.2.6.4.	Ductile-iron water pipe	ANSI/AWWA C151/A21.51	P	P	P	P	P	P	P	P	P
2.2.6.5.	Screwed cast-iron fittings	ASME B16.4	N	N	N	N	N	P	P	P	P
2.2.6.6.	Screwed malleable-iron fittings	ASME B16.3	N	N	N	N	N	P	P	P	P
2.2.6.7.	Welded and seamless steel galvanized pipe	ASTM A53/A53M	P	N	N	P	N	P[11]	P[11]	P[11]	P[11]
2.2.6.8.	Corrugated steel galvanized pipe	CSA G401	N	N	P[12]	N	N	N	N	N	N
2.2.6.9.	Sheet metal pipe[13]	—	N	N	N	N	N	N	N	N	N
2.2.6.10.	Stainless steel pipe	ASTM A312/A312M	P	P	P	P	P	P	P	P	P
2.2.6.14.	Stainless steel tube	ASTM A269/A269M	N[4]	N	N	N	N	P	P	P	P
2.2.7.1.	Copper and brass pipe										



Division B **A-2.4.5.1.(2)**

A-2.4.4.3.(1) Waste with Organic Solids. Equipment such as garbage grinders and potato peelers produces waste with organic solids. These devices reduce most waste into small-sized particles that will flow easily through the drainage system. However, if they are located upstream of the interceptor, the particles could block the interceptor.

A-2.4.4.3.(1) Grease Interceptors. Grease interceptors may be required when it is considered that the discharge of fats, oil or grease may impair the drainage system. Information on the design and sizing of grease interceptors can be found in ASPE 2016, "Plumbing Engineering Design Handbook."

A-2.4.4.4.(1) Hazardous Waste. Chemically loaded and bio-hazardous wastes can be dangerous to private or public sewer systems and hazardous to people. The treatment of corrosive and acid waste is mandated by this Code. The treatment of chemically loaded effluents is usually regulated by sewage collecting and treatment authorities. The treatment of bio-hazardous waste should follow "good engineering practice," such as that described in Laboratory Biosafety Guidelines published by Health Canada. It should be noted that bio-hazardous waste disposal systems require specific engineering expertise and remain outside the scope of this Code.

2.4.4.3.(1)

Added *treatment* to occupancy types requiring a grease interceptor,

(1) Where a *plumbing fixture* discharges *sewage* that includes fats, oils or grease and is located in a public kitchen, in a restaurant or in a *care*, ***treatment*** or *detention occupancy*, it shall discharge through a grease *interceptor*. (See Note A-2.4.4.3.(1).)

2.4.4.4.(1)

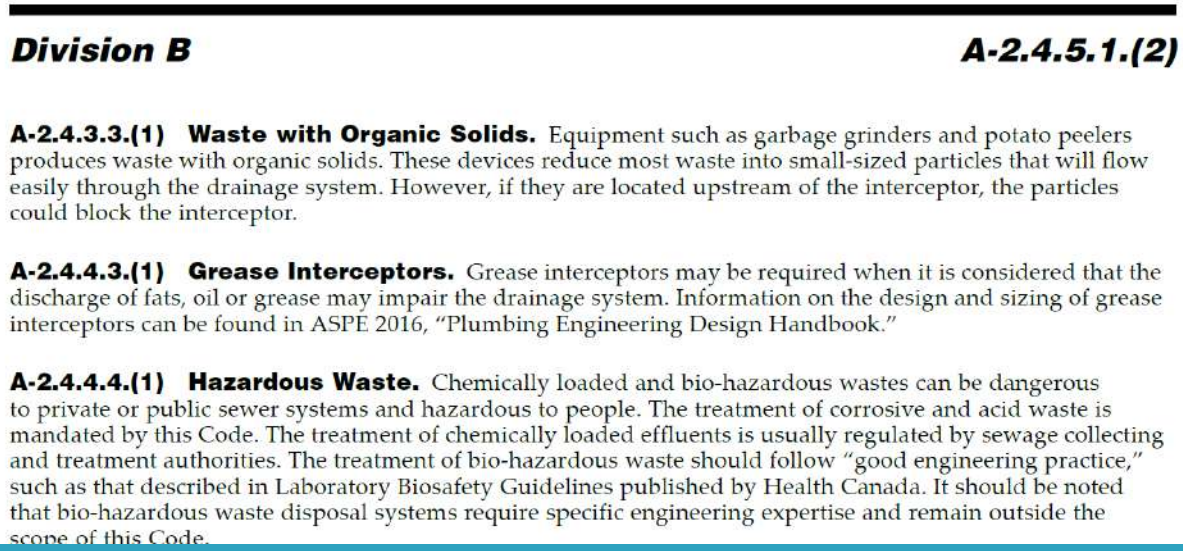
Dilution tank deleted and neutralization used in place of neutralizing,

(1) Where a *plumbing fixture* or equipment discharges corrosive or acid waste, it shall discharge into a neutralization tank that is connected to the *sanitary drainage system* through

(a) a *trap*, or

(b) an indirect connection.

(See Note A-2.4.4.4.(1).)



Division B **A-2.4.5.1.(2)**

A-2.4.4.3.(1) Waste with Organic Solids. Equipment such as garbage grinders and potato peelers produces waste with organic solids. These devices reduce most waste into small-sized particles that will flow easily through the drainage system. However, if they are located upstream of the interceptor, the particles could block the interceptor.

A-2.4.4.3.(1) Grease Interceptors. Grease interceptors may be required when it is considered that the discharge of fats, oil or grease may impair the drainage system. Information on the design and sizing of grease interceptors can be found in ASPE 2016, "Plumbing Engineering Design Handbook."

A-2.4.4.4.(1) Hazardous Waste. Chemically loaded and bio-hazardous wastes can be dangerous to private or public sewer systems and hazardous to people. The treatment of corrosive and acid waste is mandated by this Code. The treatment of chemically loaded effluents is usually regulated by sewage collecting and treatment authorities. The treatment of bio-hazardous waste should follow "good engineering practice," such as that described in Laboratory Biosafety Guidelines published by Health Canada. It should be noted that bio-hazardous waste disposal systems require specific engineering expertise and remain outside the scope of this Code.

A-2.4.3.3.(1) Waste with Organic Solids. Equipment such as garbage grinders and potato peelers produces waste with organic solids. These devices reduce most waste into small-sized particles that will flow easily through the drainage system. However, if they are located upstream of the interceptor, the particles could block the interceptor.

A-2.4.4.3.(1) Grease Interceptors. Grease interceptors may be required when it is considered that the discharge of fats, oil or grease may impair the drainage system. Information on the design and sizing of grease interceptors can be found in ASPE 2016, "Plumbing Engineering Design Handbook."

A-2.4.4.4.(1) Hazardous Waste. Chemically loaded and bio-hazardous wastes can be dangerous to private or public sewer systems and hazardous to people. The treatment of corrosive and acid waste is mandated by this Code. The treatment of chemically loaded effluents is usually regulated by sewage collecting and treatment authorities. The treatment of bio-hazardous waste should follow "good engineering practice," such as that described in Laboratory Biosafety Guidelines published by Health Canada. It should be noted that bio-hazardous waste disposal systems require specific engineering expertise and remain outside the scope of this Code.

2.4.4.4.(2)

Changed wording to neutralization in place of neutralizing and changed to "liquid it contains", instead of "neutralizing the liquid"

(2) A neutralization tank shall have a method for neutralizing the liquid it contains.

2.4.5.1.(4)

Reference changed to new Sentence 2.4.2.1.(2),

(4) An *indirectly connected plumbing fixture* that can discharge only *clear-water waste* other than a drinking fountain need not be protected by a *trap*. (**See Sentence 2.4.2.1.(2)** for indirect connections.)

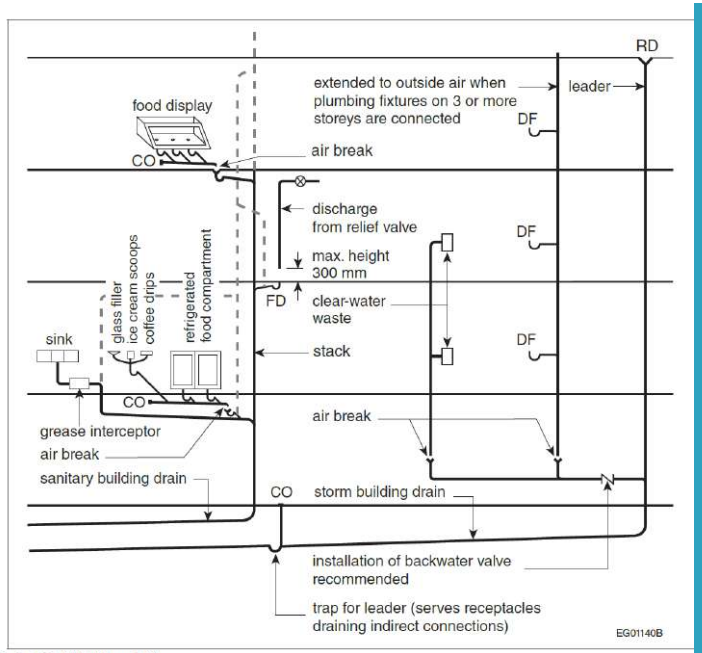


Figure A-2.4.2.1.(1)(a)(ii) and (2)
Indirect connections

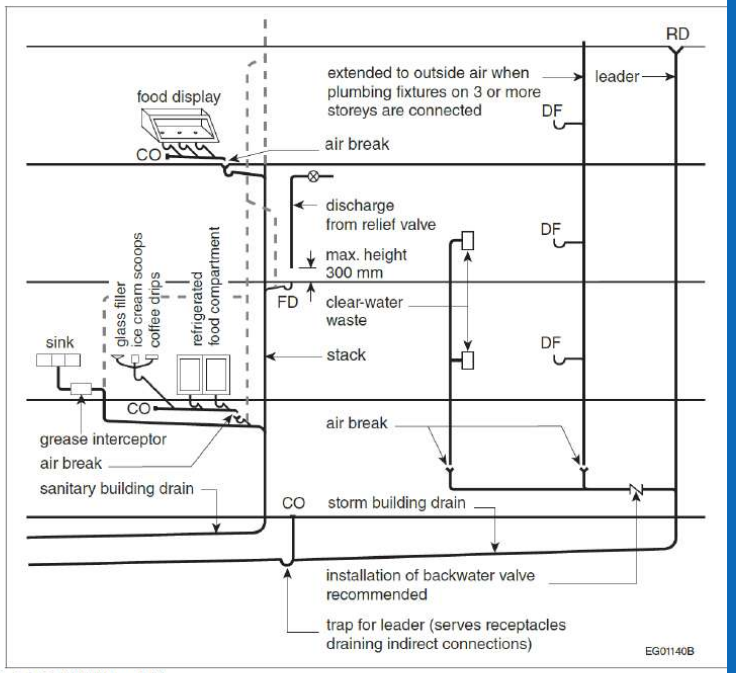


Figure A-2.4.2.1.(1)(a)(ii) and (2)
Indirect connections

2.4.5.3.(1)

New Sentence regarding traps for *condensate drainage systems,*

(1) Where a *condensate drainage system* is connected to equipment in two or more rooms, *traps* shall be installed between the equipment connection and the *condensate drainage system*. (See Note A-2.4.5.3.(1).)

2.4.6.4.

This Article regarding protection from backflow in a *drainage system* has been reorganized but no real changes to the requirements is evident.

**Note that there is currently a Public Review process underway that may, if approved, require backflow protection where a plumbing fixture(s) is located below the street or upstream sanitary manhole on the fixture drain, branch, or building drain. (Proposed Change 2137)*

[2026-proposed-changes-to-nbc-necb-npc-combined-file-2026-04-24.pdf]

2.4.6.4. Protection from Backflow

1) A *subsoil drainage pipe* that drains into a *sanitary drainage system* that is subject to surcharge shall be connected in such a manner that *sewage* cannot back up into the *subsoil drainage pipe*. (See Note A-2.4.6.4.(1).)

2) Where a *building drain* or *branch* may be subject to *backflow*, a *backwater valve* shall be installed in accordance with Sentences (3) to (6).

3) Except as provided in Sentences (4) and (5), the *backwater valve* required by Sentence (2) shall be installed on every *fixture drain* connected to the *building drain* or *branch* where the *plumbing fixture* is located below the level of the adjoining street.

4) Where two or more *plumbing fixtures* located on a *storey* are connected to the same *branch*, the *backwater valve* required by Sentence (2) is permitted to be installed on the *branch*.

5) Except as provided in Sentence (6), the *backwater valve* required by Sentence (2) is permitted to be installed in the *building drain*, provided the *backwater valve*

a) does not serve more than one *dwelling unit*, and
b) has a "normally open" design conforming to
   i) CSA B70, "Cast iron soil pipe, fittings, and means of joining,"
   ii) CSA B181.1, "Acrylonitrile-butadiene-styrene (ABS) drain, waste, and vent pipe and pipe fittings,"
   iii) CSA B181.2, "Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings," or
   iv) CSA B182.1, "Plastic drain and sewer pipe and pipe fittings."

6) A *backwater valve* or a gate valve that would prevent the free circulation of air shall not be installed in a *building drain* or in a *building sewer*.

A-2.4.6.6.(1)(a) **Parapet Height.**

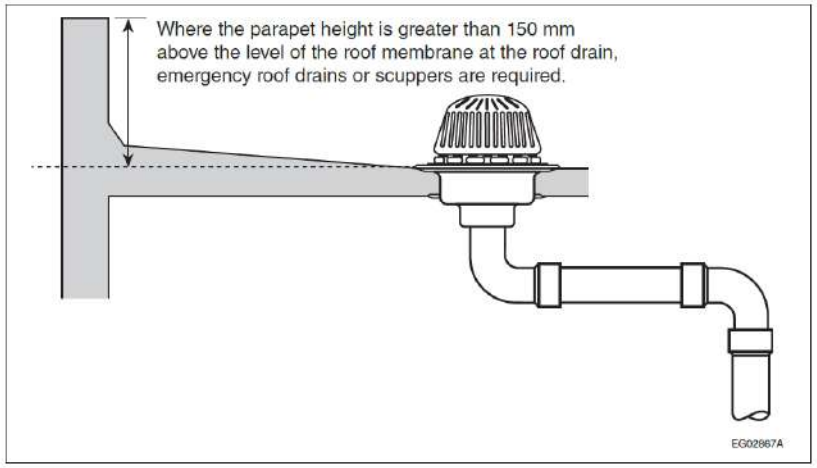


Figure A-2.4.6.6.(1)(a)
Parapet height

2.4.6.6.

New Article for emergency roof *drainage systems*, Sentence (1),

(1) Emergency *roof drains* or scuppers described in Clause 2.4.10.4.(2)(c) shall be provided

(a) where the height of the parapet is more than 150 mm above the level of the roof membrane at the *roof drain* or exceeds the height of the adjacent wall flashing (see Note A-2.4.6.6.(1)(a)), or

(b) where the configuration of the roof allows the height of accumulated water to be more than 150 mm above the level of the roof membrane at the *roof drain*.

2.4.6.6.(2)

New Sentence regarding emergency roof *drainage systems*,

(2) Except as provided in Sentence (3), an emergency roof *drainage system* shall be independent of the primary roof *drainage system*.

A-2.4.10.4.(4) Storm Building Drain or Leader Serving Both the Primary and Emergency Roof Drainage Systems.

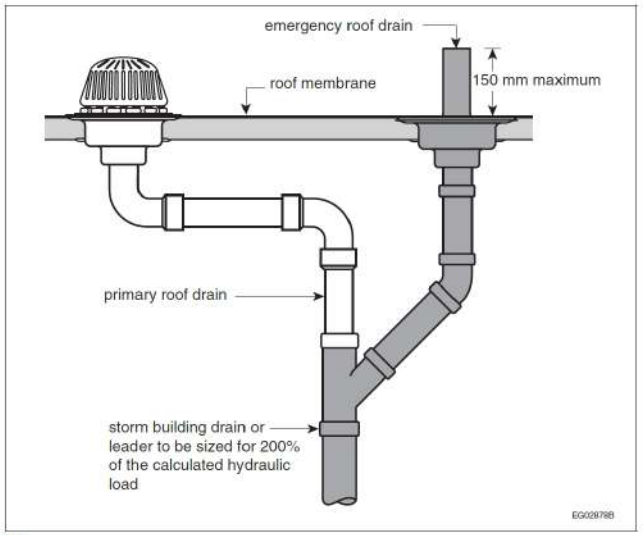


Figure A-2.4.10.4.(4)
Storm building drain or leader serving both the primary and emergency roof drainage systems

2.4.6.6.(3)

New Sentence regarding emergency roof *drainage systems*,

(3) An emergency roof *drainage system* is permitted to be connected to a primary roof *drainage system* at

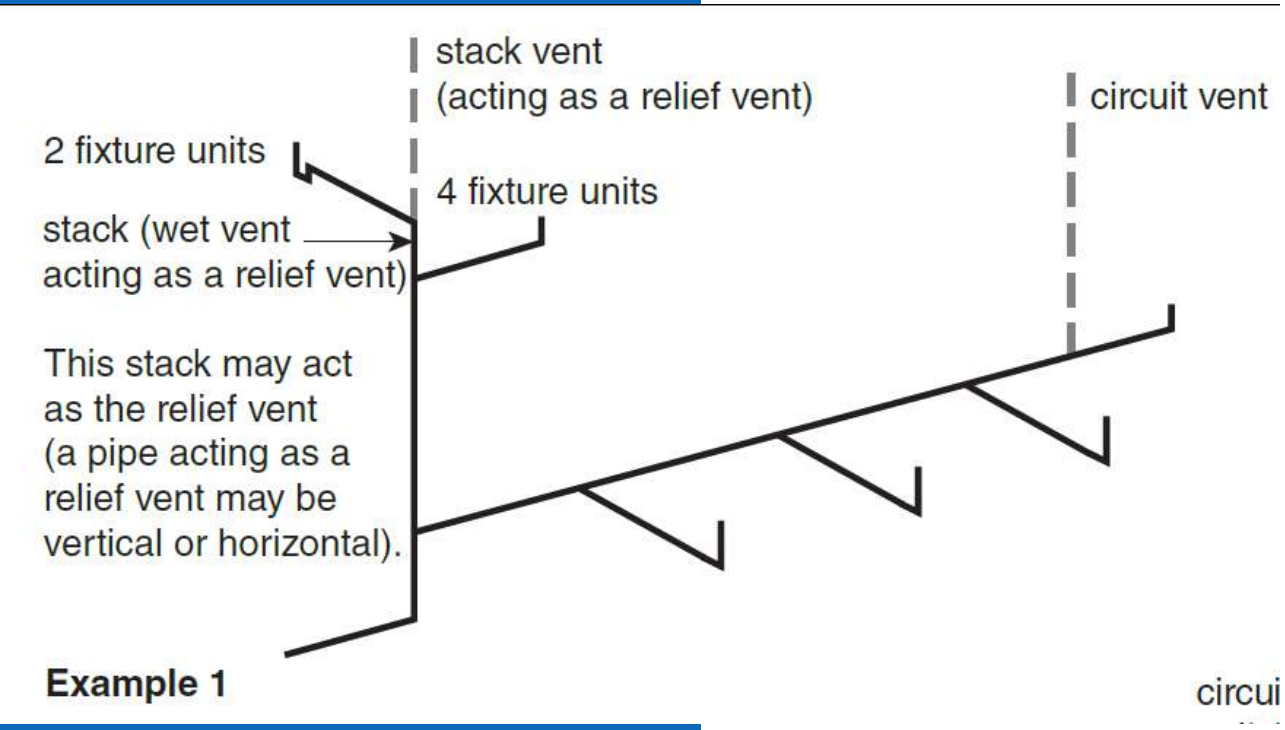
(a) the *storm building drain*, or

(b) a vertical *leader* not located immediately under the roof served by the emergency and primary roof *drainage systems*.

2.4.9.1.(2)

New Sentence requiring *storm drainage pipes* to be not less than the *NPS* of the largest *storm drainage pipe* draining into it,

(2) Except as provided in Article 2.4.10.13., a storm drainage pipe shall be of a *nominal pipe size* not less than the *NPS* of the largest storm drainage pipe that drains into it.



2.4.9.2.(2) and (3)

Sentences (2) and (3) from the 2020 NPC have been deleted. **These sentences required *NPS* 4 downstream of the third water closet on a *branch* or *building drain* and *stacks* serving more than 6 water closets,**

NPC 2020

Serving Water Closets

(1) Drainage pipes that serve a water closet shall be not less than *NPS* 3.

(2) *Branch* and *building drains* downstream of the third water-closet *fixture drain* connection shall be not less than *NPS* 4.

(3) *Stacks* that serve more than 6 water closets shall be not less than *NPS* 4.

(4) Discharge pipes serving a macerating toilet system shall be not less than *NPS* ¾.

Table 2.4.9.3. (Continued)

Plumbing Fixture	Minimum *Nominal Pipe Size* of *Fixture Outlet Pipe, NPS*	Hydraulic Load, *fixture units*
Bath: foot, sitz or slab	1½	1½
Beer cabinet	1½	1½
Bidet	1¼	1
Clothes washer		
(a) domestic type(1)	n/a	2
(b) commercial type	n/a	2
Condensate drain(2)		
(a) domestic type	½	½
(b) commercial type	¾	1
Dental unit or cuspidor	1¼	1

Table 2.4.9.3.

Table 2.4.9.3., condensate drains have been added (domestic and commercial types).

Table 2.4.9.3.

New Footnote added to table for multiple or manifold condensate drains to be sized to Table 2.4.10.12. for semi-continuous flow and footnote for emergency floor drains renumbered to (3).

Table 2.4.9.3. (Continued)

Plumbing Fixture	Minimum *Nominal Pipe Size* of *Fixture Outlet Pipe, NPS*	Hydraulic Load, *fixture units*
Urinal		
(a) pedestal, siphon-jet or blowout type	2	4
(b) stall, washout type	2	2
(c) wall		
(i) washout type	1½	1½
(ii) other types	2	3
Water closet		
(a) with flush tank	3	4
(b) with direct flush valve	3	6

Notes to Table 2.4.9.3.:

(1) See Note A-Table 2.4.9.3.

(2) Multiple or manifold applications shall conform to Table 2.4.10.12. for semi-continuous flow.

(3) No hydraulic load for *emergency floor drains*.

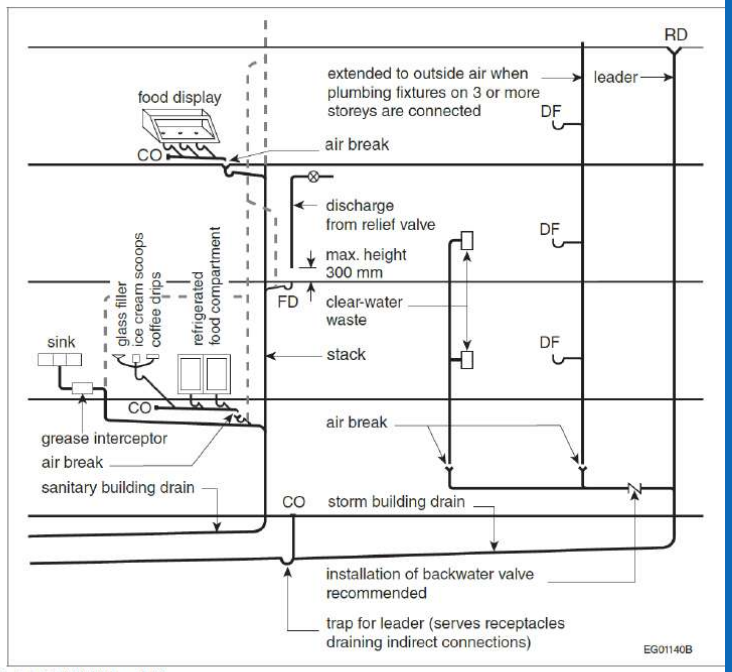


Figure A-2.4.2.1.(1)(a)(ii) and (2)
Indirect connections

Sentence 2.4.9.6.(1) and (2)

New Sentences for sizing piping in condensate *drainage systems,*

(1) Except as provided in Sentences (2) and 2.4.2.3.(1), the size of piping in a *condensate drainage system* shall be not less than *NPS* ¾.

(2) Piping in *condensate drainage systems* serving *dwelling units* shall be not less than *NPS* ½.

Sentence 2.4.10.4.(4)

Sentence revised to reflect new requirements for primary and emergency roof *drainage systems*,

(4) A *storm building drain* or *leader* serving both the primary and emergency roof *drainage systems*, as described in Sentence 2.4.6.6.(3), shall be sized for 200% of the calculated hydraulic load determined in accordance with this Subsection. (See Note A-2.4.10.4.(4).)

A-2.4.10.4.(4) Storm Building Drain or Leader Serving Both the Primary and Emergency Roof Drainage Systems.

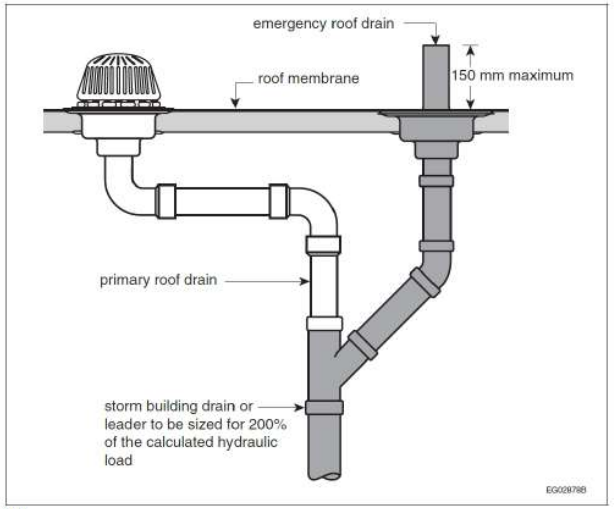


Figure A-2.4.10.4.(4)
Storm building drain or leader serving both the primary and emergency roof drainage systems

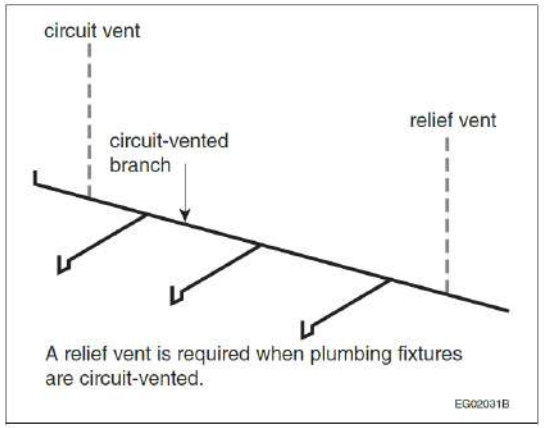


Figure A-2.5.3.1.-D
Example of circuit venting described in Sentence 2.5.3.1.(3)

Sentence 2.5.3.1.(3)

Revised wording from “most downstream circuit vented fixture” to “most downstream *plumbing fixture* in the system”,

(3) Except as provided in Sentences (4) and (5), a *relief vent* shall be connected to the *branch* that forms part of a circuit-vented system, downstream of the connection of the **most downstream *plumbing fixture* in the system.**

Table 2.6.1.6.

Table revised to add dual flush water closet 6.0/4.1 LPF.

*This was included in the 2024 BCBC in Part 7.

Table 2.6.1.6.
Water Usage per Flush Cycle
Forming Part of Sentence 2.6.1.6.(3)

Plumbing Fixtures	Maximum Water Usage per Flush Cycle, LPF
Water closets – residential	
single-flush	4.8
dual-flush	6.0/4.1
Water closets – industrial, commercial, institutional	6.0
Urinals	1.9

Sentences 2.6.1.7.(1) and (2)

Sentences revised adding the words “that is”,

(1) In addition to the requirements in Sentence (2), the hot water tank of a *storage-type service water heater* shall be equipped with a pressure-relief valve **that is**

Clauses 2.6.1.7.(1)(c) & (2)(c)

New Clauses requiring connection of the pressure or temperature-relief valves to be connected to a discharge pipe,

(c) connected to a discharge pipe conforming to the requirements of Sentence (5).

Sentences 2.6.1.7.(5)

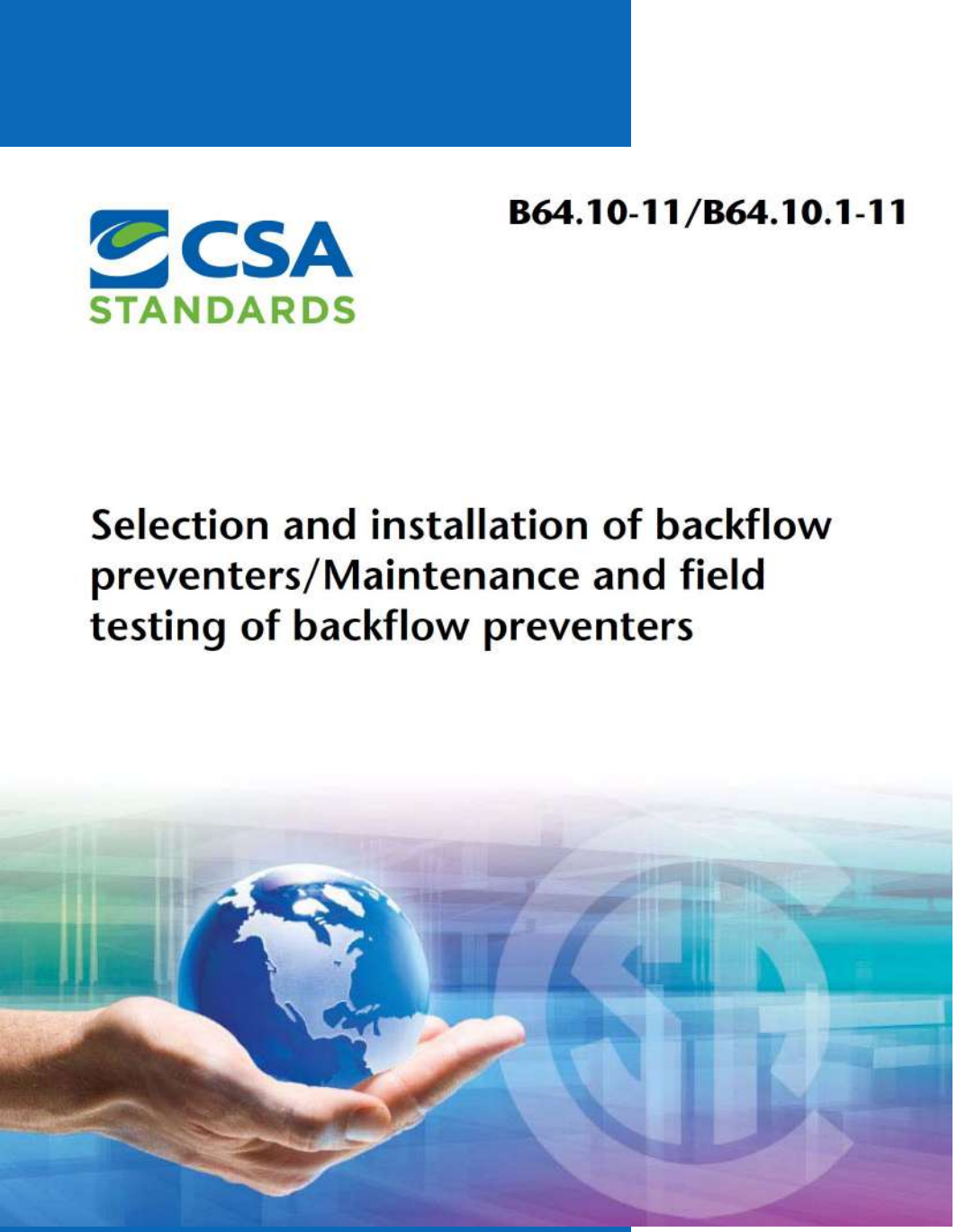
Sentence revised to read “Discharge pipes connected to ….”,

(5) **Discharge pipes connected to** a temperature-relief valve, pressure-relief valve or combined temperature- and pressure-relief valve, as required by Sentences (1) to (3), shall

2.6.1.7.(7)

Sentence revised to “discharge pipes” instead of “discharge lines”,

(7) No shut-off valve shall be installed on the pipe between any tank and the relief valves or on the **discharge pipes** from such relief valves.



2.6.2.1.(3)

Sentence revised to add reference to B64.10.1 “Maintenance and field testing of Backflow preventers”

(3) *Backflow preventers* shall be selected and installed in conformance with CSA B64.10/**CSA B64.10.1**, “Selection and installation of backflow preventers/**Maintenance and field testing of backflow preventers**.”

2.6.2.7. **Backflow through Hose Bibbs**

1) Where a hose bibb is installed outside a *building*, inside a garage or in an area where there is an identifiable risk of contamination, the *potable water system* shall be protected against *backflow* through the hose bibb.

Article 2.6.2.7.

Article title changed to “Backflow Through Hose Bibbs”,

Article 2.6.2.8.

Article title changed to “Cleaning of New Parts of Systems”

protected against *backflow* through the hose bibb.

2.6.2.8. **Cleaning of New Parts of Systems**

1) A newly installed part of a *potable water system* shall be cleaned and then flushed with *potable* water before the system is put into operation.

2.6.2.9. **Air Gaps**

2.6.2.13.(1)

New Sentence for protection of the *potable water system* in combination space-heating and service water heating systems,

(1) Where *potable* water is used as a hydronic fluid in an open-loop heating system, the *potable water system* shall be protected in accordance with Clause 4.2.5 of CSA B214, “Installation code for hydronic heating systems.”

Table A-2.2.5. to A.2.2.8.

Various changes to permit certain piping types to be used for above-ground condensate drainage piping and macerating toilet systems less than *NPS* 1¼.

Table A-2.2.5. to 2.2.8. (Continued)

NPC References	Types of Piping and Fittings	Standard References	Use of Piping and Fittings[1][2]								
			Drainage System			Venting System		Potable Water System			
								Aboveground		Underground	
			Above-ground inside building	Under-ground under building	Building sewer	Above-ground	Under-ground	Cold	Hot	Under building	Outside building
2.2.5.8.	CPVC water pipe	CSA B137.6	N[4]	N	N	N	N	P[5][6][9]	P[5][6][9]	P[9]	P[9]
2.2.5.9.	ABS Schedule 40 DWV pipe with a cellular core	ASTM F628	P[5][6]	P	P	P[5][6]	P	N	N	N	N
	Plastic sewer pipe PS ≥ 320 kPa	CSA B182.1	N	P	P	N	N	N	N	N	N
	PVC sewer pipe (PSM type) ≤ 35-SDR	CSA B182.2	N	P	P	N	P	N	N	N	N
	Profile PVC sewer pipe PS ≥ 320 kPa	CSA B182.4	N	P	P	N	P	N	N	N	N
	Profile PE sewer pipe PS ≥ 320 kPa	CSA B182.6	N	P	P	N	P	N	N	N	N
2.2.5.9. and 2.2.5.10.	ABS DWV pipe	CSA B181.1	P[5][6]	P	P	P[5][6]	P	N	N	N	N
	PVC DWV pipe	CSA B181.2	P[5][6]	P	P	P[5][6]	P	N	N	N	N
2.2.5.12.	PE/AL/PE pressure pipe	CSA B137.9	N[4]	N	N	N	N	P[5][6]	N	P	P
2.2.5.13.	PEX/AL/PEX pressure pipe	CSA B137.10	N[4]	N	N	N	N	P[5][6]	P[5][6]	P	P
2.2.5.14.	PP-R pressure pipe	CSA B137.11	N[4]	N	N	N	N	P[5][6]	P[5][6]	P	P
2.2.5.15.	PE-RT tube	CSA B137.18	N	N	N	N	N	P[5][6]	P[5][6]	P	P
2.2.5.16.	Cellular core PVC pipe	ASTM F3128	P[5][6][10]	P[10]	N	P[5][6][10]	P[10]	N	N	N	N
2.2.6.1.	Cast-iron soil pipe	CSA B70	P	P	P	P	P	N	N	N	N
2.2.6.4.	Ductile-iron water pipe	ANSI/AWWA C151/A21.51	P	P	P	P	P	P	P	P	P
2.2.6.5.	Screwed cast-iron fittings	ASME B16.4	N	N	N	N	N	P	P	P	P
2.2.6.6.	Screwed malleable-iron fittings	ASME B16.3	N	N	N	N	N	P	P	P	P
2.2.6.7.	Welded and seamless steel galvanized pipe	ASTM A53/A53M	P	N	N	P	N	P[11]	P[11]	P[11]	P[11]
2.2.6.8.	Corrugated steel galvanized pipe	CSA G401	N	N	P[12]	N	N	N	N	N	N
2.2.6.9.	Sheet metal pipe[13]	—	N	N	N	N	N	N	N	N	N
2.2.6.10.	Stainless steel pipe	ASTM A312/A312M	P	P	P	P	P	P	P	P	P
2.2.6.14.	Stainless steel tube	ASTM A269/A269M	N[4]	N	N	N	N	P	P	P	P
2.2.7.1.	Copper and brass pipe										

Table A-2.2.5. to A.2.2.8.

Various changes to permit certain piping types to be used for above-ground condensate drainage piping and macerating toilet systems less than *NPS* 1¼.

Note that the footnote numbering is incorrect in the Table and that the number will be changed. It has been confirmed with NRC representatives that the number for this will be changed to footnote (4) and tha current footnote regarding "Permitted only for water service pipe", will be changed to footnote (8).

Table A-2.2.5. to 2.2.8. (Continued)

NPC References	Types of Piping and Fittings	Standard References	Use of Piping and Fittings[1][2]								
			Drainage System			Venting System		Potable Water System			
								Aboveground		Underground	
			Above-ground inside building	Under-ground under building	Building sewer	Above-ground	Under-ground	Cold	Hot	Under building	Outside building
	Copper	ASTM B42	P	P	P	P	P	P	P	P	P
	Red brass	ASTM B43	P	P	P	P	P	P	P	P	P
2.2.7.3.	Brass or bronze threaded water fittings	ASME B16.15	N[4]	N	N	N	N	P	P	P	P
2.2.7.4.	Copper tube										
	Types K and L hard temper	ASTM B88	P	P	P	P	P	P	P	N	N
	Types K and L soft temper		N[4]	N	N	N	N	P	P	P	P
	Type M hard temper		P	N	N	P	N	P	P	N	N
	Type M soft temper		N[4]	N	N	N	N	N	N	N	N
	Type DWV	ASTM B306	P[14]	N	N	P[14]	N	N	N	N	N
2.2.7.5.	Solder-joint drainage fittings	ASME B16.23 and ASME B16.29	P	P	P	P	P	N	N	N	N
2.2.7.6.	Solder-joint water fittings	ASME B16.18 and ASME B16.22	N[4]	N	N	P	P	P	P	P	P
2.2.7.8.	Lead sanitary drainage pipe	—	P	P	N	P	P	N	N	N	N
2.2.8.1.	Polyolefin laboratory drainage systems	CSA B181.3	P[5][6]	P	P	P[5][6]	P	N	N	N	N

Notes to Table A-2.2.5. to 2.2.8.:

(1) N = not permitted and P = permitted.
(2) Where firestops are pierced by pipes, the integrity of the firestop must be maintained.
(3) Gasketted joints required.
(4) Permitted only for water service pipe.
(5) Combustible piping in noncombustible construction is subject to the requirements of Sentence 3.1.5.19.(1) of Division B of the NBC.
(6) Combustible piping that penetrates a fire separation is subject to the requirements in Articles 3.1.9.4. and 9.10.9.7. to 9.10.9.9. of Division B of the NBC.
(7) Not permitted in hot water systems.
(8) Permitted for piping in condensate drainage systems and macerating toilet systems less than NPS 1¼.
(9) Not to exceed design temperature and design pressure stated in Sentence 2.2.5.8.(2).
(10) Permitted only in residential buildings containing 1 or 2 dwelling units and row houses that do not exceed 3 storeys in height.
(11) Permitted only in buildings of industrial occupancy as described in the NBC, or for the repair of existing galvanized steel piping systems.
(12) Permitted underground only in a storm drainage system.
(13) Permitted only for an external leader.
(14) Not permitted for the fixture drain or vent below the flood level rim of a flush-valve-operated urinal.

Note A-2.2.5.14.(1)

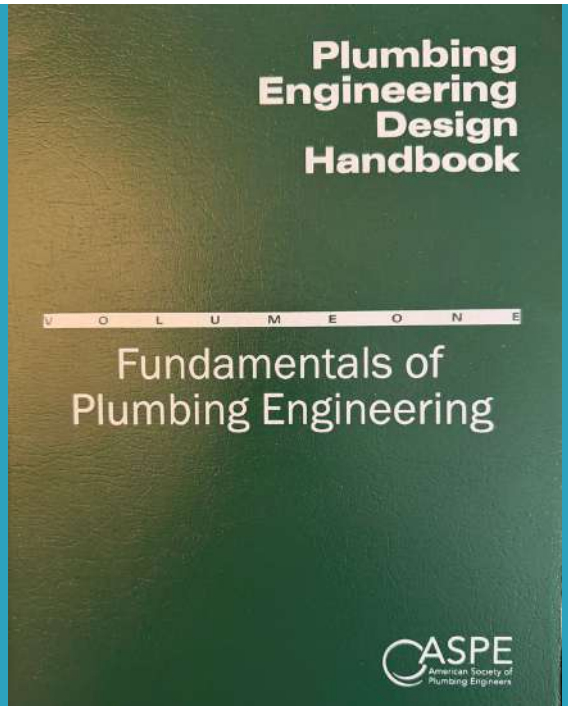
Added abbreviation - PP-RCT, which stands for Polypropylene Random Copolymer with modified Crystallinity and Temperature resistance

A-2.2.5.14.(1) Polypropylene Pipe and Fittings. There are some special installation requirements for the use of polypropylene pipe and fittings. Reference should, therefore, be made to the installation information in CSA B137.11, “Polypropylene (PP-R and **PP-RCT**) pipe and fittings for pressure applications.”

Note A-2.4.4.3.(1)

Revised reference to ASPE 2016 “Plumbing Engineering Design Handbook”,

A-2.4.4.3.(1) Grease Interceptors. Grease interceptors may be required when it is considered that the discharge of fats, oil or grease may impair the drainage system. Information on the design and sizing of grease interceptors can be found in **ASPE 2016, “Plumbing Engineering Design Handbook.”**



A-2.4.5.1.(3) Single Traps for Groups of Plumbing Fixtures.

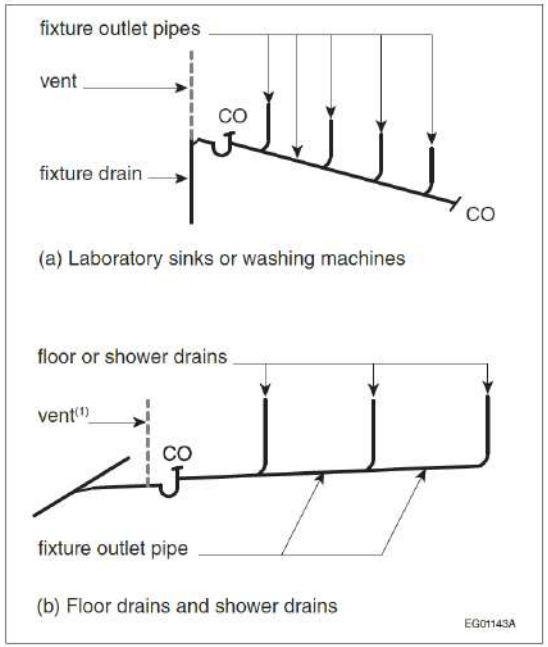


Figure A-2.4.5.1.(3)

Note A-2.4.5.1.(3)

Changed wording in title to “Single Traps for Groups of Plumbing Fixtures”,

Note A-2.4.5.3.(1)

New Note regarding traps for condensate drainage systems,

A-2.4.5.3.(1) Traps for Condensate Drainage Systems. Manufacturers may specify additional requirements for traps for condensate drainage systems beyond the prescriptive requirement of Sentence 2.4.5.3.(1).

A-2.4.6.6.(1)(a) Parapet Height.

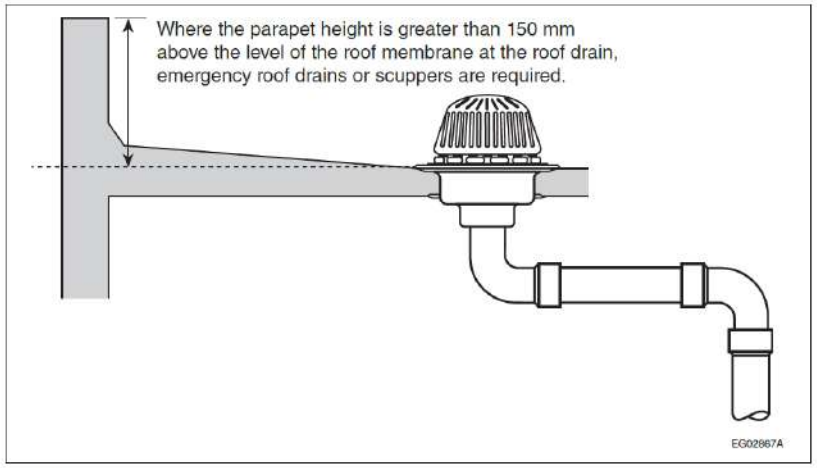


Figure A-2.4.6.6.(1)(a)
Parapet height

Note A-2.4.6.6.(1)(a)

New Note and diagram for determining the height of a parapet,

Note A-2.4.10.4.(4)

New Note and diagram for primary and emergency roof drainage systems,

A-2.4.10.4.(4) Storm Building Drain or Leader Serving Both the Primary and Emergency Roof Drainage Systems.

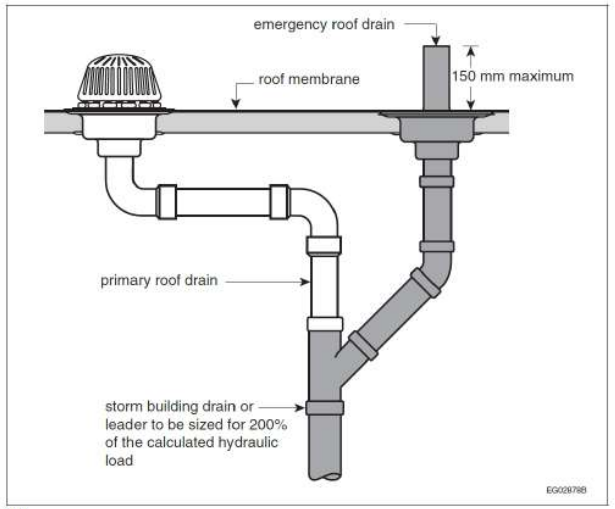


Figure A-2.4.10.4.(4)
Storm building drain or leader serving both the primary and emergency roof drainage systems

Notes to Part 2 of Division C

A-2.3.1. Documentation of Alternative Solutions

New wording directing Code users to the CBHCC website as opposed to the NRC website,

This subject is discussed in further detail in “Recommended Documentation Requirements for Projects Using Alternative Solutions in the Context of Objective-Based Codes,” which was prepared for the CCBFC Task Group on Implementation of Objective-Based Codes and is available on the **CBHCC's website.**

Code system documents

Archived documents

The following are archived documents published by the Canadian Commission for Building and Fire Codes (CCBFC) which was dissolved in 2022.

- Significant technical changes to the 2020 National Model Codes
- Canada’s construction system: The context for model codes
- CCBFC policy position paper on accessibility in buildings (June 2021)
- Final report: Alterations to existing buildings (April 2020)
- CCBFC policies and procedures 2016 (PDF, 1.7Mb, updated November 2019)
- Guidelines for impact analysis for CCBFC committees (Appendix G of CCBFC policies and procedures 2016) (PDF, 500kb, updated December 2017)
- Policy position paper: Long-term strategy for developing and implementing more ambitious energy codes (PDF, 1Mb, updated November 2017)
- Review of the Coordinated Code Development System, report on phase 1: The system (June 2016) (2016-06-27) (PDF, 2.2Mb, updated November 2017), published by the joint CCBFC/PTPACC task group
- Discussion paper: Recommended documentation requirements for projects using alternative solutions in the context of objective-based codes (PDF, 108kb)

Thank you

What questions do you have?