RULES CERTIFICATE

Department of Commerce

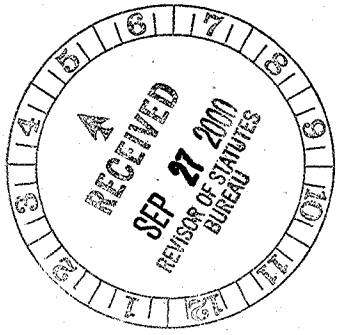
TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Brenda J. Blanchard, Secretary of the Department of Commerce, and custodian of the official records of said department, do hereby certify that the annexed rule(s) relating to

Wisconsin Uniform Plumbing Code
(Subject)

were duly approved and adopted by this department.

I further certify that said copy has been compared by me with the original on file in the department and that the same is a true copy thereof, and of the whole of such original.



IN TESTIMONY WHEREOF, I have hereunto set my hand at 201 West Washington Avenue in the city of Madison, this 19th day of Sept A.D. 2000

Secretary

COM-10530 (R.11/97)

1-1-01

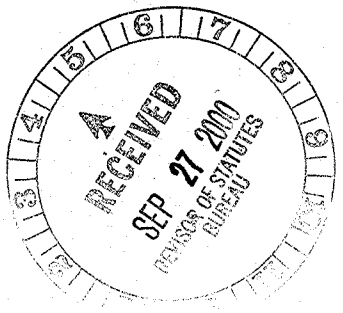
ORDER OF ADOPTION

Department of Commerce

Pursuant to authority vested in the Department of Commerce by section(s) ss. 101.02 (1), 101.63 (1), 101.73 (1), 101.82 (1) and 145.02 (3), Stats. Stats., the Department of Commerce [X] creates; [X] amends; [X] repeals and recreates; [X] repeals and adopts rules of Wisconsin Administrative Code chapter(s):

Comm 81, 82 and 84 (number) Wisconsin Uniform Plumbing Code (Title)

The attached rules shall take effect on first day of the third month following publication in the Wisconsin Administrative Register, except s. Comm 82.40 (3) (d) 3. shall take effect on the first day of the ninth month following publication in the Wisconsin Administrative Register pursuant to section 227.22, Stats.



Adopted at Madison, Wisconsin this

date: 9/19/00

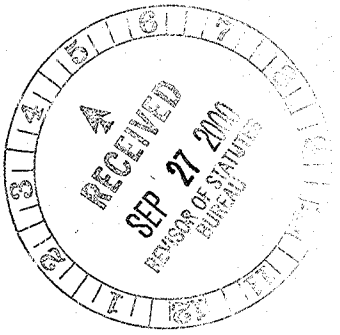
DEPARTMENT OF COMMERCE

Secretary

COM-10529 (N.03/97)

State of Wisconsin \ Department of Commerce

RULES in FINAL DRAFT FORM



Rule No.: Chapters Comm 81, 82 and 84

Relating to: Wisconsin Uniform Plumbing Code [Clearinghouse Rule No. 99-123]

Clearinghouse Rule No.: 99-123

The Wisconsin Department of Commerce proposes an order to:

renumber Comm 84.20 (5)(d) to (q) as Comm 84.20 (5)(e) to (r);

renumber and amend Comm 81.20(3) as 81.20(2); Comm 84.20(2) as 84.20(2)(a); Comm 84.20(5)(L) 3. to 5. as 84.20(5)(j) 2. to 4.; Comm 84.30(5)(c) 1. to 17. as 84.30(5)(c) 1. to 18.; and Comm 84.40(7) as 84.40(7)(a);

to amend Comm 81.01 (18), (20), (79), (80), (189), (203), and (204); Tables 81.20-4, 81.20-5, 81.20-6, 81.20-7, 81.20-8, and 81.20-11; Table 82.20-1; Comm 82.34(4)(b) 2.; Comm 82.36(3)(b) 3., Comm 82.36 (4)(a); Comm 82.36(5)(a); Comm 82.36(6)(a); Comm 82.40(8)(g); Comm 82.40(8)(i) 2.; Comm 82.41(3)(a) 2.; Comm 82.41(4)(k) 1.; Comm 82.41(5)(a); Comm 82.50(2); Comm 82.50(10)(g) Table 26 and Title; Comm 84.10(4) and (5); Comm 84.20(4)(b) 2.; Comm 84.20(5)(b) 1. a. and b.; Comm 84.20(5)(b) 2.; Comm 84.20(5)(c); Comm 84.20(5)(c) 2.; Comm 84.20(5)(f); Comm 84.20(5)(j) 1. a. to d.; Comm 84.20(5)(m) 1. and 2.; Comm 84.20(5)(n) 1. and 2.; Comm 84.20(5)(o); Comm 84.20(5)(r) 1.; Comm 84.20(6)(a) and (b); Comm 84.30(6)(f); Tables 84.30-3, 84.30-5, 84.30-6, 84.30-8, 84.30-9, 84.30-10, and 84.30-11; Comm 84.30(6)(e); Comm 84.40(2)(c); Comm 84.40(3)(a); Comm 84.40(4)(a), (c) and (d); Comm 84.40(8)(a) and (d); Comm 84.40(10)(a); and Comm 84.40(14)(c).

to repeal Comm 81.20(2); Table 81.20-14; Comm 82.50(10)(i) and Comm 84.20(5)(L)2.;

to repeal and recreate Comm 81.01 (116); Table 81.20-2; Comm 82.20(11); Comm 82.20(12); Comm 82.21(2)(a);Comm 82.21(3); Comm 82.33(9)(i); Tables 82.41-1 and 82.41-2; Comm 82.41(4)(b); Comm 82.41(4)(n); Comm 82.50(10)(g) and (h); Comm 84.20(4)(b) 9.; A-82.20(4) Appendix; and A-84.20(5) Appendix;

to create Comm 81.01 (7e), (17e), (60e), (67e), (67m), (82m), (90e), (163e), (170e), (199e), (209e), (209m), (252e), (288e) and Notes, and (288m); Comm 81.20 Table 81.20-10m, Comm 81.20(2) Notes; Tables 82.21-3e and 81.20-7e; Comm 82.20(4)(e); Table 82.21-1; Comm 82.31(16)(d) 2. Notes; Table 82.33-3; Comm 82.36(3)(b) 3. Note; Comm 82.36(3)(b) 5.; Table 82.36-4a; Comm 82.40(3)(d) 3.; Comm 82.41 (4) (k) 1. c., Comm 82.41(5)(L); Comm 82.60(2)(d); Comm 84.20(2)(b) and Note; Comm 84.20(5)(d); Comm 84.20(5)(m) 1. e.; Comm 84.20 (5) (n) 1. b., Comm 84.30(5)(c) 8. Note; Comm 84.30(5)(c) 9. Note; Comm 84.30(5)(c) 10., Comm 84.30(5)(c) 19.; Comm 84.40(7)(b); and Comm 84.40(9)(b), relating to the state uniform plumbing code.

* *

Analysis of Proposed Rules

Statutory authority: ss. 101.02 (1), 101.63 (1), 101.73 (1), 101.82 (1) and 145.02 (3), Stats.
Statutes interpreted: ss. 145.02 (4), 145.045, 145.13, 145.135, 145.19, 145.20, Stats.

Under s. 145.02, Stats., the Department of Commerce has the responsibility of safeguarding public health and the waters of the state relative to the construction, installation and maintenance of plumbing. One mechanism of the Department to fulfill this responsibility has been the promulgation of the state uniform plumbing code, chs. Comm 81-87.

This rule revision includes changes to various definitions important to health-related occupancies so as to conform to regulations of the Department of Health and Family Services (DHFS). Other proposed revisions are in response to 1997 Wisc. Acts 27, 237 and 768 and updating administrative rules to be more contemporary within the industry by adopting more recent nationally-recognized standards.

Chapter Comm 81, definitions and standards, is proposed to be revised to reflect the adoption of more recent nationally-recognized standards for various plumbing products-- fixtures and faucets, and piping materials, joints and fittings. A number of definitions have been created. [Chapter Comm 81 was created in Clearinghouse Rule No. 98-83, which was adopted after the public hearing was held on this rule revision.]

The adoption of updated standards would allow the use of elliptical concrete piping for storm and clear water drain. Also, included are provisions for the Department to create a process to tag cross connection control assemblies for the purposes of tracking cyclical testing to assure the compliant operation of these devices. One portion of the rule, s. Comm 82.40 (3)(d) 3., is planned to be delayed effective six months after the effective date of the other portions of this rule. This section relates to the tagging of all cross connection control assemblies.

Chapter Comm 82, the design, construction, installation, supervision and inspection of plumbing, is proposed to be revised to address conformance in definitions with DHFS for health-related occupancies. Section Comm 82.50 provides for methods to avoid scalding at the point of water usage, as well as providing a maximum water system temperature to reduce and/or eliminate the environment for *Legionella* bacteria in the supply water system.

A process for submittal and review of alternate and experimental plumbing system designs in s. Comm 82.20 has also been established. This will allow submittals and review of plumbing systems for statewide use on an experimental basis, similar to approvals for plumbing and building products and materials.

Section Comm 82.33 has been repealed and recreated to clarify the allowable options for public swimming pool, wading pool and whirlpool discharges.

Portions of the Appendix have been updated to reflect the following: the most current listing of water quality management agencies for use in plan submittal, and the revision of some figures to reflect spacing requirements between bathroom fixtures.

The proposed rule revisions were developed with the assistance of the Plumbing Advisory Code Council. The Plumbing Advisory Code Council consists of the following individuals: Thomas Boehnen, American Society of Plumbing Engineers; Rudy Petrowitsch, American Society of Sanitary Engineers; Gary Hamilton, State AFL-CIO; Gary Kowalke, Wisconsin Association of Plumbing, Heating, and Cooling Contractors, Inc.; Mark Krowski, City of Milwaukee; Jeff Kuhn, Plumbing and Mechanical Contractors of SE Wisconsin; Clint McCullough, Madison Contractors Association; Bob Netzler, League of Wisconsin Municipalities; Dave Viola, Plumbing Manufacturers Institute; Dale Schlieve, WI Society of Professional Designers of Engineering Systems, Inc.; and Gene Shumann, plumbing designers.

* *

SECTION 1. Comm 81.01 (7e) is created to read:

Comm 81.01 (7e) "Alternate plumbing system" means a type of plumbing system designed in such a manner that valid and reliable data shall demonstrate to the department that the plumbing system is in compliance with the intent of chs. Comm 82 and 84.

SECTION 2. Comm 81.01 (17e) is created to read:

Comm 81.01 (17e) "Backflow preventer" means any generic backflow prevention devise or assembly.

SECTION 3. Comm 81.01 (18) is amended to read:

Comm 81.01 (18) "Backflow preventer with intermediate atmospheric vent" means a type of cross connection control device which consists of 2 independently acting check valves, internally force-loaded to a normally closed position and separated by an intermediate chamber with a means for automatically venting to atmosphere, where the venting means is internally force-loaded to a normally open position. The terms "backflow preventer" or " dual check valve type with atmospheric port backflow preventer" has the same meaning as backflow preventer with intermediate atmospheric vent.

SECTION 4. Comm 81.01 (20) is amended to read:

Comm 81.01 (20) "Back siphonage backflow vacuum breaker" means a type of cross connection control device which contains a check valve force-loaded closed and an air inlet vent valve force-loaded open to atmosphere, positioned downstream of the check valve, and located between and including 2 tightly closing shut-off valves and 2 test cocks. The term "SVB" has the same meaning as back siphonage backflow vacuum breaker.

SECTION 5. Comm 81.01 (60e) is created to read:

Comm 81.01 (60e) "Community-based residential facility" has the meaning specified under s. 50.01 (1g), Stats.

Note: Section 50.01 (1g), Stats., reads: "Community-based residential facility" means a place where 5 or more adults who are not related to the operator or administrator and who do not require care above intermediate level nursing care reside and receive care, treatment or services that are above the level of room and board but that include no more than 3 hours of nursing care per week per resident. "Community-based residential facility" does not include any of the following:

(a) A convent or facility owned or operated by members of a religious order exclusively for the reception and care or treatment of members of that order.

(b) A facility or private home that provides care, treatment and services only for victims of domestic abuse, as defined in s. 46.95 (1) (a), Stats., and their children.

(c) A shelter facility as defined under s. 16.352 (1) (d), Stats.

(d) A place that provides lodging for individuals and in which all of the following conditions are met:

1. Each lodged individual is able to exit the place under emergency conditions without the assistance of another individual.

2. No lodged individual receives from the owner, manager or operator of the place or the owner's, manager's or operator's agent or employe any of the following:

a. Personal care, supervision or treatment, or management, control or supervision of prescription medications.

b. Care or services other than board, information, referral, advocacy or job guidance; location and coordination of social services by an agency that is not affiliated with the owner, manager or operator, for which arrangements were made for an individual before he or she lodged in the place; or, in the case of an emergency, arrangement for the provision of health care or social services by an agency that is not affiliated with the owner, manager or operator.

(e) An adult family home.

(f) A residential care apartment complex.

(g) A residential facility in the village of Union Grove that was authorized to operate without a license under a final judgment entered by a court before January 1, 1982, and that continues to comply with the judgment notwithstanding the expiration of the judgment.

SECTION 5a. Comm 81.01 (67e) is created to read:

Comm 81.01 (67e) "DC detector" has the same meaning as specified in sub. (80).

SECTION 5b. Comm 81.01 (67m) is created to read:

Comm 81.01 (67m) "DCV detector" has the same meaning as specified in sub. (79).

SECTION 6. Comm 81.01 (79) is amended to read:

Comm 81.01 (79) "Double check backflow prevention assembly" means a type of cross connection control device which is composed of 2 independently acting check valves internally force-loaded to a normally closed position, tightly closing shut-off valves located at each end of the assembly and fitted with test cocks. The terms "backflow preventer, double check valve type" or "DCV" have the same meaning as double check backflow prevention assembly.

SECTION 7. Comm 81.01 (80) is amended to read:

Comm 81.01 (80) "Double check detector assembly backflow preventer" means a type of a double check backflow prevention assembly which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly. The terms "DC detector" and "double check detector valve type backflow preventer" have the same meaning as double check detector backflow preventer.

SECTION 7a. Comm 81.01 (82m) is created to read:

Comm 81.01 (82m) "Dual check valve type with atmospheric port backflow preventer" has the same meaning as specified in sub. (18).

SECTION 8. Comm 81.01 (90e) is created to read:

Comm 81.01 (90e) "Experimental plumbing system" has the same meaning as experimental system as specified in specified in sub. (91).

SECTION 9. Comm 81.01 (116) is repealed and recreated to read:

Comm 81.01 (116) "Health care and related facility" means a hospital, nursing home, community based residential facility, county home, infirmary, inpatient mental health center, inpatient hospice, ambulatory surgery center, adult daycare center, end stage renal facility, facility for the developmentally disabled, institute for mental disease, urgent care center, clinic or medical office, child caring institution, or school of medicine, surgery or dentistry.

SECTION 10. Comm 81.01 (163e) is created to read:

Comm 81.01 (163e) "Nursing home" has the meaning specified under s. 50.01 (3), Stats.

Note: Section 50.01 (3), Stats., reads: "Nursing home" means a place where 5 or more persons who are not related to the operator or administrator reside, receive care or treatment and, because of their mental or physical condition require access to 24-hour nursing services, including limited nursing care, intermediate level nursing care and skilled nursing services. "Nursing home" does not include any of the following:

(c) A convent or facility owned or operated exclusively by and for members of a religious order that provides reception and care or treatment of an individual.

(d) A hospice, as defined in s. 50.90 (1), Stats., that directly provides inpatient care.

(e) A residential care apartment complex.

SECTION 11. Comm 81.01 (170e) is created to read:

Comm 81.01 (170e) "Patient area plumbing fixture" means a plumbing fixture that is accessible to patients in a health care facility and is intended to be used for culinary, hygienic or domestic purposes.

SECTION 12. Comm 81.01 (189) is amended to read:

Comm 81.01 (189) "Pressure vacuum breaker assembly" means a type of cross connection control device which consists of an independently operating internally loaded check valve and an independently operating loaded air inlet located on the discharge side of the check valve, a tightly

closing shut-off valve located at each end of the assembly, and test cocks. The term "PVB" has the same meaning as pressure vacuum breaker assembly.

SECTION 12a. Comm 81.01 (199e) is created to read:

Comm 81.01 (199e) "PVB" has the same meaning as specified in sub. (89).

SECTION 13. Comm 81.01 (203) is amended to read:

Comm 81.01 (203) "Reduced pressure detector backflow preventer" means a type of reduced pressure principle type backflow preventer which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly. The term "RP detector" has the same meaning as reduced pressure detector backflow preventer.

SECTION 14. Comm 81.01 (204) is amended to read:

Comm 81.01 (204) "Reduced pressure principle ~~type~~ backflow preventer" means a type of cross connection control device which contains 2 independently acting check valves, separated by an intermediate chamber or zone in which there is a hydraulically operated means for venting to atmosphere, and includes 2 shut-off valves and 4 test cocks. The term "RP" has the same meaning as reduced pressure principle backflow preventer.

SECTION 14a. Comm 81.01 (209e) is created to read:

Comm 81.01 (209e) "RP" has the same meaning as specified in sub. (204).

SECTION 14b. Comm 81.01 (209m) is created to read:

Comm 81.01 (209m) "RP detector" has the same meaning as specified in sub. (208).

SECTION 14c. Comm 81.01 (252e) is created to read:

Comm 81.01 (252e) "SVB" has the same meaning as specified in sub. (20).

SECTION 15. Comm 81.01 (288e) and Notes are created to read:

Comm 81.01 (288e) "Whirlpool" has the meaning as specified under s. Comm 90.03 (11) (k).

Note: Section Comm 90.03 (11) (k) reads: "Whirlpool" means a relatively small pool which uses high temperature water and which may include a water agitation system. A "whirlpool" is sometimes called a spa.

Note: A fill and dump bathtub is not a whirlpool.

SECTION 15a. Comm 81.01 (288m) is created to read:

Comm 81.01 (288m) "Whirlpool bath tub" means a plumbing appliance consisting of a bathtub fixture that is equipped and fitted with a circulation piping system designed to accept, circulate and discharge bathtub water upon each use.

SECTION 15b. Comm 81.20 (2) is repealed.

SECTION 15c. Comm 81.20 (3) is renumbered as Comm 81.20 (2) and amended to read:

Comm 81.20 ~~(3)~~ (2) ADOPTION OF STANDARDS. The standards referenced in Tables 81.20-1 to ~~81.20-14~~ 81.20-13 are hereby incorporated by reference into this chapter.

SECTION 15d. Comm 81.20 (2) Notes are created to read:

Note: Copies of the adopted standards are on file in the offices of the department, the secretary of state and the revisor of statutes. Copies of the standards may be purchased through the respective organizations listed in Tables 81.20-1 to 81.20-13.

Note: Refer to chs. Comm 82 - 86 for additional information regarding specific installations, uses and limitations of these standards.

SECTION 15e. Comm 81.20 (2) Table 81.20-2 is repealed and recreated to read:

Table 81.20-2

	ANSI	American National Standards Institute, Inc. 1430 Broadway New York, New York 10018
	Standard Reference Number	Title
1.	Z21.22a-90	Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems
2.	Z21.61-83	Gas-Fried Toilets
3.	Z124.1-95	Plastic Bathtub Units
4.	Z124.2-95	Plastic Shower Receptors and Shower Stalls
5.	Z124.3-95	Plastic Lavatories
6.	Z124.4-96	Plastic Water Closet Bowls and Tanks
7.	Z124.6-97	Plastic Sinks
8.	Z124.9-94	Fixtures, Plastic Urinal, American National Standard for

SECTION 15f. Table 81.20-3e is created to read:

Table 81.20-3e

	ASME	American Society of Mechanical Engineers 345 East 47th Street New York, New York 10017
	Standard Reference Number	Title
1.	A112.1.2-91 (R1998)	Air Gaps in Plumbing Systems
2.	A112.6.1M-97	Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use
3.	A112.14.1-75 (R1998)	Backwater Valves
4.	A112.18.1M-96	Plumbing Fixture Fittings
5.	A112.19.1M-94	Enameled Cast Iron Plumbing Fixtures
6.	A112.19.2M-95	Vitreous China Plumbing Fixtures
7.	A112.19.3M-87 (R1996)	Stainless Steel Plumbing Fixtures (Designed for Residential Use)
8.	A112.19.4-94	Porcelain Enameled Formed Steel Plumbing Fixtures
9.	A112.19.5-79 (R1998)	Trim for Water-Closet Bowls, Tanks, and Urinals (Dimensional Standards)
10.	A112.19.6-95	Hydraulic Performance Requirements for Water Closets and Urinals
11.	A112.21.1M-91	Floor Drains
12.	A112.21.2M-83	Roof Drains
13.	B1.20.1-83 (R1992)	Pipe Threads, General Purpose (Inch)
14.	B16.1-89	Cast Iron Pipe Flanges and Flanged Fittings
15.	B16.3-92	Malleable Iron Threaded Fittings
16.	B16.4-92	Gray Iron Threaded Fittings
17.	B16.5a-98	Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24 (and addenda)
18.	B16.9-93	Factory-Made Wrought Steel Buttwelding Fittings
19.	B16.11-96	Forged Fittings, Socket-Welding and Threaded
20.	B16.12-91	Cast Iron Threaded Drainage Fittings
21.	B16.15-85 (R1994)	Cast Bronze Threaded Fittings, Classes 125 and 250
22.	B16.18-84 (R1994)	Cast Copper Alloy Solder Joint Pressure Fittings
23.	B16.22-95	Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings
24.	B16.23-92	Cast Copper Alloy Solder Joint Drainage Fittings-DWV
25.	B16.24-91	Cast Copper Alloy Pipe Flanges and Flanged Fittings, Class 150, 300, 400, 600, 900, 1500 and 2500
26.	B16.26-88	Cast Copper Alloy Fittings for Flared Copper Tubes
27.	B16.28-94	Wrought Steel Buttwelding Short Radius Elbows and Returns
28.	B16.29-94	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV
29.	B16.42-87 (R1997)	Ductile Iron Pipe Flanges and Flanged Fittings
30.	B16.45-87 (R1997)	Cast Iron Fittings for Sovent® Drainage Systems
31.	B36.19M-85 (R1994)	Stainless Steel Pipe

SECTION 15g. Table 81.20-4 (partial) is amended to read:

Table 81.20-4

	ASSE	American Society of Sanitary Engineering ~~P.O. Box 9712~~ 901 Canterbury, Suite A ~~Bay Village, Ohio 44140~~ West Lake, Ohio 44145-1166

	Standard Reference Number	Title
3.	~~1003-93~~ 1003-95	Water Pressure Reducing Valves
10.	~~1010-82~~ 1010-96	Water Hammer ~~Arrestors~~ Arresters
11.	~~1011-93~~ 1011-95	Hose Connection Vacuum Breakers
13.	~~1013-93~~ 1013-99	Reduced Pressure ~~Principle Backflow Preventers~~ Detector Fire Protection Backflow Prevention Assemblies
15.	~~1015-93~~ 1015-99	Double Check ~~Backflow Prevention Assembly~~ Fire Protection Backflow Prevention Assemblies
15e.	1016-96	Individual Thermostatic, Pressure Balancing, and Combination Pressure Balancing and Thermostatic Control Valves for Individual Fixture Fittings
16.	~~1018-86~~ 1018-88	Trap Seal Primer Valves, Water Supply Fed
17.	~~1019-93~~ 1019-97	Vacuum Breaker Wall Hydrants, Freeze Resistant Automatic Draining Type
18.	~~1020-90~~ 1020-89	Pressure Vacuum Breaker Assembly
18e.	1022-96	Backflow Preventer for Carbonated Beverage Machines
21.	~~1035-93~~ 1035-95	Laboratory Faucet Backflow Preventers
22e.	1043-92	Cast Iron Sovent® Sanitary Drain Systems
23.	~~1047-93~~ 1047-99	Reduced Pressure Detector Fire Protection Backflow ~~Preventer~~ Prevention Assemblies
24.	~~1048-93~~ 1048-99	Double Check Fire Protection ~~Detector Assembly~~ Backflow ~~Preventer~~ Prevention Assemblies
25.	~~1052-93~~ 1052-94	Hose Connection Backflow Preventers
25e.	1055-97	Chemical Dispensing Systems
26.	~~1056-93~~ 1056-95	Back Siphonage ~~Backflow~~ Vacuum Breaker~~s~~
26e.	1066-97	Individual Pressure Balancing In-Line Valves for Individual Fixture Fittings
~~27.~~	~~5010-1013-1-90~~	~~Field Test Procedure for a Reduced Pressure Principle Assembly Using A Differential Pressure Gauge~~
~~28.~~	~~5010-1015-1-90~~	~~Field Test Procedure for a Double Check Valve Assembly Using a Duplex Gauge~~
~~29.~~	~~5010-1015-2-90~~	~~Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge High and Low Pressure Hose Method~~
~~30.~~	~~5010-1015-3-90~~	~~Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge High Hose Method~~
~~31.~~	~~5010-1015-4-90~~	~~Field Test Procedure for a Double Check Valve Assembly Using a Sight Tube~~
~~32.~~	~~5010-1020-1-90~~	~~Field Test Procedure for a Pressure Vacuum Breaker Assembly~~
~~33.~~	~~5010-1047-1-90~~	~~Field Test Procedure for a Reduced Pressure Detector Assembly Using a Differential Pressure Gauge~~
~~34.~~	~~5010-1048-1-90~~	~~Field Test Procedure for a Double Check Detector Assembly Using a Duplex Gauge~~
~~35.~~	~~5010-1048-2-90~~	~~Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge High and Low Pressure Hose Method~~
~~36.~~	~~5010-1048-3-90~~	~~Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge High Pressure Hose Method~~
~~37.~~	~~5010-1048-4-90~~	~~Field Test Procedure for a Double Check Detector Assembly Using a Sight Tube~~

SECTION 15h. Tables 81.20-5 (partial), 81.20-6 (partial), 81.20-7 (partial) are amended to read:

Table 81.20-5

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959
	Standard Reference Number	Title
1.	~~A53-93a~~ A53-97	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless, Specification for
2.	~~A74-94~~ A74-96	Cast Iron Soil Pipe and Fittings, Specification for
3.	~~A123-89a~~ A123/A123M-97a	Zinc (Hot-Galvanized) Coatings on Iron and Steel Products ~~Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates and Strip~~, Specification for
4.	~~A270-90~~ A270-95a	Seamless and Welded Austenitic Stainless Steel Sanitary Tubing, Specification for
5.	~~A377-94~~ A377-95	Ductile-Iron Pressure Pipe, Standard Index of Specification for
6.	~~A403/A403M-94a~~ A403/A403M-97a	Wrought Austenitic Stainless Steel Piping Fittings, Specification for
7.	~~A450/A450M-94~~ A450/A450M-96	~~General Requirements for~~ Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes~~, Specification for~~
7e.	A888-96	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Pipe Applications, Specifications for
8.	~~B32-95~~ B32-96	~~Solder Metal, Specification for~~ Solder Metal
9.	B42-93	Pipe, Seamless Copper ~~Pipe~~, Standard Sizes~~, Specification for~~
10.	~~B43-94~~ B43-96	Seamless Red Brass Pipe, Standard Sizes, Specification for
~~11.~~	~~B75-93~~	~~Seamless Copper Tube, Specification for~~
~~12.~~ 11.	~~B88-93a~~ B88/B88M-96	~~Seamless Copper Water Tube, Specification for~~ Water, Seamless, Copper Tube
~~13.~~ 12.	~~B152-94~~ B152/B152M-97a	Copper Sheet, Strip, Plate, and Rolled Bar, Specification for
~~14.~~ 13.	~~B251-93~~ B251/B251M-97	~~General Requirements for~~ Tube, Wrought Seamless Copper and Copper-~~Alloy Tube, Specification for~~
~~15.~~ 14.	~~B302-92~~ B302-97	Threadless Copper Pipe, Specification for
~~16.~~ 15.	~~B306-92~~ B306-96	Standard Specifications for Copper Drainage Tube (DWV)~~, Specification for~~
~~17.~~ 16.	~~C4-62(R1991)~~ C4-97	Clay Drain Tile and Perforated Clay Drain Tile, Specification for
~~18.~~ 17.	~~C14-94~~ C14/C14M-95	Concrete Sewer, Storm Drain, and Culvert Pipe, Specification for
~~19.~~ 18.	~~C33-93~~ C33-97	Concrete Aggregates~~, Specification for~~
~~20.~~ 19.	~~C76-94~~ C76-98	~~Reinforced Concrete~~ Culvert, Storm Drain, and Sewer Pipe, ~~Specification for~~ Reinforced Concrete
20.	C76M-97	Reinforced Concrete Culvert, Storm Drain, and Culvert Pipe (metric), Specifications for
21.	~~C425-91~~ C425-97	~~Compression Joints for Vitrified~~ Clay Pipe and Fittings~~, Specification~~ for Vitrified Compression Joints
22.	~~C443-94~~ C443/C443M-94	Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets~~, Specification for~~
22e.	C507/C507M-95a	Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer, Specifications for
23.	~~C564-95~~ C564-97	Rubber Gaskets for Cast Iron Soil Pipe and Fittings, Specification for
24.	~~C700-91~~ C700-97	Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated~~,~~ Specification for
24e.	C877/C877M-94	External Sealing Bands for Noncircular Concrete Sewer, Storm Drain, and Culvert Pipe, Specifications for
24m.	C990/C990M-96	Joints for Concrete Pipe, Manholes, Precast Box Sections Using Preformed Flexible Joint Sealants, Specifications for,
24s.	C1306-95	Hydrostatic Pressure Resistance of a Liquid-Applied Waterproofing Membrane, Standard Test Method for
25.	~~D1527-94~~ D1527-96a	Acrylonitrile-Butadiene-Styrene (ABS) ~~Plastic Pipe,~~ Schedules 40 and 80~~, Specification for~~
26.	~~D1785-93~~ D1785-96b	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120~~,~~ Specification for
27.	~~D2104-93~~ D2104-96	Standard Specifications for Polyethylene (PE) Plastic Pipe, Schedule 40~~, Specification for~~
28.	~~D2235-93a~~ D2235-96a	Standard Specifications for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings~~, Specification for~~
29.	~~D2239-93~~ D2239-96a	Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter~~,~~ Specification for
30.	~~D2241-93~~ D2241-96b	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-~~PR~~ Series),

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959
	Standard Reference Number	Title
		~~Specification for~~
31.	~~D2282-94~~ D2282-96a	Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR), Specification for
33.	~~D2447-93~~ D2447-95	Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter, Specification for
34.	~~D2464-94~~ D2464-96a	Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Specification for
35.	~~D2466-94a~~ D2466-97	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40, Specification for
36.	~~D2467-94~~ D2467-96a	Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Specification for
37.	~~D2468-93~~ D2468-96a	Acrylonitrile-Butadiene-Styrene (ABS), Plastic Pipe Fittings, Schedule 40, Specification for
38.	~~D2564-93~~ D2564-96a	Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic ~~Pipe and Fittings Piping~~ Systems, Specification for
39.	~~D2609-93~~ D2609-97	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe, Specification for
40.	~~D2657-90~~ D2657-97	~~Heat Joining~~ Heat Fusion Joining of Polyolefin Pipe and Fittings, ~~Specification for~~ Standard Practice of
41.	~~D2661-94a~~ D2661-97a	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings, Specification for
42.	~~D2662-93~~ D2662-96a	Polybutylene (PB) Plastic Pipe (SIDR-PR), Based on Controlled Inside Diameter, Specification for
43.	~~D2665-94~~ D2665-97a	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings, Specification for
44.	~~D2666-93~~ D2666-96a	Polybutylene (PB) Plastic Tubing, Specification for
45.	~~D2672-94~~ D2672-96a	Joints for IPS PVC Pipe Using Solvent Cement, Specification for
46.	~~D2680-93~~ D2680-95a	Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping, Specification for
47.	~~D2683-93~~ D2683-98	Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing, Specification for
48.	~~D2729-93~~ D2729-96a	Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Specification for
49.	~~D2737-93~~ D2737-96a	Polyethylene (PE) Plastic Tubing, Specification for
50.	~~D2751-93~~ D2751-96a	Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings, Specification for
51.	D2774-94	Underground Installation of Thermoplastic Pressure Piping, Standard Practice for
52.	~~D2846-93~~ D2846/D2846M-97	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems, Specification for
53.	~~D2852-93~~ D2852-95	Styrene-Rubber (SR) Plastic Drain Pipe and Fittings, Specification for
54.	~~D2855-93~~ D2855-96	Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings, Practice for
55.	~~D3000-93~~ D3000-95a	Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Outside Diameter, Specification for
56.	~~D3034-93~~ D3034-97	Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Specification for
57.	~~D3035-93~~ D3035-95	Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter, Specification for
58.	~~D3139-89~~ D3139-96a	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals, Specification for
60.	~~D3212-92~~ D3212-96a	Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals, Specification for
61.	~~D3261-93~~ D3261-97	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing, Specification for
62.	~~D3309-93~~ D3309-96a	Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems, Specification for
63.	~~D3311-92~~ D3311-94	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns, Specification for
64.	~~D4068-91~~ D4068-96	Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane, Standard Test Method for
71.	~~F405-93~~ F405-97	Corrugated Polyethylene (PE) Tubing and Fittings, Specification for
72.	~~F409-93~~ F409-97	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings, Specification for
73.	~~F437-93~~ F437-96a	Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Specification for
74.	~~F438-93~~ F438-97	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40, Specification for

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959
	Standard Reference Number	Title
75.	~~F439-93a~~ F439-97	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Specification for
76.	~~F441-94~~ F441/ F441M-97	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80, Specification for
77.	~~F442-94~~ F442/ F442M-97	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR), Specification for
78.	~~F477-93~~ F477-96a	Elastomeric Seals (Gaskets) for Joining Plastic Pipe, Specification for
78e.	F492-95	Propylene and Polypropylene (PP) Plastic-Lined Ferrous Metal Pipe Fittings
79.	~~F493-93a~~ F493-97	Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings, Specification for
80.	~~F628-93~~ F628-97a	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core, Specification for
81.	~~F656-93~~ F656-96a	Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings, Specification for
81e.	F679-95	Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings
81m.	F789-95a	Type PS-46 and Type PS-115 PVC Plastic Gravity Flow Sewer Pipe and Fittings
81s.	F794-97	Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
83.	~~F845-93~~ F845-96	Plastic Insert Fittings for Polybutylene (PB) Tubing, Specification for
84.	~~F876-93~~ F876-97	Crosslinked Polyethylene (PEX) Tubing, Specification for
85.	~~F877-93~~ F877-97a	Crosslinked Polyethylene (PEX) Plastic Hot-and Cold- Water Distribution Systems, Specification for
86.	~~F891-93a~~ F891-97	Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe ~~with~~ With a Cellular Core, Specification for
87.	F949-96a	Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe With a Smooth Interior and Fittings
88.	F1281-98	Crosslinked Polyethylene / Aluminum / Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
89.	F1282-97	Polyethylene / Aluminum / Polyethylene (PE-AL-PE) Composite Pressure Pipe
90.	F1336-93	Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings
91.	F1807-98A	Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing

Table 81.20-6

	AWS	American Welding Society 550 N.W. LeJune Road Miami, Florida 33126
	Standard Reference Number	Title
AWS A5.8-92		Filler Metals for Brazing ~~and Braze~~ Welding, Specification for

Table 81.20-7

	AWWA	American Water Works Association Data Processing Department 6666 West Quincy Avenue Denver, Colorado 80235
	Standard Reference Number	Title
2.	~~C111/A21.11-90~~ C111/A21.11-95	American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
3.	~~C115/A21.15-88.~~ C115/A21.15-94	American National Standard for Flanged Ductile-Iron Pipe with Ductile-Type Iron or ~~and~~ Gray-Iron Pipe ~~with~~ Threaded Flanges
4.	~~C151/A21.51-91~~ C151/A21.51-96	American National Standard for Ductile-Iron Pipe, Centrifugally Cast for Water ~~or Other Liquids~~
5e.	C651-92	Water Mains, Disinfecting
6.	~~C700-90~~ C700-95	Cold Water Meters - Displacement Type with Bronze Main Case (w/1991 Addendum)
10.	~~C706-91~~ C706-96	Cold Water Meters, Direct-Reading, Remote -Registration Systems for
12.	~~C708-91~~ C708-96	Cold Water Meters-Multi-Jet Type
13.	~~C710-90~~ C710-95	Cold Water Meters, Displacement Type-Plastic Main Case (w/1991 Addendum)
15.	C906-90	Polyethylene Pressure Pipe and Fittings, 4 in. through 63 in., for Water Distribution

SECTION 15i. Table 81.20-7e is created to read:

Table 81.20-7e

	CAN/CSA	Canadian Standards Association 178 Rexdale Boulevard Rexdale (Toronto), Ontario, Canada M9W 1R3
	Standard Reference Number	Title
1.	B64-94	Backflow Preventers and Vacuum Breakers
2.	B125-93	Plumbing Fittings
3.	B137.9-98	Polyethylene / Aluminum / Polyethylene Composite Pressure Pipe Systems
4.	B137.10-98	Crosslinked Polyethylene /Aluminum / Crosslinked Polyethylene Composite Pressure Pipe Systems
5.	B181.1-96	ABS Drain, Waste, and Vent Pipe and Pipe Fittings
6.	B181.2-96	PVC Drain, Waste, and Vent Pipe and Pipe Fittings

SECTION 15j. Table 81.20-8 is amended to read:

Table 81.20-8

	CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Road, Suite 419 Chattanooga, Tennessee 37421
	Standard Reference Number	Title
1.	F1281-97	Crosslinked Polyethylene / Aluminum / Crosslinked (PEX-AL-PEX) Polyethylene Pressure Pipe
~~1.~~ 2.	~~301-95~~ 301-97	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Standard Specification for
~~2.~~ 3.	~~310-95~~ 310-97	Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Specification for

SECTION 15k. Table 81.20-10m is created to read:

Table 81.20-10m

NFPA	National Fire Protection Association 11 Tracy Drive Avon, MA 02322-9908
Standard Reference Number	Title
NFPA 13D-1999	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes

SECTION 15L. Table 81.20-11 is amended to read:

Table 81.20-11

	NSF	NSF International 3475 Plymouth Road P.O. Box 130140 Ann Arbor, Michigan 48113-0140
	Standard Reference Number	Title
4.	Standard- 44-98	Residential Cation Exchange Water Softeners
5.	Standard- 61-97b	Drinking Water System Components Health Effects

SECTION 15m. Comm 81.20 (2) Table 81.20-14 is repealed.

SECTION 16. Comm 82.20 (4) (e) is created to read:

Comm 82.20 (4) (e) 1. When requesting approval of an experimental plumbing system, all of the following shall be submitted:

a. At least 2 sets of plans signed in accordance with par. (d) and detailing the system installation for each site.

b. A letter of consent from the site or system owner of the installation. The letter shall acknowledge that the owner has received and read a copy of the experimental plumbing system submittal and is in agreement with all requirements listed within this subdivision.

c. Any additional information as requested by the department.

2. The registered architect, engineer, designer or master plumber responsible for the design of the experimental plumbing system shall, upon completion, certify in writing to the department that the installation is in compliance with the approved plans, specifications and data.

3. Onsite inspections shall be performed by the department at time intervals as specified by the department, but not less than once a year. Time intervals shall be included as conditions of approval. An inspection report shall be written. The department may assess a fee for each inspection.

Note: Refer to ch. Comm 2 for applicable fees.

4. No later than five years after the date of the completed installation the department may perform one of the following:

a. Order the removal of the experimental plumbing system.

b. Issue an alternate approval as specified in s. Comm 82.20 (12)(a).

c. Provide an extension of the experiment with conditions.

5. If an experimental plumbing system is subsequently codified in chs. Comm 82 and 84, or ch. 145, Stats., the requirements as specified in subds. 3. and 4. do not apply.

SECTION 17. Comm 82.20 (11) is repealed and recreated to read:

Comm 82.20 (11) PETITION FOR VARIANCE. The department shall consider and may grant a variance to a provision of this chapter in accordance with ch. Comm 3.

Note: Chapter Comm 3 requires the submittal of a petition for variance form (SBD-9890) and a fee, and that an equivalency is established in the petition for variance that meets the intent of the rule being petitioned. Chapter Comm 3 also requires the department to process regular petitions within 30 business days and priority petitions within 10 business days.

Note: Form SBD-9890 is available on request at no charge from the department at the Safety and Buildings Division, P.O. Box 2509, Madison WI 53701-2509, telephone (608) 266-1818, S&B web address: http://www.commerce.state.wi.us/SB/SB-Forms.html/.

SECTION 18. Comm 82.20 (12) is repealed and recreated to read:

Comm 82.20 (12) ALTERNATE AND EXPERIMENTAL PLUMBING SYSTEM REVIEW AND APPROVAL. The provisions of this chapter, ch. Comm 84 or ch. 145, Stats., are not intended to prevent the design and use of approved innovative plumbing systems.

(a) *Alternate plumbing systems.* The department may issue an approval of an alternate plumbing system if the system complies with the intent of chs. Comm 82 and 84, or ch. 145, Stats.

1. For an alternate plumbing system, before availability for statewide installation and use, an alternate plumbing system approval shall be issued. Concepts, plans, specifications and the documentation to support the system design shall be submitted to the department for review.

2. The department may require the submission of any information deemed necessary for review. Sufficient evidence shall be submitted to substantiate at least the following:

a. Assertions of function and performance.

b. Compliance with the intent of chs. Comm 82 and 84, or ch. 145, Stats.

3. The department shall review and make a determination on an application for alternate plumbing system within 3 months of receipt of all information and fees required to complete the review. Approval for an alternate plumbing system shall be issued by the department in writing.

4. The department may include specific conditions in issuing an approval for an alternate plumbing system, including an expiration date for the approval. A violation of any of the conditions under which an approval is issued shall constitute a violation of this chapter.

5. If upon review the department determines that an alternate plumbing system does not comply with the intent of chs. Comm 82 and 84, or ch. 145, Stats., the request for approval shall be denied in writing.

(b) *Experimental plumbing systems.* The department may issue an approval of an experimental plumbing system for the purpose of proving compliance with the intent of chs. Comm 82 and 84 and ch. 145, Stats.

1. For an experimental plumbing system, a separate approval shall be obtained for each system or project to be installed for the purpose of proving compliance with the intent of chs. Comm 82 and 84 and ch. 145, Stats. Approval for an experimental plumbing system shall be issued by the department in writing.

2. The department may require the submission of additional information deemed necessary for determining that the design meets the intent of chs. Comm 82 and 84, and ch. 145, Stats.

3. The department shall review and make a determination on an application for an experimental plumbing system within 6 months of receipt of all information and fees required to complete the review.

4. The department may include specific conditions in issuing an approval for an experimental plumbing system, including an expiration date for the approval. A violation of any of the conditions under which an approval is issued shall constitute a violation of this chapter.

5. Denial of an experimental plumbing system or project by the department shall be made in writing.

6. The department may establish parameters to limit the number of applications for review it will accept for experimental plumbing systems.

(c) *Modification.* If an approved alternate or experimental plumbing system is modified or additional assertions of function or performance are made, the approval shall be void, unless the system is resubmitted to the department for review and approval is granted.

(d) *Revocation of approval.* The department may revoke an approval issued under this section for any false statements or misrepresentations of facts or data on which the approval was based, or as a result of system failure.

(e) *Limitations.* An approval issued by the department for an alternate or experimental plumbing system may not be construed as an assumption of any responsibility for defects in design, construction or performance of any system nor for any damages that may result.

(f) *Fees.* Fees for the review of an alternate or experimental plumbing system under this section and any onsite inspections shall be submitted in accordance with ch. Comm 2.

SECTION 19. Comm 82.20 (1) Table 82.20-1 (partial) is amended to read:

Table 82.20-1
SUBMITTALS TO DEPARTMENT

Type of Plumbing Installation
4. ~~Engineered~~ Alternate and experimental plumbing systems.

SECTION 20. Comm 82.21 (2) (a) is repealed and recreated to read:

Comm 82.21 (2) (a) *Existing systems.* 1. Except as specified in subd. 2., any existing plumbing system shall be permitted to remain and maintenance continue if the maintenance is in accordance with the original system design and any of the following apply:

a. The plumbing system was installed in accordance with the code in effect at the time of installation.

b. The plumbing system conforms to the present code.

2. When a hazard to life, health or property exists or is created by an existing system, that system shall be repaired or replaced.

SECTION 21. Comm 82.21 (3) is repealed and recreated to read:

Comm 82.21 (3) MAINTENANCE AND TESTING OF CROSS CONNECTION CONTROL DEVICES. (a) The maintenance and performance testing requirements of this subsection apply to all cross connection control devices regardless of date of installation.

Note: For further clarification, see Table 82.21-1.

(b) 1. A performance test shall be conducted for the devices listed in Table 82.21-1 at all of the following:

a. At the time of installation.

b. Immediately after repairs or alterations to the device have occurred.

c. At least annually.

2. The performance test shall be conducted using the appropriate test standard for the device as specified in Table 82.21-1.

3. A cross connection device performance test shall be conducted by an individual registered by the department in accordance with s. Comm 5.99.

4. a. The results of the cross connection device performance test shall be submitted as specified in Table 82.21-1 in a format prescribed by the department.

Note: Test results shall be submitted on the Cross Connection Control Device Performance Test form (SBD-9927), available on request from the department at the Safety and Buildings Division, P.O. Box 7302, Madison WI 53707-7302; Fax (608) 267-0592, S&B web address: http://www.commerce.state.wi.us/SB/SB-Forms.html/.

b. As specified in Table 82.21-1, the results of the cross connection device performance test shall be submitted to the department and purveyor within 60 days of completion of the test.

5. The results of performance tests for the devices or assemblies listed in Table 82.21-1 shall be made available upon request to the department, its agent, or the local governmental unit.

(c) The maintenance and performance testing requirements of this subsection shall also apply to those cross connection control devices or assemblies installed prior to the effective date of this subsection.

SECTION 22. Comm 82.21 (3) Table 82.21-1 is created to read:

Table 82.21-1
Testing and Submitting Requirements
for Cross Connection Control Devices or Assemblies

Industry Common Name of Assembly	ASSE Standard Name	CAN/CSA Standard Name and Number	ASSE Test Standard	Test Results Submitted To Department and Purveyor
DCV	Double check backflow prevention assembly ASSE 1015	Backflow preventer, double check valve type (DCVA) CAN/CSA-B64.5-94	5010-1015-1, 5010-1015-2, 5010-1015-3, 5010-1015-4	No[a]
DCV detector	Double check detector assembly backflow preventer ASSE 1048		5010-1048-1, 5010-1048-2, 5010-1048-3, 5010-1048-4	No[a]
PVB	Pressure vacuum breaker assembly ASSE 1020	Vacuum breaker, pressure type (PVB) CAN/CSA-B64.1.2-94	5010-1020-1	Yes
RP	Reduced pressure principle backflow preventer ASSE 1013	Backflow preventer, reduced pressure principle type (RP) CAN/CSA-B64.4-94	5010-1013-1	Yes

Industry Common Name of Assembly	ASSE Standard Name	CAN/CSA Standard Name and Number	ASSE Test Standard	Test Results Submitted To Department and Purveyor
RP Detector	Reduced pressure detector backflow preventer ASSE 1047		5010-1047-1	Yes
SVB	Backsiphonage backflow vacuum breaker ASSE 1056		Per department approved guidelines	Yes

[a] The results of the performance test shall be maintained at the site where the device is installed.

SECTION 23. Comm 82.31 (16) (d) 2. Note is created to read:

Note: Section Comm 64.57 (2) (a) adopts the American Institute of Architects (AIA) "Design and Construction of Hospital and Health Care Facilities" that includes greater vent terminal to air intake distances. These guidelines are available from AIA, telephone 1-800-365-2724.

SECTION 24. Comm 82.33 (9) (i) is repealed and recreated to read:

Comm 82.33 (9) (i) *Swimming pools.* 1. The backwash and drain wastewater from a swimming pool, wading pool or whirlpool shall discharge in accordance with Table 82.33-3.

2. The discharge from interior deck drains shall be directed to the sanitary sewer via an air-gap.

3. The discharge from exterior deck drains shall be directed to the storm sewer by way of an air-gap or to grade.

4. The requirements for sewer connections as specified in ch. Comm 90 applies to all public swimming pools.

SECTION 25. Comm 82.33 Table 82.33-3 is created to read:

Table 82.33-3
ALLOWABLE DISCHARGE POINTS
FROM PUBLIC SWIMMING POOLS, WADING POOLS AND WHIRLPOOLS

Discharge Type	Private Sewage System	Sanitary Sewer	Municipal Storm Sewer	Ground Surface Storm
1. Public Swimming Pools, Wading Pools, and Whirlpools, diatomaceous earth backwash	X[a]	X		
2. Public Swimming Pools, Wading Pools, and Whirlpools, drain wastewater	X[a]	X[c]	X[b & d]	X[b & d]
3. Public Swimming Pools, Wading Pools, and Whirlpools, sand filter backwash	X[a]	X[c]	X[b & d]	X[b & d]
4. Public Whirlpools, backwash and drain wastewater	X[a]	X[c]		

[a] Allowed when the private sewage system is designed to include pool wastewater.
[b] Allowed with permission of the local municipality.
[c] Allowed if local municipal treatment plant will accept pool wastewater.
[d] Allowed with permission of the department of natural resources.

SECTION 26. Comm 82.34 (4) (b) 2. is amended to read:

Comm 82.34 (4) (b) 2. Catch basins serving garages for one- and 2-family dwellings shall be designed and installed in accordance with par. (a) 2.

SECTION 27. Comm 82.36 (3) (b) 3. is amended to read:

Comm 82.36 (3) (b) 3. The ~~clear water~~ waste from a drinking fountain, water heater relief valve, storage tank relief valve, water softener, or iron filter~~, or floor drain or water testing sink within a municipal well house~~ shall be discharged to ~~either~~ a sanitary drain system or a storm drain system.

SECTION 27a. Comm 82.36 (3) (b) 3. Note is created to read:

Note: See also s. NR 811.29 for setbacks to wells.

SECTION 27b. Comm 82.36 (3) (b) 5. is created to read:

Comm 82.36 (3) (b) 5. The wastes from a floor drain located in a municipal well pump house, a water testing sink within a municipal well pump house or a one- and 2-family garage shall be discharged to a sanitary drain system or to ground surface.

SECTION 28. Comm 82.36 (4) (a) is amended to read:

Comm 82.36 (4) LOAD ON DRAIN PIPING. (a) Storm water drainage. The load factor on storm water drain piping shall be computed in terms of gallons per minute or on the square footage of the horizontal projection of roofs, paved areas, yards and other tributary areas based on a minimum of

3.7 inches per hour and the surface area to gallons per minute (gpm) conversion factors in Tables 82.36-1 to 82.36-3.

SECTION 29. Comm 82.36 (5) (a) is amended to read:

Comm 82.36 (5) SELECTING SIZE OF STORM AND CLEAR WATER DRAIN PIPING. (a) Horizontal storm water drain piping. The pipe size for horizontal drain piping for storm water shall be determined from Tables 82.36-1 to 82.36-4a, or a detailed engineering analysis acceptable to the department.

SECTION 30. Comm 82.36 Table 82.36-4a is created to read:

Table 82.36-4a
MAXIMUM CAPACITY OF STORM WATER HORIZONTAL DRAIN PIPING FLOWING FULL FOR ELLIPTICAL REINFORCED CONCRETE PIPE

Pipe Diameters in Inches (circular pipe equivalent)	Maximum Capacities (in gallons per minute) Pitch of Piping Per Foot			
	1/16 inch	1/8 inch	1/4 inch	1/2 inch
14 X 23 (18)	3,300	4,675	6,700	9,500
19 X 30 (24)	7,200	10,060	14,700	21,000
24 X 38 (30)	13,250	18,740	26,500	37,475
29 X 45 (36)	21,545	30,475	43,095	60,940
34 X 53 (42)	32,500	45,965	65,000	91,925
38 X 60 (48)	46,405	65,625	92,800	131,245
43 X 68 (54)	63,525	89,840	127,050	179,800
48 X 76 (60)	84,135	118,985	168,270	237,965

SECTION 31. Comm 82.36 (6) (a) is amended to read:

Comm 82.36 (6) (a) *Storm water drain piping.* The minimum pitch of horizontal drain piping shall be in accordance with Tables 82.36-1 to 82.36-4a, or as otherwise approved by the department.

SECTION 32. Comm 82.40 (3) (d) 3. is created to read:

Comm 82.40 (3) (d) 3. The installation of each reduced pressure principle backflow preventer, reduced pressure detector backflow preventer, pressure vacuum breaker assembly, and back siphonage backflow vacuum breaker shall display a department assigned identification number. The provisions of this subdivision shall take effect [revisor to add date, 6 months from effective date of this rule].

a. The method to display the department assigned identification number shall be a weather-resistant tag, securely attached to the cross connection control assembly.

b. The tag shall contain at least the following information.

Wisconsin Department of Commerce Identification/Object Number _____ Cross Connection Control Assembly Do Not Remove This Tag

c. The department assigned identification number shall be printed in the blank area with a permanent, waterproof marker or similar indelible method.

Note: To obtain a department assigned identification number for a cross connection control assembly the department at the Safety and Buildings Division; P.O. Box 7302; Madison, Wisconsin 53707-7302; telephone (608) 266-0521; Fax (608) 267-0592; TTY (608) 264-8777.

SECTION 33. Comm 82.40 (8) (g) is amended to read:

Comm 82.40 (8) (g) *Temperature control.* The water temperature to all showers in public buildings shall be controlled by thermostatic mixing valves or by individually controlled pressure balanced mixing valves. A thermostatic or pressure balanced mixing valve may not be bypassed.

SECTION 34. Comm 82.40 (8) (i) 2. is amended to read:

Comm 82.40 (8) (i) 2. New private water mains and extensions to private water mains shall be disinfected prior to use in accordance with AWWA ~~C601~~ C651 or the following method:

SECTION 35. Comm 82.41 (3) (a) Table 82.41-1 is repealed and recreated to read:

Table 82.41-1
ACCEPTABLE CROSS CONNECTION CONTROL METHODS OR ASSEMBLIES FOR SPECIFIC APPLICATIONS

METHODS or ASSEMBLIES of CROSS CONNECTION CONTROL (Standard)	SITUATIONS and CONDITIONS							
	Backpressure				Backsiphonage			
	Low Hazard		High Hazard		Low Hazard		High Hazard	
	Contin-uous	Noncon-tinuous	Contin -uous	Noncon-tinuous	Contin-uous	Noncon -tinuous	Contin-uous	Noncon-tinuous
	Pressure		Pressure		Pressure		Pressure	
Air Gaps (ASME A112.1.2)	X	X	X	X	X	X	X	X
Atmospheric Type Vacuum Breaker (CAN/CSA B64.1.1)						X		X
Back Siphonage Vacuum Breaker (ASSE 1056)					X	X	X	X
Backflow Preventers with Intermediate Atmospheric Vent (ASSE 1012)	X	X			X	X		
Barometric Loops					X	X	X	X
Dual Check Valve Type with Atmospheric Port Backflow Preventer (CAN/CSA B64.3)	X	X			X	X		
Hose Connection Backflow Preventers (ASSE 1052)	X[a]	X	X[a]	X	X[a]	X	X[a]	X
Hose Connection Type Vacuum Breakers (CAN/CSA B64.2.1 and B64.2.2)	X[a]	X	X[a]	X	X[a]	X	X[a]	X
Hose Connection Vacuum Breakers (ASSE 1011)	X[a]	X	X[a]	X	X[a]	X	X[a]	X
Pipe Applied Atmospheric Type Vacuum Breakers (ASSE 1001)						X		X
Pressure Type Vacuum Breaker (CAN/CSA B64.1.2)					X	X	X	X
Pressure Vacuum Breaker Assembly (ASSE 1020)					X	X	X	X
Reduced Pressure Principle Backflow Preventers (ASSE 1013)	X	X	X	X	X	X	X	X
Reduced Pressure Principle Type Backflow Preventer (CAN/CSA B64.4)	X	X	X	X	X	X	X	X

SECTION 36. Comm 82.41 (3) (a) Table 82.41-2 is repealed and recreated to read:

Table 82.41-2
ACCEPTABLE CROSS CONNECTION CONTROL METHODS OR ASSEMBLIES FOR SPECIFIC APPLICATIONS

Methods or Assemblies of Cross Connection Control (Standard)	Types of Application or Use
Backflow Preventer for Carbonated Beverage Machines (ASSE 1022)	Beverage dispensers
Chemical Dispensing Systems (ASSE 1055)	Chemical dispensing systems
Double Check Backflow Prevention Assemblies (ASSE 1015)	Automatic fire sprinkler systems and standpipe systems
Double Check Detector Assembly Backflow Preventer (ASSE 1048)	Automatic fire sprinkler systems and standpipe systems
Double Check Detector Valve Type Backflow Preventer (CAN/CSA B64.5)	Automatic fire sprinkler systems and standpipe systems
Hand Held Showers (ASSE 1014)	Hand held shower assemblies
Laboratory Faucet Backflow Preventer (ASSE 1035)	Laboratory faucets
Laboratory Faucet Type Vacuum Breakers (CAN/CSA B64.7)	Laboratory faucets
Laboratory Faucet Vacuum Breakers (ASSE 1035)	Laboratory faucets
Pressurized Flushing Devices (Flushometers) For Plumbing Fixtures (ASSE 1037)	Flushometer plumbing fixtures
Reduced Pressure Detector Backflow Preventer (ASSE 1047)	Automatic fire sprinkler systems
Trap Seal Primer Valves, Water Supply Fed (ASSE 1018)	Traps for drain systems
Vacuum Breaker Tees [s. Comm 82.41 (5) (k)]	Water treatment devices
Wall Hydrants, Frost Proof Automatic Draining Anti-Backflow Type (ASSE 1019), types A or B	Hose threaded outlet connections
Water Closet Flush Tank Ball Cocks (ASSE 1002)	Gravity water closet flush tanks

SECTION 37. Comm 82.41 (3) (a) 2. is amended to read:

Comm 82.41 (3) (a) 2. For the situations described in par. (b) 3., cross connection control shall be provided as part of the fixture fitting outlet or in the water supply piping for the fixture fitting outlet.

SECTION 38. Comm 82.41 (4) (b) is repealed and recreated to read:

Comm 82.41 (4) (b) 1. Except for a deck-mounted device, a pipe applied atmospheric vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least 6 inches above all of the following:

a. The flood level rim of the receptor serving the water supply port.

b. The highest point downstream from the device where backpressure would be created.

c. The highest point of an injection or aspiration port.

2. A deck-mounted pipe applied atmospheric type vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least one inch above all of the following:

a. The flood level rim of the receptor serving the water supply port.

b. The highest point downstream from the device where backpressure would be created.

c. The highest point of an injection or aspiration port.

SECTION 39. Comm 82.41 (4) (k) 1. is amended to read:

Comm 82.41 (4) (k) 1. ~~An anti-siphon,~~ A pressure type vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least 12 inches above all of the following:

a. The flood level rim of the receptor serving the water supply port~~; and~~.

b. The highest point downstream from the device where backpressure would be created.

SECTION 39a . Comm 82.41 (4) (k) 1. c. is created to read:

Comm 82.41 (4) (k) 1. c. The highest point of an injection or aspiration port.

SECTION 40. Comm 82.41 (4) (n) is repealed and recreated to read:

Comm 82.41 (4) (n) A back siphonage vacuum breaker shall be installed so that the bottom of the device or the critical level mark on the device is at least 12 inches above all of the following:

1. The flood level rim of the receptor serving the water supply port.

2. The highest point downstream from the device where back pressure would be created.

3. The highest point of an injection or aspiration port.

SECTION 41. Comm 82.41 (5) (a) is amended to read:

Comm 82.41 (5) INSTALLATION. (a) An air gap for cross connection control shall conform to ~~ANSI~~ ASME A112.1.2.

SECTION 41a . Comm 82.41 (5) (L) is created to read:

Comm 82.41 (5) (L) A chemical dispensing system shall be connected to the water distribution system in either of the following manners:

1. The fixture supply shall be individually connected to the water distribution system.

2. The fixture supply shall be installed with a pressure bleeding device. The pressure bleeding device shall create a visually free flow of water through the atmosphere from the faucet connection into the fixture drain.

SECTION 42. Comm 82.50 (2) is amended to read:

Comm 82.50 (2) SCOPE. The scope of this section shall cover devices, fixtures and equipment which are installed and maintained in health care and related facilities as defined in s. Comm 81.01 (116)~~such as hospitals, nursing or rest homes, homes for the aged, infirmaries, residential care facilities, orphanages, sanitariums, sanatoriums, clinics, mortuaries, and schools of medicine, surgery, dentistry, and research and testing laboratories whether enumerated or not. This section may also apply to offices and clinics of dentists and doctors~~.

SECTION 43. Comm 82.50 (10) (g) and (h) are repealed and recreated to read:

Comm 82.50 (10) (g) *Hot water supply control.* 1. "Health care and related facilities." a. The maximum temperature to fixture fitting outlets accessible to patients located in health care and related facilities shall not exceed 115°F.

b. The maximum temperature to other fixture fitting outlets shall not exceed 140°F.

2. "Hospitals, community-based residential facilities, inpatient hospices and nursing homes." Hot water to patients' showers, therapeutic equipment, and all types of baths located in hospitals, community-based residential facilities, inpatient hospices and nursing homes shall be provided with control valves which automatically regulate the temperature of the water supply to the fixture within a temperature range of 110°F to 115°F. Such control valves shall automatically reduce flow to 0.25 gpm or less when the water supply to the fitting outlet exceeds 115°F.

(h) *Hot water supply.* The water distribution system shall be designed to provide hot water not to exceed the maximum temperature listed in Table 26.

SECTION 44. Comm 82.50 (10) (g) Table 26 (partial) and Title are amended to read:

Table 26
SYSTEM TEMPERATURE

	Patient ~~Areas~~ Area	Clinical	Dietary	Laundry ~~(2 gals. per lb. of laundry)~~
~~Gal/hr/bed~~	~~6 1/2~~	~~6 1/2~~	4	~~4 1/2~~
System Temp. °F. (Maximum)	~~110°~~ 140°	~~125°~~ 140°	180°	180°

SECTION 45. Comm 82.50 (10) (i) is repealed.

SECTION 46. Comm 82.60 (2) (d) is created to read:

Comm 82.60 (2) (d) Shower valves and piping from the shower valve to the shower head outlet shall be securely attached to the structure.

SECTION 47. Comm 84.10 (4) and (5) are amended to read:

Comm 84.10 (4) REVOCATION. The department may revoke any approval ~~or listing~~ issued under this section for any false statements or misrepresentation of facts ~~data~~ on which the approval ~~or listing~~ was based, or as a result of the product's failure, or if ~~future information indicates~~ data indicate a ~~potential~~ health hazard or ~~potential~~ threat to the waters of the state.

(5) LIMITATIONS. An approval ~~or listing~~ of a plumbing product by the department may not be construed as an assumption of any responsibility for defects in design, construction or performance of any product nor for any damages that may result. All products shall be installed in accordance with the manufacturer's printed instructions and as specified in chs. Comm 82 – 84. If there is a conflict between the manufacturer's printed instructions and requirements of chs. Comm 82 – 84, the requirements of chs. Comm 82 – 84 shall take precedence.

SECTION 48. Comm 84.20 (2) is amended and renumbered as 84.20 (2) (a) to read:

Comm 84.20 (2) MATERIALS. (a) Plumbing fixtures shall have smooth surfaces ~~which~~ that are impervious to water.

SECTION 49. Comm 84.20 (2) (b) and Note are created to read:

Comm 84.20 (2) (b) All plumbing fixture fittings which are end-point devices, covered by the scope of NSF 61, section 9 and installed to supply water intended for human ingestion, shall conform to NSF 61, section 9.

Note: The scope of NSF 61, section 9 defines which devices are intended for use for human ingestion in response to the Federal clean drinking water act.

SECTION 50. Comm 84.20 (4) (b) 2. is amended to read:

Comm 84.20 (4) (b) 2. "Securing wall mounted fixtures." Wall mounted fixtures shall be rigidly supported by a hanger which is attached to structural members so that the load is not transmitted to the fixture drain connection or any other part of the plumbing system. The hanger for a wall mounted water closet shall conform to ~~ANSI~~ ASME A112.6.1M.

SECTION 51. Comm 84.20 (4) (b) 9. is repealed and recreated to read:

Comm 84.20 (4) (b) 9. 'Safing.' a. The floor of all site-constructed shower stalls and shower rooms shall be protected with a safing material installed beneath the finished floor of the entire enclosure or room and upward along the sides to a minimum of 6 inches above the curb or maximum water level of the room or enclosure. The corners of the enclosure or room shall be safed to a height of 6 feet and at least 3 inches in each direction from the corners.

b. All floor drains or other similar fixtures shall be installed with a safing material extending a minimum of 12 inches from the fixture.

c. The safing material shall conform to s. Comm 84.30 (6).

d. The safing material shall be properly drained.

e. All installations directly over an unexcavated portion of a building are exempt from this subdivision.

SECTION 52. Comm 84.20 (5) (b) 1. a. and b. are amended to read:

Comm 84.20 (5) (b) *Bathtubs.* 1. a. Enameled cast iron bathtubs shall conform to ~~ANSI~~ ASME A112.19.1M.

b. Porcelain enameled formed steel bathtubs shall conform to ~~ANSI~~ ASME A112.19.4.

SECTION 52a. Comm 84.20 (5) (b) 2. is amended to read:

Comm 84.20 (5) (b) 2. Bathtubs shall have waste outlets and overflows at least 1-1/2 inches in diameter. A ~~pop-up stopper or other~~ closing device shall be provided on the waste outlet.

SECTION 52b. Comm 84.20 (5) (c) is amended to read:

Comm 84.20 (5) (c) *Bidets.* Vitreous china bidets shall conform to the material requirements in ~~ANSI~~ ASME A112.19.2M.

SECTION 52c. Comm 84.20 (5) (c) 2. is amended to read:

Comm 84.20 (5) (c) 2. Bidets with submerged inlet fittings shall be protected by vacuum breakers which conform to ASSE 1001 or CAN/CSA B64.1.1.

SECTION 52d. Comm 84.20 (5) (d) is created to read:

Comm 84.20 (5) (d) *Chemical dispensing systems.* Chemical dispensing systems shall conform to ASSE 1055.

SECTION 52e. Comm 84.20 (5) (d) to (q) are renumbered as Comm 84.20 (5) (e) to (r).

SECTION 52f. Comm 84.20 (5) (f) is amended to read:

Comm 84.20 (5) (f) *Drinking fountains.* 1. Drinking fountains and water coolers shall conform to ARI 1010 or ~~ANSI~~ ASME A112.19.2M.

SECTION 52g. Comm 84.20 (5) (j) 1. a. to d. is amended to read:

Comm 84.20 (5) (j) *Lavatories.* 1. a. Enameled cast iron lavatories shall conform to ~~ANSI~~ ASME A112.19.1M.

b. Vitreous china lavatories shall conform to ~~ANSI~~ ASME A112.19.2M.

c. Stainless steel lavatories shall conform to ~~ANSI~~ ASME A112.19.3.

d. Porcelain enameled formed steel lavatories shall conform to ~~ANSI~~ ASME A112.19.4.

SECTION 52h. Comm 84.20 (5) (L) 2. is repealed.

SECTION 52i. Comm 84.20 (5) (L) 3. to 5. are renumbered as Comm 84.20 (5) (j) 2. to 4. and amended to read:

Comm 84.20 (5) (L) ~~3.~~ 2. Except for combination bathtub-shower units, waste outlets serving showers shall be at least 2 inches in diameter and shall have removable strainers of sufficient strength for the anticipated loads.

~~4.~~ 3. Where a waste outlet serves more than one shower space or shower head, the waste outlet shall be at least 2 inches in diameter and the waste outlet shall be so located and the floor so pitched that waste water from one shower does not flow over the floor area serving another shower.

Note: Section Comm 52.60 (5) (a) specifies slip-resistant requirements for shower rooms and compartments in public buildings and places of employment.

~~5.~~ 4. All shower compartments, regardless of shape, shall have a minimum finished interior of 900 square inches and shall be capable of encompassing a circle with a diameter of 30 inches. The minimum required area and dimension shall be measured in a horizontal plane 24 inches above the top of the threshold and may not extend beyond the centerline of the threshold. The minimum area and dimensions shall be maintained to a point 70 inches above the shower waste outlet with no protrusions other than the fixture valve or valves, showerheads, soap dishes, retractable seats and safety grab bars or rails.

SECTION 52j. Comm 84.20 (5) (m) 1. and 2. are amended to read:

Comm 84.20 (5) (m) *Sinks.* 1. a. Enameled cast iron sinks shall conform to ~~ANSI~~ ASME A112.19.1M.

b. Vitreous china sinks shall conform to ~~ANSI~~ ASME A112.19.2M.

c. Stainless steel sinks shall conform to ~~ANSI~~ ASME A112.19.3.

d. Porcelain enameled formed steel sinks shall conform to ~~ANSI~~ ASME A112.19.4.

2. Sinks shall be provided with waste outlets not less than ~~1 1/2~~ 1 - 1/2 inches in diameter. ~~Sinks on which a food grinder is installed shall have a waste opening not less than 3-¼ inches in diameter.~~

SECTION 52k. Comm 84.20 (5) (m) 1. e. is created to read:

Comm 84.20 (5) (m) 1. e. Plastic sinks shall conform to ANSI Z124.6.

SECTION 53. Comm 84.20 (5) (n) 1. and 2. are amended to read:

Comm 84.20 (5) (n) *Urinals.* 1. a. Vitreous china urinals shall conform to ~~ANSI~~ ASME A112.19.2M~~-90~~ and A112.19.6~~-90~~.

2. A urinal may not be located closer than ~~16~~ 15 inches from its center to any side wall, partition, vanity or other obstruction, nor closer than 30 inches center to center, between urinals. When the space between stall type urinals or a stall type urinal and a side wall is less than 12 inches, the space shall be filled flush with the front and top of the urinal with nonabsorbent material.

SECTION 53a. Comm 84.20 (5) (n) 1. b. is created to read:

Comm 84.20 (5) (n) *Urinals.* 1. b. Plastic urinals shall conform to ANSI Z124.9 and ASME A112.19.6.

SECTION 54. Comm 84.20 (5) (o) is amended to read:

Comm 84.20 (5) (o) *Water closets.* 1. a. Vitreous china water closets shall conform to ~~either ANSI A112.19.2M-82 or~~ ASME A112.19.2M~~-90~~ and ~~ANSI~~ A112.19.6~~-90~~.

SECTION 54a. Comm 84.20 (5) (r) 1. is amended to read:

Comm 84.20 (5) (r) *Water treatment devices.* 1. Water softeners shall conform to ~~WQA S-100~~ NSF-44.

SECTION 55. Comm 84.20 (6) (a) and (b) are amended to read:

Comm 84.20 (6) FAUCETS, SPOUTS AND FIXTURE SUPPLY CONNECTORS. (a) Except for circular and semi-circular wash fountains, all faucets and showerheads shall conform to ~~ANSI~~ ASME A112.18.1M or CAN/CSA B125.

(b) Circular and semi-circular wash fountains shall conform to the working pressure, burst pressure, discharge rate and product marking requirements of ~~ANSI~~ ASME A112.18.1M or CAN/CSA B125.

SECTION 56. Comm 84.30 (5) (c) 10. is created to read:

Comm 84.30 (5) (c) 10. Individual thermostatic, pressure balancing, and combination pressure balancing and thermostatic control valves serving individual showers shall conform to ASSE 1016 or CAN/CSA B125.

SECTION 56a. Comm 84.30 (5) (c) 1. to 17. is renumbered Comm 84.30 (5) (c) 1. to 18. and amended to read:

Comm 84.30 (5) (c) *Special fittings and valves.* 1. Water hammer arrestors shall conform to ~~ANSI~~ ASME A112.26.1 or ASSE 1010.

2. Relief valves and automatic gas shutoff devices for hot water supply systems shall conform to ANSI Z21.22.

3. Backwater valves shall conform to ~~ANSI~~ ASME A112.14.1, CAN/CSA B181.1 or CAN/CSA B181.2.

4. Pipe applied atmospheric type vacuum breakers shall conform to ASSE 1001, and CAN/CSA B64.1.1.

5. Water pressure reducing valves and strainers for water pressure reducing valves for domestic water supply systems shall conform to ASSE 1003.

6. Hose connection vacuum breakers shall conform to ASSE 1011 or CAN/CSA B64.2.

7. Backflow preventers with intermediate atmospheric vent shall conform to ASSE 1012 and dual check type atmospheric port backflow preventers shall conform to CAN/CSA B64.3.

8. Reduced pressure principle backflow preventers shall conform with ASSE 1013 or CAN/CSA B64.4

9. Double check backflow prevention assemblies shall conform to ASSE 1015 or CAN/CSA B64.5.

~~10.~~ 11. Trap seal primer valves, water fed shall conform to ASSE 1018.

~~11.~~12. Vacuum breaker wall hydrants, freeze resistant automatic draining type shall conform to ASSE 1019, types A or B.

~~12.~~ 13. Pressure vacuum breaker assemblies shall conform to ASSE 1020 or CAN/CSA B64.1.2.

~~13.~~14. Laboratory faucet backflow preventers shall conform to ASSE 1035 and laboratory faucet type vacuum breakers shall conform to CAN/CSA B64.7.

~~14.~~15. Reduced pressure detector backflow preventers shall conform to ASSE 1047.

~~15.~~16. Double check detector assembly backflow preventers shall conform to ASSE 1048.

~~16.~~17. Back siphonage backflow vacuum breakers shall conform to ASSE 1056.

~~17.~~18. Hose connection backflow preventers shall conform to ASSE 1052.

SECTION 56a. Comm 84.30 (5) (c) 8. Note is created to read:

Note: Reduced pressure principle fire protection backflow preventers are not permitted for cross connection control.

SECTION 56b. Comm 84.30 (5) (c) 9. Note is created to read:

Note: Double check fire protection backflow prevention assemblies are not permitted for cross connection control.

SECTION 57. Comm 84.30 (5) (c) 19. is created to read:

Comm 84.30 (5) (c) 19. Backflow preventers for carbonated beverage machines shall conform to ASSE 1022.

SECTION 58. Comm 84.30 (6) (f) is amended to read:

Comm 84.30 (6) (f) *Safing ~~materials~~ material.* Safing materials~~s~~ shall be ~~made of materials which are~~ waterproof when subjected to 2 feet of hydrostatic head when tested in accordance with ASTM C1306 or ASTM D4068. The material shall be recognized by the manufacturer for use as a safing material.

SECTION 59. Tables 84.30-3 (partial), 84.30-5 (partial), 84.30-6 (partial), 84.30-8 (partial), 84.30-9 (partial) 84.30-10 (partial) and 84.30-11 (partial) are amended to read:

Table 84.30-3
SANITARY BUILDING SEWER PIPE AND TUBING

Material	Standard
PVC Corrugated Sewer Pipe With a Smooth Interior and Fittings	ASTM F949
PVC Large-Diameter Plastic Gravity Sewer Pipe and Fittings	ASTM F679
PVC Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter	ASTM F794
Type PS-46 and Type PS-115 PVC Plastic Gravity Flow Sewer Pipe and Fittings	ASTM F789

~~Note a:~~ [a]Thermoplastic sewer pipe shall be installed in accordance with ASTM D2321.
~~Note b:~~ [b]Copper tubing, type M, may not be installed underground.

Table 84.30-5
PRESSURIZED DRAIN PIPE AND TUBING
AND SERVICE SUCTION LINES

Material	Standard
Chlorinated ~~polyvinyl chloride~~ Poly (Vinyl Chloride) (CPVC)[a]	ASTM D2846; ASTM F441/F441M; ASTM F442/F442M
Polyethylene Pressure Pipe and Fitting, 4 in. through 63 in., for Water Distribution	AWWA C906

~~Note a:~~ [a]Thermoplastic sewer pipe shall be installed in accordance with ASTM D2321.
~~Note b:~~ [b]Copper tubing, type M, may not be installed underground.

Table 84.30-6
STORM BUILDING SEWER PIPE AND TUBING

Material	Standard
Concrete, circular	ASTM C14; ASTM C76
Concrete, elliptical	ASTM C507/C507M
PVC Corrugated Sewer Pipe With a Smooth Interior and Fittings	ASTM F949
PVC Large-Diameter Plastic Gravity Sewer Pipe and Fittings	ASTM F679
PVC Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter	ASTM F794
Type PS-46 and Type PS-115 PVC Plastic Gravity Flow Sewer Pipe and Fittings	ASTM F789

~~Note a:~~ [a]Thermoplastic sewer pipe shall be installed in accordance with ASTM D2321.
~~Note b:~~ [b]Copper tubing, type M, may not be installed underground.

Table 84.30-8
PIPE AND TUBING FOR
WATER SERVICES AND PRIVATE WATER MAINS

Material	Standard
Chlorinated ~~polyvinyl chloride~~ Poly (Vinyl Chloride) (CPVC)[a]	ASTM D2846; ASTM F441/F441M; ASTM F442/F442M
Crosslinked Polyethylene /Aluminum / Crosslinked Polyethylene	CAN/CSA B137.10, ASTM F1281
Polyethylene (PE)[a]	ASTM D2239; ASTM D2737; ASTM D2104; ASTM D2447; ASTM D3035, AWWA C906
Polyethylene / Aluminum / Polyethylene	CAN/CSA B137.9
Polyethylene / Aluminum / Polyethylene (PE-AL-PE) Composite Pressure Pipe	ASTM F1282
Stainless steel	~~ANSI~~ ASME B36.19/B36.19M

~~Note a:~~ [a] Plastic water service systems shall be installed in accordance with ASTM D2774.
~~Note b:~~ [b] Copper tubing, type M, may not be installed underground.

Table 84.30-9
WATER DISTRIBUTION PIPE AND TUBING

Material	Standard
Chlorinated ~~polyvinyl chloride~~ Poly (Vinyl Chloride) (CPVC)[a]	ASTM D2846, ASTM F441/441M[c], ASTM F442/442M[d]
Crosslinked Polyethylene /Aluminum / Crosslinked Polyethylene	CAN/CSA B137.10, ASTM F1281
Polyethylene / Aluminum / Polyethylene	CAN/CSA B137.9
Polyethylene / Aluminum / Polyethylene (PE-AL-PE) Composite Pressure Pipe	ASTM F1282
Stainless ~~steel~~ Steel	~~ANSI~~ ASME B36.19M; ASTM A270; ASTM A450

~~Note a:~~ [a] Plastic pipe and tubing installed underground shall be in accordance with ASTM D2774.
~~Note b:~~ [b] Copper tubing, type M, may not be installed underground.
~~Note c:~~ [c] Use is limited to pipe $2^1/_2$ inches or less in diameter.
[d] Use is limited to pipe with a SDR 11 or less.

Table 84.30-10
EXTERIOR TURF
SPRINKLER SYSTEM PIPE AND TUBING

Material	Standard
Chlorinated ~~polyvinyl chloride~~ Poly (Vinyl Chloride) (CPVC)[a]	ASTM D2846; ~~ASTM F441;~~ ASTM F441/F441M;
Crosslinked Polyethylene / Aluminum / Crosslinked (PEX-AL-PEX) Polyethylene Pressure Pipe	ASTM F1281
Crosslinked Polyethylene /Aluminum / Crosslinked Polyethylene	CAN/CSA B137.10
Polyethylene / Aluminum / Polyethylene	CAN/CSA B137.9
Polyethylene / Aluminum / Polyethylene (PE-AL-PE) Composite Pressure Pipe	ASTM F1282

~~Note a:~~ [a]Plastic pipe and tubing installed underground shall be in accordance with ASTM D2774.
~~Note b:~~ [b]Copper tubing, type M, may not be installed underground.

Table 84.30-11
PIPE FITTINGS

Material	Standard
Cast copper alloy	~~ANSI~~ ASME B16.18; ~~ANSI~~ ASME B16.23; ~~ANSI~~ ASME B16.26; ~~ANSI B16.32~~
Cast iron	~~ANSI~~ ASME B16.4; ~~ANSI~~ ASME B16.12; ~~ANSI~~ ASME B16.1; ASME B16.45
Copper	~~ANSI~~ ASME B16.22; ~~ANSI~~ ASME B16.29; ~~ANSI B16.43~~
Crosslinked Polyethylene (PEX)	ASTM F1807
Polyvinyl ~~chloride~~ Chloride (PVC)	ASTM D2464; ASTM D2466; ASTM D2467; ASTM D3311; ASTM F409; ASTM F1336
Polyvinyl Chloride (PVC) Gasketed Sewer Fittings	ASTM F1336

~~Note a:~~ [a]Steel fittings and malleable iron fittings to be used in a water supply system shall be galvanized-coated in accordance with ASTM A123/123M.
~~Note b:~~ [b]See s. Comm 84.30 (4) (intro.) concerning the maximum lead content for fittings.
~~Note c:~~ [c]Copper and copper alloy fittings conforming to MSS ~~SP-10~~ SP-103, may not be installed underground.

SECTION 60. Comm 84.30 (6) (e) is amended to read:

Comm 84.30 (6) (e) *Flush pipes and fittings.* Flush pipes and fittings shall be of nonferrous material and shall conform to ~~ANSI~~ ASME A112.19.5.

SECTION 61. Comm 84.40 (2) (c) is amended to read:

Comm 84.40 (2) (c) *Threaded joints.* Threaded joints shall only be used on pipes of schedule 80 or heavier. Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. The pipe shall be threaded with dies specifically designed for plastic pipe. Thread lubricant or tape approved for such use shall be applied to the male threads only.

SECTION 62. Comm 84.40 (3) (a) is amended to read:

Comm 84.40 (3) (a) *Threaded joints.* Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. Pipe joint compound or tape shall be used on the male threads only.

SECTION 63. Comm 84.40 (4) (a), (c) and (d) are amended to read:

Comm 84.40 (4) (a) *Brazed joints.* All joint surfaces to be brazed shall be cleaned bright by other than chemical means. Brazing filler metal conforming to AWS A5.8 or other approved material shall be used. The joining of water supply piping shall be made with lead-free materials. ~~"Lead-free" shall mean a chemical composition equal to or less than 0.2% of lead.~~ Solders and fluxes containing in excess of 0.2% lead shall not be used.

(c) *Soldered joints.* All joint surfaces to be soldered shall be cleaned bright by other than chemical means. A nontoxic flux shall be applied to all joint surfaces. Solder conforming to ASTM B32 or other approved material shall be used. The joining of water supply piping shall be made with lead-free materials. ~~"Lead-free" shall mean a chemical composition equal to or less than 0.2% of lead.~~ Solders and fluxes containing in excess of 0.2% lead shall not be used.

(d) *Threaded joints.* Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. Pipe joint compound or tape shall be used on the male threads only.

SECTION 64. Comm 84.40 (7) is renumbered as Comm 84.40 (7) (a) amended to read:

Comm 84.40 (7) CONCRETE PIPE. (a) *Circular pipe.* Joints between circular concrete pipe or fittings shall be made by use of an elastomeric seal conforming to ASTM C443 or C990.

SECTION 65. Comm 84.40 (7) (b) is created to read:

Comm 84.40 (7) (b) *Elliptical pipe.* Joints between elliptical concrete pipe or fittings shall be made by use of materials conforming to ASTM C887 Type II or ASTM C990.

SECTION 66. Comm 84.40 (8) (a) and (d) are amended to read:

Comm 84.40 (8) (a) *Brazed joints.* All joint surfaces to be brazed shall be cleaned bright by other than chemical means. Brazing filler metal conforming to AWS A5.8 or other approved material shall be used. The joining of water supply piping shall be made with lead-free materials. ~~"Lead-free" shall mean a chemical composition equal to or less than 0.2% of lead.~~

(d) *Soldered joints.* All joint surfaces to be soldered shall be cleaned bright by other than chemical means. A nontoxic flux shall be applied to all joint surfaces. Solder conforming to ASTM B32 or other approved material shall be used. The joining of water supply piping shall be made with lead-free materials. ~~"Lead-free" shall mean a chemical composition equal to or less than 0.2% of lead.~~

SECTION 67. Comm 84.40 (9) (b) is amended to read:

Comm 84.40 (9) (b) *Threaded joints.* Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. Pipe joint compound or tape shall be used on the male threads only.

SECTION 68. Comm 84.40 (10) (a) is amended to read:

Comm 84.40 (10) (a) *Threaded joints.* Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. Pipe joint compound or tape shall be used on the male threads only.

SECTION 69. Comm 84.40 (14) (c) is amended to read:

Comm 84.40 (14) (c) *Threaded joints.* Threaded joints shall only be used on pipes of schedule 80 or heavier. Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. The pipe shall be threaded with dies specifically designed for plastic pipe. Thread lubricant or tape approved for such use shall be applied to the male threads only.

SECTION 70. A-82.20 (4) Appendix is repealed and recreated to read:

A-82.20 (4) PLANS AND SPECIFICATIONS. The following is a list of water quality management agencies and the area they serve.

Note: This listing is complied by the department of natural resources and is updated periodically.

AGENCY	AREAS SERVED
East Central Wisconsin Regional Planning Agency 132 Main Street Menasha, WI 54952 (920) 751-4770	Counties of Calumet, Fond du Lac, Green Lake, Marquette, Menominee, Outagamie, Shawano, Waupaca, Waushara, Winnebago
Dane County Regional Planning Commission 217 South Hamilton Street, Room 403 Madison, WI 53703 (608) 266-4137	County of Dane
Brown County Planning Commission 100 N. Jefferson Street, Room 608 Green Bay, WI 54301 (920) 448-3400	County of Brown
Southeastern Wisconsin Regional Planning Commission 916 North East Avenue PO Box 1607 Waukesha, WI 53187-1607	Counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Waukesha, Washington
West Central Wisconsin Regional Planning Commission 800 Wisconsin Street Eau Claire, WI 54703-3606 (715) 836-2918	"Chippewa-Eau Claire Metropolitan Planning Area;" Cities of Altoona, Chippewa Falls, Eau Claire, *River Falls (est. completion July 2000),* Towns of Brunswick, Hallie, Lafayette, Seymour, Tilden, Union, Washington
St. Croix County Planning Department 1101 Carmichael Road Hudson, WI 54016 (715) 386-4673	"Hudson Urban Area;" City of Hudson, Towns of Hudson, St. Joseph, Troy, Village of N. Hudson, Western ½ of Town of Warren
Bay-Lake Regional Planning Commission 211 N. Broadway, Suite 211 Green Bay, WI 54303-2757 (920) 448-2820	Cities of Marinette, Kohler, Sheboygan, Sheboygan Falls, Sturgeon Bay, *Manitowoc & Two Rivers (est. completion Jan. 2000)* Towns of Peshtigo, Porterfield, Mosel, Wilson, Lima, Sheboygan, Sheboygan Falls, Herman Villages of Howards Grove, Kohler
Rock County Planning Agency 51 South Main Street Janesville, WI (608) 757-5310	Cities of Janesville and Beloit, Towns of Beloit, Harmony, Janesville, La Prairie, Rock, Turtle Village of Clinton

AGENCY	AREAS SERVED
LaCrosse/Onalaska, Office of City Engineer 400 LaCrosse Street LaCrosse, WI 54601 (608) 789-7505	Cities of LaCrosse, Onalaska Towns of Shelby, Campbell
Portage County Planning Department 1516 Church Street Stevens Point, WI 54481 (715) 346-1334	"Stevens Point Urban Area;" City of Stevens Point Villages of Plover, Park Ridge, Whiting Towns of Hull, Linwood, Plover
Marathon County Planning Department 210 River Drive Wausau, WI 54403-5449 (715) 261-6040	"Wausau Urban Area;" Cities of Wausau, Schofield Towns of Maine, Stettin, Texas, Wausau, Weston "Rib Mountain Metropolitan Sewerage District;" Towns of Kronenwetter, Rib Mountain, Rothschild Village of Weston
Wood County Planning 400 Market Street Wisconsin Rapids, WI 54495 (715) 421-8466	"Southern Wood County;" Cities of Nekoosa, Wisconsin Rapids Towns of Grand Rapids, Port Edwards, Rudolph, Saratoga, Seneca, Sigel Villages of Biron, Port Edwards, Rudolph
Dunn County Land Conservation 390 Red Cedar Street Menomonie, WI 54751 (715) 232-1496	City of Menomonie (Sanitary Sewer Extensions only)
Oconto County/West Shore Oconto County Office of Land Use and Zoning 310 Washington Street Oconto, WI 54153-1621 (920) 834-6827	City of Oconto Towns of Abrams, Little River, Little Suamico, Pensaukee, Stiles, Oconto
North Central Wisconsin Regional Planning Commission 407 Grant Street Wausau, WI 54403 (715) 261-6565	*City of Marshfield (est. completion July 2000)* City of Merrill
Sauk County Planning & Zoning 505 Broadway Baraboo, WI 53913 (608) 355-3285	*City of Baraboo (est. completion July 2000)*
City of Superior Administrative Engineer 1407 Hammond Avenue Superior, WI 54880 (715) 394-0691	City of Superior
Utilities General Manager Sturgeon Bay Utilities P.O. Box 259 230 East Vine Street Sturgeon Bay, WI 54235 (920) 746-2820	City of Sturgeon Bay

SECTION 71. A-84.20 (5) Appendix is repealed and recreated to read:

A-84.20 (5) SPACING OF PLUMBING FIXTURES.

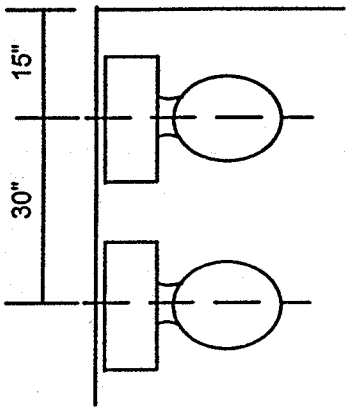


Figure 84.20-1. Spacing between water closets.

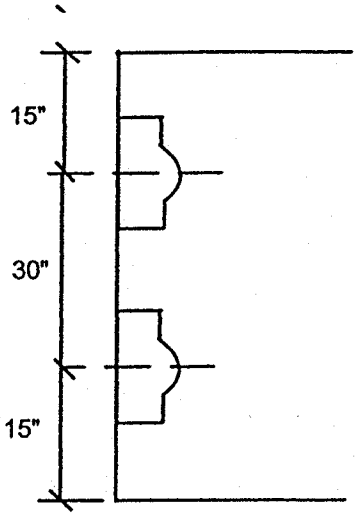


Figure 84.20-2. Spacing between stall type urinals.

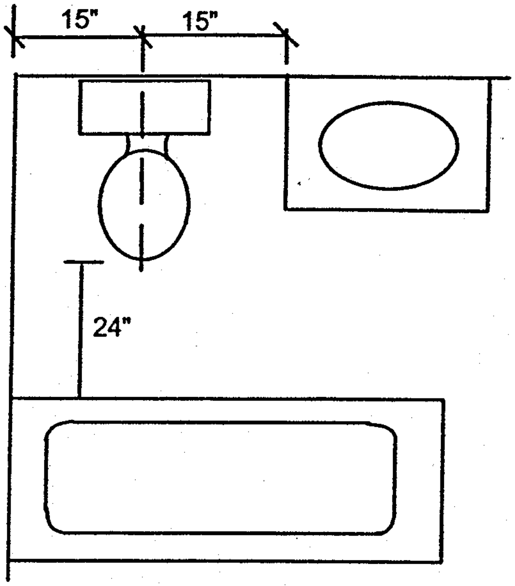


Figure 84.20-3. Spacing between water closet and tub.

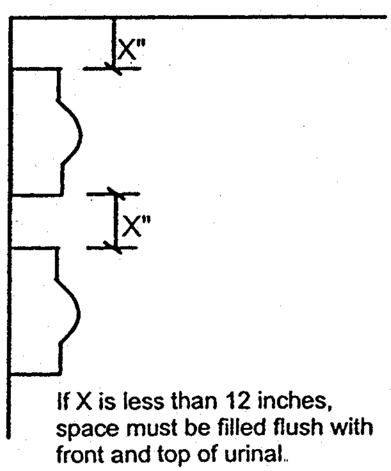


Figure 84.20-4. Spacing between wall hung or stall type urinals.

(end)

* *

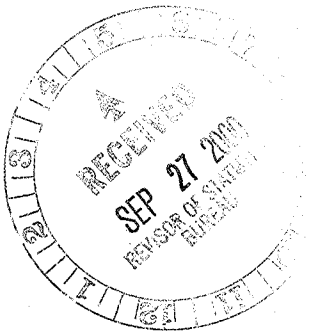
EFFECTIVE DATE

Pursuant to s. 227.22 (2) (intro.), Stats., these rules shall take effect on the first day of the third month following publication in the Wisconsin Administrative Register, except s. Comm 82.40 (3) (d) 3. shall take effect on the first day of the ninth month following publication in the Wisconsin Administrative Register.

* *

ADMINISTRATIVE RULE CORRESPONDENCE
Department of Commerce

Date: Sept 1, 00



To: Martha Kerner

From: Mike Corry

Rule No.: Chapters Comm 81, 82 & 84

Relating To: Wisconsin Uniform Plumbing Code

Subject: Adoption of Rules [Clearinghouse Rule No. 99-123]

Attached are the required materials for the adoption of proposed rules for chapters Comm 81, 82 and 84 relating to the state plumbing code.

In July the proposed rules were assigned to the Assembly Labor and the Senate Economic Development, Housing and Government Affairs committees. The legislative committee period has lapsed and no comments were received.

If you agree that the proposed rules are ready for adoption, please sign and date the required forms and return this package to Jean MacCubbin (6-0955) for copying and distribution.

Cc: Bob DuPont
Richard Meyer
Chris Spooner
Lynita Docken
Jean MacCubbin

9/15/00

P.O. Box 7970
Madison, Wisconsin 53707
(608) 266-1018
TDD#: (608) 264-8777
www.commerce.state.wi.us

Wisconsin
Department of Commerce

Tommy G. Thompson, Governor
Brenda J. Blanchard, Secretary

9/19/00

Gary Poulson
Assistant Revisor of Statutes
Suite 800
131 West Wilson Street
Madison, Wisconsin 53703-3233

Douglas LaFollette
Secretary of State
10th Floor
30 West Mifflin Street
Madison, Wisconsin 53703

Dear Messrs. Poulson and LaFollette:

TRANSMITTAL OF RULE ADOPTION

CLEARINGHOUSE RULE NO.: 99-123

RULE NO.: Chs. Comm 81, 82 and 84

RELATING TO: Wisconsin Uniform Plumbing Code

Pursuant to section 227.20, Stats., agencies are required to file a certified copy of every rule adopted by the agency with the offices of the Secretary of State and the Revisor of Statutes.

At this time, the following material is being submitted to you:

1. Order of Adoption.
2. Rules Certificate Form.
3. Rules in Final Draft Form.

Pursuant to section 227.114, Stats., a summary of the final regulatory flexibility analysis is also included.

Respectfully submitted,

Brenda J. Blanchard
Secretary

RECEIVED
SEP 27 2000
REVISOR OF STATUTES BUREAU