

## Chapter H 61

## APPRENTICESHIP AND LICENSING OF PLUMBERS

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**History:** Chapter H 61 as it existed on October 31, 1970, was repealed and a new chapter H 61 was created effective November 1, 1970.

**H 61.01 Apprenticeship.** (1) **REGISTRATION.** Every plumbing apprentice shall register with the department immediately. Registration forms will be furnished by the department which shall require the applicant to indicate his name, age, preliminary schooling, beginning date of indenture, name and address of employer and such other information as the department may require. Persons beginning an accredited plumbing trade school course may also register.

(2) **QUALIFICATIONS FOR REGISTRATION.** All applicants for registration as apprentices must have reached the age of 16 years and have completed the 12th grade in school or its equivalent. Applicants who have not completed the 12th grade or its equivalent shall be required to attend part-time school 4 hours per week during the entire period of their apprenticeship. In each case where the applicant seeks to establish the equivalency of completion of the 12th grade the matter shall be referred to the department.

(3) **RESPONSIBILITY OF EMPLOYER.** (a) Registration as an apprentice shall not be accepted unless the particular shop in which the apprentice is to work and the employing master plumber are equipped and qualified to have an apprentice and that the requirements as to both shop and school training will be complied with. Master plumbers employing registered apprentices shall report to the department any changes made in relation to the continued employment of such apprentices. Such changes shall be subject to the joint approval of the state departments having jurisdiction.

(b) Employing master plumbers shall be owners or co-owners with a monetary interest in a firm or corporation engaged in the installation of plumbing. Master plumbers in the employ of state agencies are to be considered employing master plumbers for the purpose of this section. Master plumbers shall be licensed by this state.

(4) **SUSPENSION OF REGISTRATION.** (a) Whenever an apprenticeship ceases to exist or whenever a registration has been accepted under such conditions as would not have warranted an acceptance if the facts had been presented, or when there has been willful noncompliance with the shop and school training requirements, the department shall suspend

such registration until the conditions shall have been remedied or cancel such registration if necessary.

(b) A registration which has lapsed either through suspension or cancellation may be renewed in the same manner as new registrations and the department may grant such credit toward completion of the 5-year apprenticeship as it may deem proper in each case.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.02 Practical training.** (1) **INSTRUCTION AND EXPERIENCE.** The apprentice shall receive instruction and experience in all branches of plumbing.

(2) **FIRST THREE YEARS.** During the first 3 years the apprentice shall be given opportunity to install plumbing material as his skill will permit under the immediate supervision of a journeyman or master plumber licensed in Wisconsin.

(3) **FOURTH AND FIFTH YEARS.** During the 4th and 5th years any apprentice who is meeting the related instruction requirement may under general supervision of a licensed master plumber make plumbing installations as his acquired skill will permit. A graduate of a plumbing course of an accredited trade school having at least a 2-year course in plumbing may, upon registration as an apprentice perform the same class of work as a 4th and 5th year apprentice.

(4) **SCHOOL CREDITS.** Apprentice applicants who have attended the plumbing course in a recognized trade school in Wisconsin but who are not graduates of such school will be given credit for the work done in the trade school as a part of the required 5 years of experience. Any attendance of less than 3 months shall not receive recognition.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.03 Related instruction.** (1) **TRADE SCHOOL ATTENDANCE.** An apprentice who is not a graduate of an accredited trade school shall complete an approved day school course in plumbing of not less than 400 hours. In addition, an apprentice including graduates of a trade school shall complete an approved trade extension course of not less than 120 hours in night school.

(2) **FAILURE TO COMPLETE CONTRACT.** An indentured apprentice who fails to complete his contract or who has not transferred with approval to another shop shall not be entitled to continue his vocational school plumbing course.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.04 Engineering training.** Graduates of a college engineering course related to plumbing and those completing not less than one year of such a course who have had in addition plumbing installation experience shall receive such credit up to one year for each year of college as may be determined by the department. Each such applicant shall be considered as a separate case.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.05 Journeyman plumber licenses.** Proof of experience, skill and related instruction shall be provided by all applicants for journeyman licenses.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.06 Examinations.** (1) **LICENSE EXAMINATION.** Not less than 4 examinations for the licensing of journeyman and master plumbers and journeyman restricted and master restricted plumbers will be conducted annually at such time and place as the department may direct. Application forms for examination for licensure and renewal of licenses may be obtained from the department.

(2) **DATE OF FILING APPLICATION.** All applications for examination shall be on file in the office of the section of plumbing at least 4 weeks prior to the date of the examination. Failure to have the application on file within the required time shall necessitate postponement of the applicant's appearance to the next examination. All applications shall expire after a period of one year from the date filing.

(3) **FEES.** Fees for the examinations and licenses are regulated by s. 145.08, Stats. No fees shall be returned after an applicant has appeared for examination.

(4) **NOTICE OF EXAMINATION TO APPLICANTS.** Notice of the time and place of examination shall be sent by first class mail to those who have approved applications on file. Such notice shall be mailed to the address given on the application blank and shall be presented by the applicant to gain admittance to the examination room. Failure to receive the notice due to change in address shall not be the responsibility of the department.

(5) **CHARACTER OF EXAMINATIONS.** (a) The examination shall be conducted by the committee of examiners. They shall consist of written and practical tests, and may be oral in part. The examination will cover the theory and practice of plumbing, the interpretation of charts and blueprints and plans of plumbing installations, and such other tests as the committee may deem necessary to properly pass upon the qualifications of the candidate.

(b) Examinations shall consist of the following:

1. Written work based on code.
2. Chart work based on code.
3. Practical work.

(c) Applicants shall participate in all portions of examination and shall acquire a passing grade in each subject to become eligible for licensure. A passing grade of 75% in each subject is required.

(6) **MATERIALS USED IN EXAMINATION.** Applicants shall furnish the necessary tools and material for the examination as requested by the examiners.

(7) **RE-EXAMINATION.** Applicants failing an initial examination may be re-examined within 3 months. Applicants shall not be eligible for a 2nd re-examination until the expiration of 6 months after the first re-examination, and not for the 3rd and subsequent re-examinations until the

expiration of one year after the last re-examination. Applicants failing an examination will be re-examined only in the subjects in which they were unsuccessful.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.07 Temporary permits.** Temporary permits to engage in business as a master plumber shall not be issued except in cases of emergency resulting from a master plumber's incapacity to work, demise or separation from business. When deemed necessary the department may require a special examination to determine the qualifications of an applicant before a temporary permit is issued. Temporary permits shall become void upon the date of the first examination following issuance of permit and shall be surrendered to the department. Not more than 2 permits shall be issued to an individual in any 12-month period. Applicants for temporary permits shall comply with all other applicable rules and statutes.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.08 License renewal.** (1) **ANNUAL NOTICE FOR RENEWAL OF LICENSES.** Notice for the renewal of licenses shall be sent to all plumbers whose licenses were in force during the previous year to the address given on the latest license renewal blank on file unless notice of another address is given. Failure to receive the notice for renewal of licenses shall not be an excuse for failure to renew.

(2) **DELINQUENT OR ELAPSED LICENSES.** Whenever a plumber fails to renew his license for a period of 5 years the department shall require evidence to show that he is competent to perform the work of either a master or journeyman plumber or master or journeyman plumber restricted before such license is renewed.

(a) Master plumber and master plumber restricted licenses shall be renewed at least every 5th year to be considered as a future renewable license. Renewal will require the applicant to have in his possession, a journeyman license for the year in which the exchange is requested. The licensee may again revert to a journeyman license the immediate following license period.

(b) Persons who have been licensed only as a journeyman or journeyman restricted plumber shall renew their delinquent or elapsed license every 5th year. Failure to do so will require re-examination to again qualify for licensure as a journeyman plumber. Renewal of a license shall be permitted only after the current license fee and the annual late revival fee for each year of the elapsed period have been paid to the department.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.09 Exchange of licenses without examination.** All master plumbers or master restricted plumbers in good standing and currently licensed by the department who work as journeyman, may, upon application and upon payment of the initial license fee, be issued journeyman licenses. A currently licensed journeyman who has renewed his master's license within 5 years preceding date of application for exchange may be relicensed as a master upon the payment of the renewal and revival fee as provided by law for the renewal of such license.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.10 Registered learners—restricted.** (1) **REGISTRATION.** Every plumbing learner shall register with the department as required under s. 145.07 (7) (a) Stats. Registration forms will be furnished by the department which shall require the applicant to indicate his name, age, schooling, beginning date of employment, name and address of employer and such other information as the department may require.

(2) **QUALIFICATION FOR REGISTRATION.** All applicants for registration as learners must have reached the age of 16 years and have completed the 10th grade in school or its equivalent. In each case where the applicant seeks to establish the equivalency of completion of the 10th grade, the matter shall be referred to the department.

(3) **RESPONSIBILITY OF EMPLOYER.** Registration as a learner shall not be accepted unless the particular organization in which the learner is to work and the master plumber or master plumber restricted are equipped and qualified to train a learner in the specific restricted classifications for which he is requesting registration. Master plumbers or master plumbers restricted supervising registered learners shall see that the requirements as to both shop and school training will be complied with, and shall report to the department any changes made in relation to the continued employment of such learners. Such changes shall be subject to the approval of the department.

(4) **SUSPENSION OF REGISTRATION.** (a) Whenever a registration ceases to exist or whenever a registration has been accepted under such conditions as would not have warranted an acceptance if the facts had been presented, or when there has been willful noncompliance with the shop and school training requirements, the department shall suspend such registration until the conditions shall have been remedied or cancel such registration if necessary.

(b) A registration which has lapsed either through suspension or cancellation may be renewed in the same manner as new registrations and the department may grant such credit toward completion of the 1-year learner program as it may deem proper in each case.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.11 Practical training—restricted.** The learner shall receive instruction and experience in all branches of the restricted type plumbing for which he has been registered. He shall be given opportunity to install plumbing materials as his skill will permit under his specific registration. All work shall be performed under the immediate supervision of journeyman or master plumbers or journeyman or master plumbers restricted licensed in Wisconsin.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**61.12 Related instruction—restricted.** (1) **LEARNERS.** A learner who is not a graduate of a trade school course related to the specific items and classification for which he is registered shall complete a school course of not less than 125 hours. All specialized trade courses shall be reviewed for credit by the department. Learners, immediately upon approval by the department of their registration, shall enroll in a vocational or trade school or technical institute for purposes of obtaining the required related instruction.

(2) **RESTRICTED SEWER SERVICES.** A learner registered in the classification of sewer services shall complete 125 hours of related instruction in the following subjects:

- (a) Transit or builder's level—20 hours
- (b) Blueprint interpretation—30 hours
- (c) Trenching requirements—10 hours
- (d) Plumbing code (related to class)—40 hours
- (e) Construction mathematics—15 hours
- (f) First aid and safety—10 hours

(3) **RESTRICTED APPLIANCES.** Learners registered in the classification of appliances, equipment and devices, shall complete the 125 hours of related instruction in the following subjects:

- (a) Blueprint reading (buildings)—20 hours
- (b) Plumbing code (related to class)—60 hours
- (c) Appliance and equipment servicing—30 hours
- (d) General mathematics—15 hours

(4) **CERTIFICATION.** When required subjects are not available, other related material may be referred to the department for approval and credit prior to enrollment. All learners applying for examination for licensure as a restricted journeyman plumber shall, upon completion of their registration program, submit certification of completion of the required school training from the school or institution of enrollment to the department with an application.

**History:** Cr. Register, October, 1970, No. 178, eff. 11-1-70.

**H 61.13 Fees, expiration of licenses, registration.** (1) **MASTER PLUMBER FEES.** The fees are as follows for master plumber.

- (a) *Examination fee.* Master plumber examination, \$50. Each subsequent examination, \$30.
- (b) *License fee.* Master plumber license, \$75 and \$75 for each renewal of license if application is made prior to January 1 annually; after that date an additional fee of \$20.
- (c) *Temporary permit fee.* Temporary permit pending examination and issuance of license for master plumber, \$200. The fee shall cover the examination fee prescribed and the license fee for the year in which issued.

(2) **JOURNEYMAN PLUMBER FEES.** The fees are as follows for journeyman plumber.

- (a) *Examination fee.* Journeyman plumber examination, \$30. Each subsequent examination, \$20.
- (b) *License fee.* Journeyman plumber license, \$30 and \$30 for each renewal of license if application is made prior to January 1 annually; after that date an additional fee of \$10.

(c) *Temporary permit fee.* Temporary permit pending examination and issuance of license for journeyman plumber, \$75. The fee shall cover the examination fee prescribed and the license fee for the year issued.

(3) **APPRENTICE PLUMBER FEE.** (a) *Registration fee.* Plumbing apprentice, \$15 shall be paid at the time of registration and for each subsequent calendar year during which he is engaged in his apprenticeship.

(4) **MASTER PLUMBER (RESTRICTED) FEES.** The fees are as follows for master plumber (restricted).

(a) *Examination fee.* Master plumber (restricted) examination, \$50. Each subsequent examination, \$30.

(b) *License fee.* Master plumber (restricted) license, \$75 and \$75 for each renewal of license if application is made prior to January 1 annually; after that date an additional fee of \$20.

(c) *Temporary permit fee.* Temporary permit pending examination and issuance of license for master plumber (restricted), \$200. The fee shall cover the examination fee prescribed and the license fee for the year in which issued.

(5) **JOURNEYMAN PLUMBER (RESTRICTED) FEES.** The fees are as follows for journeyman plumber (restricted).

(a) *Examination fee.* Journeyman plumber (restricted) examination, \$30. Each subsequent examination, \$20.

(b) *License fee.* Journeyman plumber (restricted), \$30 and \$30 for each renewal of license if application is made prior to January 1 annually; after that date an additional fee of \$10.

(c) *Temporary permit fee.* Temporary permit pending examination and issuance of license for journeyman plumber (restricted), \$75. The fee shall cover the examination fee prescribed and the license fee for the year issued.

(6) **REGISTERED LEARNER FEES.** Plumber learner (restricted), \$15 shall be paid at the time of registration and for each subsequent calendar year he is engaged in the learner program.

(7) **EXPIRATION OF LICENSES AND REGISTRATION.** No license or registration shall be issued for longer than one year and all licenses and registrations shall expire on December 31 of each year and such licenses and registrations may be renewed upon application made prior to date of expiration. The department may renew licenses upon application made after January 1, if it is satisfied that the applicant has good cause for not making application within the month of December and upon payment of the renewal and additional fees prescribed.

**History:** Emerg. cr. eff. 11-1-76; cr. Register, April, 1976, No. 244, eff. 5-1-76.

#### **H 61.14 Utility contractor license and registration of pipe layers.**

(1) **PROOF OF EXPERIENCE.** Proof of experience and skill in the planning, superintending and practical installation shall be provided by all persons making application for a utility contractor license. The application shall be presented to the department, on forms provided by the department. The application shall be accompanied by the appropriate license fee. In addition, the following documents must be provided to the department:

(a) At least 2 letters from municipalities; metropolitan sewage districts; or architect, engineer or developer where utilities were installed evidencing skill in the planning, superintending and practical installation of sanitary sewers, storm sewers or water service piping installations.

(b) An indication of the length of skilled utility contracting experience.

(c) A description of all related experience and training of the person seeking licensure.

(d) A document providing such other information the department may require.

(2) APPLICATION AND QUALIFICATION. (a) The person making application for the utility contractor license, if not self-employed, shall provide the name of his or her employer.

(b) All persons to be licensed as a utility contractor must be at least 18 years of age.

(c) Should the licensed utility contractor leave the employ of a utility contracting firm, the firm shall not be qualified to do business as a utility contracting firm after 30 days unless another employe becomes licensed as a utility contractor.

(3) REGISTRATION. The person who qualifies the utility contracting firm shall register with the department, on forms furnished by the department.

(4) PIPE LAYERS. The utility contractor shall be responsible for employing registered pipe layers.

(5) PIPE LAYER. (a) *Registration.* The utility contractor shall submit the names of employes to be registered as pipe layers with the department. Registration forms will be furnished by the department. The name, age, education, beginning date of employment of each pipe layer and such other information as the department may require shall be submitted.

(b) *Qualifications for registration.* All applicants for registration as pipe layers must be at least 18 years of age.

(6) LICENSE RENEWAL OR REGISTRATION. (a) Notice of renewal of license or registration shall be sent to all utility contractors and pipe layers whose license or registration was in force during the previous year. It will be sent to the address given on the latest license renewal blank on file, unless notice of another address is given. Failure to receive the notice for renewal of license shall not be an excuse for failure to renew.

(b) *Delinquent or elapsed licenses.* 1. Utility contractor. Whenever the contractor fails to renew their license for a period of 3 years, the department shall require evidence to show that the renewal applicant is competent to perform the work of utility contractor before such license is renewed.

(7) FEES, EXPIRATION OF LICENSE, REGISTRATION. (a) *Utility contractor fees.* The fees are as follows for the utility contractor: \$75 and \$75 for



each renewal of license if application is made prior to January 1 annually; after that date an additional fee of \$20.

(b) *Pipe layer fees.* The fees are as follows for pipe layer: \$30 and \$30 for each renewal of registration if application is made prior to January 1 annually; after that date an additional fee of \$10.

(c) *Expiration of licenses and registration.* No license or registration shall be issued for longer than one year and all licenses and registrations shall expire on December 31 of each year and such licenses and registrations may be renewed upon application made prior to that date of expiration. The department may renew licenses or registrations upon application made after January 1, if it is satisfied that the applicant has good cause for not making application within the month of December and upon payment of the renewal and additional fees prescribed.

**History:** Cr. Register, April, 1980, No. 292, eff. 5-1-80.

**H 61.15 Certification—plumbing inspectors and independent inspection agencies.** (1) **SCOPE.** The purpose of these rules is to promote effective and uniform enforcement of the uniform dwelling and plumbing code through state certification of inspectors and independent inspection agencies. These rules establish the standards and procedures for certification, including suspension and revocation, of certified plumbing inspectors and independent plumbing inspection agencies. Each certified plumbing inspector shall record and keep on file, in numerical order, the number of plumbing inspections made. The inspector shall record the name of the owner of the premises, the location of each inspection, i.e. county, city, village, township, street address or rural route and note any violation (s). All records and files shall be accessible to the department for inspection and review.

(2) **APPLICATION.** These rules shall apply to all persons, independent inspection agencies, municipalities and state governmental agencies engaged in the administration and enforcement of the uniform plumbing code or engaged in the education, training and testing of persons for state certification as a plumbing inspector.

(3) **ADMINISTRATION AND ENFORCEMENT.** All inspections for the purpose of administering and enforcing the uniform plumbing code shall be performed by a certified inspector.

(4) **AUTHORITY.** (a) *Departmental authority.* Pursuant to ch. 145, Stats., the department of health and social services has been granted the authority and jurisdiction over the certification, including suspension and revocation of certified inspectors or independent inspection agencies for the purpose of inspecting plumbing of one- and 2-family dwellings and manufactured one- and 2-family dwellings.

(b) *Municipality authority.* Pursuant to ss. 101.65 (1) (a), 101.66 (2), 101.76 (1) (a), 145.024, 145.025 and 145.04, Stats., all municipalities exercising jurisdiction over the construction and inspection of dwellings falling within the scope of the uniform dwelling and plumbing code, or any part (s) thereof, shall provide for inspections performed by persons certified under the rules of this section.

1. Any termination of employment or disciplinary action against a certified plumbing inspector or independent inspection agency for cause

directly related to the conditions of certification shall be reported to the department.

2. Municipal termination of employment or disciplinary action shall not constitute suspension or revocation of the state certification.

3. No certified plumbing inspector or independent inspection agency carrying a valid state certification shall be required to obtain any municipal certification or license to enforce the uniform plumbing code.

**Note:** Municipalities may jointly exercise jurisdiction, pursuant to ss. 101.65 (1) (b), 101.76 (1) (b), 66.30 (2), 145.024, 145.025, 145.04 and 145.13, Stats., by adopting the uniform plumbing code and providing for inspections by certified inspectors or certified independent inspection agencies.

**Note:** These rules are not intended to affect municipal hiring practices or conditions of employment.

(c) *Independent inspection agency authority.* Pursuant to ss. 101.63 (2), 100.66 (2), 101.73 (3), (5) and (6), 101.75 (1), 101.76 (1) (a) and 145.04, Stats., independent inspection agencies may enter into contractual agreement(s) with municipalities, building manufacturers or the department to provide the certified inspections required for the uniform dwelling and plumbing code.

(d) *Certified inspector authority.* Pursuant to ss. 101.63 (2), 101.66 (2), 101.73 (3) and (5), 101.75 (1), 101.76 (1) (a) and 145.04, Stats., an inspector may perform certified inspections in accordance with the requirements of the uniform plumbing code.

(5) **DEFINITIONS.** (a) *Approved.* Approved means approved by the department.

(b) *Certified inspection.* Certified inspection means an inspection performed by a certified inspector.

(c) *Certified plumbing inspector I.* Certified plumbing inspector I means an individual certified by the department to administer and enforce chapter H 62, Wis. Adm. Code, excluding the sections dealing with private sewage disposal.

(d) *Certified plumbing inspector II.* Certified plumbing inspector II means an individual certified by the department to administer and enforce the sections in chapter H 62, Wis. Adm. Code, related to private sewage disposal.

(e) *Certified plumbing inspector III.* Certified plumbing inspector III means an individual certified by the department to administer and enforce chapter H 62, Wis. Adm. Code, in its entirety.

(f) *Conflict of interest.* Conflict of interest means a certified inspector inspecting plumbing work in which the inspector or the inspector's employer has participated or has a monetary or personal interest.

(g) *Department.* Department means the department of health and social services.

(h) *Incompetence.* Incompetence means conduct which evidences a lack of ability to discharge the duty required to protect the health, safety and welfare of the public, lack of knowledge of the fundamental principles of plumbing inspection or an inability to apply those principles, or

failure to maintain competency in the current practices and methods applicable to inspection services and the uniform plumbing code.

(i) *Independent inspection agency.* Independent inspection agency means any person, firm, association, partnership or corporation, other than a municipal corporation, certified by the department to perform certified plumbing inspections under the uniform plumbing code.

(j) *Misconduct.* Misconduct means an act performed in the discharge of enforcement duties which jeopardizes the interests of the public, including violation of federal or state laws, local ordinances or administrative rules relating to the position, preparation of deficient or falsified reports, failure to submit information or reports required by law or contract when requested by the municipality or the department, conduct which evidences a lack of trustworthiness, misrepresentation of qualifications such as education, experience or certification, illegal entry of premises, misuse of funds, or misrepresentation of authority.

(k) *Municipality.* Municipality means any city, village, town or county in this state.

(l) *Negligence.* Negligence means failure by omission or commission to discharge the duty required to protect the health, safety and welfare of the public.

(m) *Person.* Person means partnership, associations and bodies political or corporate (s. 990.01 (26), Stats.).

(n) *Secretary.* Secretary means the secretary of the department of health and social services.

(6) APPLICATION FOR CERTIFICATION OR RECERTIFICATION. (a) All applicants shall be at least 18 years of age.

(b) Application for certification and recertification shall be made to the department of industry, labor and human relations, together with the payment of the fee as specified in Wis. Adm. Code section H 61.15 (35).

1. Applications shall be made on forms provided by the department of industry, labor and human relations and may be obtained by writing to:

Certification Coordinator  
Safety and Buildings Division  
Department of Industry, Labor and Human Relations  
P. O. Box 7946  
Madison, Wisconsin 53707

(c) Upon receipt of the completed application form, the department shall review and evaluate the application and make all necessary notifications to the applicant. If it is determined that the applicant does not qualify for certification or recertification, the applicant shall be notified of such findings in writing and instructed of the appeals procedure.

(7) REQUIREMENTS FOR CERTIFICATION OF PLUMBING INSPECTORS. (a) Eligibility for certification shall be based upon acceptance of the application and on successful completion of the approved educational training and testing programs required for the designated categories of certification or upon passage of the examination. Existing state or municipal

inspectors who have the equivalent of one year of inspection experience shall be exempt from examination for initial certification.

(b) Credit will be given for educational and training programs approved by the department.

(c) If an individual has one year of experience in plumbing inspections, the individual will be exempt from examination but must participate in and successfully complete the department's approved training program. A minimum of 20 units of continuing education is required annually.

(8) **EXAMINATION.** (a) *Application for examination.* All applications for examination shall be filed with the department of industry, labor and human relations prior to examination. The applicant shall be advised by the department of the date and place of the examination.

(b) *Time and place of examinations.* Scheduled examinations shall be offered at least semiannually. Specific details regarding time and place are available from the department upon request.

(c) *Scope of examination.* The examinations will test the applicant's ability to inspect plumbing installation and design to ascertain compliance with the rules of the uniform plumbing code, and more specifically:

1. Code knowledge;
2. Code administration;
3. Inspection and enforcement techniques;
4. Skills such as, but not limited to, general mathematics, reading of plans and specifications, materials and methods of construction, construction safety and oral and written communications.

(d) *Grading of examinations.* The final grading of all examinations shall be by persons approved by the department. A grade of 70% or greater in each part shall be considered a passing grade for certification as an inspector.

(e) *Examination retake.* Applicants failing part or all of an examination shall be required to retake, within one year of the original examination, only that part failed. All applications for re-examination shall be filed with the department of industry, labor and human relations 3 weeks prior to the scheduled date of the examination to be retaken. Failure to apply for re-examination requires successful completion of approved educational courses.

(9) **RECIPROcity.** Inspector certification may be accomplished through reciprocity provided the certification program of the state in which the inspector is certified is approved by the department.

(10) **ISSUANCE OF CERTIFICATE.** Upon completing the requirements for certification, the department shall notify the applicant in writing and shall issue an inspection certificate. The certificate will bear the name of the applicant, certificate number and expiration date. The certificate shall be valid for a period of one year from the date of issuance.

(11) **RENEWAL OF CERTIFICATE.** Upon receipt of written notice of expiration, certification may be renewed. Certification renewal shall be con-

tingent on participation and completion of the 20 units of credit annually in on-going approved education programs.

(12) **DENIAL OF CERTIFICATION.** (a) *Notice of denial.* Upon denial of certification or recertification, the department shall notify the applicant in writing stating the reasons for denial. The notice of denial shall be made by certified mail sent to the address filed with the application. Service shall be verified by the certified mail receipt.

(b) *Hearing.* Upon receipt of denial, any applicant may submit a written request for hearing. The right to hearing shall be considered waived if the applicant fails to submit the request within 30 days. Hearings will be conducted by the department and the proceedings recorded.

(13) **INDEPENDENT INSPECTION AGENCY CERTIFICATION.** Any independent inspection agency offering to perform in-plant plumbing inspections of manufactured dwellings and certify compliance for manufactured dwellings under the uniform plumbing code shall be certified and shall satisfy the requirements of the department. The department shall review all plans for plumbing systems installed in factory constructed one- and 2-family dwellings.

(14) **APPLICATION FOR INDEPENDENT INSPECTION AGENCY CERTIFICATION OR RECERTIFICATION.** Application for certification and recertification shall be made to the department of industry, labor and human relations, together with the payment of the fee as specified in Wis. Adm. Code section H 61.13 (35).

(a) Applications shall be made on forms provided by the department of industry, labor and human relations and may be obtained by writing to:

Certification Coordinator  
Safety and Buildings Division  
Department of Industry, Labor and Human Relations  
P. O. Box 7946  
Madison, Wisconsin 53707

(b) All applications for certification shall be submitted in duplicate and shall contain the following information:

1. Location of offices.
2. Names and licenses and qualifications of all in-plant inspectors employed by the agency.
3. A list of structures which the agency has inspected.
4. A list of states in which the agency is authorized to inspect or evaluate manufactured dwellings or components.
5. An affidavit certifying independence and absence of conflicts of interest.
6. Procedures and facilities, including record-keeping used in providing services which assure compliance with the rules of Wis. Adm. Code chapter H 62.
7. A list of all certified persons having contracts with the independent inspection agency, names and certification categories of the certified inspectors employed by the agency for inspection purposes.

(c) Any independent inspection agency to be certified by the department shall agree in writing:

1. That the department may monitor by inspection and require verification of any or all conditions specified in (b).
2. To make all inspection records available upon request.
3. To enforce all applicable rules of Wis. Adm. Code chapter H 62.
4. To provide the department, upon request, with a current list of all municipalities, manufacturers or others for which it is performing certified inspections.

(d) Upon receipt of the completed application form, the department shall review and evaluate the application and make all necessary notifications to the applicant. If it is determined that the applicant does not qualify for certification or recertification, the applicant shall be notified of such findings in writing and instructed of the appeals procedure.

(15) **RECIPROCITY.** Independent inspection agency certification may be accomplished through reciprocity provided the certification program of the state in which the agency is certified is approved by the department.

(16) **ELIGIBILITY FOR CERTIFICATION.** Eligibility for certification shall be based upon acceptance of the application and the applicant's ability to perform system analysis and develop and implement a compliance assurance program.

(17) **ISSUANCE OF INDEPENDENT INSPECTION AGENCY CERTIFICATE.** Upon acceptance of the application and finding of eligibility, the department shall notify the agency in writing and shall issue an independent inspection agency certificate. The certificate shall bear the name of the independent inspection agency, certificate number and expiration date. The certificate shall be valid for a period of one year from the date of issuance.

(18) **RENEWAL OF CERTIFICATE.** Upon receipt of written notice of expiration, certification may be renewed in accordance with the requirements of chapter H 61.

(19) **DENIAL OF CERTIFICATE.** (a) *Notice of denial.* Upon denial of certification or recertification, the department shall notify the applicant in writing stating the reasons for denial. The notice of denial shall be made by certified mail sent to the address filed with the application. Service will be verified by the certified mail receipt.

(b) *Hearing.* Upon receipt of denial, any applicant may submit a written request for hearing. The right to hearing shall be considered waived if the applicant fails to submit the request within 30 days. Hearings will be conducted by the department and the proceedings recorded.

(20) **INDEPENDENT INSPECTION AGENCY CERTIFICATION—ON-SITE DWELLINGS.** Any independent inspection agency offering to perform inspections for on-site dwellings under the uniform plumbing code shall be certified and shall satisfy the requirements of this section.

(21) **APPLICATION FOR INDEPENDENT INSPECTION AGENCY CERTIFICATION.** Application for certification and recertification shall be made to the de-

partment of industry, labor and human relations, together with the payment of the fee as specified in Wis. Adm. Code section H 61.15 (35).

(a) Applications shall be made on forms provided by the department of industry, labor and human relations and may be obtained by writing to:

Certification Coordinator  
Safety and Buildings Division  
Department of Industry, Labor and Human Relations  
P. O. Box 7946  
Madison, Wisconsin 53707

(b) All applications for certification shall be submitted in duplicate and shall contain the following information:

1. Identification of agency entity. If an individual, the full name under which the agency intends to do business shall be submitted.

2. Name, address and qualifications of all officers, directors and management personnel responsible for the administration and enforcement of the agency.

3. Location of offices of the independent inspection agency.

4. Names of certified plumbing inspectors employed by the agency.

5. An affidavit certifying independence and absence of conflicts of interest.

6. Programs, procedures and facilities, including record-keeping used in providing services which assure compliance with the rules of H 62.

7. A list of all persons having contracts with independent inspection agencies to perform certified inspections.

(c) Any independent inspection agency to be certified by the department shall agree in writing:

1. All inspections for compliance with the uniform plumbing code shall be by certified plumbing inspectors and make all records available to the department upon request.

2. That the department may monitor by inspection and require verification of any or all conditions specified in (b).

3. To enforce all applicable rules of Wis. Adm. Code chapter H 62.

4. To provide the department, upon request, with a current list of all municipalities, manufacturers or others for which it is performing certified inspections.

(d) Upon receipt of the completed application form, the department shall review and evaluate the application and make all necessary notifications to the applicant. If it is determined that the applicant does not qualify for certification or recertification, the applicant shall be notified of such findings in writing and instructed of the appeals procedure.

(22) RECIPROcity. Independent inspection agency certification may be accomplished through reciprocity provided the certification program of the state in which the agency is certified is approved by the department.

(23) **ISSUANCE OF INDEPENDENT INSPECTION AGENCY CERTIFICATE.** Upon acceptance of the application and findings of eligibility, the department shall notify the agency in writing and shall issue an independent inspection agency certificate. The certificate shall bear the name of the independent inspection agency, certificate number and expiration date. The certificate shall be valid for a period of one year from the date of issuance.

(24) **RENEWAL OF CERTIFICATE.** Upon receipt of written notice of expiration, certification may be renewed in accordance with the requirements of H 61.15 (21).

(25) **DENIAL OF CERTIFICATE.** (a) *Notice of denial.* Upon denial of certification or recertification, the department shall notify the applicant in writing stating the reasons for denial. The notice of denial shall be made by certified mail sent to the address filed with the application. Service will be verified by the certified mail receipt.

(b) *Hearing.* Upon receipt of denial, any applicant may submit a written request for hearing. The right to the hearing shall be considered waived if the applicant fails to submit the request within 30 days. Hearings will be conducted by the department and the proceedings recorded.

(26) **SUSPENSION OR REVOCATION OF CERTIFICATION.** The department may suspend or revoke the certification of any inspector or independent inspection agency for any of the following reasons:

(a) Fraud or deceit in obtaining certification.

(b) Knowingly aiding or abetting the unauthorized examination and inspection of dwellings by persons not certified by the department.

(c) Any negligence, incompetence or misconduct in the discharge of the duties required under this chapter and the uniform dwelling code.

(d) Conviction of a criminal charge, misdemeanor or local regulation substantially related to the circumstances of the certified inspection activity or adjudication of mental incompetence by the courts.

(e) Conflict of interest.

(27) **FILING OF COMPLAINT.** Proceedings to revoke or suspend a certificate may be initiated by any person on a signed, written complaint filed with the department. Any alleged violation of the law or the administrative rules of the department shall be set forth in the complaint with particular reference to time, place and circumstance.

(28) **INVESTIGATION AND NOTIFICATION.** The department may investigate alleged violations on its own initiative or upon the filing of a complaint. If it is determined that no further action is warranted, the department shall notify the persons affected. If the department determines that there is probable cause, it shall order a hearing and notify the persons affected.

(29) **MAILING.** Unless otherwise provided by law, all orders, notices and other papers may be served by the department by certified mail addressed to the party at the last known address. If the service is refused, service may be made by sheriff without amendment of the original order, notice or other paper.



(30) RESPONSE. Upon receipt of notification of hearing from the department, the charged party may submit to the department a written response within 30 days of the date of service. Failure to respond within the prescribed time limit, or failure to appear at the scheduled hearing, may result in the allegations specified in the complaint being taken as true.

(31) HEARINGS. (a) *Subpoenas; witness fees.* Subpoenas may be signed and issued by the department or the clerk of any court of record. Witness fees and mileage of witnesses subpoenaed on behalf of the department will be paid at the rate prescribed for witnesses in circuit court.

(b) *Conduct of hearing.* All hearings will be conducted by persons selected by the department. Persons so designated may administer oaths or affirmations and may grant continuances and adjournments for cause shown. The respondent shall appear in person and may be represented by an attorney-at-law. Witnesses may be examined by persons designated by the department.

(32) FINDINGS. The department may make findings and enter its order on the basis of the facts revealed by its investigation. Any findings as a result of petition or hearing shall be in writing and shall be binding unless appealed to the secretary.

(33) APPEAL ARGUMENTS. Appeal arguments shall be submitted to the department in writing unless otherwise ordered.

(34) PETITION FOR RULES OR DECLARATORY RULINGS. Petitions for the adoption, repeal or amendment of rules and for declaratory rulings shall be in accordance with ch. 227, Stats.

(35) CERTIFICATION FEES. All applicants for certification as a certified inspector or independent inspection agency shall submit, with the application form, fees in accordance with the following:

(a) *Certified inspectors.* Persons applying for initial certification or recertification as a certified plumbing inspector shall submit fees in accordance with the following schedule:

Plumbing..... \$25.00

Inspectors shall renew their certification annually. Expiration date of certification shall be June 30 of each calendar year.

1. Examinations for certification. Upon determination of eligibility for the examination for certification, fees shall be collected in accordance with the following schedule:

a. Initial examination..... \$5.00

b. Examination retakes..... \$5.00

2. Educational and training seminars. Fees will be assessed on a per seminar basis for educational and training programs sponsored by the department of health and social services.

(b) *Independent inspection agencies.* Fees for the initial certification of independent inspection agencies shall be \$25.00. For recertification,

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\$25.00 annually. Expiration date of certification shall be June 30 of each calendar year.

**History:** Cr. Register, April, 1980, No. 292, eff. 5-1-80.

## Chapter H 62

DESIGN, CONSTRUCTION, INSTALLATION,  
SUPERVISION AND INSPECTION OF PLUMBING

H 62.01	Basic plumbing principles (p. 203)	H 62.15	Water conserving fixtures (p. 272-20)
H 62.02	Plumbing definitions (p. 205)	H 62.16	Health care and related facilities (p. 272-22)
H 62.03	Fixture unit design basis (p. 217)	H 62.17	Mobile home parks (p. 272-32)
H 62.04	Building sewers (p. 218)	H 62.18	Joints and connections (p. 274g)
H 62.05	Building drains (p. 223)	H 62.19	Materials (p. 274k)
H 62.06	Stacks and branches (p. 225)	H 62.20	Private domestic sewage treatment and disposal systems (p. 274-25)
H 62.07	Vents (p. 227)	H 62.21	Hangers and supports (p. 274-42)
H 62.08	Fixture drain connections (p. 230)	H 62.22	Repairs and reconstruction (p. 276c)
H 62.09	Fixtures (p. 242)	H 62.23	Inspection and tests (p. 276d)
H 62.10	Traps and cleanouts (p. 245)	H 62.24	Alternate and experimental materials (p. 276f)
H 62.11	Interceptors, sumps, ejectors and special and industrial wastes (p. 249)	H 62.25	Examination of plans and specifications (p. 276-13)
H 62.12	Storm and clear water (p. 259)		
H 62.13	Water service and water distribution systems (p. 262)		
H 62.14	Back-siphonage, cross-connections and potability control (p. 272-14)		

**H 62.01 Basic plumbing principles.** (1) The basic principles of this code are enunciated as basic goals in environmental sanitation and safety worthy of accomplishment through properly designed, acceptably installed, and adequately maintained plumbing systems. Some of the details of plumbing construction must vary, but the basic sanitary and safety principles are the same. The results necessary to obtain the desired protection for the health of the people are the same everywhere. As unforeseen situations arise which are not specifically covered in the body of this code, the following principles shall serve to define the intent.

(2) Plumbing in all buildings, public and private, intended for human occupation or occupancy, shall at all times be installed in such manner so as to protect the health, safety and welfare of the public or occupants.

(3) Every building intended for human habitation or occupancy shall be provided with a supply of potable water; such supply shall not be cross connected with an unsafe water supply or with a waste pipe nor be subjected to any hazards of backflow or back-siphonage. When the premises abut on a street in which there is a public watermain, there shall be an individual connection to the public system.

(4) Buildings in which water closets and other plumbing fixtures, devices and appurtenances exist or are to be installed shall be provided with a supply of water adequate in volume and pressure by means of proper pipe sizing to insure that efficient use of the fixture is possible at all times.

(5) Devices for heating water and storing it in pressure vessels or tanks shall be so designed and installed as to prevent dangers of explosion or overheating.

(6) Every building intended for human habitation or occupancy on premises abutting on a street in which there is a public sewer shall have an individual connection with the public sewer.

(7) Each family dwelling unit provided with a drainage system shall have at least one water closet, one wash basin, one kitchen sink and one bathtub or shower to meet the basic requirements of sanitation and personal hygiene. All other structures for human occupancy or use shall be equipped with sufficient sanitary facilities as prescribed in this chapter or other applicable Wis. Adm. Code chapters and in no case no less than one water closet and one wash basin shall be provided.

(8) The entire building drainage system shall be so designed, constructed, and maintained as to conduct the waste water or sewage quickly from the fixture to the place of disposal, with velocities which will prevent clogging, fouling and the depositing of solids and shall have adequate cleanouts so arranged that the pipes may be readily cleaned.

(9) The drainage pipes should be so designed and constructed as to be proof for a reasonable life of the building against leakage of water or sewer drain air and offensive odors due to defective materials, imperfect connections, corrosion, settlements or vibrations of the ground or building, temperatures changes, freezing or other causes.

(10) The drainage system shall be so designed that there will be an adequate circulation of air in all pipes, no danger of siphonage, aspiration or forcing of trap seals under conditions of ordinary use.

(11) All rooms in which water closets, urinals or similar fixtures are installed shall have adequate lighting and have proper ventilation to the outer air.

(12) Hot water shall be supplied to all plumbing fixtures which normally need or require hot water for their proper use and function.

(13) Plumbing fixtures shall be made of durable, smooth, nonabsorbent and corrosion resistant material and shall be free from concealed fouling surfaces.

(14) If water closets or other plumbing fixtures exist in buildings where there is no sewer within a reasonable distance, suitable provision shall be made for disposing of the building sewage by some method of sewage treatment or disposal satisfactory to the department and local health authority having jurisdiction.

(15) Plumbing systems shall be maintained in a sanitary condition.

(16) Proper protection shall be provided to prevent contamination of food, water, sterile goods and similar materials by backflow of sewage.

(17) Plumbing shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.

(18) Fixtures, devices, appliances and appurtenances shall be supplied with water sufficient in volume and at pressures adequate to enable them to function satisfactorily and without undue noise under all normal conditions of use.

(19) All plumbing fixtures shall be so installed as to provide adequate spacing and shall be reasonably accessible for their intended use and for cleaning.

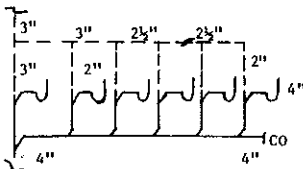


fold with standpipes served by properly sized and vented water sealed traps. The traps may be individually vented or circuit vented. Acceptable methods of installation are indicated in sketches. The following number of washers shall be the maximum to be connected to each size trap:

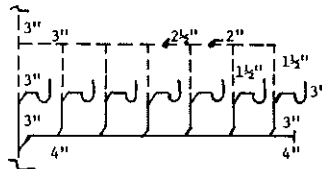
**Table 6**

TRAP SIZE (Minimum)	NO. OF WASHERS (Maximum)
2 inch trap .....	2 machines
3 inch trap .....	3 machines
4 inch trap .....	4 machines

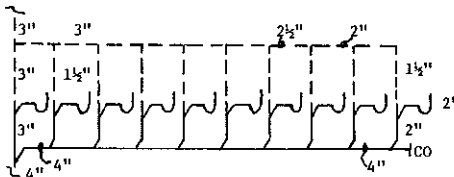
Installation of gutters, troughs, local wastes, indirect manifold waste or other such connections are prohibited installations for the above type equipment. See following sketches.



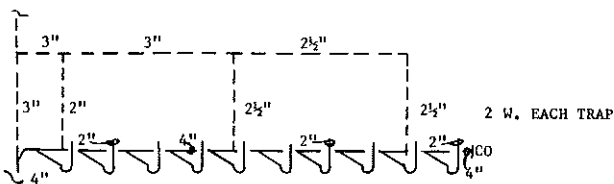
4" TRAP SERVING 4 WASHERS



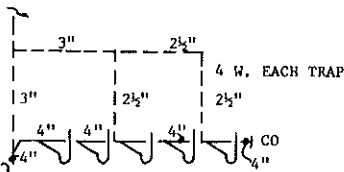
3" TRAP SERVING 3 WASHERS



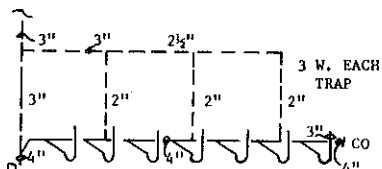
2" TRAP SERVING 2 WASHERS 20 TOTAL - 2 EACH TRAP



2" TRAP SERVING 2 WASHERS



4" TRAP SERVING 4 WASHERS



3" TRAP SERVING 3 WASHERS

(m) *Vacuum cleaners (central units)*. Plumbing connected central vacuum power cleaning units shall be provided with an acceptable air-gap connection in the water intake pipe. The unit shall be connected to the waste piping system through an air-gap or air-break type connection.

(11) **URINALS** (a) *Women*. Urinals for women may be installed as an auxiliary or supplementary fixture. This fixture is not to be used as a substitute for water closets. In all cases, the minimum number of water closets shall be provided.

1. **Enclosure**. The urinal shall be enclosed with a standard size water closet compartment with a door. An instruction card explaining how to use the fixture shall be posted in each such compartment.

2. **Installation**. The fixture shall be installed in accord with all code requirements applicable to water closets. A floor drain shall be installed within the compartment. Each individual fixture shall be equipped with a hand-operated flush tank, satisfactory foot or hand-operated flush valve or other approved device. The water supply to each urinal shall be protected by an approved type vacuum breaker or other acceptable device.

(b) *Men*. 1. **Stall type urinals**. Stall type urinals shall be set into the floor and the floor shall be graded toward the fixture. Each urinal shall be flushed individually by an approved foot or hand-operated flush valve or other approved flushing device which is limited to a maximum of 1.5 gallons per flush. The water supply to a urinal(s) shall be protected by an approved type vacuum breaker or other acceptable device. Urinals in batteries shall be spaced not less than 30 inches center to center. The center line of a single urinal shall be at least 16 inches from the nearest side wall or partition. When the space between stall type urinals or a urinal and a side wall is less than 12 inches, such space shall be filled flush with the front and top of the urinal with nonabsorbent material.

2. **Wall type**. a. **Wall hanging men's urinals** approved by the department may be installed in all buildings except elementary schools (kindergarten through 8th grade).

**Note 1:** The definitions and general classifications for schools are found in s. 115.01, Stats.

**Note 2:** The department recommends that wall hanging urinals for adults be installed at a height between 22 and 24 inches above the floor.

b. Each wall hanging urinal shall be flushed individually by an approved foot or hand-operated flush valve or other approved flushing device which is limited to a maximum of 1.5 gallons per flush. The water supply to a urinal(s) shall be protected by an approved type vacuum breaker or other acceptable device.

c. **Wall hanging urinals in batteries** shall be spaced not less than 30 inches center to center. The center line of a single urinal shall be at least 16 inches from the nearest side wall or partition.

d. **Wall hanging urinals** shall be supported by a carrier fitting.

e. **Combinations of stall type and wall hanging urinals** may be installed.



f. A floor drain shall be located not more than 12 inches from the wall supporting wall hanging urinals. A floor drain shall be provided for each group of 4 or less urinals or a stall type urinal may be used as a substitute for a floor drain.

(c) *Automatic siphon flush tanks.* The use of automatic siphon flush tanks shall be prohibited on stall and wall type urinals.

(12) **WATER CLOSETS.** (a) *Floor outlet.* One floor outlet water closet may connect to a 3 inch horizontal or vertical soil pipe through a 4 x 3 inch bend. Not more than 2 water closets shall be connected to a 3 inch vertical soil pipe. Offset or 3 x 4 inch closet collar connections are prohibited.

(b) *Back to back floor outlet.* Two water closets located back to back shall be connected to a vertical 3 inch pipe with a 3 inch tee-wye cross. Two floor outlet water closets located back to back may connect to a vertical 4 inch stack through a 4 x 3 inch sanitary cross or through a 4 inch sanitary cross fitting. When fixtures discharge into the same soil pipe above the water closets, all fixtures shall be properly vented. Back to back floor outlet water closets connecting to a horizontal soil pipe shall be connected by the proper use of 45° wyes, double wyes, tee-wye combinations or with fittings producing a like radius and may be circuit vented or individually back vented. See section H 62.08 (1) (c) for vertical limitations.

(c) *Side by side floor outlet.* Floor outlet water closets installed side by side or in batteries shall connect to the horizontal soil pipe through a horizontally installed wye, tee-wye or wye and 1/8 bend. The fixtures may be individually back vented or circuit vented. Where circuit vents are used, the size shall be: 3 inch for a battery of 2 to 6 fixtures and 4 inch for a battery of 7 or 8 fixtures.

(d) *Wall outlet floor mounted water closets.* Wall outlet floor mounted type water closet fixtures may be connected to a vertical or horizontal soil pipe through an approved type carrier fitting or 4 inch closet collar. When the soil piping is 3 inches in diameter, the pipe connection shall be increased to 4 inch inside diameter between the fixture and soil pipe fitting connections.

(e) *Back to back wall outlet.* Wall outlet, floor mounted type water closets connected to the same vertical soil pipe shall be installed with a fitting so designed as to prevent cross-flow of wastes or air pressures to the opposite fixture, or through an approved type carrier fitting. Where fixtures discharge into the same vertical pipe on floors above, all fixtures shall be properly vented. Wall outlet, floor mounted water closets may discharge into a horizontal soil pipe through an approved type carrier fitting. The water closets may be individually back vented, served by a 3 inch diameter common vent or a 2 inch diameter common vent increased to 3 inches in diameter a maximum vertical distance of 18 inches above the center line of the fixture opening, with no horizontal offset in the vent pipe below a point 38 inches above the floor line.

(f) *Side by side wall outlet.* Wall outlet floor mounted water closet fixtures installed side by side or in batteries shall connect to the horizontal or vertical soil pipe through an approved carrier type fitting, a wye, tee-wye or wye and 1/8 bend connection. The fixtures shall be individually dry vented.

(g) *Off the floor water closets.* 1. Batteries of side by side off the floor type fixtures shall connect to a horizontal or vertical soil pipe through department approved horizontal or vertical carrier type fittings and shall be individually dry vented.

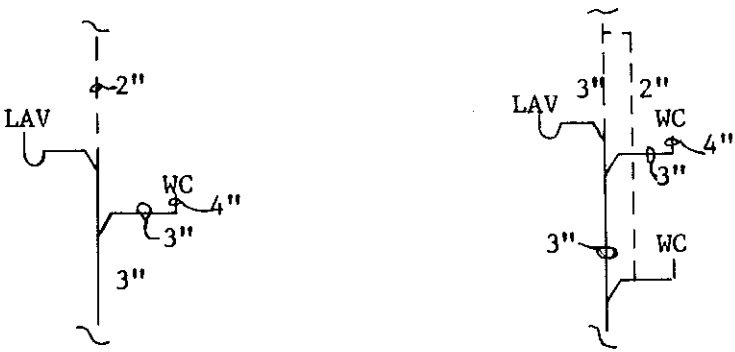
2. Off the floor type water closets installed back to back shall connect to horizontal soil pipe through a department approved type carrier fitting. The water closets may be individually back vented, served by a 3 inch diameter common vent or a 2 inch diameter common vent increased to 3 inches in diameter a maximum vertical distance of 18 inches above the center line of the fixture opening with no horizontal offset in the vent pipe below a point 38 inches above the floor line.

(h) *Stack offsets.* Off the floor type water closets shall be connected to a stack offset through an approved back to back carrier type fitting. The installation shall be served by a unit vent of 3 inch or larger diameter, or may be individually back vented in accord with section H 62.03 (1), table 1. Also see section H 62.06 (1) (c).

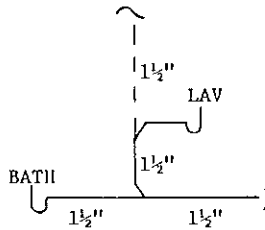
(i) *Multi-story stacks.* Back to back off the floor water closets shall connect to a vertical soil stack through a department approved back to back carrier type fitting. The water closets may be individually back vented, served by a 3 inch diameter common vent or a 2 inch diameter common vent increased to 3 inches in diameter a minimum vertical distance of 18 inches above the center line of the fixture opening with no horizontal offset in the vent pipe below a point 38 inches above the floor line.

(13) **BATHROOM GROUPS.** (a) *Bathroom group (single).* A single group of bathroom fixtures may be installed without individual fixture vents in a one story building or on the top floor of a building provided that:

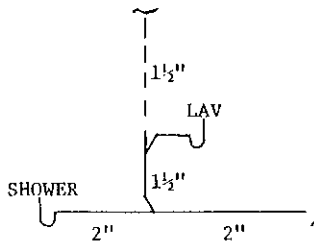
1. The water closet is independently connected to a stack 3 inches or larger with no more than 1 D.F.U. connection above. See following sketch.



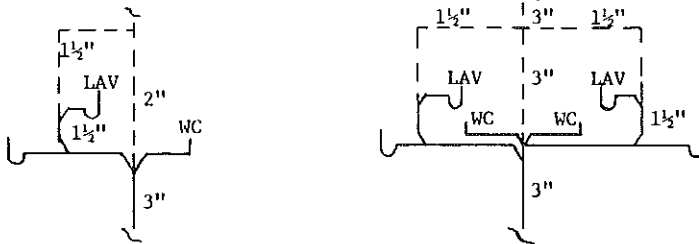
2. The drain from a back vented lavatory serves as a wet vent for a bathtub or shower stall. See following sketch.



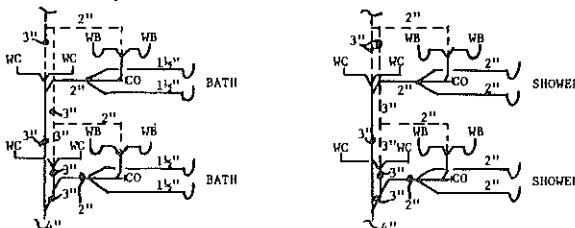
3. Not more than 1 D.F.U. is drained into the 1/2 inch vertical vent or not more than 5 D.F.U. drain into the horizontal wet vented pipe. See following sketch.



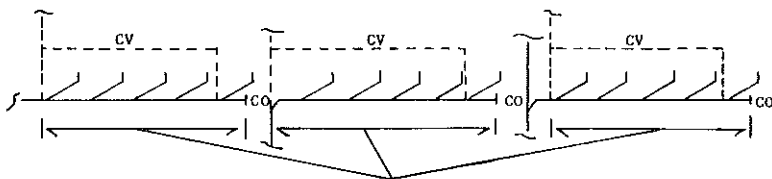
4. The horizontal wet vented pipe shall connect to the stack at or below the same level as the water closet drain when installed on the top floor. See following sketch.



(b) *Double bathroom groups.* Back to back bathroom groups consisting of 2 lavatories and 2 bathtubs or shower stalls may be installed on the same horizontal pipe when served by a 2 inch diameter unit vent provided the water closets (2) connect independently to a 3 inch or larger diameter stack which extends full size without fixture connections above. See following sketches.



(c) *Other fixtures.* A horizontal soil or waste pipe to which 2 and not more than 8 like fixtures are connected may be vented by a circuit vent. The horizontal soil or waste pipe shall be carried full diameter to the last fixture connection and terminate with a cleanout. See following sketch.



NO CONNECTIONS IN THIS AREA EXCEPT LIKE FIXTURES SERVED BY CIRCUIT VENT.

NO CONNECTIONS IN THIS AREA EXCEPT LIKE FIXTURES  
SERVED BY CIRCUIT VENT

(d) *Prohibited fixture connections.* There shall be no fixture connection other than the circuit vented fixtures connected to the circuit vented horizontal soil or waste pipe.

(e) *Juvenile fixtures.* Water closets and other fixtures for the use of juveniles shall be of a size and shall be installed at a height suitable for juveniles use. Drain connections shall be provided at height required to serve the fixtures.

(14) **UNLISTED FIXTURES, EQUIPMENT, DEVICES AND APPLIANCES.** For items not included in this section, refer to other applicable sections of this chapter or contact the department for information and proposed installation review.

(15) **INDIRECT WASTE PIPING AND SPECIAL WASTES. SPECIAL EQUIPMENT, INDIRECT WASTE PIPING.** (a) *Piping by plumber.* The indirect waste piping serving any refrigerator, refrigerator case, icebox, ice compartment, vending machine, rinse sinks, steam tables, steam kettles, potato peelers, egg boilers, coffee urns, appliances, devices or appurtenances in which food or provisions are stored or processed, baptismal founts, clothes washers and extractors, dishwashers, dental cuspidors, garbage can washers, appliances, devices or appurtenances such as stills, sterilizers, bar and soda fountains, boiler blow-off basin outlet drains and similar equipment having public health concern shall be installed by licensed plumbers.

(b) *Piping by equipment installers.* Indirect waste piping serving air-conditioning, cooling coils, air-handling condensate waste, expansion tank overflow and equipment serving steam, power, heating, such as flash tanks, boiler to blow-off basins, machinery wastes, process piping and similar waste piping may be installed by the equipment installer.

**History:** 1-2-56; r. and recr. Register, October, 1971, No. 190, eff. 11-1-71; am. (1) (b), (d), (2) (c), (3), (8) (c), (11) (b) 2. d. e. f. g. h., (12) (e), (g) 2., r. and recr. (5), Register, November, 1972, No. 203, eff. 12-1-72; r. and recr. (11) (b) 2., Register, January, 1979, No. 277, eff. 2-1-79; r. and recr. (11), Register, April, 1980, No. 292, eff. 5-1-80.

**H 62.09 Fixtures.** (1) **CONSTRUCTION AND DESIGN.** All fixtures, appliances, equipment, devices and appurtenances shall be of such design, materials and construction as to comply with applicable standards to

Table 13c

**MAXIMUM FIXTURE UNITS (s.f.u.)  
WATER SERVICE AND DISTRIBUTION SIZING  
CALCULATED PRESSURE RANGE OVER 60 PSI  
(but not to exceed 80 PSI)**

Water Service Not to Exceed 75 Feet	Building Distribution	Maximum Total Developed Allowable Length In Feet				
		75	100	150	200	250
3/4"	3/4"	20	18	18	18	18
3/4"	1"	34	32	30	28	26
1"	1"	34	34	34	34	34
1"	1-1/4"	58	58	58	58	54
1-1/4"	1"	34	34	34	34	34
1-1/4"	1-1/4"	58	58	58	58	58
1-1/4"	1-1/2"	111	111	111	111	98
1-1/2"	1-1/4"	58	58	58	58	58
1-1/2"	1-1/2"	111	111	111	111	111
1-1/2"	2"	275	275	250	235	215
2"	1-1/2"	111	111	111	111	111
2"	2"	275	275	275	275	275

(c) Friction loss method for sizing the water service and distribution system. 1. The supply demand in gallons per minute in the building water distribution system shall be determined on the basis of the load in terms of supply fixture units and of the relationship between load and supply demand as shown in tables 13 and 14. Water supply outlets for items not listed in table 13 shall be computed at their maximum demand but in no case less than:

Fixture	Number of Fixture Units	
	Private Use	Public Use
3/8-inch pipe	1	2
1/2-inch pipe	2	4
3/4-inch pipe	3	6
1 inch pipe	6	10

a. For supply outlets likely to impose continuous demands, estimate continuous supply separately in gallons per minute and add to total demand in gallons per minute for fixtures.

b. The given weights in table 13 are for total demand and for fixtures with both hot and cold water supplies. The weights for maximum separate demands are taken as 3/4 the listed total demand for the hot water supply and the cold water supply.

c. Compute flush valve demand separately.

d. Demand (GPM) Corresponding to Fixture Load (WSFU). To determine the demand in gallons per minute corresponding to any given load in water supply fixture units, reference must be made to table 14, Table for Estimating Demand.

Table 14

## ESTIMATING DEMAND

Supply Systems Predominantly For Flush Tanks		Supply Systems Predominantly For Flush Valves	
Load (Water Supply Fixture Units)	Demand GPM	Load (Water Supply Fixture Units)	Demand GPM
6	5		
8	6.5		
10	8	10	27
12	9.2	12	28.6
14	10.4	14	30.2
16	11.6	16	31.8
18	12.8	18	33.4
20	14	20	35
25	17	25	38
30	20	30	41
35	22.5	35	43.8
40	24.8	40	46.5
45	27	45	49
50	29	50	51.5
60	32	60	55
70	35	70	58.5
80	38	80	62
90	41	90	64.8
100	43.5	100	67.5
120	48	120	72.5
140	52.5	140	77.5
160	57	160	82.5
180	61	180	87
200	65	200	91.5
225	70	225	97
250	75	250	101
275	80	275	105.5
300	85	300	110
400	105	400	126
500	125	500	142
750	170	750	178
1,000	208	1,000	208
1,250	240	1,250	240
1,500	267	1,500	267
1,750	294	1,750	294
2,000	321	2,000	321
2,250	348	2,250	348
2,500	375	2,500	375
2,750	402	2,750	402
3,000	432	3,000	432
4,000	525	4,000	525
5,000	593	5,000	593
6,000	643	6,000	643
7,000	685	7,000	685
8,000	718	8,000	718
9,000	745	9,000	745
10,000	769	10,000	769

e. Size. The diameter of any pipe serving more than one plumbing fixture or appliance shall not be less than  $\frac{3}{4}$ -inch inside diameter.

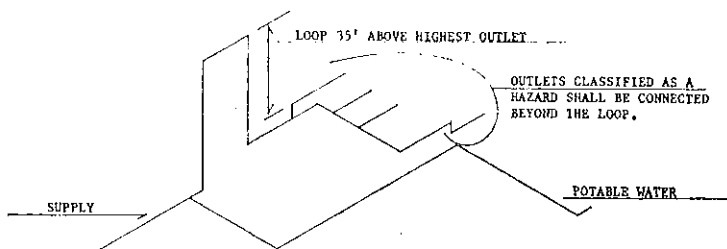
f. Minimum size. The minimum size of a water distribution branch serving no more than one fixture shall be as shown in table 15. The water distribution branch shall be extended to within at least 18 inches of the point of connection to the fixture.

control valve to the fixture. No shut-off valve or faucet shall be installed beyond the vacuum breaker.

2. Reduced pressure zone backflow preventer. A reduced pressure zone type backflow preventer may be installed subject to full static pressure.

3. Devices of all types. Backflow and back-siphonage preventing devices shall be accessibly located, preferably in the same room with the fixture they serve. Installation in utility or service spaces, provided they are readily accessible is also permitted.

4. Barometric loop. Water connections not subject to back pressure where an actual or potential backflow or back-siphonage hazard exists may in lieu of devices specified, be provided with a barometric loop. See following sketch.



(q) *Turf sprinklers.* Turf sprinkler systems, when connected to a potable water system, shall be installed in accordance with these regulations. Adequate and proper provisions shall be made for control and drainage and to prevent back-siphonage or backflow. Water shall not be turned on to any turf sprinkler system until it has been inspected and approved. Materials used in turf sprinkler systems shall be submitted for evaluation and approval prior to installation.

(2) **IMPROPER LOCATION OF SEWERS AND DRAINS AND OTHER PIPING.** (a) Sewer or drain pipes, wherever possible, shall not pass directly over areas where food, ice or potable liquids are prepared, handled, stored or displayed. Where building design requires that soil or drain pipes be located below the ceiling of such areas, the installation shall be made with the least possible number of joints and shall be installed so as to connect to a vertical stack at the nearest wall or vertical building support and the construction shall be performed as follows:

1. All openings through floors over such areas shall be provided with sleeves securely bonded to the floor construction and projecting not less than  $\frac{3}{4}$  inch above top of finished floor with space between sleeve and pipe or duct sealed.

2. Floor and shower drains installed above such areas shall be equipped with integral seepage pans.

3. Plumbing fixtures in rooms located above such areas shall be of the wall mounted type except bathtubs. Tubs shall have waste and overflow connections made above the floor and piped to trap below floor. All connections through floor and to trap shall conform with all other provi-

sions of this regulation. No floor openings other than sleeve for waste pipe will be permitted for tubs.

4. All other soil or drain pipes shall be galvanized steel or cast iron with screwed joints sealed with litharge and glycerine or copper tube with soldered joints. Cleanouts shall be extended through the floor construction above.

5. All soil and drain pipes located above such areas shall be subjected to a standing water test of not less than 25 feet.

6. All piping subject to operation at temperatures that will form condensation on the exterior of the pipe shall be thermally insulated.

7. Where pipes are run in ceilings above such areas, the ceiling shall be of the removable type, or shall be provided with access panels in order to form a ready access for inspection of piping unless a lath and plaster ceiling is provided.

8. In lieu of the above, other methods may be approved by the department.

(b) Exposed soil, waste and other drainage pipe lines in a pool or equipment room shall not pass over the pool, surge tank or open filter.

**History:** 1-2-56; r. (2) through (7), Register, October, 1971, No. 190, eff. 11-1-71; r. and recr. Register, November, 1972, No. 203, eff. 12-1-72.

**H 62.15 Water conserving fixtures.** (s. 145.25, Stats.) (1) TYPES OF WATER CONSERVING FIXTURES. (a) All water closets, lavatory faucets, urinals and shower heads shall meet the requirements of the following subsections and be of an approved type. Test data shall be submitted based on 50 pounds per square inch water pressure.

(2) PROHIBITIONS. (a) *All buildings.* "No person may sell at retail or install in or cause to be installed in any building:"

1. "A water closet which uses more than 4 gallons of water per flush."

2. "A shower head which uses more than 3 gallons of water per minute."

(b) *Public restrooms and public buildings.* No person may install or cause to be installed in any public restroom or public building:

1. "Any urinal intended for use by male persons which is operated by an automatic urinal flush valve or hand-operated flush valve which uses more than 1.5 gallons of water per flush per use."

2. "Any automatic siphon urinal flush tanks."

3. "Any wash basin faucet which allows more than 1 gallon of water to flow through the faucet after the handle is released."

**Note:** Quotation marks indicate statutory language taken verbatim or paraphrased from s. 145.25, Stats.

(c) *One and 2 family dwelling.* No person may install or cause to be installed, any faucet connected to a wash basin in any private dwelling which allows more than 3 gallons of water per minute to flow through the faucet.



(3) LISTING OF ACCEPTABLE WATER CLOSETS. (a) *Publish.* The department shall publish a list of water closet models which have been manufactured and tested in accordance with recognized standards and which have been certified by the manufacturer to use no more than 4 gallons per flush.

(b) *Manufacturer's responsibilities.* Manufacturers desiring to have their product included on the published list shall submit for each water closet model laboratory test data, engineering data, a certification by the manufacturer that the product meets the standards set forth above and a copy of the sales brochure.

(c) *Manufacturer's listing.* The manufacturer shall submit a list of the make and model of all water closets tested and offered for sale in Wisconsin, regardless of water use.

(d) *Identification.* Each closet shall be permanently marked for identification as required by H 62.19.

(4) LISTING OF OTHER WATER SAVING DEVICES. (a) *Shower heads.* The department shall publish a list of shower heads which have been manufactured, tested and certified by the manufacturer to permit not more than 3 gallons per minute to flow through the head.

(b) *Urinals and urinal flushing devices.* The department shall publish a list of all Wisconsin approved urinals and urinal flushing devices which have been manufactured, tested and certified by the manufacturer to permit not more than 1.5 gallons per flush per use to flow through the valve or fixture.

(c) *Faucets in public restrooms and public buildings.* The department shall publish a list of all faucets which have been manufactured, tested and certified by the manufacturer to permit not more than 1 gallon of water to flow through the faucet after release of the handle.

(d) *Faucets for lavatories or wash basins installed in private dwellings.* The department shall publish a list of all faucets which have been manufactured, tested and certified by the manufacturer to permit not more than 3 gallons of water per minute to flow through the faucet.

(e) *Flow control and flow restrictor devices.* 1. Flow control or restricting devices should be installed on the water inlet side of the faucet or have an integral flow control or restrictor.

2. Flow controlling aerators. Flow controlling or restricting aerators may be used in lieu of the recommended control or restricting device when approved by the department.

3. All items listed under H 62.15 (4) shall have a permanent means of identification as required by H 62.19.

4. All flow control and flow restrictive devices manufactured, tested and certified by the manufacturer shall limit the flow through the unit to the test and certification rate. They shall not be removable without special knowledge or effort.

(5) EXEMPTIONS. (a) *Availability.* When a water conserving device or fixture is required, the item(s) shall be available from 2 or more manufacturers. When a required water conserving device or fixture is not

available from 2 or more manufacturers, the requirement may be waived subject to departmental approval.

(b) *Waiver*. The department, upon request, may waive compliance with flushing requirements established by s. 145.25, Stats., and this section if the following conditions prevail:

1. Existing buildings. Any building in existence or under construction on or before January 1, 1979, if its drainage system design or installation requires a greater quantity of water to function properly.

2. Public sewer design. If any building is served by a public sewer which requires a greater quantity of water to maintain flow.

**History:** Cr. Register, April, 1980, No. 292, eff. 5-1-80.

**H 62.16 Health care and related facilities.** (1) **PLAN APPROVAL REQUIRED.** Plans for plumbing and equipment for health care facilities shall be approved by the department.

(2) **SCOPE.** The scope of this section shall cover devices, fixtures and equipment which are installed and maintained in health care facilities 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 of dentists and doctors.

(3) **INTENT.** The primary intent of the following minimum requirements is to protect public health by eliminating either potential health or safety hazards to patients and institutional personnel, and to promote the efficient use, operation and maintenance of the equipment used in the institution or establishment. Fixtures, devices and/or equipment in addition to those prescribed herein may be required dependent upon the type of occupancy, treatment, care or layout. Such additional facilities shall be installed in accord with the provisions of this chapter.

(4) **PLUMBING IN MENTAL HOSPITALS.** Special consideration shall be given to the design and installation of plumbing fixtures in areas where disturbed patients are housed. No pipes or traps shall be exposed and all fixtures shall be securely bolted through walls or floors.

(5) **SPECIAL FIXTURES AND EQUIPMENT ACCEPTABILITY.** (a) *Special fixtures.* Fixtures which are designed for any special use such as, therapy, special cleansing and/or disposal of waste materials shall be smooth, impervious, corrosion resistant materials and, if subject to temperatures in excess of 180° F., shall be able to withstand without damage, higher temperatures as may be specified. Scrub-up sinks, lavatories and sinks in patient care areas, and fixtures used by medical and nursing staff, shall have the water supply spout terminate a minimum of 5 inches above the rim of the fixture. These fixtures shall be equipped with valves or faucets which can be operated without use of the hands.

(b) *Special equipment.* All devices, appurtenances, appliances and apparatus intended to serve a special function such as sterilization, distillation, processing, cooling, storage of ice or foods, etc., which may be connected to either the water supply distribution or drainage systems or both, shall be provided with protection against back-siphonage, back-

flow, flooding, fouling, or any possibility of contaminating any portion of the water supply system, or equipment, or the misuse of any drain.

(c) *Therapeutic equipment.* Therapeutic equipment shall not be counted as a patient bathing fixture to meet the required patient bath ratio.

(6) **FIXTURE AND EQUIPMENT INSTALLATION.** (a) *Clinic sinks.* Such fixtures shall have an integral trap in which the upper portion of a visible trap seal provides a water surface. The fixture shall be designed so as to permit complete removal of the contents by siphonic and/or blow-out action, and to reseal the trap in a single flushing operation. A flushing rim shall provide water to cleanse the interior surface. The fixtures shall have flushing and cleansing characteristics similar to a water closet.

(b) *Prohibited use of clinic sinks and service sinks.* A clinic sink shall not be used as a janitor's service sink. A janitor's service sink shall not be used for the disposal of urine, fecal matter, or other human wastes.

(c) *Special requirement for ice manufacture and storage.* 1. No machines for manufacturing ice, or any device for handling or storing ice, shall be located in a room containing a bedpan hopper, clinic sink, bedpan washer, or similar fixture. Machines for manufacturing ice, or devices for handling or storing ice intended for either human consumption or packs, shall be located in a clean utility room, a floor pantry, a diet kitchen, or in other similar locations.

2. Each drain serving an ice chest or box shall discharge into an indirect waste receptor. Each drain shall discharge through an air-break above the receptor. The end of the drain shall be covered with a removable 10 mesh per inch noncorrosive screen.

(7) **STERILIZERS.** (a) *Descaling prohibited.* The interior of water sterilizers, stills, or similar equipment shall not be descaled or otherwise treated by acid or other chemical solutions while the equipment is connected to the water and/or drainage systems.

(b) *Compliance with boiler and unfired pressure vessel code.* Pressure sterilizers and pressure type instrument washer sterilizers installed after the effective date of this code shall be constructed and stamped in accordance with the provisions of Wis. Adm. Code s. Ind 41.50 (1) (e). All pressure sterilizers and pressure type instrument washer sterilizers regardless of size shall be equipped with pressure relief devices in accordance with the provisions of s. Ind 41.50 (1) (e).

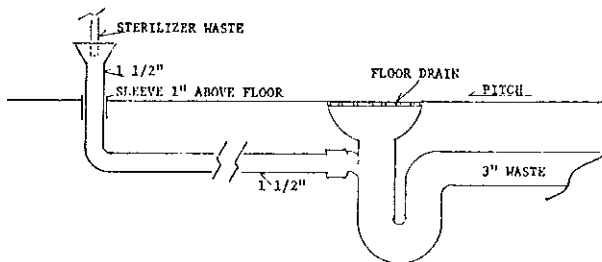
(c) *Sterilizer piping.* The connecting piping and/or devices for sterilizers shall be accessible for inspection and maintenance.

(d) *Bedpan washers and clinic sinks.* Bedpan washers and clinic sinks shall be connected to the sanitary drainage system and vented in accordance with the requirements for water closets. Vapor vents serving bedpan washers shall not connect to the plumbing system.

(8) **DRAINAGE AND VENTING.** (a) *Sterilizer wastes.* 1. Indirect wastes required. All sterilizers shall be provided with individual and separate indirect wastes, with air-gaps of not less than 2 diameters of the waste tailpiece. The upper rim of the receptor, funnel, or basket type waste fitting shall be not less than 2 inches below the vessel or piping, whichever is lower. Except as provided in sections H 62.15 [62.16] (8) (a) 3.

and 5., a "P" trap shall be installed on the discharge side of and immediately below the indirect waste connection serving each sterilizer.

2. Floor drain required. In any room containing the recessed, or concealed portions of sterilizers, not less than one acceptable floor drain, connecting to the drainage system, shall be installed in a manner to drain the entire floor area. The floor drain waste and trap shall be a minimum diameter of 3 inches. It shall receive the drainage from at least one sterilizer within the room to assure maintenance of the floor drain trap seal. The sterilizer drain may be installed on a branch taken off between the floor drain trap and the strainer. No individual sterilizer waste trap shall be required on this type of installation. See following sketch.



3. Battery assemblies. A battery assembly of not more than 3 sterilizer wastes may drain to one trap, provided the trap and waste are sized according to the combined fixture unit rating; the trap is located immediately below one of the indirect waste connections; the developed distance of a branch does not exceed 8 feet; and the branches change direction through a tee-wye or wye pattern fitting.

4. Bedpan steamers, additional trap required. A trap with a minimum seal of 3 inches shall be provided in a bedpan steamer drain located between the fixture and the indirect waste connection.

5. Pressure sterilizer. Except when an exhaust condenser is used, a pressure sterilizer chamber drain may be connected to the exhaust drip tube before terminating at the indirect waste connection. If a vapor trap is used, it shall be designed and installed to prevent moisture being aspirated into the sterilizer chamber. The jacket steam condensate return, if not connected to a gravity steam condensate return, shall be separately and indirectly wasted. If necessary to cool a high temperature discharge, a cooling receiver, trapped on its discharge side, may serve as the fixture trap.

6. Pressure sterilizer exhaust condensers. The drain from the condenser shall be installed with an indirect waste. If condensers are used on pressure sterilizers, the chamber drain shall have a separate indirect waste connection.

7. Water sterilizer. All water sterilizer drains, including tank, valve leakage, condenser, filter and cooling, shall be installed with indirect waste or according to section H 62.15 [62.16] (8) (a) 2.

8. Pressure instrument washer-sterilizer. The pressure instrument washer-sterilizer chamber drain and overflow may be interconnected. Also, they may be interconnected with the condenser.

(b) *Vapor vent material.* Material for vapor vents serving bedpan washers and sterilizer vents serving sterilizers shall be materials approved for vent piping.

(c) *Vent connections prohibited.* Connections between vapor vents serving bedpan washers, sterilizing apparatus, and/or normal sanitary plumbing systems, are prohibited.

(d) *Vapor vents and stacks.* 1. Bedpan washers shall be vented to the outer atmosphere above the roof by means of one or more vapor vents. The vapor vent for a bedpan washer shall be not less than a 2-inch diameter pipe. A vapor vent serving a single bedpan washer may drain to the fixture served.

2. Multiple installations. Where bedpan washers are located above each other on more than one floor, a vapor vent stack may be installed to receive the vapor vent on the various floors. Not more than 3 bedpan washers shall be connected to a 2-inch vapor vent stack, 6 to a 3-inch vapor vent stack, and 12 to a 4-inch vapor vent stack. In multiple installations, the connections between a bedpan washer vapor vent and a vapor vent stack shall be made by use of a tee or tee-wye sanitary pattern drainage fittings, installed in an upright position.

3. Trap required. The bottom of the vapor vent stack, except when serving only one bedpan washer, shall be drained by means of a trapped and vented waste connection to the plumbing sanitary drainage system. The trap and waste shall be the same size as the vapor vent stack.

4. Trap seal maintenance. A water supply of not less than ¼ inch minimum tubing shall be taken from the flush supply of each bedpan washer on the discharge or fixture side of the vacuum breaker, trapped to form not less than a 3-inch seal, and connected to the vapor vent stack on each floor. The water supply shall be so installed as to provide a supply of water to the vapor vent stack for cleansing and drain trap seal maintenance each time a bedpan washer is flushed.

(e) *Sterilizer vapor vent and stacks.* 1. Connections. Multiple installations of pressure and nonpressure sterilizers shall have their vent connections to the sterilizer vent stack made by means of inverted wye fittings. Such vent connections shall be accessible for inspection and maintenance.

2. Drainage. The connection between sterilizer vent and/or exhaust openings and the sterilizer vent stack shall be designed and installed to drain to the funnel or basket-type waste fitting. In multiple installations, the sterilizer vent stack shall be drained separately to the lowest sterilizer funnel or basket-type waste fitting or receptor.

(f) *Sterilizer vapor vent stack sizes.* 1. Bedpan steamers. The minimum size of a sterilizer vent serving a bedpan steamer shall be 1½ inches in diameter. Multiple installation shall be sized according to table 22.

Table 22

**VAPOR VENT STACK SIZES FOR BEDPAN STEAMERS  
AND BOILING TYPE STERILIZERS**  
(Number of connections of various sizes permitted  
to various sized sterilizer vent stacks)

Stack size	Connection size	
	1½"	2"
1½-inch¹	1 or	0
2-inch¹	2 or	1
2-inch²	1 and	1
3-inch¹	4 or	2
3-inch²	2 and	2
4-inch¹	8 or	4
4-inch²	4 and	4

¹Total of each size.

²Combination of sizes.

2. Boiling type sterilizers. The minimum size of a sterilizer vent stack shall be 2 inches in diameter when serving a utensil sterilizer, and 1½ inches in diameter when serving an instrument sterilizer. Combinations of boiling type sterilizer vent connections shall be based on table 22.

3. Pressure sterilizers. Sterilizer vent stacks shall be 2½ inches minimum; those serving combinations of pressure sterilizer exhaust connections shall be sized according to table 23.

Table 23

**VAPOR VENT STACK SIZES FOR PRESSURE STERILIZERS**  
(Number of connections of various sizes permitted to various sized vent stacks)

Stack size	Connection size			
	¾"	1"	1¼"	1½"
1½-inch¹	3 or	2 or	1	
1½-inch²	2 and	1		
2-inch¹	6 or	3 or	2 or	1
2-inch²	3 and	2		
2-inch³	2 and	1 and	1	
2-inch⁴	1 and	1 and		1
3-inch¹	15 or	7 or	5 or	3
3-inch²		1 and	2 and	2
3-inch³	1 and	5 and		1

¹Combination of sizes.

²Total of each size.

4. Pressure instrument washer-sterilizer sizes. The minimum size of a sterilizer vent stack serving an instrument washer-sterilizer shall be 2 inches in diameter. Not more than 2 sterilizers shall be installed on a 2-inch stack, and not more than 4 on a 3-inch stack.

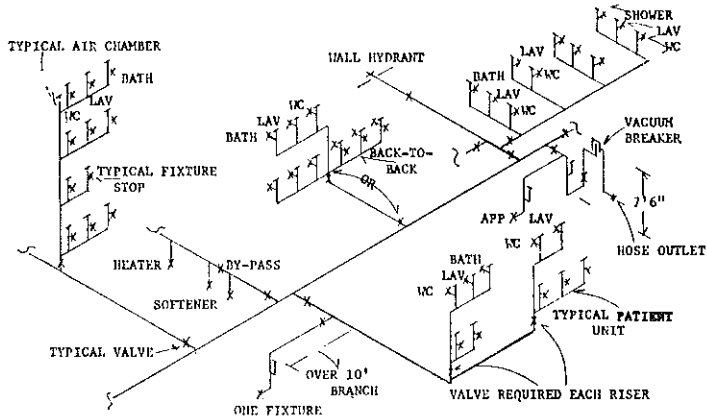
(9) FLOOR DRAINS PROHIBITED. Floor drains shall not be installed in operating or delivery rooms.

(10) WATER SUPPLY. (a) *Water services.* All hospitals shall be provided with at least 2 water service connections and whenever more than one street main is available, the connections shall be made to different street mains.

1. The water service pipe for all other health care facilities shall be of sufficient size to furnish water to the building in the quantities and at the pressures required in Wis. Adm. Code sections H 62.13 (4) (d) and (h) 3. [(4) and (5)] and H 62.15 [62.16] (10) (c).

2. Water services shall be in accord with the requirements of Wis. Adm. Code section H 62.13 (2).

(b) *Water distribution control valves.* 1. Four or less patient care units, containing not more than 2 persons per unit exclusive of intensive care coronary units, may be served with one branch control valve. All fixtures, appliances, appurtenances, lawn sprinkler faucets and wall hydrants shall be valved. See following sketch.



2. Control valves for risers, water heating equipment, water softeners and tank controls shall be in accord with Wis. Adm. Code section H 62.13 (4) (c), (d), (e) and (h) [(4) (j) 2. b. c. d. and g.]. Control valve accessibility and design shall be in accord with section H 62.13 (4) (f) and (g) [(4) (j) 2. e. and f.], Wis. Adm. Code. See above sketch.

(c) *Velocities and flow capacities.* Water supply piping shall be designed to provide service to upper floor installations at a minimum pressure of 15 (p.s.i.) pounds per square inch during maximum demand periods. Velocities shall not exceed 8 (f.p.s.) feet per second. Where static pressure exceeds 80 (p.s.i.) pounds per square inch, pressure reducing controls shall be installed to avoid fracture or other damage to the system. The supply demand in gallons per minute in the building water distribution system shall be determined on the basis of the load in terms of supply fixture units and of the relationship between load and supply demand as shown in table 24 and pertinent portions of tables 13 and 14.

Table 24  
**DATA FOR ESTIMATING WATER SUPPLY DEMAND AND WASTE REQUIREMENTS**

Fixture	Fixture Units				Minimum Pipe Sizes, Inches				Remarks	
	Water		Waste		Trap	Vent	Cold Water			Hot Water
	Water	Waste	Water	Waste			Water	Water		
Water closet (tank) .....	6		3		2	2		3/4	1/2	H.W. required with bedpan washer hose only
Water closet (flush valve) .....	10		3		2	2		1	1/2	
Lavatory .....	2	1	1 1/2		1 1/4	1 1/4		1/2	1/2	
Urinal (tank) .....	3	4	2		2	1 1/2		1/2		
Urinal (flush valve) .....	5	4					1			
Shower .....	4	2	3 FD		3			1/2	1/2	
Patient bath (public) .....	4	3	1 1/2		1 1/2			1/2	1/2	
Patient bath (pvt.) .....	2	3	1 1/2		1 1/2			1/2	1/2	
Drinking fountain .....	1	1/2	1 1/4		1 1/4			1/2	1/2	
Sitz bath .....	4	3	1 1/2		1 1/2			1/2	1/2	
Clinical sink .....	10 CW	6	3		3	2		1	3/4	
(Flushing rim) .....	4 HW									
Scrub sink .....	4	3	2		2	1 1/2		3/4	3/4	2, 3 or 4 place sink
Single sink for misc. hospital use .....	3	3	1 1/2		1 1/2	1 1/2		1/2	1/2	
Double sink for misc. hospital use .....	4	4	2		2	1 1/2		3/4	3/4	
Laboratory sink .....	2	2	1 1/2		1 1/2			1/2	1/2	
Ice machine .....	1	1	2 SD		2	1 1/2		3/4		
Plaster sink .....	6	4	2		2	1 1/2		3/4	3/4	Use with plaster trap Based on 18 x 30 x 22-inch tank
X-ray tank .....	4	2	1 1/2		1 1/2			1/2	1/2	
Bedpan sanitizer .....	10	6	3		2	2		1	1	1/2-inch STM connection
Autopsy table .....	4	4	1 1/2		1 1/2			1/2	1/2	
Animal area sinks .....	4	4	2		2	1 1/2		3/4	3/4	
Cup sink .....	1	1	1 1/4		1 1/4			1/4	1/4	



(d) *Piping insulation.* Circulating, hot, cold and chilled water piping shall be insulated. Cold and chilled water pipe insulation shall have an integral or separate vapor barrier.

(e) *Special piping systems.* Distilled water, ionized water, laboratory and other special piping systems shall be included in the plans submitted. The plans shall incorporate sufficient detail to clearly establish the installation proposed.

(f) *Water supply protection.* The installation of the water supply shall meet all the applicable requirements prescribed in Wis. Adm. Code sections H 62.13 and H 62.14, and as provided in table 25 including the corresponding reference number.

Table 25

Equipment	Protective Device	Location	Reference No.
Bath with shampoo nozzle	Vacuum breaker	6'0" above bottom of tub	1
Bedpan sanitizer	Vacuum breaker	Part of flush valve	1
Bedpan washer hose	Vacuum breaker	5'9" above floor	1
Hose and faucet at service sink	Vacuum breaker	6' above normal use of hose	1
Sterilizer condenser	Vacuum breaker	6' above unit	1
Flash washer	Vacuum breaker	6' above unit	1
Glove washer	Vacuum breaker	6' above unit	1
Stills	Air-gap	On discharge	5
Ultrasonic cleaner	Vacuum breaker	6" above unit	1
Developing tank	Vacuum breaker	6" above unit	1
Dental unit	Vacuum breaker	Part of unit	1
Hydrotherapy bath	Vacuum breaker	6" above unit	1
Radiology cooling coil (water bath)	Air-gap	On discharge	5
Pipette washer	Vacuum breaker	6" above unit	1
Laboratory spout	Vacuum breaker	At threaded discharge	2
Cage washer	Vacuum breaker	6" above unit	1
Tube washer	Vacuum breaker	Part of control valve	1
Bottle washer	Vacuum breaker	6" above unit	1
Food waste grinder	Vacuum breaker	6" above unit	1
Peeler	Air-gap	On supply	4
Dishwasher	Vacuum breaker	6" above unit	1
Can washer	Vacuum breaker	6" above unit	1
Ice machine	Air-gap	On discharge	5
Pot washer	Vacuum breaker	6" above unit	1
Coffee urn	Vacuum breaker	6" above unit	1
Glass washer	Vacuum breaker	6" above unit	1
Refrigeration condenser	Air-gap	On discharge	5
Clothes washer	Vacuum breaker	6" above unit	1
Soap and brine tanks	Vacuum breaker	6" above unit	1
Autopsy table	Vacuum breaker	6'0" above floor	1
Aspirator	Vacuum breaker	6'0" above floor	1
Hose station	Vacuum breaker	At threaded discharge	2
Flush rim floor drain	Vacuum breaker	5'9" above floor	1
Incinerator gas washer	Air-gap	On water supply	5
Lawn sprinklers	Vacuum breaker	Outdoor type	1
Wall hydrant	Vacuum breaker	At threaded discharge	2
Hose bibb	Vacuum breaker	At threaded discharge	2
Package air-conditioner	Air-gap	On discharge	5
Cooling tower	Backflow preventer	On water supply	3
Boiler make-up water	Backflow preventer	On water supply	3
Vacuum pumps and air washing	Air-gap	On water supply	4
Spray coil for air washing	Vacuum breaker	6" above unit	1
Expansion tank	Backflow preventer	On water supply	3

1. The designation "vacuum breaker" means a non-pressure, atmospheric type device. The installation elevation means the distance above the spill level of the fixture or equipment served, or the height to which a connected discharge may be raised to cause gravity back-flow to reach the device. The designated installation shall be measured from the bottom of the device, or the critical level marking if indicated on the device. The installation and elevation shall permit the vacuum breaker to drain and actuate each time the control valve is operated. No shut-off valve shall be permitted downstream from the vacuum breaker. The vacuum breaker shall not be installed in a manner so as to be under continuous pressure.

2. The location "at the threaded discharge" means the location where an aerator would normally be installed. The vacuum breaker is the in-line type and for the laboratory faucet the serrated nozzle is then screwed into the discharge end of the vacuum breaker. When this vacuum breaker is used with a hose bibb, it is threaded onto the male end and the hose is connected to the vacuum breaker.

3. The designation "backflow preventer" means the reduced pressure type backflow preventer which includes two spring loaded check valves, a broken connection to a drain and usually two gate valves. The use of this device requires that adequate and rapid drainage be available.

4. An air-gap on the water supply means that the air-gap shall be located at the supply opening to the fixture or equipment it serves. An air-gap is the minimum vertical distance between the supply discharge orifice and the spill level of the receptor, fixture or equipment served. This minimum vertical distance shall be at least 2 diameters of the discharge orifice, or a minimum of one inch, whichever is the greatest.

5. An air-gap on the waste line means an indirect connection between the fixture or equipment and the waste receptor. The waste discharge orifice governs the minimum distance according to section H 62.15 [62.16] (10) (f) 4.

(g) *Hot water supply control.* Hot water supply to patients' showers, therapeutic equipment, and continuous baths shall be provided with control valves automatically regulating the temperature of the water supply to the fixture. The valve shall fail in a closed position when the tempered water supply to the fixture exceeds 110° F.

(h) *Hot water supply.* The water supply distribution system shall be designed to provide hot water at each applicable fixture at all times. The system shall be of a circulating type. The circulating pumps shall be arranged for continuous operation or shall be controlled by an aquastat in the circulating piping. See Wis. Adm. Code section H 62.13 (4) (i) 3 [62.13 (4) (f)].

(i) *Water heaters and tanks.* Storage tanks when provided shall be fabricated of non-corrosive metal or be lined with non-corrosive material. The water heating equipment shall have a sufficient capacity to supply water at the temperature and amounts in table 26.

Table 26

	Patient Areas	Clinical	Dietary	Laundry (2 gals. per lb. of laundry)
Gal/hr/bed .....	6½	6½	4	4½
Temp. °F. (Maximum) .....	110°	125°	180°	180°

(11) **ASPIRATORS.** The use of water aspirators shall be limited to those units approved by the department.

(12) **SPOUTS AND ACTIONS—HOSPITAL AND NURSING HOME FIXTURES.** (a) The selection of spouts and actions for hospital and nursing home plumbing fixtures shall comply with section H 62.15 [62.16] (12) (b) and table 27.

(b) Lavatories and sinks required in patient care areas shall have the water supply spout mounted so that its discharge point is a minimum distance of 5 inches above the rim of the fixture. All fixtures used by medical and nursing staff, and all lavatories used by patients and food handlers shall be trimmed with valves which can be operated without the use of hands. Where blade handles are used for this purpose they shall not exceed 4½ inches in length, except that handles on scrub sinks and clinical sinks shall be not less than 6 inches long.

Table 27

**SPOUTS AND ACTIONS FOR HOSPITAL AND NURSING  
HOME FIXTURES**

Location	Type of Spout	Type of Action Minimum
<b>NURSING DEPARTMENT</b>		
Patient toilet room .....	Gooseneck	Wrist
Patient toilet room— isolation .....	Gooseneck	Knee
Utility room .....	Gooseneck	Wrist
Treatment room .....	Gooseneck	Wrist
Medicine room .....	Gooseneck	Wrist
Lavatory in floor kitchen .....	Gooseneck	Wrist
Sink in floor kitchen .....	Sink faucet	Wrist
Nurses toilet room .....	Lavatory supply	Hand
Floor laboratory .....	Laboratory gooseneck	Vertical hand
<b>NURSERY</b>		
Nursery .....	Gooseneck	Wrist
Suspect nursery .....	Gooseneck	Wrist
Examination and treatment .....	Gooseneck	Wrist
Premature nursery .....	Gooseneck	Foot
Formula room .....	Gooseneck	Wrist
Labor room .....	Gooseneck	Wrist
<b>SURGICAL</b>		
Scrub room .....	Gooseneck with spray head	Knee
Sub-sterile room .....	Sink faucet	Wrist
Clean-up room .....	Sink faucet	Wrist
Frozen sections room .....	Laboratory gooseneck	Vertical hand
Surgical supply room .....	Gooseneck	Wrist
Work room .....	Sink faucet	Wrist
Cystoscopic room .....	Gooseneck with spray head	Knee
Fracture room .....	Sink faucet	Wrist
Recovery room .....	Gooseneck	Foot

Location	Type of Spout	Type of Action Minimum
<b>CENTRAL SUPPLY</b>		
Work room .....	Sink faucet	Wrist
Solutions room .....	Sink faucet	Wrist
Needle and syringe room .....	Sink faucet	Wrist
Glove room .....	Gooseneck	Wrist
Pharmacy .....	Laboratory gooseneck	Vertical hand
Manufacturing .....	Gooseneck	Wrist
<b>EMERGENCY DEPARTMENT</b>		
Observation bedroom .....	Gooseneck	Wrist
Utility room .....	Gooseneck	Wrist
Operating room .....	Gooseneck with spray head	Knee
D.O.A. room .....	Gooseneck	Wrist
Examination room .....	Gooseneck	Wrist
<b>DIAGNOSTIC AND TREATMENT</b>		
Occupational therapy .....	Gooseneck	Wrist
Hydro-therapy room .....	Gooseneck	Wrist
Examination room .....	Gooseneck	Wrist
Deep therapy .....	Gooseneck	Wrist
Superficial therapy .....	Gooseneck	Wrist
Radium treatment and exam .....	Gooseneck	Wrist
Toilet room .....	Gooseneck	Wrist
Dark room .....	Sink faucet	Hand
Autopsy .....	Gooseneck with spray head	Knee
Lavatory in autopsy shower room .....	Gooseneck	Wrist
Laboratories .....	Laboratory gooseneck	Vertical hand
<b>OUTPATIENT DEPARTMENT</b>		
Examination and treatment room .....	Gooseneck	Wrist
Dental operating .....	Gooseneck	Knee
Dental laboratory .....	Laboratory gooseneck	Vertical hand
Dental recovery .....	Gooseneck	Wrist
Surgical room .....	Gooseneck with spray head	Knee
Eye examination room .....	Gooseneck	Knee
Ear, nose and throat room .....	Gooseneck	Knee
<b>SERVICE DEPARTMENT</b>		
Lavatory in kitchen .....	Lavatory supply	Wrist

(13) RADIOACTIVE MATERIALS. See Wis. Adm. Code chapter H 57.

**History:** 1-2-56; am. (3) (4) and (5), Register, August, 1961, No. 68, eff. 9-1-61; r. and recr. Register, November, 1972, No. 203, eff. 12-1-72; r. and recr., Register, February, 1979, No. 278, eff. 3-1-79.

**H 62.17 Mobile home parks.** (1) **PLAN APPROVAL.** (a) *Plans and specifications.* Complete plans and specifications shall be submitted to the department and written approval received before letting contracts or commencing work for all mobile home park sewerage, mobile home park water main and water services and for the addition to or replacement of existing systems.

(b) *Local approval.* The approval by county or other local governmental agency shall not exempt the requirements for state approval for the installation of sewerage and water systems serving mobile home parks.

(c) *Submission of plans and specifications.* All plans and specifications shall be submitted in triplicate and shall include the following:

1. Detailed plan of the proposed sewerage and water system showing mobile home site and service building location with all building sewers and water services indicated.

2. Legal description of the property on which the park is to be constructed.

3. Availability of plans. There shall be maintained at the project site one set of plans bearing the department's stamp of approval.

4. Plans and specifications submitted for private sewage disposal systems shall meet the criteria set forth in Wis. Adm. Code section H 62.20.

(2) **MOBILE HOME PARK SEWERAGE SYSTEM.** (a) *General.* The park main sewerage system shall be constructed of materials approved by the department, and installed to limit infiltration of surface or subsoil waters. The infiltration of surface or subsurface waters shall not exceed 200 gallons per inch of diameter per mile per day. See Wis. Adm. Code section H 62.23 (2) (h).

(b) *Design and construction.* 1. Main sewer size and gradient. The main sewers shall be sized and graded in accordance with table 30. Main sewers 8 inches or larger shall be designed and constructed to give mean velocity, when flowing full, of not less than 2.0 feet per second, based on Kutter's formula using an "n" value of 0.013. Use of other practical "n" values may be permitted by the department, if deemed justifiable on the basis of research or field data presented.

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