

ADDITIONS AND AMENDMENTS

TO THE

2004 ILLINOIS STATE PLUMBING CODE

ADDITIONS AND AMENDMENTS TO THE

2004 ILLINOIS STATE PLUMBING CODE

The word “Add” preceding a provision of this section means that such provision is thereby added to and made part of the Illinois State Plumbing Code.

The word “Delete” preceding a provision of this section, means that such provision deletes the reference section from the Illinois state Plumbing Code.

The word “Amend” preceding a provision of this section means that such provision amends the reference section of the Illinois State Plumbing code to read as provided and that such provision is added to and made a part of such code as though fully set forth at the referenced number.

ADD: SECTION 890.110 GENERAL REGULATIONS

c) Administration

For purposes of administering and enforcing this code, the following terms, which terms consist of words or expressions that have a precise meaning in plumbing, shall have the meaning indicated.

d) Words, Terms, or Expressions

Words or terms or expressions found throughout this code that are not clearly understood shall be clarified by the Building Official.

e) Building Official Defined

When used in this code, Building Official means the Fire Chief or Fire Chief's designee. “Department” and “Administrative Authority” means the Building Safety Division of the Fire Department.

ADD: f) Permits

1) When required. Any owner, authorized agent or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the Building Official and obtain the required permit for the work.

2) **Exempt work.** The following work shall be exempt from the requirement for a permit.

A) The stopping of leaks in drains, water, soil, waste or vent pipe; provided however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

B) The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

3) **Application for permit.** Application for a plumbing permit shall be made on forms provided by the Building Safety Division. The application shall be accompanied by the appropriate fees calculated from the plumbing permit fee schedule found in the currently adopted International Building Code.

4) **Construction documents.** Construction documents, engineering calculations, diagrams and other such data shall be submitted with each application for a permit. The Building Official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional when required by state law. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for pipe, fittings and components and shall indicate the materials and methods for maintaining required structural safety, fire-resistance rating and fire blocking.

Exception: The Building Official shall have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for is such that reviewing of construction documents is not necessary to determine compliance with this code.

5) **Permit issuance.** The application, construction documents and other data filed by an applicant for permit shall be reviewed by the Building Official. If the Building Official finds that the proposed work conforms to the requirements of this code and all laws and ordinances applicable thereto, a permit shall be issued to the applicant.

- 6) **Approved construction documents.** When the Building Official issues the permit where construction documents are required, such approved construction documents shall not be changed, modified or altered without authorization from the Building Official. All work shall be done in accordance with the approved construction documents.

The Building Official shall have the authority to issue a permit for the construction of a part of a plumbing system before the entire construction documents for the whole system have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of such permit shall proceed at their own risk without assurance that the permit for the entire plumbing system will be granted.

- 7) **Validity.** The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinances of the jurisdiction. No permit presuming to give authority to violate or cancel the provisions of this code shall be valid.

The issuance of a permit based upon construction documents and other data shall not prevent the Building Official from thereafter requiring the correction of errors in said construction documents and other data or from preventing building operations being carried on thereunder when in violation of this code or other ordinances of this jurisdiction.

- 8) **Expiration.** Every permit issued by the Building Official under the provisions of this code shall expire by limitation and become null and void if the work authorization by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days.

- 9) **Permit renewal.** A permit which has expired for three months or less may be renewed provided no changes have been made in the original plans and specifications for such work. The renewal fee shall be one half the amount required for a new permit. Permits which have been expired for greater than three months require a new application and payment of the full permit fee.

- 10) **Extensions.** Anyone holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The Building Official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause.

- 11) **Suspension or revocation of permit.** The Building Official shall revoke a permit or approval issued under the provisions of this code in case of any false statement or misrepresentation of fact in the application or on the construction documents upon which the permit or approval was based.
- 12) **Retention of construction documents.** One set of approved construction documents shall be retained by the Building Official.
- 13) **Fees.** A permit shall not be issued until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, due to an increase of the plumbing systems, has been paid.
- 14) **Work commencing before permit issuance.** Any person who commences any work on a plumbing system before obtaining the necessary permits shall be subject to 100 percent of the usual permit fee in addition to the required permit fees.

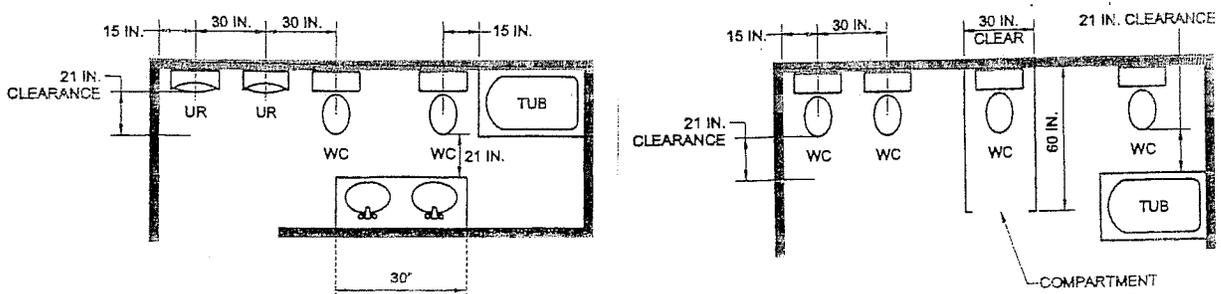
SECTION 890.630 INSTALLATION

AMEND: h) Water closets, urinals, lavatories and bidets. A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction, or closer than 30 inches (762 mm) center-to-center between water closets, urinals or adjacent fixtures. There shall be at least a 21 inch (533 mm) clearance in front of the water closet, urinal or bidet to any wall, fixture or door. Water closet compartments shall not be less than 30 inches (762 mm) wide or 60 inches (1524 mm) deep. There shall be at least a 21-inch (533 mm) clearance in front of a lavatory to any wall, fixture or door (See Illustration G).

Each water closet used by the public or employees shall occupy a separate compartment with a door and walls or partitions between fixtures to assure privacy.

Exception: Water closet compartments shall not be required in a single-occupant toilet room with a lockable door.

ILLUSTRATION G



SECTION 890.680 LAVATORIES

AMEND: e) Maximum Temperature

The maximum temperature for all public lavatories, including hotels/motels shall be 110°F.

SECTION 890.1220 HOT WATER SUPPLY AND DISTRIBUTION

ADD: d) Location

Water heaters shall be installed and connected so as to provide access for observation, maintenance, servicing and replacement and shall be installed in accordance with the manufacturer's instructions. Gas and oil fired water heaters shall conform to the requirements of this code and the mechanical code or gas code. Electric water heaters shall conform to the requirements of this code and the provisions of the currently adopted edition of the National Electrical Code.

AMEND: SECTION 890.1380 STORM WATER DRAINAGE WITHIN A BUILDING

ADD: a) 1) Scope

The provisions of this chapter shall govern the materials, design, construction and installation of storm drainage.

2) Continuous flow

The size of a drainage pipe shall not be reduced in the direction of flow.

b) Definitions General

The following words and terms shall, for the purposes of this chapter and as stated elsewhere in this code, have the meanings shown herein. Refer to Section 890.120 for general definitions.

Area Drain. A receptacle designed to collect surface or storm water from an open area.

Conductor. A pipe inside the building which conveys storm water from the roof to a storm or combined building drain.

Leader. An exterior drainage pipe for conveying storm water from roof or gutter drains to an approved means of disposal.

Roof Drain. A drain installed to receive water collecting on the surface of a roof and to discharge such water into a leader or a conductor.

Sewer:

Sanitary sewer. A sewer that carries sewage and excludes storm, surface and ground water.

Storm sewer. A sewer that conveys rainwater, surface water, condensate, cooling water or similar liquid wastes.

ADD: Storm drain. Piping located within a building or within 5' outside the building foundation wall used for conveying rainwater, surface water, condensate, cooling water or similar liquid wastes.

Sump Pump. An automatic water pump for the removal of drainage, except raw sewage, from a sump, pit or low point.

c) Materials

1) General. The materials and methods utilized for the construction and installation of storm drainage systems shall comply with this section.

2) Inside storm drainage conductors. Inside storm drainage conductors installed above ground shall conform to one of the standards listed in Appendix A, Table A.

3) Underground building storm drain pipe. Underground building storm drainpipe shall conform to one of the standards listed in Appendix A, Table A.

4) Fittings. Pipe fittings shall be approved for installation with the piping material installed and shall conform to the respective pipe standards or one of the standards listed in Appendix A, Table A. The fittings shall not have ledges, shoulders or reductions capable of retarding or obstructing the flow in the piping. Threaded drainage pipe fittings shall be of the recessed drainage type.

5) Roof drains. Roof drains shall conform to ASME A112.21.2. or ASME A112.3.1.

d) Conductors and Connections

1) Prohibited use. Conductor pipes shall not be used as soil, waste or vent pipes, and soil, waste or vent pipes shall not be used as conductors.

2) Protection of leaders. Leaders installed along alleyways, driveways or other locations exposed to damage shall be recessed into the wall or otherwise protected in an approved manner.

e) Roof Drains

- 1) **Strainers.** Roof drains shall have strainers extending not less than 4 inches (102 mm) above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, or not less than one and one-half times the area of the conductor or leader to which the drain is connected.
- 2) **Flat decks.** Roof drain strainers for use on sun decks, parking decks, and similar areas that are normally serviced and maintained shall comply with 890.1380 Paragraph f.1.) or shall be of the flat-surface type, installed level with the deck, with an available inlet area not less than two times the area of the conductor or leader to which the drain is connected.
- 3) **Roof drain flashings.** The connection between roofs and roof drains which pass through the roof and into the interior of the building shall be made water tight by the use of approved flashing material.

f) Size of Conductors, Leaders, and Storm Drains

- 1) **General.** The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on the 100-year hourly rainfall rate indicated in Figure 890.1390.1 or on other rainfall rates determined from approved local weather data.
- 2) **Vertical conductors and leaders.** Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Table 890.1380.2.
- 3) **Building storm drains and sewers.** The size of the building storm drain, building storm sewer and their horizontal branches having a slope of one-half unit or less vertical in 12 units horizontal (4-percent slope) shall be based on the maximum projected roof area in accordance with Table 890.1380.3. The minimum slope of horizontal branches shall be one-eighth unit vertical in 12 units horizontal (1-percent slope) unless otherwise approved.
- 4) **Vertical walls.** In sizing roof drains and storm draining piping, one-half of the area of any vertical wall which diverts rainwater to the roof shall be added to the projected roof area for inclusion in calculating the required size of vertical conductors, leaders and horizontal storm draining piping.
- 5) **Parapet wall scupper location.** Parapet wall roof drainage scupper and overflow scupper location shall comply with the requirement of the building code.
- 6) **Size of roof gutters.** The size of semicircular gutters shall be based on the maximum projected roof area in accordance with Table 890.1380.4.

TABLE 890.1380.2
SIZE OF VERTICAL STORM DRAINAGE LEADERS

SIZE OF VERTICAL CONDUCTORS AND LEADERS

DIAMETER OF LEADER (inches) ^a	HORIZONTALLY PROJECTED ROOF AREA (square feet)											
	Rainfall rate (inches per hour)											
	1	2	3	4	5	6	7	8	9	10	11	12
2	2,880	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400	9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675	1,530
5	34,600	17,300	11,530	8,650	6,920	5,765	4,945	4,325	3,845	3,460	3,145	2,880
6	54,000	27,000	17,995	13,500	10,800	9,000	7,715	6,750	6,000	5,400	4,910	4,500
8	116,000	58,000	38,660	29,000	23,200	19,315	16,570	14,500	12,890	11,600	10,545	9,660

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m².

a. Sizes indicated are the diameter of circular piping. This table is applicable to piping of other shapes provided the cross-sectional shape fully encloses a circle of the diameter indicated in this table.

TABLE 890.1380.3
SIZE OF HORIZONTAL STORM DRAINAGE PIPING

SIZE OF HORIZONTAL STORM DRAINAGE PIPING

SIZE OF HORIZONTAL PIPING (inches)	HORIZONTALLY PROJECTED ROOF AREA (square feet)					
	Rainfall rate (inches per hour)					
	1	2	3	4	5	6
¹ / ₈ unit vertical in 12 units horizontal (1-percent slope)						
3	3,288	1,644	1,096	822	657	548
4	7,520	3,760	2,506	1,800	1,504	1,253
5	13,360	6,680	4,453	3,340	2,672	2,227
6	21,400	10,700	7,133	5,350	4,280	3,566
8	46,000	23,000	15,330	11,500	9,200	7,600
10	82,800	41,400	27,600	20,700	16,580	13,800
12	133,200	66,600	44,400	33,300	26,650	22,200
15	218,000	109,000	72,800	59,500	47,600	39,650
¹ / ₄ unit vertical in 12 units horizontal (2-percent slope)						
3	4,640	2,320	1,546	1,160	928	773
4	10,600	5,300	3,533	2,650	2,120	1,766
5	18,880	9,440	6,293	4,720	3,776	3,146
6	30,200	15,100	10,066	7,550	6,040	5,033
8	65,200	32,600	21,733	16,300	13,040	10,866
10	116,800	58,400	38,950	29,200	23,350	19,450
12	188,000	94,000	62,600	47,000	37,600	31,350
15	336,000	168,000	112,000	84,000	67,250	56,000
¹ / ₂ unit vertical in 12 units horizontal (4-percent slope)						
3	6,576	3,288	2,295	1,644	1,310	1,096
4	15,040	7,520	5,010	3,760	3,010	2,500
5	26,720	13,360	8,900	6,680	5,320	4,450
6	42,800	21,400	13,700	10,700	8,580	7,140
8	92,000	46,000	30,650	23,000	18,400	15,320
10	171,600	85,800	55,200	41,400	33,150	27,600
12	266,400	133,200	88,800	66,600	53,200	44,400
15	476,000	238,000	158,800	119,000	95,300	79,250

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m².

**TABLE 890.1380.4
SIZE OF SEMICIRCULAR ROOF GUTTERS**

DIAMETER OF GUTTERS (inches)	HORIZONTALLY PROJECTED ROOF AREA (square feet)					
	RAINFALL RATE (inches per hour)					
	1	2	3	4	5	6
¹ / ₁₆ unit vertical in 12 units horizontal (0.5-percent slope)						
3	680	340	226	170	136	113
4	1,440	720	480	360	288	240
5	2,500	1,250	834	625	500	416
6	3,840	1,920	1,280	960	768	640
7	5,520	2,760	1,840	1,380	1,100	918
8	7,960	3,980	2,655	1,990	1,590	1,325
10	14,400	7,200	4,800	3,600	2,880	2,400
¹ / ₈ unit vertical in 12 units horizontal (1-percent slope)						
3	960	480	320	240	192	160
4	2,040	1,020	681	510	408	340
5	3,520	1,760	1,172	880	704	587
6	5,440	2,720	1,815	1,360	1,085	905
7	7,800	3,900	2,600	1,950	1,560	1,300
8	11,200	5,600	3,740	2,800	2,240	1,870
10	20,400	10,200	6,800	5,100	4,080	3,400
¹ / ₄ unit vertical in 12 units horizontal (2-percent slope)						
3	1,360	680	454	340	272	226
4	2,880	1,440	960	720	576	480
5	5,000	2,500	1,668	1,250	1,000	834
6	7,680	3,840	2,560	1,920	1,536	1,280
7	11,040	5,520	3,860	2,760	2,205	1,840
8	15,920	7,960	5,310	3,980	3,180	2,655
10	28,800	14,400	9,600	7,200	5,750	4,800
¹ / ₂ unit vertical in 12 units horizontal (4-percent slope)						
3	1,920	960	640	480	384	320
4	4,080	2,040	1,360	1,020	816	680
5	7,080	3,540	2,360	1,770	1,415	1,180
6	11,080	5,540	3,695	2,770	2,220	1,850
7	15,600	7,800	5,200	3,900	3,120	2,600
8	22,400	11,200	7,460	5,600	4,480	3,730
10	40,000	20,000	13,330	10,000	8,000	6,660

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m².

g) Secondary (Emergency) Roof Drains

1) Secondary drainage required. Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.

2) Separate systems required. Secondary roof drain systems shall have a point of discharge separate from the primary system. Discharge shall be

above grade in a location which would normally be observed by the building occupant or maintenance personnel.

3) Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with 890.1380 g.) based on the rainfall rate for which the primary system is sized but with the sizing adjusted by dividing the values for horizontally projected roof area in Tables 890.1380.2, 890.1380.3, and 890.1380.4 by two. The minimum cross-sectional area of an overflow scupper shall be three times the cross-sectional area of the primary roof drain and the scupper shall have a minimum opening dimension of 4 inches (102mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

h) Values for Continuous Flow

Equivalent roof area. Where there is a continuous or semicontinuous discharge in the building storm drain or building storm sewer, such as from a pump, ejector, air conditioning plant or similar device, each gallon per minute (L/m) of such discharge shall be computed as being equivalent to 96 square feet (9m²) of roof area, based on a rainfall rate of 1 inch (25 mm) per hour.

i) Controlled flow roof drain systems

1) General. The roof of a structure shall be designed for the storage of water where the storm drainage system is engineered for controlled flow. The controlled flow drain system shall be an engineered system in accordance with this section and the design, submittal, approval, inspection and testing requirements of Section 890.1380 j.) The controlled flow system shall be designed based on the required rainfall rate in accordance with Figure 890.1390.1.

2) Control devices. The control devices shall be installed so that the rate of discharge of water per minute shall not exceed the values for continuous flow as indicated in Section 890.1300 i).

3) Installation. Runoff control shall be by control devices. Control devices shall be protected by strainers.

4) Minimum number of roof drains. Not less than two roof drains shall be installed in roof areas 10,000 square feet (930 m²) or less and not less than four roof drains shall be installed in roofs over 10,000 square feet (930 m²) in the area.

ADD: 890.1380 k. ALTERNATIVE ENGINEERED DESIGN.

The design, documentation, inspection, testing and approval of an alternative engineered design plumbing system shall comply with Sections 890.1380, k.1) through k.6).

1) Design criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's installation instructions.

2) Submittal. The registered design professional shall indicate on the permit application that the plumbing system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the approved installation.

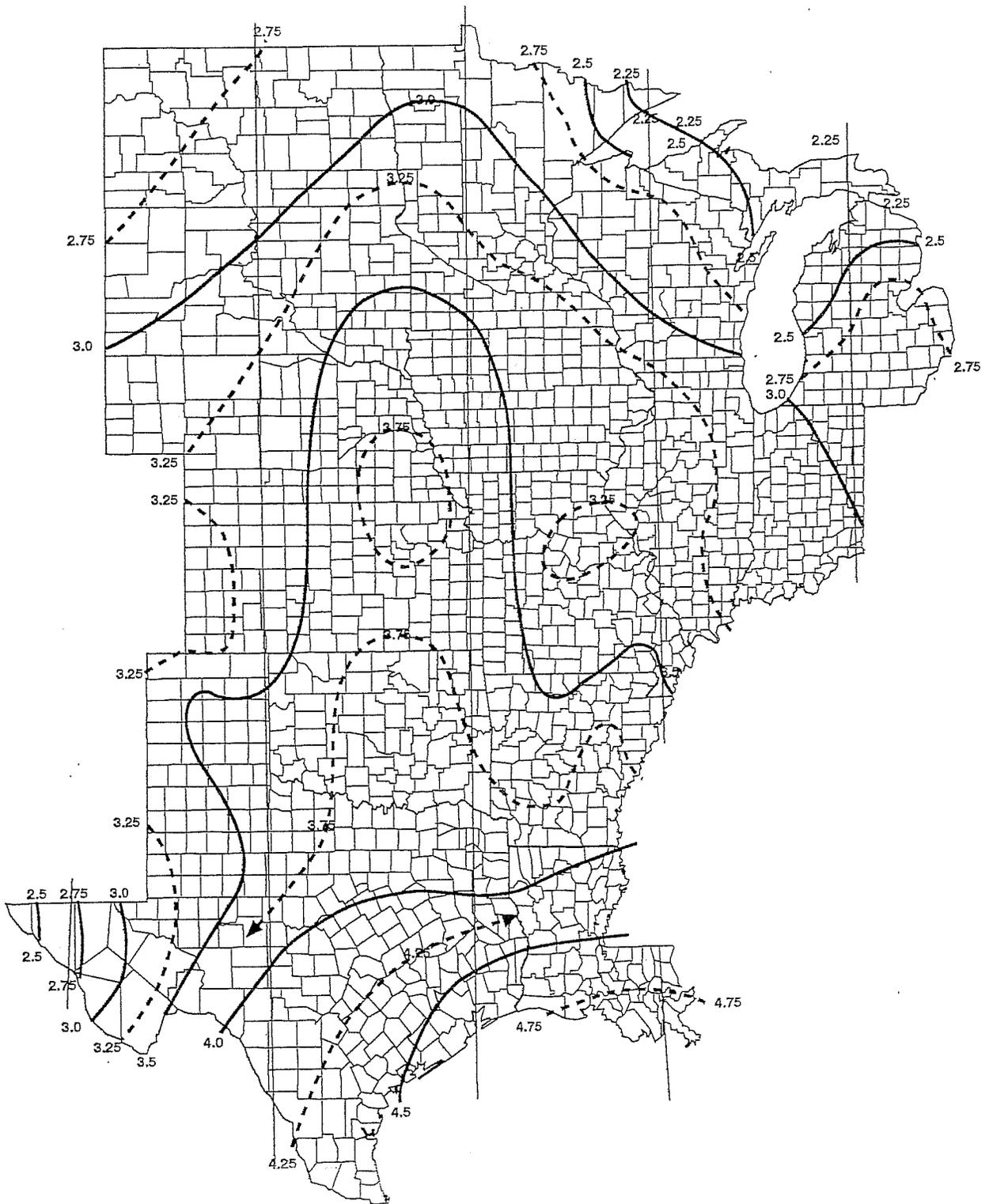
3) Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

4) Construction documents. The registered design professional shall submit to the Building Official two complete sets of signed and sealed construction documents for the alternative engineered design. The construction documents shall include floor plans and a riser diagram of the work. Where appropriate, the construction documents shall indicate the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.

5) Design approval. Where the Building Official determines that the alternative engineered design conforms to the intent of this code, the plumbing system shall be approved. If the alternative engineered design is not approved, the Building Official shall notify the registered design professional in writing, stating the reason thereof.

6) Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of Sections 890.1910 through 890.1930.

FIGURE 890.1390.1



AMEND: 890.1910 INSPECTIONS

ADD: 1) Compliance with Plumbing Code: The department may make plumbing inspections to ascertain compliance with this code and shall have authority to investigate complaints involving plumbing.

2) Right of Entry: The authorized representative of the Department shall, after proper identification, have the right, subject to constitutional limitations, to enter any premises for the purpose of enforcing this Code or the Act.

AMEND: 890.1950 VIOLATIONS

c) Unlawful acts. It shall be unlawful to install, extend, alter, repair, or maintain plumbing systems in or adjacent to building except in conformity with this code.

d) Notice. The Building Official shall serve a notice of violation or order to the person responsible for the installation of plumbing work in violation of the provisions of this code, or in violation of a detailed statement or a plan approved thereunder, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

e) Prosecution. If the notice of violation is not complied with promptly, the Building Official shall request the legal council of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful use of any plumbing system in violation of the provisions of this code or of the order or direction made pursuant thereto.

f) Penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall install plumbing work in violation of an approved plan or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be guilty of an offense, and shall be subject to the penalties set forth in Section 1-21 of the Champaign Municipal Code. Each day that a violation continues shall be deemed a separate offense.

g) Abatement. The imposition of the penalties herein prescribed shall not preclude the legal officer of the jurisdiction from instituting appropriate action to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent illegal occupancy of a building, structure or premises, or to stop an illegal act, conduct, business or use of a building or structure in or about any premises.

ADD: 890.1960 STOP WORK ORDER

1) Notice. Upon notice from the Building Official that work on any building or structure is being prosecuted contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work.

2) Unlawful continuance. Any person who shall continue any plumbing work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe conditions, shall be guilty of an offense and subject to the penalties as provided in Section 1-21 of the Champaign Municipal Code.

ADD: 890.1970 TEMPORARY OCCUPANCY

Upon the request of the holder of a permit, the Building Official shall issue a temporary authorization before the entire work covered by the permit has been completed, provided such portion or portions will be put into service safety prior to full completion of the building or structure without endangering health or public welfare.