

1.0 STATEMENT OF BASIS AND PURPOSE

- 1.1 Following are the adopted changes in the Rules and Regulations of the Colorado State Examining Board of Plumbers, for general clarification, for efficient management and expeditious procedures of the Board and for the safeguard of the General public, in compliance with Title 12, Article 58, of the Colorado Revised Statutes: Accepted through formal public hearing and approved by the Attorney General.

2.0 STANDARDS

- 2.1 The Examining Board of Plumbers hereby adopts Chapters 2-14; Appendices A-D and Appendices H and L of the Uniform Plumbing Code, 2000 edition, promulgated by the International Association of Plumbing and Mechanical Officials, 1st printing, October, 1999. This Code, as amended, will be known as the Colorado Plumbing Code. This rule does not include later amendments to or editions of the Uniform Plumbing Code, 2000 edition.
- 2.2 The Examining Board of Plumbers hereby adopts the Uniform Solar Energy Code, 2000 edition, which may be amended by the Board, as the Colorado Solar Code. The Uniform Solar Energy Code, 2000 edition, first printing, July 2000, was promulgated by the International Association of Plumbing and Mechanical Officials. This rule does not include later amendments to or editions of the Uniform Solar Energy Code, 2000 edition.
- 2.3 The administrative office of the Examining Board of Plumbers maintains a certified copy of the Uniform Plumbing Code, 2000 edition, and a certified copy of the Uniform Solar Energy Code, 2000 edition, available for public inspection during regular business hours. Certified copies of the Uniform Plumbing Code, 2000 edition, or the Uniform Solar Energy Code, 2000 edition, will be provided at cost, upon request. The administrative office of the Examining Board of Plumbers maintains one copy of the Colorado Plumbing Code, as amended, and one copy of the Colorado Solar Code, as amended, available for public inspection. The Program Administrator of the Examining Board of Plumbers located at 1580 Logan Street, Suite 550, Denver, Colorado 80203 will provide information regarding how the Uniform Plumbing Code, 2000 edition may be obtained or examined. A copy of these materials that have been incorporated by reference may be examined at any state publications depository library.

Rule 2.3.1 Alternate Materials and Methods Review

A. Criteria for Board Approval As an Alternate Material or Method

1. The Board shall consider requests for approval of materials or methods under the procedures and limitations of 301.2 of the most recently adopted edition of the Uniform Plumbing Code.
2. Approval under section 301.2 of the Uniform Plumbing Code will result in an amendment to the Colorado Plumbing Code stating the type of material and/or method, the allowable uses, and the acceptance criteria.
3. The Board will not require a petition under this rule for materials and/or methods that have been included in the Uniform Plumbing Code by IAPMO or have received an unconditional/unrestrictive certification for the material and/or method against the applicable criteria from an ANSI accredited third-party certifier.

B. Procedures:

1. **Petitions for Approval.** Any interested person may petition the Board to amend the Colorado Plumbing Code so as to approve the use of an alternate material or method; pursuant to section

301.2 of the most recently adopted Uniform Plumbing Code. Such petition must conform to the requirements in B.2. Incomplete petitions will not be processed.

2. Petition contents. Each petition filed under this rule must comply with the following requirements:

- (a) Where to Submit. Petitions must be submitted in duplicate to the Program Administrator for the Board.
- (b) Petition Document. Petitions must begin with a short concise document labeled as the "petition," and which includes the following information:
 - (1) Identification of the petitioner and the petitioner's interest in the alternate materials or methods approval. This identification must designate one person as the Board's contact for the petition, and list telephone, fax, and mailing addresses for that person.
 - (2) A full description of the types of uses for which the petitioner would like approval. This list should be sufficiently detailed to allow the Board to consider specific types of applications or uses for the alternate material and/or method.
 - (3) A complete identification of the applicable standards from the Mandatory Referenced Standards identified in Chapter 14 of the Uniform Plumbing Code at Table 14-1 that the petitioner proposes to be the acceptance criteria for the alternate material or method.
 - (4) If the petition is for approval of an alternate material, one sample of the material. The sample will be returned to the petitioner after completion of the review process.
 - (5) Copy of approval language of each code the petitioner cites.
- (c) Submission of National Standards. Each petition must be accompanied by a set of the applicable standards from the Mandatory Referenced Standards identified in Chapter 14 of the Uniform Plumbing Code at Table 14-1 listed by the petitioner in B.2.b.3. If the petitioner has referenced standards from Table 14-1 that are not the most current version of the standard available as of the date of submission, the applicant shall identify the most current version of the standard. In addition, the petitioner shall explain any reason, other than it is not the version listed in Table 14-1, that the most current version is not incorporated into the petition. If the listed standard incorporates other standards into its criteria, copies of the incorporated standards shall be submitted as well.
- (d) Results of Independent Third Party Compliance Testing. Each petition must be supported with complete copies of test reports with protocols issued within the previous 18 months prior to the date of submission by a laboratory or other testing facility that is recognized as a nationally recognized testing laboratory pursuant to 29 C.F.R. § 1910.7, or by an ANSI accredited third-party certifier.
- (e) Discussion on Compliance With Section 301.2.2. Each petition must be supported by detailed written discussion as to why the proposed alternate material or method meets the following requirements from section 301.2.2 of the most recently adopted Uniform Plumbing Code.
 - (1) That the proposed design of the proposed alternate material is satisfactory and complies with the intent of the Colorado Plumbing Code.
 - (2) That the proposed material is appropriate for the proposed intended use at least the

equivalent of that prescribed in the Colorado Plumbing Code with respect to quality, strength, effectiveness, durability and safety. This description requires that the petitioner directly compare the quality, strength, effectiveness, durability and safety data on the applicable conventional systems with the tested and documented performance characteristics of the proposed alternate material and/or method.

- (3) When an alternate installation method is proposed, the petitioner must describe how the proposed method of installation conforms to the most recently adopted edition of the Colorado Plumbing Code. Petitioner must also comply with all other requirements as set forth in Rule 2.3.1.

3. Timeline.

- (a) The Board shall determine within 3 months of receiving the petition for consideration whether to initiate rulemaking proceedings in accordance with subsection 3(b).
- (b) The Board shall hold a public hearing to consider any petition completed according to the requirements set for in Rule 2.3.1. on a 6-month interval commencing upon adoption of Rule 2.3.1. In the event the Board has received 3 or more completed petitions prior to the 6-month hearing date, the Board, upon its discretion, may convene a public hearing to consider those petitions.
4. Notice of Denial. When it is determined that a petition filed under this rule should be denied, either before or after the institution of rulemaking proceedings, a letter indicating the denial and the reasons for denial shall be mailed to the petitioner within thirty (30) days.
5. Reconsideration of Board Action. Any petitioner whose petition has not been fully granted by the Board may apply for reconsideration of the Board's decision within thirty (30) days of the mailing of the Board's notice of denial, publication of notice of termination, or publication of the Board rule that partially granted the petition. A request for reconsideration shall be in writing and shall explain why reconsideration is warranted. Action on any request for reconsideration is within the sole discretion of the Board.

Rule 2.3.2 When the phrase “the most recently adopted Uniform Plumbing Code” is referred to in any rule contained in 3 CCR 720-1, that reference is to the Uniform Plumbing Code, 2000 edition.

2.4 Amendments and Exceptions to the 2000 Colorado Plumbing Code.

Chapter 2, Section 218.0 - DefinitionsAddition to existing section:

PE-AL-PE - Polyethylene-Aluminum-Polyethylene

PEX-AL-PEX-Cross-linked Polyethylene-Aluminum-Cross-linked Polyethylene

Chapter 3, Section 301.2 Add the following table:

Table 3-1A Approved Alternate Materials and Methods			
Material or Method Type	Requirements ¹	Approved Uses	UPC § amend.
2 ASTM is the American Society for Testing and Materials. 100 Barr Harbor Drive. West Conshocken, PA 194			
PEX-AL-PEX pipe -nps 1/2', 5/8', 3/4' and 1' with	(1) Pipe must comply with ASTM F 1281-972;	Potable and non- potable water distribution.	§ 604.1

associated fittings.

(2) Fittings must comply with ASTM F 1974 - 99; (3) Pipe must not be used when water temperatures exceed 180°F; (4) System must be installed per manufacturer instructions; (5) There shall be a minimum of 36' (914 mm) of metallic piping between a gas water heater connection and PEX-AL-PEX piping. Piping shall not be installed down stream from any instantaneous type (coil or immersion) water heater closer than 36' (914 mm) to the heater; and (6) Horizontal piping shall be supported at a maximum of 3 foot (914 mm) intervals.

PE-AL-PE pipe - nps 1/2', 5/8', 3/4' and 1' with associated fittings.

(1) Pipe must comply with ASTM F 1282- 97; (2) Fittings must comply with ASTM F 1974 - 99; (3) Pipe must not be used when water temperatures exceed 73°F; (4) System installed per manufacturer instructions; (5) There shall be a minimum of 36' (914 mm) of metallic piping between a gas water heater connection and PE-AL-PE piping. Piping shall not be installed down stream from any instantaneous type (coil or immersion) water heater closer than 36' (914 mm) to the heater; and (6) Horizontal piping shall be supported at maximum 3 foot (914

Potable and non- potable water distribution.

§ 604.1

Air Admittance Valves
("AAVs")

mm) intervals.

(1) AAVs must comply with ANSI/ASSE 1051-96 and ANSI/NSF 14-96³; (2) AAVs are to be installed per manufacturer instructions.

For venting of the following fixture applications: (1) sinks under windows on bearing walls; (2) island sink installations; and (3) basement bar sink installations.

§ 903 -

§ 905.4 -

§ 906 -

¹When the table incorporates a standard, such a reference does not include later amendments to or editions of the incorporated material. Copies of cited standards are available for inspection at the office of the Examining Board of Plumbers. Copies of the above referenced publications may be viewed at any State Publications Depository Library.

³ASSE is the American Society of Sanitation Engineering for Plumbing and Sanitary Research, 28901 Clemens Road, Suite 100, Westlake, OH 44145, and NSF is NSF International, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, MI 48113-0149.

Addition of new section 301.2.4.3 Amended to read:

Corrugated Stainless Steel Tubing (CSST) gas pipe and fittings is allowed, provided it meets with ANSI LC-1b, 2001 CSA 6.26B-2001, is marked as such, and is installed as per manufacturer installation guidelines. All CSST must be installed by a qualified installer who has passed the individual manufacturers' certification program.

Section 603.3.2 Amended to read:

The premise owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation.

Section 604.11.2 Amended to read:

Water Heater Connections. PEX tubing shall not be installed within the first thirty-six (36) inches (914 mm) of piping connected to a water heater.

Section 705.1.4 - Delete

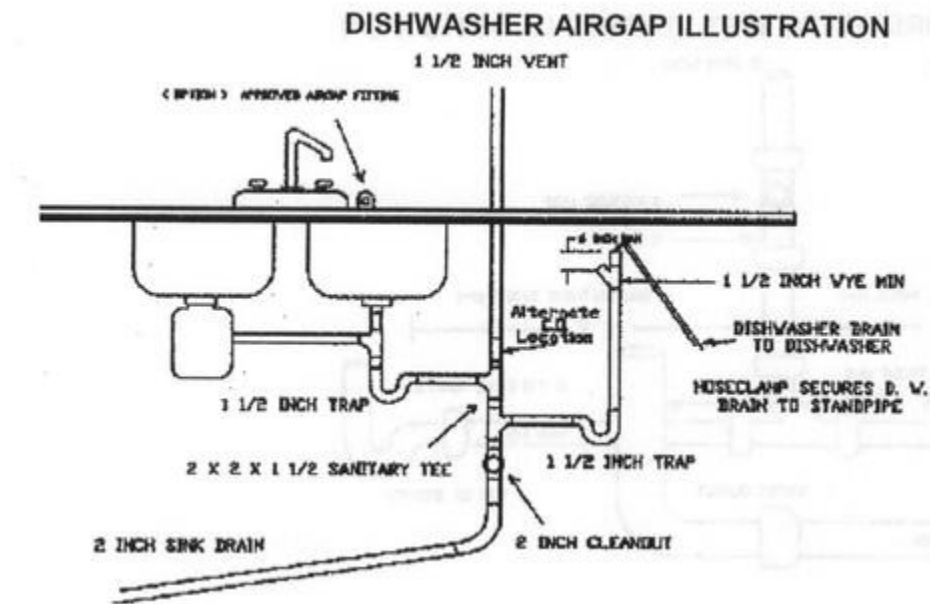
Section 708.0 Amended to read:

Horizontal drainage piping shall be run in practical alignment and for pipe up to and including 3'; have a uniform slope of not less than one-fourth (1/4') of an inch per foot (20.9 mm/m). Piping 4' and larger shall have a uniform slope of not less than one-eighth (1/8') of an inch per foot (10.4 mm/m)

Section 807.4

Addition of a New Section 807.4(a)

No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher airgap fitting on the discharge side of the dishwashing machine. Listed airgaps shall be installed with the flood level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher, or separately trapped with the airgap located on the stand pipe.



Section 911.0 Horizontal Wet Venting

Addition of New Section with subsections

Section 911.1

Single bathroom groups - a single bathroom group of fixtures may be installed with the drain from an individually vented lavatory or lavatories serving as a wet vent for a bathtub, shower compartment, or floor drain and for a water closet provided the requirements listed below are met:

Section 911.1(a)

Not more than four fixture units drain into a minimum 2 inch diameter wet vent. Kitchen sinks, dishwashers, or automatic clothes washer connections are not permitted.

Section 911.1(b)

The horizontal branch drain connects to the stack at the same level as the water closet drain; or it may connect to the upper half of the horizontal portion of the water closet bend at an angle not greater than 45 degrees from the direction of flow.

Section 911.1(c)

Trap arm sizes and lengths shall conform to tables 7.3, 7.5 and 10.1.

[illegible]

Illustration for the minimum requirements for grease trap, grease interceptor, oil or sand trap.

Minimum capacity of oil and sand interceptors shall be 6 cubic feet plus 1 cubic foot for each vehicle washed during a 24 hr. period. Maximum depth permitted is 12" below grade.

For concrete or hard surface, extend top ring and install iron ring and cover.

Shape is cylindrical or rectangular.
Concrete or glazed tile.

1 FT MIN

1 FT MAX

2 INCH MIN VENT

4 INCH CLEARDUT

4 INCH

6 INCH MIN FOR OIL TRAPS

10 INCH MIN FOR SAND TRAPS ONLY

4 FT MIN

2 FT MIN

8 INCH DIA

DIMENSION B IS A MIN OF 2 FT FOR SAND TRAPS ONLY
DIMENSION C IS MAX OF 18 INCHES FOR OIL TRAPS

Location depends on fire regulations and other convenient factors.

IF gas tight cover is provided trap may be installed inside.

Special regulations by the waste water and/or sanitation district into which the grease trap or interceptor effluent is transported and/or treated may supersede this requirement.

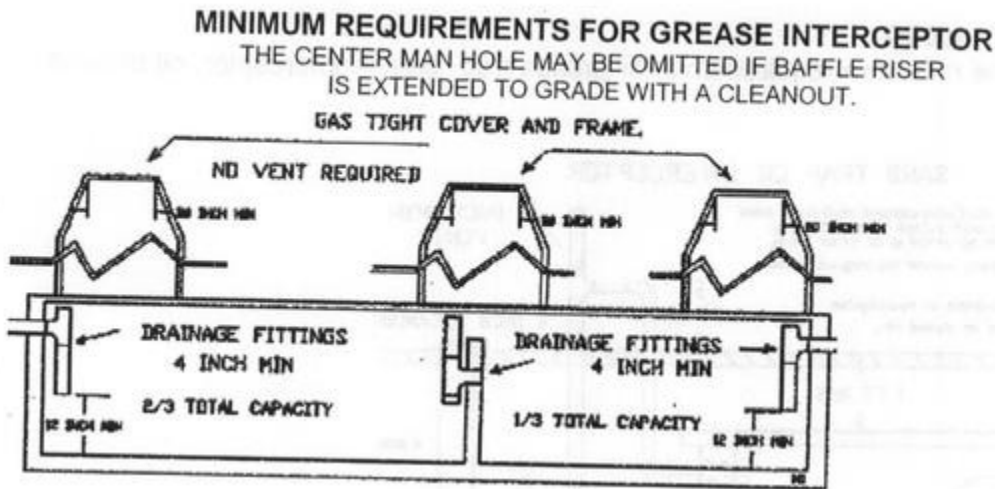
Chapter 13 - Health Care Facilities and Medical Gas and Vacuum Systems Amend by deleting text

of chapter and inserting the following:

The Colorado Plumbing Code requires adherence to "Gas and Vacuum Systems" National Fire Protection Association NFPA 99C, 1999 edition.

Appendix H 106.3 Addition of New Section:

Recommended procedures for sizing grease interceptors for school cafeterias: Use the following formula for sizing school cafeterias. To acquire peak meals per hour divide the total students that utilize the cafeteria by hours of daily use. Then proceed by peak meals per hour x flow x rate retention time.



Appendix L 2.1 Amended to read:

Definition. Engineered Plumbing System: A system designed for a specific building project with drawings and specifications indicating plumbing materials to be installed, all as prepared by a person licensed by the State of Colorado as a professional engineer.

3.0 EXAMINATIONS

- 3.1 Applications for all examinations and requests for re-examination, shall be in the office of the Examining Board of Plumbers at least thirty (30) days prior to the examination date.
- 3.2 The applicant must present positive photo identification in order to be admitted to the examination area.
- 3.3 If an applicant wishes to submit a request for reconsideration of a board action, accompanied by additional information or documentation, or to request a personal interview before the Board, these requests must be submitted within 45 days of the date on which the Board made the decision. No requests for reconsideration or interviews will be considered by the Board if they are not filed within this time limit.
- 3.4 An applicant for licensure by examination who does not take the examination within one year from the date of the original application shall be required to complete an updated application.
- 3.5 An applicant for a license by endorsement who does not complete the licensing process within six months shall be required to complete the application process again, and to pay a new fee.

3.6 Examination results will be provided in writing to each examinee. No results will be given in any other manner.

3.7 Examinations shall not be subject to review by applicants.

3.8 All examinations will be conducted in English.

3.9 [Expired 05/15/06 per Senate Bill 06-106]

4.0 TEMPORARY WORK PERMITS

4.1 Pursuant to §12-58-112, a temporary work permit may be issued at the time of approval for an examination.

- a. If the work permit is issued without scheduling for the next available practical examination, the work permit shall expire thirty days from the date of issuance.
- b. If the applicant is scheduled for the next practical examination, the work permit shall expire 30 days after the practical exam to allow the applicant to schedule and take the written examination.
- c. If the applicant is scheduled for the next practical examination and fails the practical exam the work permit shall expire upon notification of exam results.

4.2 A temporary work permit shall not be accepted to meet the requirements for contracting plumbing work.

- (a) Exception: A temporary master plumber work permit may be issued to a qualified applicant of an existing plumbing contractor pursuant to 12-58-112(4).

5.0 QUALIFICATIONS

5.1 Any applicant for the residential or journeyman plumber's license must furnish evidence as to his training and experience to qualify for the examination by:

- a. A record of employment as an apprentice doing plumbing work, exact dates so employed, and, at time of application, submission of original documented written evidence, verified by the master license holder to include a specific job description and a breakdown (commercial, residential, industrial and/or maintenance/service) of the actual work performed.
- b. If training and experience were obtained outside the state of Colorado, the applicant must provide the Board with documented, written evidence verified by the employer of actual work performed.
- c. If training includes school courses in plumbing work from an accredited trade school or community college, a transcript must be included with the application. Such education will replace actual field experience under a licensed master as follows: one hour for every six hours' training or experience up to a maximum of one year.
- d. Military training or experience in plumbing work must be detailed and submitted for evaluation with the application. Such experience will replace actual field experience under a licensed master as follows: one month for every six months' training or experience up to a maximum of one year.
- e. The minimum hours of practical experience required for examination are:

(a) Residential 3400

(b) Journeyman 6800

f. The minimum years of experience required for the master examination is five years or (60 full time months). One month is equivalent to 163 hours.

5.2 Work experience gained in the plumbing maintenance/service field that is not required to be performed under a permit, inspection or the direct supervision of a licensed plumber may replace actual field experience as follows: one month credit for each two months experience up to a maximum of one-half of the applicable experience requirement for a license issued under Article 58, and pursuant to 12-58-107.5.

6.0 MISCELLANEOUS

6.1 Licensees from another state may be eligible for licensure by endorsement providing that the applicant meets the requirements of 12-58-111, and all of the following conditions:

a. Completion of a state or federally approved apprenticeship program, or completion of the required years and type of experience for the comparable license.

b. Successful completion of a comparable State plumbing examination based on the current or most previous edition of the Uniform Plumbing Code adopted by the Colorado Examining Board of Plumbers.

c. Currently licensed by that state and have held that license for a minimum of six (6) months.

6.2 Persons working as plumbers, shall be required to carry on their person, their license, permit or registration.

6.3 The Board or its administrative officer may revoke a permit that was issued in error or on the basis of incorrect information supplied by the applicant.

6.4 Persons requesting a plumbing inspection shall provide reasonable access to the inspection area during the normal working hours of the Board.

6.5 Reinspections shall not be performed until after the fees have been received by the Board.

6.6 Additions, alterations or repairs may be made to any plumbing system and equipment without requiring the existing plumbing system and equipment to comply with all the requirements of the Examining Board of Plumbers standards, provided that the addition, alteration or repair conforms to that required for a new plumbing system and equipment, and provided further that no hazard to life, health or safety will be created by such additions, alterations or repairs.

6.7 Existing plumbing systems may continue to be utilized provided that they were lawfully installed and that they present no hazard to life, health or property.

6.8 Temporary and moved buildings shall comply with the standards of the Examining Board of Plumbers for new installations. The existing plumbing system may be re-connected provided that a plumbing contractor gives written verification to the Board that the existing plumbing installation presents no hazard to life, health or property. Permits and inspections shall be required.

6.9 Any individual who has acquired both master and journeyman licenses by examination issued by the state of Colorado, and who has dropped the journeyman license and holds the master license, may renew the journeyman license without re-examination.

6.10 If a permit application is not filed in advance of the commencement of an installation, the inspection fee shall be twice the amount prescribed.

7.0 FEE SCHEDULE

7.1 Licensing, permit and inspection fees shall be established pursuant to Section 24-34-105, C.R.S., and shall be categorized as follows:

- (a) Master plumber license or temporary permit
- (b) Renewal of master plumber license
- (c) Journeyman plumber license or temporary permit
- (d) Renewal of journeyman plumber license
- (e) Residential plumber license or temporary permit
- (f) Renewal of residential plumber license
- (g) Examination for master plumber
- (h) Examination for journeyman plumber
- (i) Examination for residential plumber
- (j) Plumber apprentice registration

7.1 (k) All other fees shall be computed on the dollar value of the plumbing installation, including plumbing materials and items, and the total cost to the consumer. Fee categories shall be as follows:

Valuation of work

Not more than \$300

\$301 but not more than \$2000

\$2001 but not more than \$50,000

\$50,001 but not more than \$500,000

More than \$500,000

Reinspections

8.0 INSPECTIONS

8.1 A pressure test of 10 PSI for no less than 15 minutes on screwed pipe and 60 PSI for 30 minutes on a welded pipe shall be required prior to supplying gas to the piping system. On manufactured housing units, which have had the required 10 PSI air test performed at the factory, a test with a water manometer or equivalent device to a pressure of an 11 inch water column with no indication of loss or gain of pressure for a minimum of three (3) minutes will be accepted.

8.2 A waste and vent system must be tested by either of the methods listed below:

- a. A 10' head of water
- b. An uninterrupted 15 minute 5 pound air test

8.3 Water piping must be tested by either of the methods listed below:

- a. Under full working water pressure
- b. An uninterrupted 15 minute 50 pound air test

9.0 Declaratory Orders

9.1. Any person¹ may petition the board for a declaratory order to terminate controversies or to remove uncertainties as to the applicability to the petitioner of any statutory provision or of any rule or order of the board.

¹Refer to existing definition of "person" in APA, rules or statute, if any.

9.2. The board will determine, in its discretion and without notice to the petitioner, whether to rule upon any such petition. If the board determines that it will not rule upon such a petition, the board shall promptly notify the petitioner of its action and state the reasons for such action.

9.3. In determining whether to rule upon a petition filed pursuant to this rule, the board will consider the following matters, among others:

- a. Whether a rule on the petition will terminate a controversy or remove uncertainties as to the applicability to petitioner of any statutory provision or rule or order of the board.
- b. Whether the petition involves any subject, question or issue which is the subject of a formal or informal matter or investigation currently pending before the board or a court involving one or more of the petitioners.
- c. Whether the petition involves any subject, question or issue which is the subject of a formal or informal matter of investigation currently pending before the board or a court but not involving any petitioner.
- d. Whether the petition seeks a ruling on a moot or hypothetical question or will result in an advisory ruling or opinion.
- e. Whether the petitioner has some other adequate legal remedy, other than an action for declaratory relief pursuant to rule 57, Colo. R. Civ.P., which will terminate the controversy or remove any uncertainty as to the applicability to the petitioner of the statute, rule or order in question.

9.4. Any petition filed pursuant to this rule shall set forth the following:

- a. The name and address of the petitioner and whether the petitioner is licensed pursuant to/the organic act/.
- b. The statute, rule or order to which the petition relates.
- c. A concise statement of all of the facts necessary to show the nature of the controversy or uncertainty and the manner in which the statute, rule or order in question applies or potentially applies to the petitioner.

9.5. If the board determines that it will rule on the petition, the following procedures shall apply:

- a. The board may rule upon the petition based solely upon the facts presented in the petition. In such a case:
1. Any ruling of the board will apply only to the extent of the facts presented in the petition and any amendment to the petition.
 2. The board may order the petitioner to file a written brief, memorandum or statement of position.
 3. The board may set the petition, upon due notice to petitioner, for a non-evidentiary hearing.
 4. The board may dispose of the petition on the sole basis of the matters set forth in the petition.
 5. The board may request the petitioner to submit additional facts, in writing. In such event, such additional facts will be considered as an amendment to the petition.
 6. The board may take administrative notice of facts pursuant to the Administrative Procedure Act (C.R.S. 1973, 24-4-105[8]) and may utilize its experience, technical competence and specialized knowledge in the disposition.
- If the board rules upon the petition without a hearing, it shall promptly notify the petitioner of its decision.

- b. The board may, in its discretion, set the petition for hearing upon due notice to petitioner, for the purpose of obtaining additional facts or information or to determine the truth of any facts set forth in the petition or to hear oral argument on the petition. The notice to the petitioner setting such hearing shall set forth, to the extent known, the factual or other matters into which the board intends to inquire. For the purpose of such a hearing, to the extent necessary, the petitioner shall have the burden of proving all of the facts stated in the petition, all of the facts necessary to show the nature of the controversy or uncertainty and the manner in which the statute, rule or order in question applies or potentially applies to the petitioner and any other facts the petitioner desires the board to consider.
- 9.6. The parties to any proceeding pursuant to this rule shall be the board and the petitioner. Any other person may seek leave of the board to intervene in such a proceeding, and leave to intervene will be granted at the sole discretion of the board. A petition to intervene shall set forth the same matters as required by section 4 of this rule. Any reference to a "petitioner" in this rule also refers to any person who has been granted leave to intervene by the board.
- 9.7. Any declaratory order or other order disposing of a petition pursuant to this rule shall constitute agency action subject to judicial review pursuant to C.R.S., 24-4-106.