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Administrative Regulation Review Committee AGENDA

Tuesday, August 14, 2001 10:00am-12:00n, 2nd floor Conference Room, Anchorage

I. Title 13 Public Safety's adoption of International Building & Plumbing Codes as opposed to Uniform Codes.

*This hearing will be teleconferenced

DATE: August 14, 2000

TO: Code Enforcement Officials, Members of Plumbing Code Adoption Boards, and Interested Members of the Plumbing Community

FROM: Edward Saltzberg,* PE, CEM, CIPE
J. Richard Wagner,* PE, CIPE

RE: **2000 International Plumbing Code/Uniform Plumbing Code Review**

The following is a general review of the 2000 versions of both the International Plumbing Code and the Uniform Plumbing Code. The review was prepared by Edward Saltzberg, PE, CEM, CIPE, and J. Richard Wagner, PE, CIPE. The review was undertaken with the health and safety of the consumer as the prime concern. However, other factors considered in our review were the life cycle cost of systems, the ease of enforcement, clarity of the code, plumbing engineering criteria, and any other reservations that the writers may have had concerning the respective provisions of the two codes. This review is not intended as a paragraph by paragraph comparison of the two code documents, but merely a comparison of the significant variations between the two documents and was modified from our 1997 code review. Therefore, we have used a vertical line (|) in the margin to indicate a change from the 1997 review and an arrow (→) in the margin to indicate a deletion from the 1997 review.

A. CHAPTER 1 - ADMINISTRATION

1-1. **IPC PREFACE.** The section Maintenance contains a significant disclaimer which reads, "While the development procedure of the *International Plumbing Code* assures the highest degree of care, BOCA, ICBO, SBCCI, their members and those participating in the development of this code do not accept any liability resulting from compliance or noncompliance with the provisions given herein, for any restrictions imposed on materials or processes, or for the completeness of the text. BOCA, ICBO and SBCCI do not have power or authority to police or enforce compliance with the contents of this code. Only the governmental body that enacts the code into law has such authority."

The UPC does not contain such a disclaimer.

1-2 **IPC Marginal Markings.** The code indicates that solid vertical lines in the margins within the body of the code indicate a change from the requirements of the 1997 edition (*except where a change was minor*) [emphasis added]. Deletion indicators (→)

* A brief bio on each writer is included at the end of this report. A complete Curriculum Vitae on each writer is available

are provided in the margin where a paragraph or item has been deleted (*if the deletion resulted in a change of requirements*) [emphasis added].

In the UPC a vertical line denotes any change and an arrow denotes any deletion.

1-3. **IPC Section 101.2** has been revised. Fuel gas piping is no longer regulated by the IPC.

Fuel gas piping is within the scope of the UPC.

1-4. **IPC Section 102.8, Referenced codes and standards.** The code indicates that those codes listed in Chapter 13 are considered part of the requirement of this code and, therefore, an enforcement agent must have copies of all of those codes and become thoroughly familiar with them.

The UPC attempts to have as much as possible within the body of the code and not refer to or incorporate other codes as part of the UPC. The 2000 UPC contains 380 pages, compared to 131 pages in the 2000 IPC.

1-5. **IPC Section 103.4, Restriction of employees.** This section has restrictions on work that employees of a plumbing inspection department may perform and this section may be in conflict with the administration sections of the local code and, therefore, it is normally not included as part of a plumbing code.

The UPC does not include such a restriction.

1-6. **IPC Section 103.5, Liability.** This section removes any liability from employees. However, from a legalistic standpoint, this section may not be valid and may be in conflict with city attorneys' rules and regulations or state interpretations.

The UPC does not include such a provision.

1-7. **IPC Section 104.2, Rule-making authority.** This section gives the code official the authority to adopt and promulgate rules and regulations regarding the Code.

The UPC does not address rule making by the Administrative Authority. Such authority is normally included in the ordinance that created the Administrative Authority and/or in the adopting ordinance for the plumbing code.

1-8. **IPC Section 105.1, Modifications, and 105.2, Alternative materials, methods and equipment.** This section is essentially the same as what is included under UPC Section 301.2, Alternate Materials and Methods.

1-9. **IPC Section 109, MEANS OF APPEAL.** This section provides means of appealing the decision of the code official. It includes the appeal board, board membership, qualification of members, board officers, meetings, and open hearings.

The UPC does not address the filing of appeals and the administration of an appeal board. Such authority is normally included in the ordinance that created the Administrative Authority and/or in the adopting ordinance for the plumbing code.

1-10. On other matters of administration, the IPC and UPC have similar requirements and address those issues that need to be in the Administrative chapter of a plumbing code.

B. CHAPTER 2 - DEFINITIONS

2-1 **IPC Section 202, GENERAL DEFINITIONS – ACCEPTED ENGINEERING PRACTICE.** The IPC includes a definition for this phrase and the UPC does not.

2-2. **IPC Section 202, GENERAL DEFINITIONS - ALTERNATIVE ENGINEERED DESIGN.** The last sentence of the IPC definition indicates "The system design is not specifically regulated by Chapters 3 through 12". Therefore, as part of any new design, an engineer would have to include all of the appropriate sections of the codes that were to still be enforced as part of his/her submission to give the code official something with which to inspect and approve the alternative engineered design, as the entire body of the IPC has been deleted by this definition.

The UPC includes alternative engineering methods under Section 301.2, Alternate Material and Methods which still requires compliance with the remaining provisions of the UPC.

2-3. **IPC Section 202, GENERAL DEFINITIONS - FLOOD ZONES.** The IPC defines two different flood zones, flood hazard zone, A Zone, and high hazard zone, V Zone. While the definition seems clear, there are many areas, such as mountain areas, where locations are not normally subject to flooding but could be during heavy rainstorms where runoffs could have high velocity water. Therefore, from an engineering standpoint it would be somewhat hard to define which zone a specific building is located in.

The UPC does not contain this confusing item.

2-4 **IPC Section 202, GENERAL DEFINITIONS – TYPE A AND TYPE B DWELLING UNITS.** The IPC indicates a change in Type A dwelling and yet there is no change from the wording of the 1997 IPC. However, Type B dwelling unit was changed from the 1997 IPC and it is not noted as a change.

The UPC does not include these definitions.

C. CHAPTER 3 - GENERAL REGULATIONS

3-1. **IPC Section 303.2, Installation of materials.** The material manufacturer's installation instructions are superseded by the installation provisions of the standard for that particular material. This could prevent a manufacturer from dictating the installation requirements for a specific material or product for which it is responsible.

UPC Section 310.4 requires that material be installed according to the code and the manufacturers recommendations. If there are conflicts, the more stringent is used.

3-2. **IPC Section 303.4, Third-party testing and certification.** The IPC has changed from requiring plumbing products and materials to be labeled by an approved agency to having them either tested or certified by a third party as indicated in Table 303.4. The IPC defines "third-party certification agency", "third-party certified", and "third-party tested", but it does not define the relationship between the third party and the first and second parties.

UPC Section 301.1.1 requires that all pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system must be listed or labeled by a listing agency. The UPC defines "labeled", "listed", and "listing agency". The requirements of the IPC and UPC produce essentially the same end results with regard to the compliance of products and materials to accepted standards.

3-3. The IPC does not have any method to determine the minimum size of the hanger rods supporting pipe.

Table 3-1 of the UPC indicates the size of the pipe and the minimum rod size for hanging various size piping.

3-4. **IPC Table 308.5, HANGER SPACING.** An exception to Table 308.5 in Section 308.5 that is new in the 2000 IPC is that the interval of support to provide for expansion and contraction of any piping material must be handled as an alternative engineered design in accordance with IPC Section 105.4. This requires the input of a registered design professional for each project requiring provisions for the expansion and contraction of any piping. The reason for this unusual requirement is not obvious. Also, providing for expansion and contraction involves more than support spacing.

In the IPC, the maximum support spacing for ABS and PVC drainage pipe is four feet horizontally and ten feet vertically, with mid-story guides for pipe 2" and smaller.

UPC Table 3-2 requires mid-story guides for all sizes of ABS and PVC drainage pipe. In addition, it requires provisions for expansion at 30-foot intervals per the IAPMO Installation Standards for ABS and PVC drainage pipe. The provisions for expansion and contraction of such piping are addressed by the UPC and do not need to be handled as an alternative engineered design.

3-5. **IPC Table 308.5, HANGER SPACING.** This section lists support spacing for aluminum tubing, but aluminum tubing is not an approved material for any IPC piping systems.

The UPC does not list this material.

3-6. **IPC Table 308.5, HANGER SPACING.** Lists maximum vertical support spacing but does not refer to the base of risers or support at floor levels. (Section 308.9 addresses base of stacks only.)

UPC Table 3-2 is generally more detailed. It specifically calls for vertical support at the base of risers and at floor levels.

3-7. **IPC Table 308.5, HANGER SPACING.** Footnote "a" requires that hangers shall be increased to 10-foot spacing where 10-foot lengths of cast iron pipe are used. (Emphasis added.) Furthermore, industry standards call for the supports to be within 18 inches of the joints in cast iron soil pipe. The IPC does not require this.

UPC Table 3-2 says "may be increased." (Emphasis added.) There is no reason to prohibit support spacings of less than 10 feet in 10-foot lengths of pipe. Also, the UPC requires that the supports be within 18 inches of the joints.

3-8. **IPC Section 308.6, Sway bracing.** This section requires rigid-support sway bracing for all [emphasis added] pipe 4" and larger at turns greater than 45 degrees. This requirement seems excessive to the writers.

UPC Table 3-2 requires sway braces only for cast iron soil pipe (all sizes) and only at 40-foot intervals.

3-9. **IPC Section 308.7, Anchorage.** Calls for restraining anchors on all drain pipe 4" and larger at changes in direction and where the pipe size changes by two (2) pipe sizes. This appears to be based on no-hub cast iron soil pipe, but the IPC does not say so.

UPC Table 3-2 requires bracing on cast iron pipe at 40-foot intervals to prevent horizontal movement.

3-10. **IPC Section 309, FLOOD PROOFING.** The subjective classification of flood hazard zones is addressed, however, the means by which flood proofing is to be achieved are not described.

The 2000 IPC defines flood hazard zone (A Zone) and high hazard zone (V Zone), but has the same requirements for flood proofing for both zones. However, it contains no indication of how to satisfy these requirements.

The UPC does not address how to flood proof a plumbing installation.

3-11. **IPC Section 312, TESTS AND INSPECTIONS.** Includes tests for drain and vent piping, water supply pipe, sewers, and backflow preventers. These requirements are not included in the individual chapters.

The UPC includes individual test requirements of drain and vent, water supply, sewers, and backflow preventer assemblies, etc., in the specific individual chapters.

3-12. **IPC Section 312.9, Inspection and testing of backflow prevention assemblies.** This section is revised in the 2000 IPC, but it still has some confusing requirements. All backflow prevention devices, even air gaps and non-testable devices, must now be inspected annually for proper operation. There are no requirements on how to inspect these devices. However, like the UPC, testable devices must now be tested at the time of installation, after repairs or relocation, and at least annually.

The UPC, national backflow prevention organizations, and device manufacturers do not require annual inspections of non-testable devices and air gaps.

3-13. The IPC does not specifically address plumbing in food handling establishments except for indirect waste, Section 802.1.1.

The UPC addresses special plumbing requirements for food handling establishments in Sections 318.0 and 412.3.

3-14. **IPC Section 313.1** references the *International Energy Conservation Code*, but that code is not listed in Chapter 13 – Referenced Standards.

The UPC does not address equipment efficiencies. The requirements of the energy conservation code that is adopted by the jurisdiction would apply.

3-15. **Section 314.2.2, Drain pipe materials and sizes.** The IPC requires air conditioning condensate drain piping, but does not provide any information as to required sizing.

The UPC in Table 8-2 provides minimum required condensate drain pipe size.

3-16. **Section 314.2.3, Auxiliary and Secondary Drain Systems.** The IPC provides requirements in the plumbing code for the secondary drain pan which is usually provided by the HVAC contractor. Therefore, the plumbing inspector is required to approve equipment furnished under another scope of work.

The UPC does not include this provision.

D. CHAPTER 4 - FIXTURES, FAUCETS, AND FIXTURE FITTINGS

4-1. **IPC Table 403.1, MINIMUM NUMBER OF PLUMBING FACILITIES.** This table generally requires fewer plumbing fixtures than UPC Table 4-1.

The current trend in the plumbing industry is to increase the minimum number of required fixtures due to complaints of inadequate "potty parity".

4-2. **IPC Section 404, ACCESSIBLE PLUMBING FACILITIES.** This section has requirements for Type A and Type B dwelling units in residential occupancies but still does not define what these types are. IPC Section 404.1 requires that accessible plumbing fixtures comply with IPC Section 404 and ICC/ANSI A117.1. Section 404 has been revised to reference ICC/ANSI A117.1 for ordinary accessible plumbing facilities and includes additional requirements for unisex facilities, which ICC/ANSI A177.1 does not address.

UPC Section 408.7 defers to the applicable building regulations for accessibility requirements for plumbing fixtures and facilities. Table 14-1, *Mandatory Referenced Standards*, lists A117.1 except that it lists the CABO A117.1-92 edition. The UPC does not address unisex facilities, for which there are no nationally recognized requirements.

4-3. **IPC Section 406, AUTOMATIC CLOTHES WASHERS.** The IPC requires the installation of either an integral air gap or an external backflow preventer for a domestic clothes washer. The IPC fails to recognize that the industry standard for domestic clothes washers requires that they have an internal air gap. The mention of a possible external backflow preventer creates confusion in the field and frequently results in the installation of unnecessary devices by uninformed persons.

The UPC recognizes that domestic clothes washers have internal backflow protection. UPC Section 603.4.7 specifically excludes clothes washer hose connections from required backflow protection.

4-4. **IPC Section 409, DISHWASHING MACHINES.** The IPC requires either an air gap or a backflow preventer for domestic and commercial dishwashers. The IPC fails to recognize that the industry standards for dishwashing machines require that they have an internal air gap. The mention of a possible external backflow preventer creates confusion in the field and frequently results in the installation of unnecessary devices by uninformed persons.

The UPC recognizes that dishwashing machines have built-in backflow protection and does not mention the possible need for external devices.

4-5. **IPC Section 412.4, Public Laundries and Central Washing Facilities.** The 2000 IPC still does not require floor drains in public toilet rooms.

UPC Section 412.2.1 requires floor drains in public toilet rooms having two (2) or more water closets or a combination of one (1) water closet and one (1) urinal to accommodate housekeeping and the possible overflow of fixtures.

4-6. **IPC Section 419.2, Substitution for water closets.** The IPC now permits urinals to be substituted for 67% of the minimum required number of water closets instead of 50%. IPC Table 403.1 lists only required water closets.

UPC Table 4-1 lists minimum required numbers of both water closets and urinals for males. If the number of urinals is increased above the minimum, one required water closet can be deducted for each additional urinal, except that the number of water closets cannot be reduced to less than 2/3 of the minimum requirements. The UPC provides more water closets and urinals than the IPC in most occupancies and assures an adequate number of water closets.

4-7. **IPC Section 426.1, MANUAL FOOD AND BEVERAGE DISPENSING EQUIPMENT.** This new section requires that such equipment conform to ANSI/NSF 18. This now makes the Administrative Authority for plumbing responsible for this equipment, which is not considered plumbing equipment.

The UPC does not include manual food and beverage dispensing equipment in its scope, except for any required potable water connections or provisions for drainage.

E. CHAPTER 5 - WATER HEATERS

5-1. **Section 502.1, General.** The IPC references the International Fuel Gas Code for gas-fired water heaters.

The UPC includes complete requirements for gas-fired water heaters in its Chapter 5. Gas piping is included in Chapter 12 and appliance venting is in Appendix C.

5-2. **IPC Section 505.1, Unfired vessel insulation.** This section requires specific insulation on unfired vessels.

The UPC does not contain this requirement. It would be regulated by the local energy conservation code.

F. CHAPTER 6 - WATER SUPPLY AND DISTRIBUTION

6-1. **IPC Chapter 6, WATER SUPPLY AND DISTRIBUTION.** This section does not contain a water pipe sizing procedure. IPC Section 604.1 requires that piping be sized per "accepted engineering practice". It also requires that methods used to determine pipe sizes shall be approved, but it does not say how or by whom. Furthermore, it does not refer to Appendix E, which is supposedly an acceptable method.

UPC Section 610.0 covers sizing potable water piping. UPC Table 6-5 is used for sizing smaller systems of up to 50 water supply fixture units (WSFU) and 200 feet maximum length without a great deal of engineering. In addition, UPC Section 610.10 provides a mechanism for adapting flush valve fixtures in these moderate size systems that does not require the utilization of the engineered method to size the piping. This makes it much more convenient for the plumbing contractors, the plumbing inspectors for checking, and the engineers who do not want to do a lot of detailed engineering. Systems having more than 50 WSFU can be sized by Table 6-5 up to 1000 feet maximum, by the procedures in Appendix A, or by Appendix L.

6-2. **IPC Section 604.3, Water distribution system design criteria.** The "conditions of peak demand" under which fixtures are expected to perform according to Table 604.3 are not described. Furthermore, IPC Table 604.3 is not consistent with IPC Table 604.4 as noted below:

a. A lavatory that flows 2.5 gpm at 60 psig will not flow 2 gpm at 8 psig.

b. A shower head that flows 2.5 gpm at 60 psig will not flow 3 gpm at 8 psig nor 3.0 gpm at 20 psig.

c. A sink faucet that flows 2.2 gpm at 60 psig will not flow 2.5 gpm at 8 psig.

d. Table 604.4 lists 2.5 gpm maximum for showers but Table 604.3 lists 3 gpm required design flow.

e. Table 604.4 lists 0.5 gpm for public lavatories but Table 604.3 lists 2 gpm design for all lavatories. The flow rate of 0.5 gpm is associated with self-closing faucets.

f. In Table 604.4, the quantity of 0.25 gallons per metering cycle does not apply to all self-closing faucets, only the metering type.

The UPC provides a means for sizing water piping systems using flow values that are coordinated with current water conservation standards. (See UPC comment in Item 6-1 above.)

6-3. **IPC Table 604.3, WATER DISTRIBUTION SYSTEM DESIGN CRITERIA, REQUIRED CAPACITIES AT FIXTURE SUPPLY PIPE OUTLETS.** This table lists 8 psi flow pressure at the water supply pipe outlet for two-piece water closets. However, many ultra low flow water closets require higher water pressure for proper flushing. The IPC does not address this.

UPC Section 608.1, Inadequate Water Pressure, requires 15 psi minimum pressure at fixtures, and higher if required by the fixtures and/or fixture fittings.

6-4. The IPC does not dictate where self-closing and self-closing metering faucets are required to be installed.

UPC Section 402.6 requires that self-closing or self-closing metering faucets be installed on lavatories intended to serve the transient public, such as those in, but not limited to, service stations, train stations, airports, restaurants, and convention halls. This is consistent with current water conservation practices.

6-5. **IPC Section 604.5, Size of fixture supply.** This section allows up to a 30" reduced-size flexible tubing supply to each fixture. This can create a significant pressure drop, especially in light of the IPC's already reduced water pipe size allowance. (Also see Item 6-7 below.)

UPC Table 6-4 requires 1/2" minimum supply pipes to all fixtures. Therefore, 30" reduced-size flexible connectors will still provide sufficient water pressure and flow at the fixtures.

6-6. **IPC Table 604.5, MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES.** This section permits 3/8" fixture water supply pipes for the following fixtures:

Bidets
Drinking fountains
Lavatories
Flush tank water closets
Flushometer tank water closets

The pressure loss created by 3.0 gallons per minute for a water closet in 3/8" PEX is 32.4 psig for a 60-foot run. This is excessive pressure loss.

UPC Table 6-4 requires 1/2" minimum supply pipe to all fixtures.

6-7. **IPC Table 604.5, MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES, Footnote "a".** This footnote states "Where the developed length of the distribution line is 60 feet or less, and the available pressure at the meter is a minimum of 35 psi, the minimum size of an individual distribution line supplied from a manifold and installed as part of a parallel water distribution system shall be one nominal tube size smaller than the sizes indicated." (Emphasis added.)

This footnote requires that all parallel water distribution supply lines that were 3/8" be reduced to 1/4" and 1/2" supply lines be reduced to 3/8". This mandatory reduction in size will not allow the required flow of water to the fixtures as required by Table 604.3. For example, for a shower with 2.5 gpm flow in 60 feet of 3/8" PEX equals 23.5 psig loss; residual required pressure of 8 psig; elevational loss of, say, six pounds; meter loss of, say, 2.0 psi, equals a total of 39.5 psig losses without fitting losses. However, this pipe size reduction can be used with an incoming pressure of only 35 psig. Therefore, the water system cannot provide the required residual pressure and flow to the fixtures. Furthermore, if temperature controlled shower mixing valves or ultra low flow water closets are installed which require higher than 8 pounds residual pressure then the pressure deficiency is even greater.

UPC Table 6-4 requires 1/2" minimum supply pipe to all fixtures.

6-8. **IPC Section 604.9, Water hammer.** This section states that "The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer." Flow velocities are "controlled" by pipe sizing. However, the IPC does not limit the flow velocities for the various water distribution piping materials.

The UPC limits the flow velocities in various piping materials in its Installation Standards.

6-9. **IPC Section 604.10.1, Manifold sizing.** This section requires that the manifold shall be sized on the basis of the summation of the gpm demand of all the outlets

(fixtures) supplied by the manifold. This oversizes the manifold because it does not allow for normally accepted diversity in the use of fixtures, i.e., normally all fixtures do not operate at the same time.

The UPC allows manifolds to be sized on the basis of the same diversity as is used in sizing water piping.

6-10. **IPC Table 604.10.1, MANIFOLD SIZING.** This table has two columns, velocity at 4 feet and velocity at 8 feet per second. However, there is nothing in the IPC to dictate or mandate which column an individual is to utilize in sizing the water system manifold.

The UPC limits the velocity in various materials in its Installation Standards.

6-11. **IPC Table 605.5, WATER DISTRIBUTION PIPE.** This table does not prohibit the use of plastic insert fittings in polybutylene (PB) tubing. It also does not reference ASTM F1390 for metal insert fittings for PB tubing. However, IPC Section 605.19.3, Mechanical joints, mentions metallic lock rings but does not prohibit plastic insert fittings. The manufacturers of polybutylene tubing have blamed the failure of the product on the use of plastic insert fittings. They now recommend only brass insert fittings.

The UPC no longer approves PB piping for water systems due to the number of failures and lawsuits. Also, some jurisdictions prohibit flexible fixture supplies that are PB because of deterioration and failure because of the chlorine in public water systems.

6-12. **IPC Section 605.16.2, Solvent cementing.** The IPC now permits ASTM D2846 CPVC pipe and fittings up through 2" size to be solvent cemented with ASTM F493 yellow cement without the use of a primer.

UPC Section 316.1.6 requires that CPVC and PVC pipe and fittings be cleaned and joined with listed primer(s) and solvent cements(s). There is currently no consensus among the manufacturers of pipe, fittings, and solvent cements that adequate joints can be made without using a primer. There is concern among designers, installers, and code officials about mixing pipe, fittings, and solvent cements from different manufacturers who have different recommendations regarding the use of one-step solvent cements.

6-13. **IPC Section 605.22.1, Copper or copper-alloy tubing to galvanized steel pipe.** This section does not restrict the joining of copper tubing and galvanized steel pipe except for how the joining is to be made. Also the IPC does not require such dissimilar joint connections to be exposed or accessible.

UPC Section 604.1 indicates that all material used in the water supply system, except valves and similar devices, shall be of a like material, except where otherwise approved by the Administrative Authority. Furthermore, UPC Section 311.6 indicates that except for necessary valves where intermembering or mixing of dissimilar metals occurs, the point of connection shall be confined to exposed or accessible locations.

6-14. **IPC Section 606.2, Location of shutoff valves.** Paragraph 2 requires a shutoff valve ahead of every sillcock.

The UPC does not have this mandatory requirement for all sillcocks. Shutoff valves could be installed if the installer wanted them.

6-15. **IPC Section 606.4, Valve Identification.** This section requires that all service valves, hose bibb valves, and valves not located adjacent to fixtures shall be identified. It is assumed that "hose bibb valves" are the shutoff valves required in 606.2 and not the hose bibb itself.

The UPC does not require valve identification. The function of most shutoff valves is obvious. Typical specifications for commercial construction work generally require labeling of valves.

6-16. **IPC Table 606.5.4, SIZES FOR OVERFLOW PIPES FOR WATER SUPPLY TANKS.** This table provides the required size for overflow pipes from various sizes of storage tanks. However, normally the overflow pipe size is dictated only by the size of the water supply pipe inlet. (The amount of water entering the tank and not by the size of the tank.) Therefore, if the tank has a 1" supply pipe it might have a 2" overflow. However, this table does not relate to the size of the inlet pipe, but simply to the capacity of the storage tank. This results in extremely large overflow pipe sizes. The IPC seems to be overly conservative on this.

The UPC does not have this excessive requirement.

6-17. **IPC Table 606.5.7, SIZE OF DRAIN PIPES FOR WATER TANKS.** This table dictates the mandatory size of a drain pipe from a water storage tank. This extremely oversized drain piping might create serious damage as to where this large volume of water drainage is going to discharge. Furthermore, if someone wishes to take a little longer to drain a tank, why does the IPC restrict them? The IPC seems to be overly conservative on this.

The UPC does not contain this requirement.

6-18. **IPC Section 607.2, Hot water supply temperature maintenance.** This section requires that if a fixture is beyond 100 feet developed length from the water

heater, a means for maintaining temperature shall be provided to within 100 feet of the fixture. This procedure achieves very little in energy conservation or water conservation with the allowance of 100 feet of unmaintained hot water supply. In many cases, this could require that only the first few feet of hot water pipe be insulated.

The UPC does not address hot water maintenance systems, however, the various state energy conservation laws do address this subject.

6-19. **IPC Section 607.2.1, Piping insulation.** This section is not clear as to where insulation is required on hot water piping. Is it required only on the maintained piping, or the circulated supply and return piping, and is insulation required only to within 100 feet of the farthest fixture?

The UPC does not have requirements for thermal insulation on hot water piping. The requirements of the energy conservation code for the jurisdiction would apply.

6-20. **IPC Section 607.3.1, Pressure-reducing valve.** This section is very confusing being that the requirement for a means of controlling expansion is only required for service pipes 2" and smaller, which seems strange to the writers. Secondly, there is no indication that a device to control thermal expansion is required if the incoming pressure is higher than the relief valve pressure so that subsequently the integral bypass on a pressure-reducing valve would be non-functioning and, therefore, the system would have no provision to compensate for thermal expansion.

The UPC addresses this problem very clearly in the third paragraph of Section 608.3 where it indicates that if the water supply pressure is higher than the relief valve setting, a means of addressing thermal expansion must be provided regardless of the size of the water service.

6-21. **IPC Table 608.15.1, MINIMUM REQUIRED AIR GAPS.** In the IPC table "with effective openings not greater than 3/4" in diameter close to the wall," the minimum required air gap is 2-1/2", which is more restrictive than the UPC, which is only 2-1/4".

6-22. **IPC Section 608.16.3, Heat exchangers.** This section uses the terms "essentially toxic" and "essentially non-toxic" to address restrictions on the use of single-wall heat exchangers for domestic hot water. The IPC defines essentially non-toxic in Section 202, GENERAL DEFINITIONS, as having a Gosselin rating of 1. However, Gosselin ratings indicate the relative toxicity of various substances and household products ranging from a low of "1" to a high of "6". Furthermore, Gosselin's book is intended as an aid to doctors and poison control centers in quickly evaluating potential cases of poisoning that are phoned in. Products are not labeled with a Gosselin rating. The amount of the substance ingested is also a

factor in its toxicity. For example, potable water can cause death if too much is ingested.

The Commentary on the 1997 IPC describes a Gosselin rating of "1" as practically non-toxic. (Emphasis added.) The lethal dose of a substance having a Gosselin rating of "1" is listed as "more than 1 quart" for a 150 pound person. The IPC does not require that single-wall heat exchangers be permanently marked to indicate the restrictions on additives nor does IPC Section 608.16.3 require single-wall heat exchangers to have warning labels.

UPC Appendix L 3.2 permits single-wall heat exchangers if any additives used are recognized as safe by the FDA. Such products would typically bear the FDA approval. Furthermore, the UPC requires that the equipment must be permanently labeled to indicate that only FDA approved additives shall be used.

6-23. **IPC Section 608.16.4, Connections to automatic fire sprinkler systems and standpipe systems.** This section places no restrictions on the use of double check valve assemblies or double check detector assemblies for backflow protection from fire protection systems.

UPC Section 603.4.18.2 permits only reduced pressure backflow preventers or reduced pressure detector assemblies where there is a non-potable water source (such as a pond or stream) within 1700 feet of a fire department connection. This corresponds to the recommendations of national backflow prevention organizations. (AWWA M14, Class 4)

6-24. **IPC Table 608.17.1, DISTANCE FROM SOURCES OF CONTAMINATION TO PRIVATE WATER SUPPLIES AND PUMP SUCTION LINES.** A comparison of IPC Table 608.17.1 and UPC Table K-1 shows a significant reduction in the IPC in the required separation between water wells and seepage pits, septic tanks, sewers, and subsurface disposal fields. The writers are not aware of any justification for this significant reduction in these dimensions.

IPC TABLE 608.17.1 DISTANCE FROM SOURCES OF CONTAMINATION TO PRIVATE WATER SUPPLIES AND PUMP SUCTION LINES		UPC TABLE K-1 LOCATION OF WATER SUPPLY WELLS
SOURCE OF CONTAMINATION	DISTANCE (Feet)	DISTANCE (Feet)
Barnyard	100	Not included
Farm Silo	25	Not included
Pasture	100	Not included
Pumphouse floor drain of cast iron draining to	2	Not included

ground surface		
Seepage pits	50	150
Septic tank	25	50
Sewer	10	50[3]
Subsurface disposal fields	50	100
Subsurface pits	50	Not included

For SI: 1 foot = 304.8 mm.

UPC Footnote 3, "All drainage piping shall clear domestic water supply wells by at least fifty (50) feet (15240 mm). This distance may be reduced to not less than twenty-five (25) feet (7620 mm) when the drainage piping is constructed of materials approved for use within a building."

6-25. **IPC Section 609, HEALTH CARE PLUMBING.** This section deals with partial requirements of health care plumbing and health care water systems.

The UPC has added some special requirements for health care plumbing in Chapter 13 and in the backflow protection section of Chapter 6. The unique requirements for plumbing in hospitals are usually established by the design professionals and governmental agencies that oversee their design and operation.

6-26. **IPC Section 609.2, Water service.** This section requires that all hospitals have two water services regardless of the size of the facility, the number of beds, or the fact that the public water system may only have one water main in the adjacent area. Therefore, this code requirement seems to be excessive and beyond the normal requirements of a minimum plumbing code.

The UPC does not have this requirement.

6-27. **IPC Section 609.7, Condensate drain trap seal.** This section requires that a water supply be provided for cleaning, flushing, and resealing the [emphasis added] condensate traps in health care facilities. It is not clear whether this requirement is meant for all condensate traps in health care facilities or just certain traps on special equipment, which are not identified. As written, the IPC requires that water supplies be run to all HVAC condensate traps for maintenance purposes. This is a very unusual and excessive requirement. A local water supply is not needed to maintain HVAC traps. The writers are not aware of any piece of equipment that needs a local water supply for condensate trap maintenance.

The UPC does not have this requirement.

G. CHAPTER 7, SANITARY DRAINAGE

7-1. **IPC Section 702, MATERIALS.** This section has no restrictions on the location of ABS and PVC drain and waste piping.

UPC Section 701.1.2 has been revised and no longer prohibits ABS and PVC DWV piping in structures that are higher than three stories above grade. It does add limits on flame-spread index and smoke-developed index for piping exposed in ducts or plenums, except in individual dwellings.

7-2. **IPC Tables 704.1, SLOPE OF HORIZONTAL DRAINAGE PIPE, and 710.1(1), BUILDING DRAINS AND SEWERS.** These tables permit 3" horizontal drains to run at 1/8" per foot slope. All other model plumbing codes require that 3" and smaller drain piping be run at 1/4" per foot minimum slope. The 1/4" minimum slope assures sufficient flow velocity for the transport of solids. Two (2) feet per second velocity is the minimum recommended for soil and waste lines. A 3" drain at 1/8" per foot slope has a flow velocity of only 1.59 fps. A 3" drain at 1/4" per foot slope has a flow velocity of 2.25 fps. This is particularly important where 1.6 gpf water closets are involved due to the limited waste carry of some low flow water closets.

UPC Section 708.0 requires that horizontal drain piping be run at 1/4" per foot minimum slope where possible. It permits pipe 4" and larger to be run at 1/8" per foot slope when approved by the Administrative Authority.

7-3. **IPC Section 704.3, Connections to offsets and bases of stacks.** This section allows fixture connections at bases of stacks or stack offsets as close as ten pipe diameters downstream from the base of the stacks or the stack offsets. However, with sudsing, this dimension could be insufficient to prevent the suds from coming up into a fixture located near the base of the stack or stack offset.

UPC Section 711.0, Suds Relief, dictates a minimum of 8 feet from the base of the stack containing discharge from suds-producing fixtures to any connection to a fixture, with certain exceptions.

7-4. **IPC Section 704.5, Dead ends.** This section prohibits the installation of dead ends which in the definitions are listed as any developed length of greater than two feet. However, cleanout extensions and approved future fixture drainage piping are not considered dead ends. Therefore, with all of these exceptions, why does the IPC prohibit dead ends?

The UPC does not have this restriction on dead ends.

7-5. **IPC Section 705.16.2, Copper or copper-alloy tubing to galvanized steel pipe.** This section requires that the connection between copper tubing and galvanized steel be made with a brass converter fitting or dielectric fitting. The writers have not seen dielectric fittings normally used on waste or vent piping.

The UPC does not have this requirement in the drainage section of the code.

7-6. **IPC Table 706.3, FITTINGS FOR CHANGE IN DIRECTION.** This table is more liberal than the UPC in its use of short radius fittings, particularly on individual fixture drains. However, the table fails to recognize the differences in terminology for the various fitting patterns in different drain pipe materials. For example, a hubless cast iron short sweep is not a short radius fitting and its use need not be restricted. In the plumbing industry, there are some fitting pattern names that are specific to only one material.

UPC Section 706.0 does not permit 1/4 bends or other short radius fittings in individual branch drains.

7-7. **IPC Section 708.3.2, Building Sewers.** The IPC requires that all [emphasis added] sewers 8" and larger have manholes installed at each change of direction and at intervals not to exceed 400 feet. However, as now written, building sewers 8" size and larger require cleanouts at 100-foot intervals plus [emphasis added] manholes at 400-foot intervals.

UPC Section 719.6 indicates that manholes may be used on any size sewer in lieu of cleanouts when approved by the Administrative Authority. Distance between manholes shall not exceed 300 feet.

7-8. **IPC Section 708.3.3, Change of Direction.** The IPC requires a cleanout at every change of direction greater then 45 degrees, but does not require a cleanout closer than every 40 feet. Therefore, this section may require more cleanouts in drainage piping than UPC 707.0. Furthermore, regardless of how many changes of direction occur on a drain or waste line within a 40' interval, still only one cleanout is required by the IPC.

UPC Section 707.0 requires cleanouts every 100 feet. Exceptions include lines less than five feet long and all lines above the first floor of the building. Furthermore, an additional cleanout is required for each aggregate horizontal change of direction exceeding 135 degrees. The requirement for fewer cleanouts in the UPC has not proven to be a problem in clearing blockages in drainage piping when modern drain cleaning equipment is used.

7-9. **IPC Section 708.3.4, Base of stack.** This section requires that cleanouts be installed at the base of each waste or soil stack regardless of their location within the building.

The UPC only requires cleanouts if the base of the stack is part of the building drain or the lowest drain line. The requirement for fewer cleanouts in the UPC has not proven to be a problem in clearing blockages in drainage piping when modern drain cleaning equipment is used.

7-10. **IPC Section 708.4, Concealed piping.** This section requires that cleanouts be provided on all drainage piping in concealed spaces. This would require that drainage piping above the ceiling is required to be provided with cleanouts and, if the ceiling space is less than 24", the cleanout would have to be extended up to a finished wall or out through the face of the building.

The UPC only requires cleanouts on the building drain, not on drainage piping above the lowest floor.

7-11. **IPC Section 708.4, Concealed Piping.** This section requires that the piping cleanout, where the crawl space is less than 24", shall be extended through and terminate flush with finished wall, floor, or ground surface, or shall be extended to outside the building.

UPC Section 707.10 indicates that the piping cleanout shall be extended to outside the building when there is less than 18"' vertical and 30" horizontal clearance from the means of access to such cleanout and that no under-floor cleanout shall be located more than 20 feet from an access door, trap door, or crawl hole. This provides better safety for the building occupant and service personnel.

7-12. **IPC Section 708.8, Clearances.** This section requires that cleanouts on 6" and smaller pipes shall be provided with clearance of not less than 18" and cleanouts on 8" and larger pipes shall have a clearance of not less than 36".

UPC Section 707.10 is less restrictive than the IPC as it only requires that cleanouts on piping 2" or less shall have a clearance of 12" in front of the cleanout, and cleanouts on piping larger than 2" shall have a clearance of not less than 18". The requirement for less clearance for cleanouts in the UPC has not proven to be a problem in clearing blockages in drainage piping.

7-13. **IPC Table 709.1, DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS.** The IPC now distinguishes between 1.6 gpf water closets and greater than 1.6 gpf water closets. However, they distinguish between the demands of private and public plumbing fixtures only for water closets. The dfu values for flushometer tank water closets is the same whether private or public. The IPC fails to recognize use patterns for most other fixtures, which the UPC does. Plus the IPC does not recognize the higher demands caused by continuous use in assembly occupancies. Furthermore, the table omits listing significant types of fixtures which are in common use.

UPC Table 7-3 has been revised and now provides three (3) different use groups for all fixtures in lieu of four (4). There is no longer a distinction between single dwellings and 3 or more dwellings. The groups are now private, public, and assembly. The table still better addresses the demands of the

various fixtures based on their application. The dfu values in Table 7-3 are based on research by Stevens Institute, which revealed that peak drainage loads in dwellings are caused by bathtubs or combination bath/showers, clothes washers, and dishwashers. The time duration of these discharges is relatively long and combines with other fixtures to create the peak drainage loads.

UPC Table 7-3 also includes a much greater classification of fixture types for simplicity of use, as shown below. The UPC table contains 41 line items as opposed to only 27 contained in the IPC Table 709.1 (a 50% increase in fixture classifications).

Arrows indicate IPC Table 709.1 fixture classifications. ↓	Uniform Plumbing Code Table 7-3 Drainage Fixture Unit Values (DFU)				International Plumbing Code Table 709.1 Drainage Fixture Units for Fixtures & Groups	
UPC Table 7-3 – Plumbing Appliance, Appurtenance or Fixture	Minimum Size Trap & Trap Arm[7]	Private	Public	Assembly[8]	Drainage Fixture Unit Value as Load Factors	Minimum Size of Trap (Inches)
→ Automatic Clothes Washers, commercial[a]	—	—	—	—	3	2"
→ Bathroom group as defined in Section 202 (1.6 GPF water closet)[f]	—	—	—	—	5	—
→ Bathroom group as defined in Section 202 (water closet flushing greater than 1.6 GPF)[f]	—	—	—	—	6	—
→ Bathtub[b] (with or without overhead shower or whirlpool attachments)	—	—	—	—	2	1-1/2"
Bathtub or Combination Bath/Shower	1-1/2"	2.0	2.0	—	—	—
→ Bidet	1-1/4"	1.0	—	—	1	1-1/4"
Bidet	1-1/2"	2.0	—	—	—	—
→ Clothes Washer, domestic, standpipe[5] (Residential)	2"	3.0	3.0	3.0	2	2"
→ Combination Sink and Tray	—	—	—	—	2	1-1/2"
→ Dental Lavatory	—	—	—	—	1	1-1/4"
→ Dental Unit or Cuspidor	1-1/4"	—	1.0	1.0	1	1-1/4"
→ Dishwasher, domestic, with independent drain	1-1/2"[2]	2.0	2.0	2.0	2	1-1/2"[c]
→ Drinking Fountain or Watercooler (per head)	1-1/4"	0.5	0.5	1.0	0.5	1-1/4"
Food-waste-grinder, commercial	2"	—	3.0	3.0	—	—
→ Floor Drain, emergency	2"	—	0.0	0.0	0	2"
Floor Drain (for additional sizes see Section 702)	2"	2.0	2.0	2.0	—	—
→ Floor Drains	—	—	—	—	2	2"
Shower single head trap	2"	2.0	2.0	2.0	—	—
Multi-head, each additional	2"	1.0	1.0	1.0	—	—
→ Lavatory, single	1-1/4"	1.0	1.0	1.0	1	1-1/4"
Lavatory in sets of two or three	1-1/2"	2.0	2.0	2.0	—	—
Washfountain	1-1/2"	—	2.0	2.0	—	—
Washfountain	2"	—	3.0	3.0	—	—
Mobile Home, trap	3"	12.0	—	—	—	—
Receptor, indirect waste[1,3]	1-1/2"	—	See Footnote 1,3		—	—
Receptor, indirect waste[1,4]	2"	—	See Footnote 1,4		—	—
Receptor, indirect waste[1]	3"	—	See Footnote 1		—	—
→ Shower	—	—	—	—	2	1-1/2"
Sinks						
Bar	1-1/2"	1.0	—	—	--	—
Bar	1-1/2"[2]	—	2.0	2.0	—	—
Clinical	3"	—	6.0	6.0	--	—
Commercial with food waste	1-1/2"[2]	—	3.0	3.0	—	—

→	Sink	—	—	—	—	2	1-1/2"
	Special Purpose	1-1/2"	2.0	3.0	3.0	—	—
	Special Purpose	2"	3.0	4.0	4.0	—	—
	Special Purpose	3"	—	6.0	6.0	—	—
→	Kitchen, domestic (with or without food-waste-grinder and/or dishwasher)	1-1/2"[2]	2.0	2.0	—	2	1-1/2"
	Laundry (with or without discharge from a clothes washer)	1-1/2"	2.0	2.0	2.0		
→	(1 or 2 compartments)					2	1-1/2"
	Service or Mop Basin	2"	—	3.0	3.0	—	—
	Service or Mop Basin	3"	—	3.0	3.0	—	—
	Service, flushing rim	3"	—	6.0	6.0	—	—
→	Wash, each set of faucets (circular or multiple)	—	—	2.0	2.0	2	1-1/2"
→	Urinal	—	—	—	—	4	Footnote d
→	Urinal, 1 gallon per flush or less	—	—	—	—	2[e]	Footnote d
	Urinal, integral trap 1.0 GPF[2]	2"	2.0	2.0	5.0	—	—
	Urinal, integral trap greater than 1.0 GPF	2"	2.0	2.0	6.0	—	—
	Urinal, exposed trap	1-1/2"[2]	2.0	2.0	5.0	—	—
→	Water Closet, 1.6 GPF Gravity Tank[6]	3"	3.0	4.0	6.0	3[e] Private	Footnote d
	Water Closet, 1.6 GPF Flushometer Tank[6]	3"	3.0	4.0	6.0	—	—
→	Water Closet, Flushometer Tank, public or private	—	—	—	—	4[e]	Footnote d
	Water Closet, 1.6 GPF Flushometer Valve[6]	3"	3.0	4.0	6.0	—	—
→	Water Closet, greater than 1.6 GPF Gravity Tank[6]	3"	4.0	6.0	8.0	4[e] Private	Footnote d
	Water Closet, greater than 1.6 GPF Flushometer Valve[6]	3"	4.0	6.0	8.0	—	—
→	Water Closet, public (1.6 GPF)	—	—	—	—	4[e]	Footnote d
→	Water Closet, public (flushing greater than 1.6 GPF)	—	—	—	—	6[e]	Footnote d

UPC Footnotes

1 Indirect waste receptors shall be sized based on the total drainage capacity of the fixtures that drain therein to, in accordance with Table 7-4.
2 Provide a 2" (52 mm) minimum drain.
3 For refrigerators, coffee urns, water stations, and similar low demands.
4 For commercial sinks, dishwashers, and similar moderate or heavy demands.
5 Buildings having a clothes washing area with clothes washers in a battery of three (3) or more clothes washers shall be rated at six (6) fixture units each for purposes of sizing common horizontal and vertical drainage piping.
6 Water closets shall be computed as six (6) fixture units when determining septic tank sizes based on Appendix K of this Code.
7 Trap sizes shall not be increased to the point where the fixture discharge may be inadequate to maintain their self-scouring properties.
8 Assembly [public use (See Table 4-1)].

IPC Footnotes

a For traps larger than 3 inches, use Table 709.2.
b A showerhead over a bathtub or whirlpool bathtub attachments does not increase the drainage fixture unit value.
c See Sections 709.2 through 709.4 for methods of computing unit value of fixtures not listed in Table 709.1 or for rating of devices with intermittent flows.
d Trap size shall be consistent with the fixture outlet size.
e For the purpose of computing loads on building drains and sewers, water closets or urinals shall not be rated at a lower drainage fixture unit unless the lower values are confirmed by testing.
f For fixtures added to a dwelling unit bathroom group, add the DFU value of those additional fixtures to the bathroom group fixture count.

Inch	1-1/4	1-1/2	2	2-1/2	3
mm	32	40	50	65	80

For SI: 1 inch = 25.4 mm, 1 gallon = 3.785 L.

7-14. The IPC and UPC both require 1-1/2" minimum traps on kitchen sinks. The IPC permits a 1-1/2" branch drain. However, the UPC requires a 2" drain beyond the trap on any sink, as there may be food waste now or in the future.

7-15. **IPC Table 709.2, DRAINAGE FIXTURE UNITS FOR FIXTURE DRAINS OR TRAPS.** The DFU values for drain and trap sizes of fixtures not listed in Table 709.1 are less than required in UPC 702.0 as shown below.

IPC Table 709.2 DRAINAGE FIXTURE UNITS FOR FIXTURE DRAINS OR	UPC Table 702.0 FIXTURE UNIT EQUIVALENTS

TRAPS	
FIXTURE DRAIN OR TRAP SIZE (INCHES)	DRAINAGE FIXTURE UNIT VALUE
1-1/4	1
1-1/2	2
2	3
2-1/2	4
3	5
4	6

For SI: 1 inch = 25.4 mm.

DRAINAGE FIXTURE UNIT VALUE	
1-1/4"	1 Unit
1-1/2"	3 Units
2"	4 Units
—	—
3"	6 Units
4"	8 Units

Exception: On self-service laundries.

7-16. **IPC Section 710.1, Maximum fixture unit load.** The IPC fixture loading for drainage piping as shown in Table 710.1(1), BUILDING DRAINS AND SEWERS, is more liberal in some cases than the fixture loading shown in UPC Table 7-5. However, UPC Table 7-5 allows greater DFUs on horizontal lines than does IPC Table 710.1(2) for "total for a horizontal branch". Therefore, the UPC has greater allowance for DFU carrying capacity in horizontal drain lines for most installations. See comparisons below.

IPC TABLE 710.1(1)
Building Drains and Sewers

DIAMETER OF PIPE (INCHES)	MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS CONNECTED TO ANY PORTION OF THE BUILDING DRAIN OR THE BUILDING SEWER, INCLUDING BRANCHES OF THE BUILDING DRAIN[a] — SLOPE PER FOOT 1/4 INCH
1-1/4	1
1-1/2	3
2	21
2-1/2	24
3	42
4	216
5	480
6	840
8	1,920
10	3,500
12	5,600
15	10,000

For SI: 1 inch = 25.4 mm, 1 inch per foot = 0.08.33 mm/m.
a The minimum size of any building drain serving a water closet shall be 3 inches.

IPC Table 710.1(2)
Horizontal Fixture Branches and Stacks[a]

MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS (DFU) — TOTAL FOR A Horizontal Branch
—
3
6
12
20
160
360
620
1,400
2,500
2,900
7,000

For SI: 1 inch = 25.4 mm.
a Does not include branches of the building drain. Refer to Table 710.1(1).

UPC TABLE 7-5
MAXIMUM UNIT LOADING AND MAXIMUM LENGTH OF DRAINAGE AND VENT PIPING

SIZE OF PIPE INCHES (mm)	MAXIMUM UNITS DRAINAGE PIPING[1] HORIZONTAL
1-1/4 (32)	1
1-1/2 (40)	1
2 (50)	8[3]
2-1/2 (65)	14[3]
3 (80)	35[4]
4 (100)	216[5]
5 (125)	428[5]
6 (150)	720[5]
8 (200)	2,640[5]
10 (250)	4,680[5]
12 (300)	8,200[5]

1 Excluding trap arm
2 Except sinks, urinals and dishwashers.
3 Except six-unit traps or water closets.
4 Only four (4) water closets or six-unit traps allowed on any vertical pipe or stack; and not to exceed three (3) water closets or six-unit traps on any horizontal branch or drain.
5 Based on one-fourth (1/4) inch per foot (20.9 mm/m) slope. For one-eighth (1/8) inch per foot (10.4 mm/m) slope, multiply horizontal fixture units by a factor of 0.8.

7-17. **IPC Section 710, DRAINAGE SYSTEM SIZING, and Tables 709.1 and 709.2.** Nowhere does it require that the minimum size for drainage piping for a water closet shall be 3". Also, Table 710.1(1) indicates that the minimum size for a building drain (emphasis added) serving a water closet shall be 3" but the IPC does not indicate the requirement that a minimum branch size to the water closet

shall be 3". Therefore, it could be 2-1/2", which is the trap way for some water closets.

UPC Tables 7-3 and 7-5 require a minimum of 3" drain piping for water closets.

7-18. **IPC Section 710.1.1, Horizontal stack offsets.** The IPC requires that horizontal stack offsets be sized as shown in Table 710.1(1), except as modified by Section 711.4.

The UPC requires only Table 7-5 for determination of vertical and horizontal pipe sizing and does not require other considerations for pipe sizing.

7.19. **IPC Table 710.1(2), HORIZONTAL FIXTURE BRANCHES AND STACKS.** There appears to be a typographical error for the maximum number of DFUs on a 12" horizontal branch drain. The "2900" should probably read "3900".

7-20. **IPC Section 710.1.2, Vertical stack offsets.** The IPC requires that vertical offsets be sized in accordance with Table 710.1(2) except as modified by Section 711.1.1.

The UPC only requires the sizing of the offsets to be as shown in Table 7-5 with no other considerations required for pipe sizing.

7-21. **IPC Section 710, DRAINAGE SYSTEM SIZING, and Section 711, OFFSETS IN DRAINAGE PIPING IN BUILDINGS OF FIVE STORIES OR MORE.** These sections use branch intervals in sizing drainage stacks. Table 710.1(2) has limits on the total number of drainage fixture units that:

(1) can discharge into one (1) branch interval. This makes sure that the stack is large enough that the flow introduced in one (1) branch interval does not block the stack and restrict its flow.

(2) can discharge into stacks of up to three (3) branch intervals. This adds some diversity in the total number of DFUs allowed.

(3) can discharge into stacks of greater than three (3) branch intervals. This includes more diversity in the total allowable load on the stack.

By definition, branch intervals correspond to a story height but are not less than eight (8) feet high. This is so that where there are branch connections from fixtures on one floor that have connections both above and below the floor, it does not count as more than one (1) branch interval. However, a problem can occur if the floors of the building are staggered and drain connections from fixtures on two (2) floors occur within an eight (8) foot height.

UPC Table 7-5 does not use the branch interval principle and also allows 1-1/4" stacks for one DFU fixtures. Furthermore, the UPC permits greater carrying capacity in vertical drainage piping than does the IPC in most of their "one branch interval stacks" and "three branch intervals or less" which results in smaller drainage sizing with the UPC method for most installations. For comparison of the carrying capacity of stacks, see tables below.

IPC TABLE 710.1(2)

HORIZONTAL FIXTURE BRANCHES AND STACKS[a]

DIAMETER OF PIPE (INCHES)	MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS (DFU)		
	STACKS[b]		
	TOTAL DISCHARGE INTO ONE BRANCH INTERVAL	TOTAL FOR STACK OF THREE BRANCH INTERVALS OR LESS	TOTAL FOR STACK GREATER THAN THREE BRANCH INTERVALS
—	—	—	—
1-1/2	2	4	8
2	6	10	24
2-1/2	9	20	42
3	20	48	72
4	90	240	500
5	200	540	1,100
6	350	960	1,900
8	600	2,200	3,600
10	1,000	3,800	5,600
12	1,500	6,000	8,400
15	Footnote c	Footnote c	Footnote c

For SI: 1 inch = 25.4 mm.
a Does not include branches of the building drain. Refer to Table 710.1(1).
b Stacks shall be sized based on the local accumulated connected load at each story or branch interval. As the total accumulated connected load decreases, stacks are permitted to be reduced in size. Stack diameters shall not be reduced to less than one-half of the diameter of the largest stack size required.
c Sizing load based on design criteria.

UPC TABLE 7-5

MAXIMUM UNIT LOADING AND MAXIMUM LENGTH OF DRAINAGE AND VENT PIPING

SIZE OF PIPE INCHES (mm)	MAXIMUM UNITS DRAINAGE PIPING[1] VERTICAL
1-1/4 (32)	1
1-1/2 (40)	2[2]
2 (50)	16[3]
2-1/2 (65)	32[3]
3 (80)	48[4]
4 (100)	256
5 (125)	600
6 (150)	1,380
8 (200)	3,600
10 (250)	5,600
12 (300)	8,400

1 Excluding trap arm
2 Except sinks, urinals and dishwashers.
3 Except six-unit traps or water closets.
4 Only four (4) water closets or six-unit traps allowed on any vertical pipe or stack; and not to exceed three (3) water closets or six-unit traps on any horizontal branch or drain.
5 Based on one-fourth (1/4) inch per foot (20.9 mm/m) slope. for one-eighth (1/8) inch per foot (10.4 mm/m) slope. multiply horizontal fixture units by a factor of 0.8.

7-22. **IPC Table 710.1(2), HORIZONTAL FIXTURE BRANCHES AND STACKS.** IPC 709.1 now addresses whether or not water closets are rated for 1.6 GPF or greater than 1.6 GPF, but the IPC still has no restrictions on the number of water closets on a 3" drainage stack. As an example, if the stack served only water closets in hotel guest rooms, the IPC would permit as many as twenty-four (24) 1.6 GPF water closets on the stack.

The UPC restricts 3" stacks to four (4) water closets to avoid possible overloading of the stack in the event that more than the predicted number of fixtures are flushed simultaneously.

7-23. **IPC Section 711, OFFSETS IN DRAINAGE PIPING IN BUILDINGS OF FIVE STORIES OR MORE.** This section contains six sections with different requirements as to where the vents are required, how and where they have to be installed, and their sizing, etc. Furthermore, while the title of IPC Section 711 refers to "buildings of five stories or more", the text refers to branch intervals.

UPC Table 7-5 can be used directly to size stacks and offsets in stacks, but the UPC does not require sizing changes for venting offsets.

7-24. **IPC Section 712, SUMPS AND EJECTORS.** This section does not require that sewage ejector pumps in commercial and other "public use" occupancies be duplexed. Also Section 712.3 refers to a "sump pump" for a sewage sump. Sump pumps do not have the solids-handling capacity of a sewage pump.

UPC Section 710.9 requires dual sewage pumps or ejectors in "public-use" occupancies that function independently to assure continuous operation of the drainage system during maintenance or in the event of equipment failure.

7-25. **IPC Section 713, HEALTH CARE PLUMBING.** This section still includes many provisions that are outdated regarding local vents for sterilizers and bed pan washers. Boiling-type sterilizers are no longer used in modern health care facilities. The requirements for vacuum systems in Sections 713.4, 713.5, 713.6 and 713.7 are far from complete and do not include sufficient requirements to assure that medical vacuum disposal systems in health care facilities are safe and sanitary. These four (4) sections are not coordinated with IPC Section 1202.1, which references NFPA 99C for the design and installation of medical vacuum systems.

The UPC has been revised to include the special requirements for plumbing in health care facilities in its Chapter 13, where its extensive requirements for medical gas and vacuum systems are located. The UPC references both NFPA 99C – *Gas and Vacuum Systems* and its parent document, NFPA 99 -- *Health Care Facilities*, either of which can be used for medical gas and vacuum systems in health care facilities.

7-26. The IPC has no specific requirements for suds relief at the base of stacks or offsets of stacks serving suds-producing fixtures, such as bathtubs, clothes washers, kitchen sinks, and dishwashers.

UPC Section 711.0, in order to prevent the sudsing backup problem, prohibits fixture connections within eight (8) feet of the base of the stack or offsets of stacks having suds-producing fixtures except in dwellings or stacks less than three (3) stories high.

7-27. **IPC Section 714, COMPUTERIZED DRAINAGE DESIGN.** This sounds impressive but it is largely meaningless. The section does not indicate what computer program design methods are approved. Furthermore, COMPUTERIZED DRAINAGE DESIGN does not mandate that the design comply with the minimum requirements of IPC Section 105.4, Alternative engineered design.

a. **IPC Section 714.1** could be interpreted to mean that all plumbing drainage systems must be sized by computer.

b. **IPC Section 714.2** requires that the load on the drainage system be determined by:

1) the simultaneous discharge conditions from fixtures, appurtenances, and appliances, or

2) the sequential discharge conditions from fixtures, appurtenances, and appliances, or

3) the peak usage design condition.

These three criteria represent three (3) completely different conditions and the IPC does not specify which condition is to be used.

c. **IPC Section 714.2.1, Fixture discharge profiles.** This section requires that the flow rate versus time be in accordance with manufacturer's specifications. This data is normally not published by manufacturers and would normally be difficult to obtain.

d. **IPC Section 714.3, Selections of drainage pipe sizes.** This section permits sizing the drainage pipe up to (but not at) its full-bore flow. Historically, drainage pipe sizing tables have been typically based on the drainage pipes flowing only half full. This provides for air movement above the flow and allows for temporary overloads and surges. The writers are not aware of any engineering exception to this fundamental requirement.

e. **IPC Section 714.3.1, Selecting pipe wall roughness.** This section sounds impressive but does not say anything. Allowance for aging, deposit, and corrosion are historically included in the drainage pipe sizing tables in most plumbing codes, being that over time most drainage piping ends up with a similar roughness factor.

The UPC does not prohibit the use of computers to size drainage piping, provided that the sizing complies with all requirements of Chapter 7, Sanitary Drainage. If the resulting pipe sizing is different from that required by Chapter 7, the design would be considered as an "engineered plumbing system" and would have to comply with the requirements of Appendix L. Appendix L includes provisions to assure that the alternate design will comply with the public health and safety requirements of the code.

H. CHAPTER 8, INDIRECT/SPECIAL WASTE

8-1. **IPC Section 802.1.1, Food handling.** This section contains an exception which does not require an air gap in the discharge from a domestic dishwasher. It is possible for waste water from a flooded kitchen sink to flow back into the dishwasher and contaminate dishes that were clean.

UPC Section 807.4 requires dishwasher air gap fittings to be installed above the flood level of the kitchen sink on all domestic dishwasher discharge lines, and UPC Section 704.3 requires that commercial dishwashers be directly connected to maintain the sanitary conditions in the restaurant but also requires a floor drain be installed adjacent to the fixture to prevent backup of sewage, thereby protecting the sanitation of the dishes in the dishwasher.

8.2. **IPC Section 802.1.2, Floor drains in food storage area.** The exception to this section permits an air break in lieu of an air gap on an indirect waste line from a food storage area that has a backwater valve. A backwater valve would be of benefit only if the flood level rim of the receptor was at or above the flood level of the food storage area. This exception places total reliance on the backwater valve to protect the stored food from contamination by backflow of sewage. Backwater valves typically do not provide the leak-tightness that this exception should require.

UPC Section 801.2.2 permits air breaks in indirect wastes from food storage areas, but requires that the floor level rim of the receptor be at least six (6) inches lower than the lowest floor drain (in the food storage area). It further requires that where the food storage area (and indirect waste pipe) may be under a vacuum, only air gaps are permitted. The UPC thus requires more protection from sewage backflow in food storage areas than the IPC.

8-3. **IPC Section 803.1, Waste water temperature.** This section requires that waste water above 140° Fahrenheit simply be discharged to an indirect waste receptor that is connected to the drainage system. This method, in itself, does not prevent the excessively hot water from entering the sanitary discharge system. Plumbing codes limit the temperature of waste discharge to protect the drain piping and also to prevent the high temperature from adversely affecting bacterial action in the sewage.

UPC Section 810.0 contains detailed requirements for the sumps and condensers that are necessary to cool the waste before it enters the drainage system. Furthermore, Table 8-1 contains minimum sizing for blowoff condensers and sump pipe sizing.

8-4. **IPC Section 803, SPECIAL WASTES.** This section provides minimum criteria for corrosive/chemical wastes.

UPC Section 811.0 provides a far more comprehensive code section controlling chemical waste discharge.

8-5. The IPC does not contain any specific criteria for sizing air conditioning condensate piping.

UPC Section 815.1 and 815.2 and Table 8-2 provide complete criteria for sizing air conditioning condensate piping.

I. CHAPTER 9, VENTS

9-1. **IPC Section 901, GENERAL.** This section requires that every trap and trap fixture shall be vented in accordance with the venting method specified in this chapter.

UPC Section 902.0, Vents Not Required, specifies where indirect waste can be installed without vents which allows for lesser cost installations for specific equipment.

9-2 **IPC Section 902.1, Vents.** This section has no restrictions on the location of ABS and PVC vent piping.

UPC Section 903.1.2 has been revised and no longer prohibits ABS and PVC vent piping in structures that are higher than three stories above grade. It does add limits on flame-spread index and smoke-developed index for piping exposed in ducts or plenums, except in individual dwellings.

9.3 **IPC Section 903.1, Stack required.** This section was entitled "Main vent required" in the 1997 IPC and required a vent to run undiminished in size and as directly as possible from the building drain to the open air above the roof. The required size of this vent was not clear. This section has been changed in the 2000 IPC and no longer refers to the "main vent" as such. It now requires at least one stack that is not less than one-half the size of the required building drain, but it does not indicate whether this refers to a vent stack or a stack vent, which is the title of Section 903. If it is a stack vent, there would be a drainage stack connected as directly as possible to the building drain instead of a vent. New Section 903.1.1 indicates that the main vent could be a stack vent, in which case would the drainage stack have to be at least one-half the size of the required building drain? This section is still not clear on what it requires.

UPC Section 904.1 requires that each drainage system have one or more vents with an aggregate cross-sectional area that is not less than that of the largest required building sewer. This assures adequate venting of the system and typically adds little or no cost to the plumbing system, depending on its layout.

9-4. **IPC Section 903.2, Vent stack required.** This section requires vent stacks for drainage stacks having only five (5) branch intervals or more.

UPC Section 907.1 only requires vent stacks for drainage stacks extending ten (10) stories or more. There are no indications that this causes inadequate venting of the stack and branches of the building drain.

9-5. **IPC Section 904.2, Frost closure.** This section requires 3" minimum size vents to prevent frost closure. Furthermore, the IPC requires enlargement where the 97.5 percent value (ASHRAE) for outside design temperature is less than zero degrees Fahrenheit (-18 degrees C.) This temperature, however, is not the minimum winter design temperature but is the normal winter heating design temperature for buildings. Normally in the middle of the night the heating system may or may not be at maximum capacity, but the plumbing system would still be exposed to the colder minimum temperature. Also from the *ASHRAE Design Manual*, the 97.5% value is exceeded in a normal year by at least 54 hours. Therefore, this 97.5% temperature is not the appropriate temperature to use to protect a plumbing vent terminal from freezing. The edition of the *ASHRAE Fundamentals Handbook* from which Appendix D was extracted also listed 99% temperature values. In addition, the more recent *ASHRAE Fundamentals Handbook* edition lists the mean of the annual daily minimum extremes which is the more appropriate temperature to be used for freeze protection.

UPC Section 906.7 requires 2" minimum vents to prevent frost and snow closure. The 2" size has proven to be adequate. Also, the UPC requires that any installation that has a minimum design temperature below zero degrees F. be so protected, as opposed to the 97.5% design temperature used by the IPC.

9-6. **IPC Section 904.5, Location of vent terminal.** This section allows that vent terminals may be two (2) feet above any opening and within ten (10) feet horizontally of an opening.

UPC Section 906.2 requires that vent terminals be at least three (3) feet above any opening within ten (10) feet horizontally. The three-foot dimension is derived from the BMS 66, the basis of most modern plumbing codes.

9-7. **IPC Section 904.5, Location of vent terminal.** This section does not indicate how close a vent termination can be to a lot line or property line. It refers only to openings in buildings. Section 904.6 requires that a vent extension through a wall must be 10 feet from a lot line and 10 feet above grade, but this only applies to sidewall vents.

UPC Section 906.2, Vent Terminations, requires that vents terminate not less than three (3) feet in any direction from any lot line; alleys and streets excepted.

9-8. **IPC Section 904.6, Extension through the wall.** This section permits sidewall vent terminals. It does not require that the vent terminal be turned up or down. Furthermore, sidewall vents that terminate horizontally are subject to direct wind loads. A 45 mile per hour wind produces a pressure of 1" wg, which when added to the 1" wg design basis for the vent piping, could blow a 2" trap seal and create an unsanitary condition. In addition, sidewall vent terminals must be protected (by screens?) against the entrance of birds or rodents. This creates a maintenance problem and the potential for the vent becoming blocked and ineffective.

The UPC does not allow side wall vents but requires all vents to terminate above the roof.

9-9. **IPC Section 904.6, Extension through the wall.** This section does not indicate how far the vent line has to terminate from the wall. Therefore, wind blowing against the wall could create additional pressure even if the pipe is turned down or up, as the wall acts as a wind break. Furthermore, this section indicates that vents shall not be installed below a roof extension if they have soffit vents. However, one could have a roof extension without soffit vents and then sewer gas could be trapped underneath the roof extension and could migrate over to openable windows that are located ten feet away. This would allow sewer gas into the building and there is no prohibition against this condition in the IPC.

The UPC does not allow sidewall vents and also requires in Section 906.1 that the vent terminate not less than one foot from any vertical surface.

9-10. **IPC Section 904.7, Extension outside a structure.** This section again uses the 97.5 percent design temperature value for requirements for protection of vents outside the structure from freezing by insulation, heat or both. This is the wrong outside temperature to use. (See Item 9-5 above.)

UPC Section 906.7 requires the use of the minimum design temperature instead of the 97.5% design temperature figure.

9-11. **IPC Section 905.1, Connection.** This section has been changed so that air admittance valves are no longer considered as exceptions to extending vents to the outdoor air. However, as now written, it permits any [emphasis added] individual, branch, or circuit vent to connect to an air admittance valve, without reference to Section 917, which has limitations on where air admittance valves can be used.

The UPC does not permit air admittance valves. (For reasons see Item 9-28 below.)

9-12. **IPC Section 905.2, Grade.** This section indicates that all vent pipes be so graded (emphasis added) and connected as to drain back to the drainage pipe by gravity.

UPC Section 905.1 indicates that "all vents shall be free from drops or sags and such vents shall be level or shall be graded and connected as to drip back by gravity to the drainage pipes." Therefore, it is not required to grade vents. This simplifies the installation of vent piping by not having to grade them.

9-13. **IPC Section 905.6, Side inlet.** This section has been deleted in the 2000 IPC. It permitted wet vents to connect to a side inlet on a closet bend. It is not clear now whether side inlet closet bends are prohibited or not.

The UPC now includes wet venting of water closets in Appendix L 6.2 and 6.3 for those jurisdictions who permit this method of venting. However, whether or not side inlets are permitted is a matter of interpretation. Section L 6.2.1 prohibits wet vent openings below the weir of the trap that they are venting, but Section 905.5 exempts water closets from that requirement.

9-14. **IPC Section 906.1, Distance of trap from vent, and Table 906.1, MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT.** This section and table establish the allowable distances between traps and their protecting vents to prevent self-siphonage. The purpose is to keep the vent pipe opening at the end of the trap arm above the overflow weir of the trap.

UPC Table 10-1 has allowable trap arm lengths that are less than those shown in IPC Table 906.1. The shorter distances between the trap and its vent allows for the longer sweep of some fittings, such as combination wyes and 1/8th bends.

9-15. **IPC Section 908.3, Connection at different levels.** This section is confusing. It sizes the vertical drain between the two fixtures using Table 908.3 – Common Vent Sizes. However, Table 908.3 sizes the piping according to the DFU value for the upper fixture only, without regard for the lower fixture. According to Table 908.3, a 1-1/2" pipe could serve as a wet vent for a water closet. But Table 909.3 – Wet Vent Size requires a 2" wet vent from a lavatory to a water closet.

UPC Section 908.0 – Vertical Wet Venting requires that the wet vented section be at least one size larger than the minimum size waste for the upper fixture or one size larger than required to drain and vent both fixtures, whichever is larger. It also requires that the pipe be 2" minimum size.

9-16. **IPC Section 909, WET VENTING.** This section has criteria for horizontal and vertical wet venting two bathroom groups on the same floor. However, the code

does not fully describe how to determine the DFU load in the various portions of the wet vent piping. In the Commentary of the 1997 IPC, it takes one (1) full page of text and eleven (11) diagrams to explain all of the possible conditions that affect the arrangement of the wet vent piping and its sizing. This section specifically addresses two bathroom groups. It is not clear whether wet venting is permitted in a single bathroom group.

IPC Section 909.1, Wet vent permitted. This section allows the fixtures to be connected in any combination and permits water closets to discharge into the wet vent piping. IPC Table 704.1 permits 3" drain piping to be sloped at only 1/8" per foot. Thus, the discharge of one or two water closets into a 3" wet vent sloped at 1/8" per foot will overfill the line and interfere with its venting function.

The UPC now includes wet venting of single and back-to-back bathroom groups in Appendix L 6.2 and 6.3 for those jurisdictions who permit this method of venting.

9-17. **IPC Section 910, WASTE STACK VENT.** This section permits waste stacks to vertically wet vent limited numbers of drainage fixture units (DFU) in a single stack concept. The DFUs are limited to 1/3 to 1/20 the maximum allowed DFUs for waste stacks with vented fixtures. However, the single stack concept has been discontinued and unused for a number of years because of the high failures of fixtures installed on this system concept. Furthermore, the origin of the IPC sizing data is unknown to the writers.

The UPC does not recognize waste stack venting other than vertical wet venting as allowed in Section 908.0.

9-18. **IPC Section 911, CIRCUIT VENTING.** This section permits circuit venting of up to eight (8) fixtures on a horizontal branch drain without venting the individual fixtures. This practice is common in large toilet rooms having rows of fixtures.

The UPC now includes battery venting (circuit venting) in Appendix L 6.1 for those jurisdictions who permit this method of venting. The UPC does not allow the battery vents and relief vents to be used at wet vents. The IPC permits up to four (4) DFU to discharge into a relief vent.

9-19. **IPC Section 912, COMBINATION DRAIN AND VENT SYSTEM.** This section permits a combination waste and vent system where conventional venting is not practical. Examples are floor drains in large warehouses, markets, and service outlet drains in exhibition halls. The drain pipes are sized per Table 912.3 to presumably oversize them to lower the depth of flow and thereby providing free movement of air to avoid disturbing the trap seals in the fixtures being drained. Water closets and urinals cannot be connected to a combination waste and vent system.

UPC Section 910.0 permits combination waste and vent systems. The pipes must be increased two sizes and branch lengths are limited to fifteen (15) feet of unvented length. Plans must be approved by the Administrative Authority before installation.

9-20. **IPC Table 912.3, SIZE OF COMBINATION DRAIN AND VENT PIPE.** This table has two columns which are both under the title Maximum Number of Drainage Fixture Units. The first column is "Connecting to a Horizontal Branch or Stack" and the second is "Connecting to a Building Drain or Building Subdrain." The first column increases the pipes one size compared to Table 710.1(2) for horizontal fixture branches. The second column increases the pipes one size, except for 1-1/2", compared to Table 710.1(1) for building drains and sewers at 1/2" slope, which is the maximum allowable slope for combination waste and vent piping. The writers are unaware of what the second column is actually based on since the IPC permits combination waste and vent piping to be sloped less than 1/2" and also why there is a difference in the allowable DFUs based on what the combination waste and vent piping connects to. The IPC sizing method does not consider the slope of the piping.

The UPC simply increases the combination piping two sizes larger than conventionally vented drain piping.

9-21. **IPC Section 913, ISLAND FIXTURE VENTING.** This section permits island fixture venting with the vent pipe at the sink permitted to be below the flood level rim of the sink, then turned down and connected to the horizontal drain beneath the floor. This is similar to UPC Section 909.0.

9-22. **IPC Section 914.1, Relief vents - stacks of more than 10 branch intervals, where required.** This section requires relief vents for soil and waste stacks at intervals of ten (10) branch intervals. This is inconsistent with Section 903.2, which requires a vent stack for drainage stacks that are five branch intervals.

UPC Section 907.1 requires a vent stack for drainage stacks that are ten (10) or more stories high. It then requires that a relief vent (yoke vent) be connected to the vent stack at five-story intervals starting from the top down.

9-23. **IPC Section 915, VENTS FOR STACK OFFSETS.** This section has requirements for venting horizontal offsets in stacks having five (5) branch intervals or more.

The UPC has no specific requirements for venting horizontal offsets in drainage stacks, but the upper and lower portions of the stack should be considered as separate stacks and vented accordingly.

9-24. **IPC Table 916.1, SIZE AND DEVELOPED LENGTH OF STACK VENTS AND VENT STACKS.** IPC Table 916.1 determines maximum developed length of vents from three factors: Fixture units being vented, size of waste stacks, and size of the vent. This table is a far more complex chart to use than UPC Table 7-5 which gives maximum length of feet and maximum vent size based solely on fixture unit loading. Furthermore, the IPC does not have any restrictions on the horizontal length limitation on the vent piping. Therefore, the entire developed length could be horizontal according to this table. The table has a larger range of pipe sizes (15" drain stack and 12" vent) and allowable DFU loadings per vent pipe size than UPC Table 7-5.

UPC Table 7-5 is much easier to use and provides a note that only one-third of the total developed length of the vent may be installed horizontally without increasing size. The UPC uses Table 7-5, which is limited to 12" drains and 8" vents, to size all vent piping.

9-25. **IPC Section 916.2, Vents other than stack vents or vent stacks.** This section requires that vents, other than stack vents or vent stacks, be one-half the pipe size of the equivalent drain(s) that it is venting. This method requires sizing drains that do not exist in order to size the various sections of vent piping. Vent piping exceeding 40 feet in developed length must be increased one pipe size.

The UPC uses Table 7-5 to size drain and vent piping. It permits up to one-third of the maximum listed developed length of the various vent pipe sizes to be horizontal. The required vent pipe sizes in Table 7-5 are generally larger than those required by IPC Section 916.2.

9-26. **IPC Section 916.4.1, Multiple branch vents exceeding 40 feet in developed length.** Section 916.4 has sizing requirements for common branch vents that have multiple branch vents connected to them. It appears that Section 916.4.1 should be referring to the common branch vent rather than the multiple branch vents. The use of the term "multiple branch vents" is confusing.

This is far more confusing than UPC Table 7-5 in which the venting is simply sized on the fixture units and the length of the pipe and not whether it is a multiple branch. Furthermore, the UPC permits up to one-third of the maximum allowable length of a vent pipe to be horizontal. There are no limits on length if the vent is increased one pipe size.

9-27. **IPC Table 916.5.1, SIZE AND LENGTH OF SUMP VENTS.** This table sizes vents for sewage sumps, based on the discharge capacity (GPM) of the pump and the maximum allowable developed length of the vent. Footnote "a" requires that an allowance of 50% be made for fittings and other losses. Table 916.1 SIZE AND DEVELOPED LENGTH OF STACK VENTS AND VENT STACKS does not have a similar requirement. This seems inconsistent.

UPC Section 710.10 sizes sewage sump vents based on the fixture unit load served by the sump, using Table 7-5. An allowance for fittings and other losses is included in the maximum allowable lengths in the table.

9-28. **IPC Section 917, AIR ADMITTANCE VALVES.** The IPC permits the use of fixture or branch type air admittance valves in lieu of vents to the outdoor air. Section 917.7 requires that only one stack vent or vent stack be extended to the open air outdoors, but it has no sizing requirements for that vent, compared to the overall size of the drainage and vent system. Section 917.8 prohibits the installation of air admittance valves in HVAC supply or return air plenums because the valves require neutral surrounding air pressure to operate as designed.

Section 917.3 permits air admittance valves to be installed for horizontal branch drains up to four branch intervals from the top of a stack without relief vents. This provides no means to relieve positive pressures or permit air to circulate and equalize within the drain and vent piping.

The UPC does not allow the use of air admittance valves as they are mechanical and subject to malfunction in the field, they are affected by pressures within the building, they do not prevent or relieve over-pressurization in the drain and vent system, they can become fouled with backflow of waste and sewage, and they are an ongoing maintenance consideration for the building owner. Although the IPC prohibits air admittance valves in supply and return air plenums, it is not uncommon for entire buildings to be pressurized (positive and negative) by the HVAC system or by vertical "stack effect". The writers of the UPC prefer the peace of mind that vents to the outdoors provide.

9-29. **IPC Section 918, ENGINEERED VENT SYSTEMS.** The IPC allows engineered small size vent piping. This is an example of decimal point engineering that does not provide sufficient margin of safety for varying field conditions, both at the time of installation and throughout the life of the system. Furthermore, a 1/2" or 3/4" size vent can be easily closed by any obstruction getting into the end of the vent or by a kink in the vent tubing, thereby destroying the beneficial effect of the venting system. In addition, the sizing concept is dependent upon the precise "design discharge load" of the fixture which is questionable if ever known initially. Furthermore, if a homeowner or occupant changes out a fixture and the flow rate becomes somewhat greater, the venting system may not function properly.

IPC Table 918.2 is based on "smooth pipe". In Appendix E, copper tube is referred to as smooth pipe. However, Section 918 does not indicate what piping materials are permissible for "engineered vent systems", therefore, any material could be used and the required correction factors for the calculations are not provided in the IPC. Lastly, using copper tubing for the venting system creates as

great an expense as a conventional venting system. Therefore, there is no significant savings in using the reduced size venting system.

IPC Section 918 does not appear to include sufficient data to design reduced-size vents. The IPC concept is completely different from the relatively simple procedure in Chapter 17 of the *ASPE Data Book* which includes all necessary data and limitations. ASPE also restricts reduced-size vents to residential fixtures in low rise (1 - 2 story) residential buildings and requires that some listed 1/2" and 3/4" vent sizes be increased in two-story buildings. Furthermore, ASPE does not permit reduced-size vents where the fixture is more than 15 feet above the building drain or its branches. ASPE additionally requires that vents not be reduced until 6" above the flood level rim of the fixture served. The 1997 IPC Commentary "suggests" the same thing, but vents can be reduced below the fixture overflow in the IPC. There are not the required restrictions on reduced-size venting in the IPC.

The UPC does not include reduced-size venting because it has not proven itself in the field and it does not provide sufficient margin of safety for dependable operation. However, reduced-size venting with appropriate restrictions could be submitted as an alternate method under Section 301.2 or as an engineered plumbing system under Section L 2.0.

9-30. **IPC Section 919, Computerized Vent Design.** This section is new in the 2000 IPC. It is not clear why this section is necessary in the code. It simply says that vent systems can be sized and designed using a computer program and that the design be based on the peak load on the drainage system. Section 919.1 requires that the computer program be approved, but it does not say what the basis of approval is. It does not require that the design and sizing comply with the other requirements of IPC Chapter 9.

The IPC has similar provisions for designing drainage systems using a computer program, but not water distribution piping or storm drainage piping.

The UPC does not prohibit using computer programs or any other means to design plumbing systems, so long as the results meet the requirements of the code.

J. CHAPTER 10, TRAPS

10-1. **IPC Section 1003, INTERCEPTORS AND SEPARATORS.** This section has specific requirements for where interceptors, separators, and grease traps are required.

UPC Sections 1009.1 and 1014.1 give the Administrative Authority more discretion in determining the need for interceptors and grease traps, based on the particular application.

10-2. **IPC Section 1003.3.2, Food waste grinders.** This section permits food waste grinders to discharge through grease traps, if the grease trap is rated for the flow capacity of the grinder.

UPC Section 1015.0 prohibits food waste grinders to discharge through grease traps unless specifically required or permitted by the Administrative Authority. Manufacturers of most grease traps recommend that food particles not be allowed to enter grease traps. The food particles become trapped with the grease and decompose, causing foul odors. Furthermore, the "contaminated" grease cannot be sold to renderers due to the food particles from the waste grinder in the grease.

10-3. **IPC Section 1003.4, Oil separators required.** This section includes very limited criteria for the design of oil and flammable liquid separators.

UPC Section 1017.0 has detailed requirements for the design and construction of oil and flammable liquid interceptors, including venting, line sizes, cleanouts, waste oil tanks, and pump-out connections.

K. CHAPTER 11, STORM DRAINAGE

11-1. **IPC Section 1101.7, Roof design.** This section requires that the roof be designed to withstand the level of the water based on the height of the overflows or scuppers assuming that all of the primary roof drains are blocked [emphasis added].

The UPC has requirements for primary and secondary roof drainage that are based on the roof design, but the UPC does not have requirements for the roof design itself, since it is not regulated by the plumbing code.

11-2. The IPC does not specifically address thermal expansion in storm drain piping.

UPC Section 1101.4., Expansion Joints Required, specifically requires expansion joints where there are temperature variations or physical conditions that would warrant the use of expansion joints.

11-3. **IPC Tables 1106.2, SIZE OF VERTICAL CONNECTORS AND LEADERS, and 1106.3, SIZE OF HORIZONTAL STORM DRAINAGE PIPING.** These tables need to be interpolated for the rainfall rates in Appendix B that fall between the listed whole numbers.

UPC Tables 11-1 and 11-2 list gallons per minute (gpm) of flow associated with the vertical piping and the sloped horizontal piping. Table D-1 lists rainfalls for cities in inches per hour and gpm per square foot of roof (gpm/sf). The roof area being drained (sf) can be multiplied by the gpm/sf to determine the required gpm of drainage. The pipe size can then be selected directly from Table 11-1 or 11-2 without interpolation.

11-4. **IPC Section 1106.4, Vertical walls.** This section adds 50% of the area of walls that drain rainwater onto roofs to the area of the roof to allow for wind-driven rain in sizing roof drainage systems.

UPC Section 1106.4 lists six (6) different orientations of walls and the various allowances for more accurately determining the adjusted roof area for rainfall. The highest added allowance is 50%. Some allowances are zero.

11-5. **IPC Section 1107.3, Sizing of secondary drains.** This section requires that secondary (emergency) roof drainage be sized for twice the primary rate and that the primary system be considered to be blocked. The primary rainfall rates are based on a 100-year, 60-minute storm. Using twice that rate is comparable to a 100-year, 15-minute storm.

This section is revised in the 2000 IPC, but it appears that some needed language was deleted. The section no longer says to divide the values for horizontally projected roof area (square feet) that were used for the primary drains by two (2) in order to size the secondary drains. It now says to double the primary rainfall rate, rather than half the allowable roof area. The secondary rainfall rates could exceed the rates listed in Tables 1106.3 and 1106.6 and there is no clear direction on how to determine the allowable secondary roof area. This approach to sizing the secondary drainage system is confusing and could be easily misinterpreted.

UPC Section 1101.11.2.1 permits the secondary roof drainage system to be sized for the same rainfall rates as the primary system. The primary system handles the 60-minute storms and the two systems together handle the more severe 15-minute storms.

Both the IPC and the UPC require that the secondary roof drainage system be piped independently from the primary system and discharge at grade.

11-6. **IPC Section 1108, COMBINED SANITARY AND STORM SYSTEM.** This section has criteria for sizing combined sanitary and storm water drains and sewers. It converts the sanitary fixture unit (DFU) load into equivalent square feet of roof, based on a rainfall rate of one inch per hour. However, the section does not indicate how to adjust the DFU equivalent roof area for the actual local rainfall rate used in the system design. It is necessary to refer to the 1997 IPC Commen-

tary for an explanation of how to convert the DFU load for rainfall rates other than one inch per hour.

The UPC does not include sizing of combined sewers. It addresses requirements where combined sewers exist, but does not encourage their use by providing sizing data, as combined sanitary and storm systems are no longer looked on with favor due to federal clean water laws and the impact on the sizing of sewer systems and the capacity of sewage treatment plants.

11-7. **IPC Section 1109, VALUES FOR CONTINUOUS FLOW.** This section equates gpm of flow from sources other than rainfall to square feet of roof based on a rainfall rate of one inch per hour. It is necessary to refer to the 1997 Commentary for an explanation of how to convert the gpm flows for rainfall rates other than one inch per hour.

UPC Chapter 11 and Appendix D provide means of sizing storm drainage piping on the basis of gpm, which simply allows gpm flows from sources other than rainwater to be added directly to the gpm of rainwater flow without conversion to equivalent square feet of roof for a particular rainfall rate.

11-8. **IPC Section 1110, CONTROLLED FLOW ROOF DRAIN SYSTEMS.** This section covers controlled flow roof drainage systems. The rainfall rate used is the same as a primary roof drain system (100-year, 60-minute storm). However, there is no reference to the requirement of a secondary drainage system as mandated under IPC Section 1107.

UPC Section 1108.0 covers controlled flow roof drainage in detail (14 paragraphs). It requires scuppers for emergency drainage. Furthermore, Tables 11-4 and 11-5 also dictate height of water and scuppers above the roof for controlled flow roof drains and the slope of the roof.

11-9. **IPC Section 1110, CONTROLLED FLOW ROOF DRAIN SYSTEMS.** This section requires that a controlled flow roof drainage system be considered as an "engineered plumbing system" with associated submittals, approvals, inspections, and testing. Furthermore, IPC Section 1110.1 requires that the rainfall rate used for design be in accordance with Section 1106.1, which is a 100-year, 60-minute storm. However, the 1997 IPC Commentary states that many engineers design for the total rainfall for the duration of a 25-year storm, which is not listed in the IPC. The intent of the IPC is not clear. The 1997 IPC Commentary also states that the purpose of controlled flow roof drainage is to cool the roof, whereas the primary intent is to reduce the peak flows in storm sewers.

The UPC does not require that controlled flow roof drainage systems be "engineered" and includes sufficient data for their design, construction, and

inspection without the need for extra engineering. The UPC requires that the calculations merely need to be submitted with the plans.

11-10. **IPC Section 1110.4, Minimum number of roof drains.** The IPC requires, "for controlled flow systems, not less than two roof drains to be installed in a roof area of 10,000 square feet or less and not less than four roof drains to be installed in roofs over 10,000 square feet." This means for a roof area of 10,001 square feet the number of required controlled flow roof drains jumps from two to four. Furthermore, the IPC does not provide information on the required number of controlled flow roof drains for roof areas over, say, 20,000 square feet. Therefore, a building of 100,000 square feet could, per code, only have four controlled flow roof drains installed. This does not seem prudent to the writers.

UPC Section 1108.1(3) requires that two roof drains shall be provided for each 10,000 square feet and no less than one additional roof drain for each additional 10,000 square feet over 10,000 square feet, which is a more accurate way of providing the number of roof drains required.

11-11. **IPC Section 1111, Subsoil drains.** This section covers subsoil drainage. It requires 4" minimum drain size.

IPC Section 1113.1.1, Pump capacity and head. This section requires that the sump pump have "capacity and head appropriate for the anticipated use requirements". It has no minimum requirements.

IPC Section 1113.1.2, Construction. This section requires that sump pits be not less than 18' in diameter.

IPC Section 1113.1.4, Piping. This section requires that pipe and fittings be equal to or larger than the pump discharge tapping.

UPC Section 1101.5 covers subsoil drainage in greater detail than the IPC. It requires 3" minimum drains and sump pits that are 15" in diameter by 18" deep. Minimum pump flow rates are 15 gpm and the minimum discharge pipe size is 1-1/2". Furthermore, UPC Sections 1101.7 and 1101.8 cover areaway drains and window well drains, which are not addressed in the IPC.

L. CHAPTER 12, SPECIAL PIPING AND STORAGE SYSTEMS.

12-1. **IPC Chapter 12, SPECIAL PIPING AND STORAGE SYSTEMS.** This chapter was formerly for fuel gas piping. The IPC presently does not include requirements for fuel gas piping.

UPC Chapter 12, Fuel Piping, covers the sizing and installation of fuel gas piping in complete detail. In addition, Table 14-1 lists NFPA 54 as a referenced standard.

12-2. **IPC Chapter 12, SPECIAL PIPING AND STORAGE SYSTEMS.** This chapter is very limited, the scope is not clear, and there are several contradictions. For example, Section 1202 references NFPA 99C for medical gas and vacuum piping systems. However, it also references the mechanical code for vacuum system exhaust, even though vacuum piping and exhaust is included in the scope of NFPA 99C. In addition, it references NFPA 50 - *Standard for Bulk Oxygen Systems at Consumer Sites* and NFPA 51 - *Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes* for non-medical oxygen systems. However, non-medical oxygen systems and other compressed gas systems do not appear to be within the scope of the IPC. Also, NFPA 50 is referenced in NFPA 99C for medical bulk oxygen systems.

IPC Section 1202 also excludes cylinder storage, even though NFPA 99C includes cylinder storage for nitrogen and nitrous oxide systems.

The IPC does not reference NFPA 99 - *Health Care Facilities*, which is the parent document of NFPA 99C - *Gas and Vacuum Systems.* Although NFPA 99 covers more than medical gas and vacuum piping, it is a legally acceptable alternative to NFPA 99C for gas and vacuum piping systems.

UPC Chapter 13 includes detailed requirements for the design, installation, inspection, testing, and certification of medical gas and vacuum piping systems. In addition, the UPC references both NFPA 99 and NFPA 99C. It does not include references to non-medical oxygen systems or other special compressed gas piping or storage systems that are not within the scope of the UPC.

M. IPC APPENDIX C, GRAY WATER RECYCLING SYSTEMS

C-1. The gray water systems covered by this appendix are not the same as the gray water systems covered by UPC Appendix G. The IPC gray water system permits recycled waste water from bathtubs, showers, and lavatories to be used for flushing water closets and urinals within the same building. Also, Appendix C includes very general requirements for filtering and disinfection.

The UPC does not permit this type of gray water recycling system which is essentially "reclaimed water" and most health departments do not allow this type of untreated water to be utilized for flushing toilets in residential installations in the event that a child or pet might drink the "gray water" from the water closet. Therefore, this subject is covered in the UPC in Section 601.2.3, Reclaimed Water, and thoroughly in Appendix J, Reclaimed Water

Sec. 08.40.210. Purpose of AS 08.40.210 - 08.40.490.

The purpose of AS 08.40.210 - 08.40.490 is to protect the safety of people and property in the state from the danger of improperly installed or modified mechanical systems by providing a procedure to assure

(1) the public that persons responsible for making mechanical installations in this state are qualified; and

(2) that a sufficient number of persons are so qualified.

Sec. 08.40.270. Examination of applicant.

(a) Each applicant shall be examined to determine the applicant's

(1) ability to understand plans, design specifications, and engineering terms commonly used in the mechanical field;

(2) knowledge of mechanical installations and piping;

(3) familiarity with the requirements of the Uniform Plumbing Code, Uniform Swimming Pool, Spa, and Hot Tub Code, Uniform Solar Energy Code, and the Uniform Mechanical Code currently in effect in the state;

Sec. 08.40.490. Definitions.

3) "mechanical administrator" means a person who is responsible for

(A) installing or modifying mechanical piping and systems, devices, fixtures, equipment, or other mechanical materials subject to the Uniform Plumbing Code, Uniform Swimming Pool, Spa, and Hot Tub Code, Uniform Solar Energy Code, and the Uniform Mechanical Code as published by the International Association of Plumbing and Mechanical Officials and the International Conference of Building Officials; or

(B) certifying that an installation or modification described in (A) of this paragraph complies with the applicable codes;

Sec. 08.18.171. Definitions.

(7) "mechanical contractor" means a contractor whose business operations involve plumbing, pipe fitting,
sheet metal, heating, air conditioning, ventilating, or sprinkler and dry chemical fire protection trades in order to
install or modify mechanical piping and systems, devices, fixtures, and equipment or oth mechanical materials
subject to the following codes as published by the International Association of Plumbing and Mechanical Officials
or the International Conference of Building Officials:

(A) Uniform Plumbing Code;

(B) Uniform Swimming Pool, Spa, and Hot Tub Code;

(C) Uniform Solar Energy Code; and

(D) Uniform Mechanical Code;

A Comparison Between the 2000 Uniform Mechanical Code™ and the 2000 International Mechanical Code™

Preface

This document is an attempt to highlight the differences between the 2000 editions of the Uniform Mechanical Code (UMC) published by the International Association of the Plumbing and Mechanical Officials (IAPMO) and the International Mechanical Code published by the International Code Council. It consists of an executive summary followed by a chapter by chapter cross-reference. Each chapter also has a brief summary. When there are differences, comments are included in the analysis column. This study is provided for the benefit of those entities contemplating the issue of mechanical code adoption. IAPMO welcomes your comments and observations on this document. For additional copies please contact IAPMO at 909-595-8449 x149.

DIFFERENCES BETWEEN THE 2000 UMC AND THE 2000 IMC

Executive Summary

Background:

Until 1991 the Uniform Mechanical Code (UMC) was cosponsored by the International Association of Plumbing and Mechanical Officials (IAPMO) and the International Conference of Building Officials (ICBO) with each organization owning the copyright to the document. That situation changed in 1994, and again in 1997, when each of the two model code bodies published a separate UMC. Currently only IAPMO publishes a 2000 edition of the UMC with ICBO discontinuing publication of their Uniform Codes set. The 1994 versions of the UMC were similar but that was not the case in the 1997 editions of the document. Chapters 3, 4, and 11 of the ICBO UMC were rewritten in their entirety. At that point the documents had diverged. That trend has continued with the 2000 International Mechanical Code (IMC). The 2000 UMC is significantly different from the 2000 IMC in style, philosophy and technical content. The IMC is a publication of the International Code Council (ICC) and sponsored by ICBO.

Technical Content:

Some of the significant technical differences between the 2000 UMC and the 2000 IMC are outlined below:

1. Unvented Room Heaters: The IMC allows for the use of unvented room heaters by reference to the International Fuel Gas Code (IFGC) in Section 301.3. Unvented fuel burning room heaters are specifically prohibited under Section 916.3 of the 2000 UMC

2. LPG Facilities are prohibited in pits or basements and other specific locations by Section 1313.5. The 2000 IMC or the 2000 IFGC do not contain any such restriction.

3. Unlisted Equipment: Table 3-1 provides for clearances for different types of unlisted appliances. There is no equivalent table in the IMC.

4. Referenced Standards: Appendix A contains 7 UMC standards. These standards based on nationally recognized standards are reproduced in their entirety in the UMC. The IMC does not have any standards in it and only mentions them by reference.

5. Fuel Gas provisions: Chapter 13 of the UMC by reference to Appendix B contains these provisions. The IMC refers you to a different document; i.e. the International Fuel Gas Code for these provisions.

6. Text from other codes: The IMC reproduces text from other codes. As an example refer to Section 513 for Smoke Control systems. The UMC does not use this approach. This factor needs to be considered when jurisdictions are considering adopting one document over another.

7. Commercial Cooking Equipment (Chapter 5): There are significant differences between the two codes in this area. The requirements for duct enclosures for Type I Hoods are different; clearances are different with the UMC being more restrictive. The cleanout requirements are different as well.

8. Refrigeration (Chapter 11): Table 1103.1 on the IMC is different from Table 11-1 of the UMC. The refrigerant list in the IMC is more in keeping with ASHRAE 34. There is no comparable table in the IMC for Table 11-2 in the UMC. Part II of Chapter 11 deals with cooling towers; there is no equivalent provision in the IMC. Additionally, Section 1101.8 requires prior approval from the Administrative Authority for change of refrigerant. The UMC has no similar provision.

Conclusion:

As indicated above there are several major differences between the 2000 UMC and the 2000 IMC. Those code users currently using the 1997 UMC (either one) will find it a relatively smooth transition to the 2000 UMC in comparison to adopting the IMC. It is clear from comparing the size of the two books that the UMC 2000 is significantly more prescriptive in its approach, a philosophy that been utilized in the development of the Uniform codes. This philosophy is evident in the fact that the 2000 UMC reproduces important standards in the code for ease of use while the IMC only references them. Jurisdictions considering adoption of one or the other document need to examine these differences and consider their impact on the health and safety of the communities that they serve.

YEAR 2000 MECHANICAL CODE COMPARISON JUST COMPLETED

WALNUT, Calif., August 18, 2000 - In a continuing effort to provide the public with the most up to date detailed analysis of the two leading mechanical codes in the industry, IAPMO has completed A Comparison Between the 2000 Uniform Mechanical Code and the 2000 International Mechanical Code. This study was performed by Hari Ramanathan, who was previously employed by the International Conference of Building Officials (ICBO) as a staff engineer chiefly responsible for support of the International Plumbing Code (IPC) and International Mechanical Code (IMC). After leaving ICBO, Mr. Ramanathan assumed the position of Director of Code Services with IAPMO and is primarily responsible for supporting the 2000 UMC. As a member of the IAPMO family, Mr. Ramanathan decided that it was important to inform the public of the relative advantages of one mechanical code over another, thus he developed a comprehensive analysis of the 2000 UMC and IMC. If you wish to review this comparison, download a copy from IAPMO's document download page. For multiple copies of the comparison, please contact Mr. Ramanathan at (909) 595-8449 Ext. 149.

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Chapter 1

2000 UMC	2000 IMC	Analysis
101.0 Title	101.1 Title	IMC refers to ICC Fuel Gas Code for fuel gas provisions.
102.0 Purpose 103.0 Scope	101.2 Scope	
104 Application to Existing Mech. Provisions	102 Applicability	Similar language except IMC has a section dealing with referenced standards.
105.0 Alternate Materials and Methods of Const.	105.2 Alt. Materials	UMC language more detailed on this issue.
106.0 Modification	105.1 Modification	Almost identical.
107.0 Tests	107.2 Testing	
Part II 108.0 Powers and Duties of the Admin. Authority	104.1 Duties and Powers of the Code Official	UMC uses 'Admin Authority'; IMC uses 'Code Official'. UMC more detailed in this area.
110.0 Board of Appeals	109 Means of Appeal	IMC spells out the makeup of the Board of Appeal UMC does not.
Part III 112.0 Permits	106 Permits	Exempt work similar.
113.2 Plans and Specifications	106.3.1 Construction Documents	
114.1 Permit Issuance	106.4 Permit Issuance	
115 .0 Fees	106.5 Fees	UMC has Table 1-1 at the end of the chapter; IMC has a permit fees table in the appendix. UMC fee table is broken down in greater detail than the IMC appendix.
116.0 Inspections	107 Inspections and Testing	Similar.

Summary:
The major difference is that the IMC creates a department of mechanical inspections while the UMC does not specifically require it. The members of the Appeals Board are spelled out as far as qualifications in the IMC but not in the UMC. All aspects of the administrative process for a mechanical code are covered in both documents though the UMC is more prescriptive.

Chapter 2

2000 UMC	2000 IMC	Analysis
201.0 General	201.1 Scope 201.2 Interchangeability	
202.0 Accepted meanings		No specific reference to a dictionary found in the IMC.
203.0 (A thru Z) Definitions	Section 202 Definitions	Definitions in the two documents are varied. Even for the same terms, the definitions are not always identical. The UPC is generic in its building code reference and, therefore, can be used with any building code.

Summary:
The definitions in the two documents have similarities as well as significant differences. There are several terms defined in the UMC 2000 that are not defined at all in the IMC 2000. Examples would be Assembly Building, Cooling Unit/System, Heating degree-day, and Vented Appliance categories among others.

The UMC makes reference to a generic building in the definitions so as to be used with a building code adopted by the jurisdictions. For words not defined at all the UMC refers the user to a specific dictionary.

Chapter 3

2000 UMC	2000 IMC	Analysis
301.0 Scope	301.1 Scope	301.4 /301.5 Similar except the UMC has additional language on BTU ratings at altitude. Though both sections have the title, the provisions in each are different. Some of the material in this section of the IMC is covered.
302.0 Approval		Not covered in this chapter.
303.0 Type of Fuel and Fuel Connections	No comparable provision.	
304.0 Installation	304.0 Installation	
305.0 Access	306 Access and Service Space	The IMC is a combination of UMC 304 and 305. The requirements for clearances are not identical.
306.0 Automatic Control Devices	No such provision in this chapter.	
307.0 Labeling	301.4 Listed and Labeled	The approach to the topic is different. The UMC deals with the marking issue while the IMC goes into the specifics of the listing process.
308.0 Location	304.3 Elevation of Ignition Sources	Similar provisions.
309.0 Electrical Connections	301.7 Electrical	IMC refers to the ICC Electrical Code for all electrical provisions while the UMC spells out the provisions for mechanical equipment.
310.0 Condensate Wastes and Control	307 Condensate Disposal	Provisions are similar except the UMC has a table to size condensate piping based on equipment capacity and specific atmospheric conditions.
311.0 Personnel Protection	304.9 Guards	
312 Air Filters	No comparable provision.	

2000 UMC	2000 IMC	Analysis
Table 3-1	No comparable table.	
Table 3-2	Table 308.6	Similar though not identical.
Table 3-3 Table3-4 Table 3-5	No similar tables.	

Summary:
There are some significant differences between the two chapters. The IMC chapter does not contain tables needed to clearances for unlisted appliances. The IMC defers to the listing of the equipment for information pertaining to installations.

UMC has sizing tables for condensate piping while IMC does not. The IMC refers to the ICC electrical code for all electrical provisions while they are spelled out it in the UMC 2000.

Chapter 4

2000 UMC	2000 IMC	Analysis
401.0 General	401 General	The scopes of the two chapters are very different. Chapter 4 of the UMC deals with ventilation requirements of direct gas-fired heaters by reference. It has the requirements for evaporative coolers.
402.0 Makeup Air	No comparable provision.	
403.0 Evaporative Cooling Systems	No comparable provision.	
404.0 Location	No comparable provision.	
405.0 Access Inspection and Repair	No comparable provision.	
406.0 Installation	No comparable provision.	

Summary:
Chapter 4 of the UMC 2000 is a brief chapter dealing mainly with evaporative coolers. Chapter 4 of the IMC 200 deals extensively with the issue of ventilation. Some of the issues in the IMC are mechanical ventilation, requirements for outdoor ventilation for different occupancies, ventilation for parking garages. The UMC defers to the building code on many of these issues.

Chapter 5

2000 UMC	2000 IMC	Analysis
501.0 Scope	401.1 Scope	The UMC chapter is divided into two parts with Part I dealing with Environmental Air ducts/product conveying ducts and Part II dealing with commercial hoods and kitchen ventilation. The IMC is laid out differently and has significant portions from the ICC Fire Code and ICC Building Code reproduced in this chapter.
502.0 Definitions	No comparable provision.	
503.0 Motors, Fan and Filters	503 Motors and Fans	Air filter requirements only found in UMC.
504.0 Environmental Air Ducts	508 Commercial Kitchen Makeup Air 504 Clothes Dryer Exhaust Ducts	Maximum length limitation for clothes dryer exhaust is 14 ft under the UMC and 25 feet. IMC allows use of manufacturer installation instructions to reduce this length. UMC does not. Both reduce distance for use of elbows though not identical.
504.3.3 Commercial Clothes Dryers	504.7 Commercial Clothes dryers	Both sections are similar in that they refer to the listing requirements. The UMC refers to manufacturer's installation for ducts while the IMC has specific duct installation provisions.

2000 UMC	2000 IMC	Analysis
504.5 Termination of Environmental Air Ducts	502.6.3.6 Termination Point	IMC deals with both product conveying and environmental duct termination in this section.
505.0 Design of Product Conveying Ventilation Systems	502 Required Systems	The approach to this subject is different within the two documents. The UMC has the provisions in the chapter while the IMC reproduces whole sections of the ICC Fire Code.
Table 501 Minimum Conveying Velocities	No comparable table.	
506.0 Product Conveying Ducts	511 Dust, Stock and Refuse Conveying Systems	Some of the material covered is the same though they are by no means identical. 506.9 and 511.2 IMC are almost identical.
Part II- Commercial Hoods and Kitchen Ventilation	507 Commercial Kitchen Hoods	
507.0 Definitions	No comparable section.	
508.0 Kitchen Ventilation Systems	507 Commercial Kitchen Hoods	Requirements for the joints and seams for hoods are different The UMC requires all joints and seams to welded or brazed where the IMC provides exceptions under Sec. 507.1.1.
508.2 Prevention of Grease Accumulation	506.3.8 Prevention of Grease Accumulation	The sections are identical except that the UMC has additional language specific to using a centrifugal fan with a bottom horizontal discharge.

2000 UMC	2000 IMC	Analysis
508.3 Cleanouts and Other Openings	506.3.9 Cleanouts and Other Openings	Identical except for reference to listed door assemblies in the IMC.
508.4 Duct Enclosure	506.3.11 Duct Enclosure	There are major differences. UMC requires a one-hour duct enclosure for a Type I hood. IMC provides for exceptions to this rule. Minimum clearances from the duct to the enclosure are 3" in the UMC and 6" for the IMC.
508.6 Air Velocity	No similar provision.	
508.8 Clearances	No similar provision.	The UMC calls for specific clearance of eighteen inches from combustible construction for a duct for a Type I hood. IMC has no similar provision.
508.9 Exhaust Outlets	506.3.13 Type I Exhaust Outlets	Similar with two differences. Vertical distance above the roof surface is 2 ft. for the IMC and 40 inches for the IMC. Also IMC specifies a minimum horizontal distance from vertical discharge fan and a parapet. UMC does not have a similar provision.
508.10 Fuel Burning Appliances	507.3 Fuel Burning Appliances	Identical.
509.0 Hoods	507 Commercial Kitchen Hoods	

2000 UMC	2000 IMC	Analysis
509.1 Where Required	507.2 Where Required	Similar in scope except UMC spells out different types of appliances for which a hood is required
509.2 Materials and Installation	507.4 Type I Materials 507.5 Type II Materials	Type II Hoods: 24 gauge UMC 22 gauge IMC.
509.4 Clearances for a Type I Hood	507.9 Clearances for a Type I Hood	UMC is more restrictive. Allows for a 3-inch clearance if combustibles are protected by one hr. fire resistive material. Under IMC, clearance is not required under similar conditions
509.5 Grease Filters	509.5 Grease Filters	Identical except for minimum distance between lowest edge of filter and cooking surface without exposed flame is 2 ft. under the UMC and 0.5 ft. under the IMC.
509.7 Capacity of Hoods	507.13 Capacity of Hoods	Identical.
509.9 Make-up Air	508 Commercial Kitchen Makeup Air	Similar with the following differences:
509.10 Exhaust Outlets	507.16 Exhaust Outlets	Similar except UMC has an exception for listed exhaust hoods.
509.11 Performance Tests	507.17 Performance Tests	Identical.
510.0 Motors Fans and Safety Devices	No comparable provisions.	Major difference; IMC refers to the IBC and IFC. UMC has provisions describing the type of fire protection needed.

Summary:
There are significant differences between the two chapters. The UMC requires a duct enclosure for Type I Hoods while this is not the case with IMC which provides for exceptions. The clearances from ducts serving Type I Hoods are also different. The clothes dryer length provisions are different.

Chapter 6

2000 UMC	2000 IMC	Analysis
Scope 601.0	Scope 601.0	The scope of the two documents is slightly different. Some of the material covered is the same but the UMC has Tables 6-1 thru 6-8 dealing with ducts. The IMC does not have similar tables.
602.1 General	602.1 General	UMC section deals with a reference to tables and prohibition on the use of rated corridors for conveying air to and from rooms. This subject is covered in Section 601.2 IMC. IMC is less restrictive.
602.2 Combustibles within Ducts or Plenums	602.2.1 Materials Exposed within Plenums	Provisions are similar. UMC has one or two more exceptions. IMC specifically mentions requirements for pneumatic tubing.
602.3 Factory-Made Air-Ducts	603 Duct Construction and Installation	There are significant differences in which duct construction is handled within the two chapters. The UMC is very prescriptive giving specifics about joints, seams and installation. References are made to UMC 6-1, 6-2, and 6-3 that are found in the code. The IMC simply references SMACNA standards.

2000 UMC	2000 IMC	Analysis
605.0 Insulation	604 Insulation	The IMC refers the user to the ICC energy code. The UMC refers to Table 6-4 for minimum R-values.
606.0 Smoke Dampers Fire Dampers and Ceiling Dampers	607 Ducts and Air Transfer Openings	The IMC reproduces this section from the ICC Building Code with the building code regulating these provisions. The UMC only the requirement for dampers while IMC deals with other issues as well.
607.0 Ventilating Ceilings	No similar provision.	
608.0 Use of Under-Floor Space as Supply Plenum	No similar provision.	
610.0 Product-Conveying Ducts	511 Dust Stock and Refuse Conveying Systems	
Table 6-1 thru Table 6-7	No comparable tables.	

Summary:
There are similarities in some of the provisions of the two chapters. However, the UMC does not allow air to be conveyed between rated corridors and adjoining rooms. The IMC refers the reader to the ICC Building Code on this issue. UMC refers to the UMC standard 6-2 for duct construction that is printed in the code. IMC reproduces text from the ICC Building pertaining to smoke control. Tables 6 -1, 6-2 and 6- 3 deal with duct details. IMC has no similar tables.

Chapter 7

2000 UMC	2000 IMC	Analysis
701.1 Air Supply	701.1 Scope 701.2 Combustion and Dilution Air Required	UMC does not use the term " dilution " air. Also for buildings of ordinary tightness, UMC requires 50 cu. ft. per 1000 BTU appliance rating for combustion air allowance. This is handled in the IMC through the definition of unconfined space.
701.2 Existing Buildings	No comparable provision.	
702.0 Combustion Air Openings	702 Inside Air 703 Outdoor Air	
702.2 Dampers Prohibited	709.2 Damper Openings	UMC requires prior approval.
702.3 Louvers Grills and Screens	No comparable provision.	
703.0 Sources of Combustion Air		This subject matter is scattered throughout the IMC chapter.
703.3 Prohibited Sources	701.5 Prohibited Sources	
703.4 Interior Space	702 Inside Air	Similar
704.0 Combustion Air Ducts	708 Combustion Air Ducts	Similar
705.0 Gravity type Warm Air Furnace	No similar language.	
706.0 Special Conditions Created by Mechanical Exhausts or Fireplaces		Similar , though no specific reference to mechanical exhausts
707.0 Area of Combustion Air Openings		The UMC refers to Table 7-1. The IMC has no such table. The size of combustion openings must be gleaned from code text. This is a significant difference in the

2000 UMC	2000 IMC	Analysis
		manner. The information is presented in the two chapters.
707.2 Designed Installations		There is no specific provision for alternate design for combustion air in the IMC.

Summary:
The subject matter covered in Chapter 7 of each book is fairly similar. The difference arises in how the information is presented. As an example, Table 7-1 provides you with required combustion air requirements broken down into buildings of ordinary tightness and those of unusually tight construction. This information is contained within the IMC chapter but not in tabular form. The UMC tends to be a little more prescriptive in some areas than the IMC.

Chapter 8

2000 UMC	2000 IMC	Analysis
801.0 General	801.1 Scope 801.2 General	IMC refers to ICC Fuel Gas for Venting of gas fired appliances. Though there are some similarities, they are mostly different with the IMC getting into specifics. UMC mentions Category I through IV appliances.
802.0 Types of Venting Systems Required		802.4 UMC and 801.11 IMC are similar. Other than that, no comparable provisions in IMC.
803.0 Install and Const Rqmts	802.1 General 801.8 Abandoned Openings 803.5 Manual Dampers	Similar elements found scattered in the IMC chapter.
804.0 Location and Support of Venting Systems	802.7 Support of Vents	UMC more prescriptive.
805.0 Length Pitch and Clearances	No comparable provision.	
806.0 Vent Termination	804	Different requirements; UMC has Table 8-1. No similar table in IMC. IMC has requirements for horizontal terminations.
807.0 Vents for Wall Furnaces Requiring a Type BW Gas Vent	No similar provision.	
808.0 Size of Gravity System	No similar provision.	
809.0 Multiple Appliance Venting Systems	803.7 Connectors Serving Two or More Appliances	The UMC provides some level of detail on this issue.
810.0 Existing Systems	801.18 Existing Chimneys and Vents	

2000 UMC	2000 IMC	Analysis
811.0 Draft Hoods	No similar provision.	
812.0 Types of Chimneys	805 Factory Built Chimneys	UMC requires spark arrestor for solid/liquid fuel appl. unless excepted. No such requirement in IMC.
813.0 Masonry Chimneys	No comparable provisions.	
815.0 Connectors 815.2 Chimney Connector 815.3 Vent Connector	803 Connectors	Significant difference; UMC provisions are extremely prescriptive in this area. UMC breaks it down into chimney connectors and vent connectors.
Table 8-2 Chimney Selection Chart	No comparable table.	
Table 8-3 Vent Selection Chart	No comparable table.	
Table 8-4 Vent Selection Chart	No comparable table.	
Table 8-5 Clearances to Combustibles	No comparable table.	

Summary:
There are significant differences in the provisions for chimneys and vents between the UMC and the IMC. The UMC chapter is highly detailed and has three tables at the end of the chapter. By contrast, the IMC chapter refers to the listing or the standard. For fuel gas provisions, IMC refers user to the ICC Fuel Gas Code.

Chapter 9

2000 UMC	2000 IMC	Analysis
901.0 Scope	901.0 Scope	UMC scope is different from IMC. IMC refers to ICC Fuel Gas Code. UMC section specifically refers to warm air heating systems, vented decorative appliances, floor furnaces, unit heaters and room heaters.
Part I-Warm-Air Heating Systems		No comparable provision in IMC.
904.0 Prohibited Installations	303 Equipment and Appliance Location 306 Access and Service Space	Similar - not identical. UMC more prescriptive.
906.0 Return and Outside Air	918 Forced-Air Warm Air Furnace	These are similar with some differences. Section 906.2, which calls for a separation only, appears in the UMC chapter.
907.1 Duct Size		Same as in 918 IMC.
907.2 Surgical Rooms		No comparable provision in IMC.
903.0 Attic Furnaces		No comparable provision.
909.0 Warm Air		No comparable provision.
910 Furnaces in Roofs or Exterior of Buildings		No comparable provision.
Part II Vented Decorative Appliances, Floor Furnaces, Vented Wall Furnaces, Unit Heaters and Room Heaters		Unvented fuel burning heaters are prohibited by the UMC and allowed by the IMC. This is a significant difference.
914.0 Vented Wall Furnace		IMC refers code user to listing.
915.0 Unit Heaters		
916.0 Room Heaters		

2000 UMC	2000 IMC	Analysis
Part III 917.0 Ranges 918.0 Open top Broiler 919.0 Direct Gas-Fired Make-up Heaters and Industrial Air Heaters		
920.0 Ceramic Kilns	923 Small Ceramic Kilns	UMC details clearances, hood requirements and exterior installations. IMC refers to manufacturer's instructions.
Part IV Incinerators	907 Incinerators and Crematories	IMC refers to the listing while UMC is extremely descriptive providing detailed provisions.

Summary:
Though the titles of the two chapters are the same, the content is hardly the same. In most instances, in the IMC chapter the standard for the equipment is referenced without any further details. The UMC has additional prescriptive provisions. This is true for floor furnaces, vented wall furnaces, unit heaters and room heaters The UMC prohibits the use of unvented heaters. The IMC allows them.

UMC contains clearances for cooking ranges and requirements for open top broiler units The IMC relies on this information coming from the listing and the manufacturer's instructions.

Chapter 10

2000 UMC	2000 IMC	Analysis
1001.1 Scope	1002.0 Scope	Similar except UMC specifically excludes water heaters under 120 gallons and less than 200,000 BTU rating from this chapter.
1004.0 Definitions	No comparable provision.	
1006.0 Detailed Requirements	1003 Pressure Vessels	UMC sections deals with boilers and pressure vessels. UMC provides detail on stack dampers.
1007. Expansion Tanks	1009 Hot Water Boiler Expansion Tank	Similar. Provisions for open and closed type systems are different.
1008.0 Relief Valve Discharge	1006.6 Safety and Relief Valve Discharge	UMC section more detailed. IMC refers to ICC Plumbing Code for low-pressure systems.
1009.0 Shutoff Valves	No similar provision.	
1010.0 Gas Pressure Regulator	No similar provision.	
1011 Low Water Cutoff	1007 Boiler Low Water Cutoff	UMC section more detailed and allows for an exception when serving 6 or less dwelling units.
1012.0 Combustion Regulators-safety valves	No comparable section.	
1013 Automatic Boilers	No comparable provision.	No comparable table for Table 10-3 in the IMC.
1014 Clearance for Access	No comparable provision.	
1015 Boiler Rooms and Enclosures		
1015 Boiler Rooms and Enclosures		

2000 UMC	2000 IMC	Analysis
1017.0 Floors		
1018 Chimney and Vents	No comparable provision.	
1019.0 Drainage		
1020.0 Fuel Piping		
1022.0 Operating Adjustments and Instruction		
1023.0 Inspections and Tests		UMC requires a warning notice before testing is completed. UMC also allows a registered professional engineer to do the testing. IMC simply refers you to the standard.
1024 Operating Permit	No comparable provision.	
1025 Maintenance Inspection	No comparable provision.	
1026.0 Operation and Maintenance of Boilers	No comparable provision.	

Summary:
The two chapters are similar. However the UMC contains a definitions section. UMC has Tables10-1, 10-2, and 10-3 dealing with expansion tank capabilities and controls for automatic boilers. The IMC has no comparable tables. The UMC has additional provisions dealing with maintenance and operation of boilers.

Chapter 11

2000 UMC	2000 IMC	Analysis
1101.0 Scope	1101 General	UMC has two parts Part I deals with refrigeration systems, etc. Part II is Cooling Towers. The IMC chapter is formatted differently using standard references.
1102.0 Refrigerants	1102.1 General Systems Requirements	
1103 Refrigerant Classification	1103.1 Refrigerant Classification	Both refer to ASHRAE 34; IMC in the code, UMC in Chapter 16.
1104.0 Classification of Refrigeration Systems	1103.2 Occupancy Classification	Significant differences UMC classifies in table 11-2 into high and low probability systems.
1105.0 Requirements for Refrigerant and Refrigerant Use		No comparable provision.
1105.1 System Selection		No comparable provision.
1105.2 Volume of Occupied Space	1102.1/3 IMC	UMC refers to 11-1 IMC to Table 1103.1 (governed by the ICC Fire Code) UMC has 2 exceptions.
1105.3 Refrigerated Process and storage Areas	1104.2.2 Industrial Occ. and Refrig. Rooms	
1105.4 Refrigerant Purity	1102.2.2 Purity	Similar.
1106.2 Supports and Anchorage	No comparable provision.	
1106.3 Access through Condensate Disposal	No comparable provisions.	
1107.0 Refrigeration Machinery Rooms	1105 Machinery Room General Rqmts.	UMC is specific within code text as to when a refrigeration machinery room is required. The requirements are different.

Chapter 11 (Continued)

2000 UMC	2000 IMC	Analysis
1107.2 Dimensions	No comparable provisions.	
1107.4 Refrigeration Vapor Alarms	1105.3 Refrig. Detector (governed by ICC Fire Code)	UMC has the provisions in the code; IMC refers user to ICC Fire Code.
1107.7 Special Requirements	1106.2 Elevated Temp	Similar though UMC has two exceptions.
1108.0 Refrigeration Mach. Rm. Ventilation	1105.6.3 Qty-Normal Ventilation	Some of provisions are similar but UMC provides additional formulae to calculate minimum airflows and max. temp. increases.
1108.3 Distribution of Ventilation 1108.4 Intermittent Control of the Ventilation System 1108.5 Emergency Control of the Ventilation Systems 1108.6 Central Control of Ventilation Systems 1108.7 Vent Discharge 1108.8 Fans 1108.9 Ventl. Intake		No comparable provisions in this chapter of the IMC.
1109. 0 Refrigeration Machinery Room Equipment and Controls		No comparable provisions.
1110.0 Refrigerant Piping Containers Valves		UMC divides into ferrous and non-ferrous materials IMC deals with type of piping material individually. UMC does not mention aluminum.

Chapter 11 (Continued)

2000 UMC	2000 IMC	Analysis
1111.0 Erection of Refrigerant Piping 1112.0 Refrigerant Control Valves 1113.0 Pressure Limiting Devices 1114.0 Pressure Relief Devices 1115 Pressure Relief Device Settings 1116.0 Marking of Pressure Relief Devices 1117.0 Over Pressure Protection 1118.0 Discharge Piping 1119.0 Special Discharge Requirements		There are no provisions that directly compare in IMC.
Table 11-1	Table 1103.1	Tables are different. IMC has an expanded list based on ASHRAE 34.
Table 11-2 Table 11-3	No similar tables.	
Part II-Cooling Towers	No comparable provisions in IMC.	

Summary:
There are several differences in the chapter. In size alone, the UMC chapter is about double the size of the IMC chapter. The reason being that the UMC in keeping with its philosophy has several prescriptive provisions so as to allow the user to have all the information needed in the chapter. The IMC refers to both the ICC Building and Fire Code extensively and defers to standards for requirements such as refrigerant control valves. Table 11-1 and Table 1103.1 are the not same-the IMC refrigerant list being longer. The IMC chapter requires access to several other documents.

Chapter 12

2000 UMC	2000 IMC	Analysis
1201.0 Scope	1201.1 Scope	UMC specifies scope as piping where pressure /temperature in excess of 160 psig and 250°F.
1201.2.1 Materials and Construction	1202 Material	UMC is more prescriptive in this section specifying permissible materials in code text. IMC has materials and standards in tabular form. IMC allows PEX,PEX-AL-PEX. No specific mention in UMC of these materials.
1201.2.2 Fabrication of Joints	1203 Joints and Connections	Similar though UMC provides additional information. Joints for plastic piping in IMC.
1201.2.4 Changes in Direction	No comparable provision.	
1201.2.6 Hangers and Supports	No comparable provision.	
1201.2.7 Installation	No comparable provision.	
1201.2.8 Pressure Testing	1208 Tests	Similar requirements except IMC contains requirements for ground source heat pump loop systems.
Part II- Hydronic Panels	No comparable provision.	There are multiple sections in the UMC dealing with the installation of hydronic piping, including requirements for underground and outside of buildings and trenching.

Summary:
The material in both chapters in presented differently. The IMC allows for the use of more kinds of plastic for hydronic systems. Hydronic panels are included in the UMC. Overall the UMC chapter is more detailed. The differing philosophies in the formulation of codes are reflected in this chapter.

Chapter 13

Summary:
Chapter 13 of the 2000 UMC refers the user to Appendix B, Chapter 13 of the 2000 UMC where fuel gas provisions (reproduced from the 2000 Uniform Plumbing Code) can be found. The IMC references the ICC Fuel Gas Code, a separate document.

Chapter 14

Summary:
Chapter 14 of the 2000 UMC is process piping. There is no equivalent chapter in the 2000 IMC.

Chapter 15

Summary:
This chapter references Section 1206.0 Heat Sources of the 2000 UMC and the Uniform Solar Energy Code. IMC has a short chapter containing solar provisions.

Chapter 16

Summary:
UMC 2000 has two parts. Part I has standards adopted as part of the code (8 in all). Part II lists other referenced standards that are listed alphabetically by title. IMC 2000 in its chapter lists standards by promulgating agency.

Appendices

Summary:
The UMC 2000 has Appendix A, B, C and D. Appendix A contains 8 standards. Appendix B contains Fuel Gas Piping , Installation and Testing of Gas or Fuel Fired Equipment, Installation and testing of Oil (liquid) Fuel Fired Equipment. Appendix C has sizing tables for venting systems. IMC has 2 appendices - one for combustion air openings and one for chimney connector pass throughs.

Mechanical Contractors Association MCA

MECHANICAL CONTRACTORS
of Alaska, Inc.

July 30, 2001

Subject: Reason the State of Alaska Should Continue With The Uniform Mechanical Code.

Dear

There is a controversy in our State surrounding the adoption of the mechanical code, and a good chance that this controversy will be a topic for legislation in the 2002 session. The purpose of this letter is to provide some background and information from the perspective of the Mechanical Contractors and Mechanical Administrators who are licensed under State Statutes 08.40.210, 08.40.270 (3), 08.40.320 (a) (2), 08.40.490 (3) (A) (B) and 08.18.171 (7).

As enacted by the legislature, these statutes require mechanical contractors to install or modify their work in accordance with a family of Uniform Codes, specifically Uniform Plumbing Code, Uniform Swimming Pool, Spa and Hot Tub Code, Uniform Solar Energy Code and the Uniform Mechanical Code.

The State Fire Marshal without coordinating with other agencies has proposed repeal of the Uniform Mechanical Code and instead seeks to adopt the International Mechanical Code. This was done despite strenuous objections from these mechanical professionals licensed under the Uniform Mechanical Code per statute.

The basic problem, as we see it, is one agency seeks to adopt a new substantive code while another agency can only license mechanical contractors under a different code.. We also think the proposed new code will ill serve the public and our members. We are opposed to this method of repealing the Uniform Mechanical Code and will continue to fight this repeal until such time as the Legislature clears up the chaos created by the Fire Marshal and the Dept. of Public Safety.

In the Department of Public Safety budget request "Change Record Detail With Description " dated 12/17/1999 the DPS asked for $98,100.00 for

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"Extensive Code/Regulation Project". At the date of this budget request the codes DPS proposed to adopt had not yet been published. According to the fly/leaf in the front of these codes they are published as follows;

2000 International Residential Code – Published Jan. 2000
2000 International Fire Code – Published Dec. 1999
2000 International Building Code – Published March 2000
2000 International Mechanical Code – Published Dec. 1999

The DPS did not proceed to adopt the International Residential Code.

We are puzzled how the DPS could consider adopting codes before they are published. The Budget Request goes on to conclude that other model codes are no longer available. This is incorrect. The Uniform Plumbing Code, Uniform Mechanical Code, Uniform Swimming Pool, Spa and Hot Tub Code and the Uniform Solar Energy Code are still being published by the International Association of Plumbing and Mechanical Officials (IAPMO) as they have always published these codes. Also, the Uniform Fire Code was developed and is published by the Western Fire Chiefs Association (WFCA). A 2000 edition has been published.

In summary, the 2000 edition of the family of Uniform Codes listed above are in use across the United States. They are still available despite what DPS states in their Budget Request.

Based on the information we have to date, the only code body to pull out of the Uniform family was the International Conference of Building Officials (ICBO), the organization of which the Fire Marshal is a member. What we have in this situation is one splinter group seeking to adopt a new and untested code. Frankly, our members and the public should not be required to participate in this experiment.

The DPS statement that FEMA will not fully fund disasters in our state unless we adopt the International Codes is wrong! The State of California recently re-adopted the Uniform Codes after a review process that lasted more than a year. They would not have taken that action if it would risk losing FEMA disaster funding.

The DPS statement that failure to adopt the International Codes will make it more costly for companies to build in Alaska is puzzling. How does the DPS know the new code will reduce the cost of building in Alaska? Where is the documentation? Common sense suggests the adoption of any new regulatory code will increase building costs, at least initially.

The DPS statement that the major cities in Alaska (all of whose chief building officials are ICBO members) plan to adopt the new codes is true. But those chief building officials point to the State's plan to adopt the new

International Codes as their justification to adopt these codes. This kind of bureaucratic self justification is driving the adoption of the International Codes.

It is clear that the DPS manufactured an artificial crises and rammed through this regulation project to fix a phony problem. . This "fix" has and will cost hundreds of mechanical contractors and the public thousands of hours of time and hundreds of thousands of dollars. We ask for what purpose? To those of us caught in the middle of this bureaucratic turf fight, there is no a valid reason to adopt a new , untested code. .

At the next code cycle, 2003, there will be a new integrated family of model consensus codes, NFPA 5000, the full Consensus Code Set. This family of codes will contain the NFPA Building Code, a joint NFPA/WFCA Fire Code, Uniform Mechanical Code, Uniform Plumbing Code. Uniform Swimming Pool, Spa & Hot Tub Code, Uniform Solar Energy Code and the National Electric Code. The last four of these codes will still be in effect in our State at that time because statutes require the Dept. of Labor to adopt those specific codes. Let us take our time and fairly examine both code sets before we rush to judgement. This is what California and Oregon are doing. It makes no sense to adopt new codes piecemeal, particularly where the statutes governing testing and licensing are at odds with the new proposed International Codes.

At the Federal level the government agencies are encouraging the development of model consensus building codes. Consensus is defined in OMB A-119 by the attributes of Openness, Balance of interest, Due process and an Appeals process. The International Codes do not meet these criteria in my opinion.

Please use your good offices to make sure the regulation adoption process works as the Legislature intended, and the interests of all stakeholders are considered, not just the interest of a few building officials more concerned with their own "turf" than the interests of the public..

Sincerely,

Eugene R. Rutland
Executive Director

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
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MEMORANDUM July 12, 2001

SUBJECT: Regulatory adoption of International Mechanical Code (Work Order No. 22-LS1056)

TO: Representative Jeannette James
Attn: Barbara

FROM: Theresa L. Bannister
Legislative Counsel

You have asked whether The Department of Public Safety may amend its regulations to replace the Uniform Mechanical Code ("UMC") with the International Mechanical Code ("IMC"). On June 25, 2001 the Lieutenant Governor's office filed regulations of the Department of Public Safety ("Department") that adopt, with some Alaska variations, the International Mechanical Code and certain other international codes. The International Mechanical Code replaces the Uniform Mechanical Code in those regulations. The relevant changes in the regulations occur at 13 AAC 50.023 (adoption of the International Mechanical Code) and 13 AAC 55.150(a)(19) (repeal of the definition of "U.M.C." for 13 AAC 50 - 13 AAC 55). The regulation changes take effect September 15, 2001.

You are asking whether these regulatory changes are valid. First of all, keep in mind that amended regulations that are filed by the lieutenant governor raise the rebuttable presumption that the amended regulations are valid. AS 44.62.100, and see O'Callaghan v. Rue, 996 P.2d 88, 95 (Alaska 2000). However, to uphold this presumption, the amended regulations must be consistent with and reasonably necessary to implement the statutes authorizing their adoption. See AS 44.62.030 and State, Bd. of Marine Pilots v. Renwick, 936 P.2d 526, 531 (Alaska 1997), cited by Interior Alaska Airboat Association v. State, 18 P.3d 686, 689 (Alaska 2001). Where a regulation is adopted in accordance with the Administrative Procedures Act (AS 44.62), and the legislature intended to give the agency discretion, the court applies this test by reviewing first whether the regulation is consistent with the statutory provisions that authorize it and second by determining whether the regulation is reasonable and not arbitrary. See Interior Alaska Airboat Association, 18 P.3d at 689 - 690. Finally, to be valid, an administrative regulation must not violate existing state statutes or constitutional provisions. See O'Callaghan v. Rue, 996 P.2d at 98.

The information that I have received does not disclose the complete process that preceded the filing of the regulations. Therefore, I will assume for the purposes of this memo that the regulation changes were adopted in accordance with the Administrative Procedures

Act. The authority cited for the repeal and reenactment of 13 AAC 50.023 and for the repeal of 13 AAC 55.150(a)(19) is AS 18.70.080. In addition, AS 18.70.010 is also cited for the repeal of 13 AAC 55.150(a)(19). AS 18.70.080(a) expressly authorizes the Department of Public Safety to promulgate regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standards for certain listed items. These items include, among other things, minimum standards for "fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units...." AS 18.70.080(a)(2). This is a very broad delegation of authority by the legislature and gives the Department much discretion. AS 18.70.010 describes the general function of the Department with regard to fire protection and states that the Department "shall foster, promote, regulate, and develop ways and means of protecting life and property against fire, explosion, and panic."

The adoption of a code to regulate the mechanical systems of certain structures appears to be consistent with AS 18.70.080 because it establishes standards for the installation and operation of mechanical systems in buildings, and the mechanical systems appear to directly affect fire in and explosions of structures. It is my understanding that mechanical codes cover air flow systems (heating, cooling, and ventilation systems) and that air flow systems are significant in fire protection matters because air is one of the elements that are needed for a fire. The authorization for adoption of a mechanical code is reinforced by AS 18.56.300(e)(3), which defines "state building code" for the section to include the mechanical standards adopted by the Department under AS 18.70.080.

However, AS 18.56.300(e)(3) expressly refers to the Department's adoption under AS 18.70.080 of a version of the UMC for these standards. Although this reference does not appear in the Department's grant of authority under AS 18.70.080, it appears to indicate that the legislature intended that the UMC be the mechanical code adopted under AS 18.70.080. Since this language is so clear, it is likely to be read to limit the Department's discretion under AS 18.70.080 when adopting a code for mechanical standards. If AS 18.70.080 and AS 18.56.300 are read together, the adoption of the IMC would not be consistent with AS 18.70.080. On the other hand, it is possible that AS 18.56.300 might be read as limited to the mechanical code to be adopted for the structures covered by that section. However, even in that case, it would seem to require that the Department adopt the UMC at least for the purposes of AS 18.56.300, which the regulation changes do not appear to do.

When considering consistency, the purposes of the grant of regulation-making authority may be considered. See Interior Alaska Airboat Association, 18 P.3d. at 690. In this regard, adoption of the IMC may not actually promote the protection of life and property from fire and explosion because mechanical administrators, the persons who install and modify mechanical systems, are required to be trained in the UMC, not the IMC. See AS 08.40.270(a)(3). The training requirements of licensing provisions generally are to insure that the licensees can implement the standards they are required to apply. The purpose of the licensing provisions for mechanical administrators is to protect the safety

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of people and property in the state from the danger of improperly installed or modified mechanical systems by providing a procedure to assure, among other goals, that the public that persons responsible for making mechanical installations in this state are qualified. See AS 08.40.210. If a licensee is not trained in the IMC the licensee will not be able to implement the standards established by the IMC. If the two codes are not significantly different, this may not be a significant problem. However, changing to a code in which the mechanical administrators are not required to be trained appears, at least on the surface, not to promote the purposes of the authorizing statute.

The next question is whether the regulation changes are reasonable and not arbitrary. See Kelly v. Zamarello, 486 P.2d 906, 911 (Alaska 1971), cited by Interior Alaska Airboat Association, 18 P.3d at 690. The Alaska Supreme Court conducts the "reasonable and not arbitrary" review using a deferential standard. See O'Callaghan, 996 P.2d at 95. In determining whether a regulation is reasonable and not arbitrary courts do not substitute their judgment for the judgment of the agency. See Meier v. State, Bd. of Fisheries, 739 P.2d 172, 174 (Alaska 1987), cited by Interior Alaska Airboat Association, 18 P.3d at 690. Therefore, review consists primarily of ensuring that the agency has taken a hard look at the salient problems and has genuinely engaged in reasoned decision making. See Tongass Sport Fishing Ass'n, v. State, 866 P.2d 1314, 1319 (Alaska 1994), cited by Interior Alaska Airboat Association, 18 P.3d at 690.

As mentioned earlier, the information that I have received does not disclose the complete process that preceded the filing of the regulations. Therefore, I will not address whether there were any process failures in the adoption of the regulation changes. However, the Alaska Supreme Court included in its process review a comment that the agency's findings reflected careful consideration of the public testimony received by the agency. See Interior Alaska Airboat Association, 18 P.3d at 693. I have not reviewed any Department findings, but a review of the regulation changes does raise questions as to whether the Department adequately considered the comments that it received, including comments from the Department of Community and Economic Development (June 7, 2001 letter from the Division of Occupational Licensing) about licensing issues and the May 29, 2001 letter from the Department of Labor and Workforce Development referring to conflicts with existing statutes, and whether the Department had decided its position before it went into the comment period.

Even assuming that the Department's findings indicate that it considered the comments that it received, the unresolved problems created by the substitution of the International Mechanical Code for the Uniform Mechanical Code suggest that the Department did not engage in reasoned decision making. As mentioned earlier, AS 18.56.300 specifically applies the Uniform Mechanical Code to certain buildings subject to AS 18.56.300, and, as also mentioned earlier in this memo, the licensing of mechanical administrators is currently based by statute on knowledge of the Uniform Mechanical Code. The licensing chapter, AS 08.40, defines a "mechanical administrator" as a person who is responsible for

(A) installing or modifying mechanical piping and systems, devices, fixtures, equipment, or other mechanical materials subject to the Uniform Plumbing Code, Uniform Swimming Pool, Spa, and Hot Tub Code, Uniform Solar Energy Code, and the Uniform Mechanical Code as published by the International Association of Plumbing and Mechanical Officials and the International Conference of Building Officials; or

(B) certifying that an installation or modification described in (A) of this paragraph complies with the applicable codes...." [AS 08.40.490(3), emphasis added.]

A reference to the UMC also appears in the definition of mechanical administrators for the chapter that licenses contractors. See AS 08.18.171(7).

In addition, the examination of applicants for mechanical administrator's licenses includes, in addition to the basic knowledge of basic mechanical system information, familiarity with the requirements of the Uniform Mechanical Code. AS 08.40.270(a)(3).

Finally, if the IMC conflicts with the UMC, mechanical administrators would be exposed to disciplinary action under AS 08.40.320 and penalties under AS 08.40.380. Those sections authorize the discipline and penalties when a licensee knowingly violates a code listed in AS 08.40.490(3)(A). As you recall, that paragraph refers to the UMC and not the IMC.

The legislative intent for the licensing of mechanical administrators, therefore, appears to be based on the use of the Uniform Mechanical Code. While it is possible, I suppose, for persons familiar with one code to be familiar with and operate under another code, it does not seem reasonable for the Department to mandate the use of a mechanical code that is different from the mechanical code that mechanical administrators must study and be familiar with or to expose licensees to disciplinary action by requiring the use of the IMC.

The third part of the analysis of an administrative regulation is determining whether the administrative regulation violates existing state statutes or constitutional provisions. See O'Callaghan, 996 P.2d at 98. As already discussed above, the adoption of the IMC appears to directly conflict with the language of AS 18.56.300, AS 08.40.320, and AS 08.40.380, and less directly with AS 08.18.171 and AS 08.40.270 and AS 08.40.490. Before finding a conflict, a court will attempt to harmonize the regulation changes with the statutes. See State v. Anderson, 749 P.2d 1342, 1346 - 1347 (Alaska 1988). As mentioned earlier, although the reference to the UMC in AS 18.56.300 is clear, a court may determine that the reference to the UMC is limited to the application of AS 18.56.300 and may also attempt in some way to harmonize the licensing provisions with the regulation changes, e.g., reading the licensing provisions to allow the licensing agency to require training in the IMC. However, it is not clear how AS 08.40.320 (disciplinary action) and 08.40.380 (penalties) could be harmonized with the regulation

changes, and, further, the regulation changes do not appear to provide for the application of the UMC in cases covered by the AS 18.56.300.

As indicated earlier, I have not reviewed any findings that the Department may have made for the regulation changes. If you would like me to do so, please advise. Keeping that limitation in mind, my conclusion is that there appear to be serious questions whether the adoption of the IMC by the Department satisfies the criteria established by statute and the courts for the validity of regulations. The Department may be determined not to have been acting within the statutory authorization for regulations because of the language of AS 18.56.300. The regulation changes may be considered unreasonable in light of the language of the licensing statutes and AS 18.56.300. And the changes appear to conflict with certain statutes in this area. Although it is always difficult to predict how a court would rule in a particular matter, particularly in light of the deference the court gives when applying part of its analysis, I believe that it is quite possible that a court may determine that invalidation of the regulation changes related to the UMC is appropriate in light of these problems.

If I can be of further assistance, please advise.

TLB:lmb
01-179.lmb

ALASKA STATE LEGISLATURE

REPRESENTATIVE GARY DAVIS

MEMORANDUM

TO: Representative Gene Therriault, Co-Chair
House Finance Committee

FROM: Representative Gary Davis, Chair
House Finance Subcommittee on Public Safety

DATE: March 6, 2000

RE: Capital Budget request

In reviewing the Department of Public Safety operating budget, there is one item that seems appropriately situated in the Capital Budget.

The appropriation of concern is a one-time item of 98.1 GF that will fund a 2-year project to rewrite and provide for the subsequent adoption of the International Building Codes. The project requires extensive review of the current codes, expanded public hearings and notification and a complete rewrite of chapters 13 AAC 50, 13 AAC 52 and 13 AAC 55.

If the International Building Code is not adopted and Alaska experiences a natural disaster, FEMA will not provide full disaster recovery funding.

Session: State Capitol, Juneau, AK 99801 • Phone 907/465-2693 or 800/463-2693 • Fax 907/465-3835
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Email: Representative_Gary_Davis@legis.state.ak.us

Change Record Detail With Description

Department of Public Safety

Scenario: FY2001 Governor
Component: Fire Prevention Operations (494)
BRU: Fire Prevention

Scenario/ Change Record Title	Trans Type	Totals	Personal Services	Travel	Contractual	Supplies	Equipment	Land/ Buildings	Grants Claims	Misc.	Non Specific	Positions PFT	PPT	NP
FY2001 Governor														
Adopt International Building Code														
	Inc	98.1	69.1	6.0	17.0	2.0	4.0	0.0	0.0	0.0	0.0	0	0	1
1004 Gen Fund	98.1													

Change Record Detail With Description

Department of Public Safety

Scenario: FY2001 Governor
Component: Fire Prevention Operations (494)
BRU: Fire Prevention

Scenario/ Change Record Title	Trans Type	Totals	Personal Services	Travel	Contractual	Supplies	Equipment	Land/ Buildings	Grants Claims	Misc.	Non Specific	Positions PFT	PPT	NP

Increment for Extensive Code/Regulation Project: $98.1 GF

The State of Alaska has used the Uniform Codes since statehood. The Uniform Codes are one of three model code sets that have been used across the United States. In 1995, the three model code organizations combined into an organization called "The International Code Council". The primary purpose of the three model code groups coming together was to develop and publish one set of model codes for use in the United States and other countries.

The model code organizations agreed to stop publishing their own model code set once the new International Codes were published. The International code Council has completed the work on the International Codes and they will be published in calendar year 2000.

This change has a significant impact on Alaska as well as most states:

- The model code set used in Alaska since statehood is no longer available. The 1997 edition of the Uniform Codes that are now in use in Alaska is the last edition that will be published by the International Conference of Building Officials, (ICBO). The only current set of codes that will be available after calendar year 2000 will be the International Codes.

- The International Codes are a combination of the three previous model code sets. The combined criteria sets standards for building construction, fire safety, and other code requirements that are significantly different than is now used in Alaska or any other state.

The following impacts will occur if Alaska does not move to the new model codes:

- The new International Building Code will be adopted by the Federal Emergency Management Agency (FEMA). If a state is not using this code and there is a disaster (earthquake, fire, etc.), FEMA will not provide full disaster funding for recovery.

- Not adopting the new codes would make it more costly for companies to build in Alaska. The primary purpose the code organizations had in developing one code was to make it more cost effective for companies that build in many different states and jurisdictions.

- The major cities in Alaska have plans to adopt the new codes. If the state does not adopt these codes it will cause many problems for all who want to build in Alaska.

Because of the significant changes in criteria these new codes will establish, for building design and construction, fire safety standards and other requirements the adoption will require extensive review of the codes, expanded public hearings and notification, plus a complete rewrite of chapters 13 AAC 50, 13 AAC 52 and 13 AAC 55 of the Alaska Administrative Code. This will require resources that the Division of Fire prevention does not have.

We believe the program for Alaska to change to the new International Building, Fire, Mechanical and Residential Codes will be a two

National Fire Protection Association

Western Regional Representative
3535 Inland Empire Boulevard, Suite 29, Ontario, CA 91764
Telephone (909) 941-2505 Fax (909) 941-2506

May 12, 2000

The Honorable Aileen Adams
Secretary, State & Consumer Services Agency & Chair
California Building Standards Commission
915 Capitol Mall, Suite 200
Sacramento, California 95814

Dear Aileen Adams:

The purpose of this letter is to provide further information regarding my research into questions regarding Federal Post Disaster Funding and Federal Seismic Safety Guidelines.

Over the past two years questions have been raised at both the BSC meetings and the 2000 Code Partnership meetings regarding whether or not there is in place some type of federal mandate for states or local communities to update their current codes in order to qualify for federal disaster relief. This has resulted in some confusion among participants as to how to proceed with future code adoptions.

This office has been working with our Washington D.C. staff over the past few months reviewing federal regulations and guidelines on these matters.

Our findings indicate the Federal Government does not recommend or mandate the adoption or use of any particular code or standard in order for states to qualify for post disaster federal funding.

FEMA does encourage local and state governments to adopt and enforce good and reasonable codes in order to minimize building damage should disasters occur.

Since 1993 there has been an ongoing legislative discussion in congress as to whether or not the Stafford Act should be strengthened to require state and localities to adopt state-of-the-art building and fire codes to reduce the cost of losses caused by natural disasters.

The Earthquake Hazards Reduction act of 1977 requires the development and promulgation of specifications, design criteria, etc., to achieve appropriate earthquake resistance for new structures.

Obviously, California has always adopted state-of-the-art codes and is currently viewed as a national leader in statewide codes. Our current codes meet or exceed recommendations by the Federal Government.

I have enclosed several federal documents, which address this subject.

I would appreciate receiving any further information you may have on this subject.

Respectfully submitted,

Robert V. Miller

Robert V. Miller
Western Regional Manager

rvm/cac

Enclosure

Change Record Detail With Description

Department of Public Safety

Scenario: FY2001 Governor

Component: Fire Prevention Operations (494)

BRU: Fire Prevention

Scenario/ Change Record Title	Trans Type	Totals	Personal Services	Travel	Contractual	Supplies	Equipment	Land/ Buildings	Grants Claims	Misc.	Non Specific	Positions PFT	PPT	NP
We believe the program for Alaska to change to the new International Building, Fire, Mechanical and Residential Codes will be a two year effort, spanning FY2001 and FY2002.														
The funding requested for FY2001 is $98.1 General Funds														
FY2001 Governor														
Inspect schools, other assemblies														
	Inc	40.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
1005 GF/Prgm 40.0														
Increment for inspection of schools, other assemblies: $40.0 GF/PR (Excess Plan Review Fees)														
This increment will provide funding so that schools and assembly buildings (public buildings which hold 50 or more people) can be inspected on an annual basis. Current funding only allows these buildings to be inspected every two years. The two year cycle does not provide adequate fire prevention services and does increase fire loss in these occupancies. The $40.0 to be funded from additional GF/PR authority (Excess Plan Review Fees).														
Technical Adjustment: I/A Funds for Building Plan Reviews and Other Services														
	Inc	125.0	0.0	0.0	125.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
1007 I/A Rcpts 125.0														
This increment adjusts the authorization of Interagency Receipts in Fire Prevention BRU to reflect historical trends in unbudgeted RSAs. These RSAs have been for building plan reviews and other fire prevention services for state agencies.														
Totals		1,705.8	1,285.1	99.4	280.7	23.5	9.1	0.0	0.0	0.0	0.0	18	0	1

Mechanical Code Adoption

Background

Under AS 18.70.080, the Department of Public Safety has the authority to "adopt regulations for the purpose of protecting life and property from fire and explosion." Since 1981, the State Fire Marshal has adopted the Building, Fire and Mechanical codes.

Our primary concern regarding the mechanical code is that we adopt and use a code that is compatible and correlated with a building code and fire code. The nation's three model building code organizations, Building Officials and Code Administrators (BOCA), International Conference of Building Officials (ICBO) and Southern Building Code Congress International (SBCCI) have agreed to form the International Code Council for the purpose of publishing a national standard code. As a part of this agreement, the three organizations will no longer publish separate model building codes. Currently, there is only one model building code published; the International Building Code (IBC). This means that if a jurisdiction wants to adopt a fire or mechanical code that is compatible and correlated with a building code, they will either have to adopt the International Fire Code (IFC) and International Mechanical Code (IMC) or stay with the 1997 editions of the codes now being used. Industry is eager to use the new International Codes and would not look favorably upon any delay of adoption.

Process

The adoption process for the International Building, Fire and Mechanical Codes involved all organizations either served, affected by or subject to the Alaska State Fire Regulations. At the outset, organizations such as the Alaska Home Builders Association, the Alaska Professional Design Council, the Alaska Mechanical Contractors Association, the American Institute of Architects, the American Society of Heating, Refrigeration & Air Conditioning Engineers, the American Society of Mechanical Engineers, the Associated General Contractors, the Building Owners and Managers Association, the Mortgage Bankers Association as well as the Building and Fire Officials of the various deferred jurisdictions from around the state were asked to have representatives participate in the development process for the adoption of the International Codes into the State Fire Regulations.

Recommendations were received from many of those organizations and a work group of 40 people representing all the interested areas of the state and affected parties participated in work shops held in Fairbanks, Juneau, Soldotna and Anchorage between October 23 and 30, 2000. The outcome was a set of revisions to the International Building, Fire and Mechanical Codes that were then set into the required regulatory format as outlined in the "Drafting Manual for Administrative Regulations, 14th Edition" dated September 2000.

The "draft" of these regulations was again e-mailed to all workshop participants for review and comment. The final document was submitted to Assistant Attorney General Michael Stark in the Department of Law for review under File #993-01-0048 and Notice

of Proposed Adoption was made through the Anchorage, Fairbanks and Juneau newspapers and Alaska Journal of
Commerce as well as direct e-mails or mailings to those work group members, any who requested such, and as outlined in the Manual for Administrative Regulations. The public comment period was from December 15, 2000 through January 31, 20001. Comments on the regulations were received from at least five groups, the foster care industry (fire & building), the bulk fuel storage design engineers (fire), DOT on rural airports (fire), PACE representing a group of oil workers (fire & building) and the safety engineer from BP (fire). The various comments were considered and some were included in the final set of regulations now in review and some were rejected. Throughout the process, there has been unqualified support for the adoption of the three "family" members if the International codes under the jurisdiction of the Fire Marshal's Office.

Since the adoption order was signed, we have conducted code classes in Juneau, Fairbanks, and Soldotna and will be conducting one in Kodiak within two weeks. These classes have been attended by code officials, contractors, architects, and mechanical engineers. All participants have been enthusiastic regarding the coordination between the three codes, the cross referencing of other codes and the clear direction to the Department of Labor for the plumbing and electrical standards and authority.

A number of the major deferred jurisdictions will be adopting the IMC, and are currently in the process. Several large scale projects are in the design phase under the International Codes in anticipation of the adoption of the IBC, IFC and IMC.

MESSAGE FROM DEBORAH BEHR:

On June 25, 2001 the lieutenant governor's office filed regulations of the Department of Public Safety to adopt (with some Alaska variations) the International Building Code, International Fire Code, and the International Mechanical Code as the standards for buildings in this state. The codes replace the Uniform Building Code, Uniform Fire Code, and Uniform Mechanical Code in those regulations. The new regulations are contained in 13 AAC 50.010 - 13 AAC 50.150. (The codes are commonly known as the Fire and Life Safety Codes.) The regulation changes take effect September 15, 2001.

I did a quick search in the statutes and regulations databases and found the following state agencies had at least one statute or regulation that incorporated one or more of the uniform code described above. I also am aware that some state agencies refer to the fire and life safety codes in contracts and state plans.

You should ask the agencies that you advise to review their statutes, regulations, and other important documents to see if they incorporate these codes. We can then advise on the appropriate actions to take.

If you have questions, please contact me at deborah_behr@law.state.ak.us.

STATUTES

Department	Citation	Affected AAG
Community and Economic Development	AS 08.18.171 (Construction Contractors) AS 08.40.270 (Mechanical Administrators) AS 08.40.490 (Mechanical Administrator)	Truitt/Horetski
Alaska Housing Finance Corporation	AS 18.56.300 (Construction Standards - AHFC)	McKinnon
Labor and Workforce Development	AS 18.60.705 (Plumbing Code)	Steinberger

REGULATIONS

Education & Early Development	4 AAC 31.014 (New School Planning	Reeves/Mischel

	and Construction)	
Health & Social Services	7 AAC 12.900 (Medical Facilities Licensing)	Bomengen
Community & Economic Development	12 AAC 39.252 (Mechanical Administrator) 12 AAC 39.410 (Mechanical Administrator - CL)	Truitt/Horetski
Alaska Housing Finance Corporation	15 AAC 150.910 (Definitions - AHFC)	McKinnon
Environmental Conservation	18 AAC 78.025 (Requirements For Existing Underground Storage Transfer Systems)	Daugherty

MEMORANDUM

STATE OF ALASKA
Department of Law

TO: The Honorable Glenn Godfrey
Commissioner
Department of Public Safety

DATE: June 25, 2001

FILE NO.: 993-01-0048

TELEPHONE NO.: 465-3600

Deborah E. Behr

FROM: Deborah E. Behr
Assistant Attorney General
and Regulations Attorney
Legislation and Regulations Section

SUBJECT: Department of Public Safety
Regulations Re: Fire and Life
Safety Code
(13 AAC 50.010 - .060;
13 AAC 55.150)

Under AS 44.62.060, we have reviewed the Department of Public Safety's adoption, amendment, and repeal of these regulations and approve the changes for filing by the lieutenant governor. A duplicate original of this memorandum is being furnished the lieutenant governor, along with the 96 pages of regulations and the related documents.

You might wish to contact the lieutenant governor's office to confirm the filing date and effective date of the attached regulation changes.

The December 15, 2000 and April 30, 2001 public notices and the June 22, 2001 adoption order all state that this action is not expected to require an increased appropriation. Therefore, a fiscal note under AS 44.62.195 is not required.

The regulation changes were adopted by the Department of Public Safety after the close of the public comment periods. The regulations are commonly known as the fire and life safety code. Also, please note that the regulations take effect September 15, 2001 as specified in the adoption order.

DEB:jf

cc w/enc.: Royce Weller, Regulations Contact
Department of Public Safety

Ross Fosberg
Department of Public Safety

Mike Stark
Assistant Attorney General
Juneau

MEMORANDUM State of Alaska

TO: Deborah Behr
Regulations Attorney
Legislation/Regulations Section
Department of Law

DATE: June 22, 2001

FILE: File #993-01-0048

TELEPHONE: 269-5061
FAX: 338-4375

FROM: Ross A. Fosberg
Regulations Contact
Division of Fire Prevention,
Department of Public Safety

SUBJECT: Request for Final Legal Review of Regulations Project on State of Alaska Fire and Life Safety Regulations 13 AAC 50.010 – 55.150

We are requesting legal review and approval of the attached final regulations on Fire and Life Safety, which were adopted by the Department of Public Safety.

Enclosed are the following documents:

1. The original and one copy of the final regulations for the Department of Law's use;
2. One copy of the final regulations and the public notice for governor's office use;
3. The original of the signed and dated adoption document;
4. A copy of the delegation of authority to adopt regulations;
5. A copy of the public notice;
6. A copy of the additional regulations notice information form distributed with the notice;
7. The originals of the publishers' affidavits of publication;
8. The original of the affidavit of notice;
9. The original of the affidavit of agency record of public comment;
10. Material adopted by reference in the regulations has already been transmitted to the agency attorney.

We would appreciate the project being reviewed at the earliest possible opportunity, for the following reasons:

1. The regulations contain design criteria for projects ranging from small multi-family (4-plex) residential projects to the multi-million dollar industrial and oil related industries. Although the effective date will be September 15, 2001, the design and construction communities, and deferred jurisdictions are dependent on sufficient lead time to prepare for the timely adoption of regulations and the proposed Building, Fire and Mechanical codes adopted under this set of regulations. The adoption of these regulations has been eagerly anticipated by both industry and the deferred jurisdictions.

2. The various deferred jurisdictions throughout the state are moving forward in their code adoption processes for the International Building and Fire codes, which are the referenced codes under these regulations. Some have already adopted portions of those codes. It is imperative that the Department of Public Safety be in a position to assist and work with these jurisdictions in promoting fire and life safety through adoption and enforcement of the same standards.

We have worked with Assistant Attorney General Michael Stark on the project.

Upon completion of your review, please forward the regulations to the lieutenant governor for filing.

STATE OF ALASKA

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT

WAGE AND HOUR ADMINISTRATION
LABOR STANDARDS & SAFETY DIVISION

TONY KNOWLES, GOVERNOR

3301 Eagle Street, Suite 301
P.O. Box 107021
Anchorage, Alaska 99510-7021
Phone: (907) 269-4900
Fax: (907) 269-4915

May 29, 2001

Mr. Gary Powell
State Fire Marshal's Office
State of Alaska, Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Powell:

Mr. Eugene Rutland has contacted me and requested a clarification of paragraph two of your letter to him dated May 21, 2001. In your letter, paragraph two makes mention of one of our plumbing inspectors, Mr. Paul Yoder, as a representative of the Department of Labor.

In early fall of 2000, the Department of Labor obtained information that there was an effort to adopt a family of codes, including the International Plumbing Code (IPC) and the International Electrical Code (IEC). A review of the initial draft of the regulations did indeed reference both of those codes. We contacted your agency through Mr. Fosberg to inquire into the proposed regulation change. Mr. Fosberg invited the Department to provide a code review of your body of codes and point out our opposition to any language. While this is a function of the review committee, the Department felt compelled to have the proposed codes reviewed by our agencies. Mr. Yoder was asked to attend the meetings. The subsequent regulation package reflected the deleted references to the IEC and IPC, courtesy of Mr. Yoder. Mr. Yoder never endorsed the adoption of the International Mechanical Code over the Uniform Mechanical Code. In addition, you state that Mr. Yoder reviewed the IFGC code sections also. Mr. Yoder informs the Department that it was Tami Hamler and not he that reviewed the International Fuel Gas Code.

If the tone of this letter sounds somewhat critical and defensive, it is not meant that way; it is meant to clarify our positions on a number of issues. It is important for both our agencies to work together, and in order to accomplish that end, we must address several points that have caused these agency problems.

In one instance, your personnel approved the installation of materials not approved by the state adopted Uniform Plumbing Code (UPC) enforced by the Department of Labor (DOL), for a structure in Homer, Alaska. The material was cross-linked polyethylene (PEX) piping for potable water. While that material was finally approved and is included in the current code, at the time it was installed it was not approved by the code. ASTMF 1807 was promulgated as a standard for PEX and the material was adopted in the 2000 code.

Most recently, we opposed the installation of an emergency power generator at a school, which did not have an on-site fuel supply. This is a direct violation of the state adopted National Electrical Code (NEC). We solicited and received the support of your division for requiring code compliance until we discovered from the engineering firm that the code requirement had been directly addressed to your plan review section and they granted an exception. The exception was the prerogative of the Department of Labor.

In the past two weeks, the Department has received two national trade publications with "press releases" ostensibly written by you that announce the adoption by the State of Alaska of the "2000 IBC, IFC and IMC codes effective March 1, 2001." That is not true. Your regulations are still out for public comment. We are getting daily calls from industry wanting to know what codes are in effect. In a meeting attended by Department of Labor personnel, Mr. Fosberg was quoted as stating that "it doesn't matter what the public comments are, the adoption of the International Codes is a done deal." This is an extremely cavalier approach to regulation adoption.

We have had regulations adopted in the past, and our experience has been that public comment does matter. The Department has also been informed that the endorsement of your proposed codes was by members of your own code review committee. This committee is made up of "all the major stakeholders." We have been told that all the workgroups were almost exclusively ICBO members. This is the organization responsible for the codes, which your agency is attempting to adopt. Conspicuously missing from the groups are mechanical contractors and mechanical administrations that will have to radically adjust their activities in order to comply with the proposed International Mechanical Code.

When the Director of Occupational Licensing Division offered to make a mailing list of Mechanical Contractors and Mechanical Administrators available to Mr. Fosberg, he was not interested in receiving them. Occupational Licensing Division took the unprecedented step of public notice mail out of the proposed regulations on the second go-round. Further, the original advertising for public comment was poor. The Department attended two of the four meetings and found attendees were made up of review committee members.

I, as Director of Labor Standards and Safety, can appreciate that "The Boss" doesn't always have the time to carefully review every detail that comes across their desk. However, when facts are distorted or misrepresented, steps must be taken to correct the matter. The Labor Standards and Safety Division, through the Mechanical Inspection section, stands ready to explain our position concerning the proposed regulations. We have conducted a side by side analysis of the IMC/UMC and the IPC/UPC and find no compelling reason to abandon the uniform codes that have been in effect for over thirty years.

Finally, the adoption of the International body of codes would create several conflicts with existing statutes. These conflicts will have to be addressed by the various agencies that enforce existing statutes. Switching enforcement to the International codes would create confusion and require each agency to access what the costs of enforcing the codes would be. In closing, Labor Standards and Safety stands ready to assist you and your agency with any assistance you may need from us.

Sincerely,

Richard A. Mastriano

Richard A. Mastriano
Director
Labor Standards and Safety

RAM:jr
cc: Ed Flanagan, Commissioner
Glenn Godfrey, Commissioner
Mr. Gene Rutland
Mr. Dwight Perkins
J.R. Carr, Chief Labor Standards and Safety
Dennis Bowden, Assistant Chief, Mechanical Inspection
regnot.

Tony Knowles, Governor

Alaska Department of Community and Economic Development

Division of Occupational Licensing
P.O. Box 110806, Juneau, AK 99811-0806
Telephone: (907) 465-2534 • Fax: (907) 465-2974 • Text Telephone: (907) 465-5437
Email: license@dced.state.ak.us • Website: www.dced.state.ak.us/occ/

June 7, 2001

Mr, Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Protection
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg,

The following are the Department of Community and Economic Development Division of Occupational Licensing comments on the Department of Public Safety proposed changes to 13 AAC 50.020 and 13 AAC 50.023 regarding the Building Code and the Mechanical Code.

The Department of Public Safety proposes to repeal the Uniform Building Code and the Uniform Mechanical Code and to adopt the International Building Code and the International Mechanical Code. This change would significantly impact the Division of Occupational Licensing and our licensed Mechanical Administrators and Residential Contractors.

The proposed change from the Uniform Codes to the International Codes appears to conflict with the statutes and regulations administered by the Division of Occupational Licensing governing Mechanical Administrators and Residential Contractors. Even if the Mechanical Administrator and the Residential Endorsement statutes can be interpreted in a manner that does not technically conflict with the proposed DPS regulations, the outcome will be conflicting policies and public confusion.

The purpose of licensing Mechanical Administrators as stated in AS 08.40.210 is to, "protect the safety of people and property in the state from the danger of improperly installed or modified mechanical systems by providing a procedure to assure (1) the public that persons responsible for making mechanical installations in this state are qualified; and (2) that a sufficient number of persons are so qualified."

The primary qualification that AS 08.40.270 requires Mechanical Administrators to posses is passage of an examination that must test applicant's, "familiarity with the requirements of the...Uniform Mechanical Code currently in effect in the state." Therefore current Mechanical Administrators have studied and been tested on the Uniform Mechanical Code and not the International Mechanical Code that DPS proposes to adopt.

Furthermore, the continuing education Mechanical Administrators are required to obtain under Division regulations is training in the Uniform Codes. All Mechanical Administrators must renew their licenses by August 31, 2001 and document 8-16 hours of training on specific Uniform Codes. This training will not have familiarized them with the International Codes.

The other reference to specific codes in the Mechanical Administrator statute appears AS 08.40.490 that defines Mechanical Administrator as a person who is responsible for installing or modifying items subject to the Uniform Mechanical Code. These references appear to imply the legislature was intending Mechanical Administrators to be performing under the Uniform Code.

Residential Contractors are required by AS 08.18.025 to hold residential endorsements for which they are tested. The Division tests applicants on the Uniform Building Code and continuing education relates to that code.

The Division contracts with Experior Assessments to write the Mechanical Administrator and Residential Endorsement Exams. Under our contract with Experior, it may cost up to $2,000 per exam for the revisions necessary to switch to the International Code. Eight separate examinations would have to be revised and the revisions would take four to six months to complete.

A change from the Uniform Code to the International Code would also result in the Division having to revise its own examination and continuing education regulations for Mechanical Administrators and Residential Endorsees. The Division would need to locate providers of continuing education on the International Code and approve their courses.

In conclusion, the Division requests that the Department of Public Safety delay adoption of the International Codes until conflicts with the Mechanical Administrator statutes can be resolved and the transition can be made in an orderly manner.

Thank you for consideration of my comments.

Sincerely,

Catherine Reardon
Director

CC: Deborah Behr, Department of Law
Jeff Bush, Department of Community and Economic Development

Subject: Re: Fire Prevention regs
Date: Fri, 27 Apr 2001 15:59:17 -0800
From: "Deborah Behr" <Deborah_Behr@law.state.ak.us>
To: <Ross_Fosberg@dps.state.ak.us>, "Michael Stark" <Michael_Stark@law.state.ak.us>

Mike/Ross - Here's what I think:

1) Ross is having my edits typed into the regs. I would like to see them as soon as possible after this is accomplished because I can check for typos, etc.

2)I understand that Occupational Licensing is going to be mailing notices to all licensed contractors, including mechanical administrators. I would suggest that Ross ask Kurt West to give a short affivadit indicating that Occupational Licensing made the mailing at the request of Public Safety ,

3)Please get the remaining incorporation by reference books to me when they arrive. Don't wait for the submission of the final product.

4) Ross needs to check in with Mike before Mike goes on leave. If Ross is contemplating edits after the public comment period closes, perhaps some preliminary language can be developed before Mike leaves. Ross and DPS cannot formally make changes in the regs until have the public comment period is closed.

5)DPS should prepare a new adoption order and have Mike OK it before he goes on leave. If changes are made in the regs that affect the order, I can work with Ross.

6)Ross needs to send the final regulations package - order, affivadits,newspaper notices, etc. - directly to me. I believe that I can process them without further assistance from Mike. If it gets beyond me because of complexities or other priorities, I will talk to Dean Guaneli.

Will this work for both of you??? Deborah Behr

>>> *Michael Stark 04/27/01 02:50PM* >>>
Ross and Deb, since the deadline for comments on the new notice for the Frire Prevention regs is June 8th, it occurred to me that I should let you both know that I will be out of state from June 8-24. I expect that Ross will get his packet to us sometime late in the week of June 11, when I am gone. Since time is of the essence, and I won't return to my office until June 25, I wanted tc seek your input on how we should handle this. Thanks. Mike Starlk

Tony Knowles, Governor

Alaska Department of Community and Economic Development

Division of Occupational Licensing
P.O. Box 110806, Juneau, AK 99811-0806
Telephone: (907) 465-2534 • Fax: (907) 465-2974 • Text Telephone: (907) 465-5437
Email: License@dced.state.ak.us • Website: www.dced.state.ak.us/occ/

May 29, 2001

Mr. Ross Fosberg
Division of Fire Prevention
State Fire Marshall
5700 E Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg:

Enclosed please find a roster of mechanical administrators and mechanical contractors that were sent a copy of your public notice relating to proposed regulations. The division mailed your public notice to these individuals on May 2, 2001. The attached rosters include only currently licensed individuals as of May 2, 2001. Feel free to contact me at 465-2537 if you have any questions.

Sincerely,

Kurt West
Regulations Specialist

Subject: Fwd: International Mechanical Code
Date: Thu, 14 Jun 2001 13:20:29 -0800
From: "Dean Guaneli" <Dean_Guaneli@law.state.ak.us>
To: <delbert_smith@dps.state.ak.us>

attached

Subject: International Mechanical Code
Date: Wed, 13 Jun 2001 14:26:43 -0800
From: "Dean Guaneli" <Dean_Guaneli@law.state.ak.us>
To: <glenn_godfrey@dps.state.ak.us>
CC: "Dan Branch" <Dan_Branch@law.state.ak.us>,
"Deborah Behr" <Deborah_Behr@law.state.ak.us>,
"Ken Truitt" <Ken_Truitt@law.state.ak.us>, "Michael Stark" <Michael_Stark@law.state.ak.us>

Commissioner Godfrey:

This is a follow-up to conversations with you and others in your department about the advice provided to the Department of Public Safety and the Division of Occupational Licensing regarding the authority of Public Safety to adopt regulations implementing the International Mechanical Code in place of the Uniform Mechanical Code.

It is apparent that the Department of Law has consistently advised both agencies that Public Safety has the clear legal authority to adopt the International Mechanical Code, and that the testing requirements of AS 08.40.270 and the definition in AS 08.40.490(3) are not inconsistent with Public Safety's authority in this regard.

In my view, the private legal opinion sought by Dwight Perkins is incorrect insofar as it opines that the Division of Occupational Licensing will lack the authority to test the knowledge of license applicants under the International Mechanical Code. Although I do not provide advice to the Division of Occupational Licensing, I believe the division's authority under AS 08.40.270 to test for knowledge of "the Uniform Mechanical Code currently in effect in the state" is a sufficient statutory grant to allow testing under the International Mechanical Code if the IMC is adopted by Public Safety as the mechanical code in effect in Alaska. Although it may be appropriate to revise the statutes in AS 08.40 to more accurately or more flexibly reflect the nomenclature used in describing the mechanical code, in my opinion the thinly-veiled threat of litigation set out in attorney Joe Geldhof's June 4 letter to Dwight Perkins is merely bluster.

Dean Guaneli

JOSEPH W. GELDHOF
Attorney at Law
229 4th Street
Juneau, Alaska 99801
(907)586-6193
FAX: (907)586-8216
E mail: joeg@alaska.com

June 4, 2001

U.A. Local 375 & Mechanical
Contractors of Alaska, Inc.
c/o Mr. Dwight Perkins
P.O. Box 33922
Juneau, Alaska 99803

Re: Proposed Changes to 13 AAC 50

Dear Mr. Perkins:

You have requested an expedited review with respect to the proposed adoption of regulations addressing mechanical code requirements in Alaska. In summary, the Department of Public Safety has proposed altering 13 AAC 50.023 *et seq.*, the provisions dealing with mechanical requirements for buildings in Alaska. Typically the term "mechanical" refers to heating, ventilation, air conditioning and other building systems.

Currently, the Department of Public Safety has adopted by reference the Uniform Mechanical Code (UMC), for use in Alaska. The proposed changes to 13 AAC 50 have had a history of procedural problems, but essentially the Department of Public Safety is proposing to replace the existing UMC with the International Mechanical Code (IMC).

A review of the statutory authority found in AS 18.70, indicates that the Department of Public Safety has fairly broad authority to adopt regulations necessary "for the purpose of protecting life and property from fire and explosion...".[1] Other agencies of the State of Alaska do not have similar sweeping powers to adopt regulations. For example, the legislature

[1] AS 18.70.080 (a).

has constrained the Alaska Department of Labor's ability to adopt building codes by reference to a specific code.[2]

The merits of adopting the IMC instead of the current UMC is outside the scope of this opinion. However, the manner in which the Department of Public Safety has proposed to amend 13 AAC 50 (essentially the adoption by reference of the new IMC), supports at least one and possibly two legal theories that could be used to challenge a final adoption of the proposed regulations.[3] Whatever the merits of one code compared to another, it is worth considering the practical impacts adoption of the IMC would have on the public and other agencies. Even if the Department of Public Safety adopts the IMC, other provisions of Alaska law require individuals tasked with implementing the certification of "mechanical administrators" according to the UMC.[4] As a practical matter, the mechanical administrators are the individuals and firms who install and complete mechanical work for the public. In simple terms, this means the Alaska Department of Community and Economic Development, Division of Occupation Licensing will not be able to examine and certify mechanical administrator's under the IMC, if the Department of Public Safety proceeds with the proposed adoption of the IMC.

This situation is perhaps akin to the situation back in the early 1990's when the legislature terminated or contemplated termination of certain occupational licensing boards (including the Board of Electrical Examiners), without altering other substantive provision of Alaska law.[5] The situation in the early 1990's lead to confusion. It is possible that adoption of the IMC by the Department of Public Safety could lead to similar confusion or problems unless the Department of Community and

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[2] *See, e.g.*, AS 18.60.590 (affording the Department of Labor with authority to adopt the most recent National Electrical Code "approved and issued by the American National Standards Institute."; *see also*, AS 18.60.705 (a)(1) (adopting the Uniform Plumbing Code).

[3] A separate Memorandum will outline these legal theories and assess the probability of a successful challenge. In any event, litigation over adoption should be avoided if possible for all the obvious reasons.

[4] AS 08.40.270 (a)(3); *see also*, AS 08.40.490 (3)(A).

[5] *See generally, Atty Gen. Op.* 663-93-0354, March 31, 1993.

Economic Development is given statutory authority to certify individuals under the IMC. Absent a statutory change to AS 08.40, the public will soon be confronted with a situation whereby no individuals are certified to provide mechanical services under the IMC if adopted by the Department of Public Safety.

Under these circumstances, resort to litigation or immediate adoption of the proposed regulations appears to be premature. Instead, the State of Alaska should review and adopt a comprehensive regime by statute that works for the public, industry and regulators alike.

Call me if you have any questions about this matter.

Very truly yours,

Joseph W. Geldhof

Subject: State Fire Regulations (Proposed)
Date: Fri, 22 Dec 2000 09:17:42 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: monty@agcak.org

Monty Montgomery:

I talked with Don Weber this morning and at his request I am forwarding to you the attached two legal notices regarding the proposed changes to the state fire regulations and the regulations themselves. Anyone wanting to see how the revisions fit with the International Building, Fire or
Mechanical codes needs to obtain a copy of those code. They can be obtained from International Conference of Building Officials. The address and phone number is contained in the proposed regulations under the editors notes.

If I can be of further assistance, please contact me at 269-5061 or drop me a e-mail at ross_fosberg@dps.state.ak.us.

Thanks,

Ross Fosberg

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1_A-Additional Regs Notice1.doc	**Name:** 1_A-Additional Regs Notice1.doc **Type:** Winword File (application/msword) **Encoding:** base64
A-Final Regs Submitted.doc	**Name:** A-Final Regs Submitted.doc **Type:** Winword File (application/msword) **Encoding:** base64
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A-Final Regs Submitted.doc	**Name:** A-Final Regs Submitted.doc **Type:** Winword File (application/msword) **Encoding:** base64

Subject: State Fire Regulations (Proposed)
Date: Fri, 22 Dec 2000 09:04:16 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: agcsafety@gci.net, info@alaska.agc.org

Don Weber:

Attached are the two legal notices regarding the proposed changes to the state fire regulations and the regulations themselves. Anyone wanting to see how the revisions fit with the International Building, Fire or Mechanical codes needs to obtain a copy of those code. They can be obtained from International Conference of Building Officials. The address and phone number is contained in the proposed regulations under the editors notes.

If I can be of further assistance, please contact me at 269-5061 or drop me a e-mail at ross_fosberg@dps.state.ak.us.

Thanks,

Ross Fosberg

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A-Final Regs Submitted.doc	**Name:** A-Final Regs Submitted.doc **Type:** Winword File (application/msword) **Encoding:** base64

Memorandum

Date: June 15, 2001

To: Record/File

From: Ross Fosberg, Code Adoption Coordinator

Re: Summary of written comments (essence of) against the adoption of IMC from Public Comment Period of May 6, 2001 through June 8, 2001 and agency action regarding such. Action recorded in lieu of notes on comment letters.

1. Uniform Plumbing, Mechanical, Solar Energy, Swimming Pool, etc; form a family of Codes that cover all of the mechanical systems in a building. Adoption of the IMC would only weaken the otherwise strong cohesiveness that these codes have.

   Rejected. While the UMC and UPC for part of a family of codes, the IMC is also part of a family of code, the I-codes. The IBC, IFC and IMC are integral to one another with extensive cross-referencing and design/installation requirements based on one another that are intrinsic to the fire/life safety performance of the structure. To break that relationship would be to deprive the designer, the construction team and the end user (the public/owner) of a properly integrated safe environment, as the IBC is the only building code now being published.

2. The adoption process is flawed. Advisory groups only composed of public officials and engineers, not those who work in the trades with the codes such as mechanical administrators.

   Rejected. The adoption process has followed the statutory and regulatory requirements outlined in the "Drafting Manual for Administrative Regulations", 14th Edition as provided by the Department of Law. We have gone beyond the notifications required and the time frames required in regard to public input and comment. That an organization fails to respond to such notices in a timely manner does not make the "process flawed." The Anchorage Chapter of the Mechanical Contractor Association was notified, but for whatever reason did not distribute the notice to its members in the first public comment period. Other 'trades" people were involved and responded to the invitation to participate. All responding groups or individuals were assigned to work on the review project.

3. The IMC refers to so many other documents or publications. UMC is self-contained, and provides all the information that is necessary. Will require administrators to have greater library, and may result in mistakes and unsafe conditions in the field.

   Reject contention that the presence of numerous other standards and references will result in mistakes and unsafe conditions. **Concur** with both statements in regard to multiple documents and publications. It should be noted that the currently adopted 1997 UMC did not include the adoption of the appendices, therefore the current UMC and the proposed IMC references the same standards. The inclusion of other codes such as the IBC and IFC as well as the NFPA, ANSI and ASTM Standards is no different than any other interrelated body or family of codes. The UMC itself is not as self-contained as alleged, the cross-referencing assists in elimination of design, installation and interpretation problem solving.

4. There are omissions in the IMC whereas, the UMC is complete. User must refer to other codes such as the IFGC for gas venting. UMC one document. Alleged omissions include gas piping, combustion air, and refrigeration.

   Concur. The IMC is a companion to the IFGC, which was not adopted because it would cover material already adopted under the plumbing code as adopted under 8 AAC 63.010. The plumbing

code is the Uniform Mechanical Code 2000 Edition and is under the authority of the Department of Labor. There is a concerted effort in this adoption process not to create conflict with such safety standards already adopted by another agency. In addressing the identified omissions from the IMC, we have referenced other codes adopted either by this agency or other agencies, or made revisions or adoptions by reference to cover the subject identified which would not have been omitted had we adopted the IFGC. Those are as follows:

a. Fuel gas piping, installation and testing. This is covered in Chapter 12 of the UPC adopted by the Department of Labor.
b. Process piping. This is covered under the various processes as covered by the UPC.
c. Combustion air. The requirements for combustion air for oil fired equipment is covered in Chapter 7 of the IMC. The requirements for combustion air for gas fire equipment is covered under Section 304 of the IFGC which has been adopted by reference in a revision to IMC Section 701.1.
d. Refrigeration. This is covered under IMC Chapter 11.

5. Will seriously compromise minimum safety standards.

Rejected. The safety standards and design criteria along with the cross-referenced requirements between the IMC, IBC and IFC give greater fire/life safety protection than does the adoption of the UMC without the integration with the other codes. The mechanical systems are subordinate to the fire/life safety design requirements of the fire and building codes. The mechanical code transmits the systems design into a working component of the overall design of the structure.

6. Mechanical administrators licensing, testing and training is based on UMC. No training or continuing education credits are allowed under IMC. Will need to rewrite training for apprentices and field personnel. Regulations on licensing conflict with regulations allowing adoption of IMC.

Rejected: The DECD has responsibility for licensing under regulations adopted by that agency. Law Department advises that those regulations are subordinate to the code adoption authority of DPS under AS 18.70. While DECD has a significant role relating to licensing, certification, and continuing education, it is their responsibility to conform their policies and where necessary their statutes to the code so adopted by DPS. Mr. Perkins alluded to this fact in his discussion of the transitional reference "currently in effect in the state" adopted in AS 08.40.70 with the Fire Marshal and the Commissioner at a meeting on May 31st in Anchorage. No work will stop because of this code change. Current licenses will continue to the next renewal period with certification and testing being done under the IMC at that time.

7. Disclaimer on liability in preface of IMC not in UMC.

Relevance? This is a publisher's disclaimer that occurs throughout all the I-Codes. Does not have any impact or relationship to our adoption process.

8. UMC is legally tested. We will be guinea pigs for an untested code.

Rejected. As an adopted standard of safety in the state, it contains the same references as the current UMC and is based on the same criteria. The commentator in this case often testifies in cases so therefore his concern. We are not a guinea pig. This is one of the first I-Codes promulgated in 1997 and is based on the same safety and design premises as the UMC. The commentator will need to become familiar with this code in order to give expert testimony; just as he would with any newly adopted standard of design.

9. The thickness of the UMC indicates that the UMC must be better. The IMC is a thinner document. Something must have been left out.

   Rejected. This has nothing to do with the issue. The UMC contains the code body and appendices. Only the portions of Chapter 1 and Chapters 2-16 had been adopted previously. The IMC contains the same material in 16 Chapters. Chapter 16 of both codes contains the references. Those appendices, which have been made issue over, have never been adopted as part of the regulations. Some of the material covered in the UMC would be covered if the IFGC were adopted, but those sections and other references are picked up through adoption by reference and revisions. Nothing has been left out in the adoption process.

10. The prescriptive nature of the UMC is superior to the performance nature of the IMC. The UMC tells you exactly how to do it, whereas the IMC give latitude that could result in error.

    Concur on the nature of the codes. Reject superiority and error allegation. We are looking at a central issue on the national code effort here. The codes are moving to a performance basis. This allows design latitude and new technology for problem solving in safety and design, as well as greater cost effectiveness to the owner/end user. This is a concept the Division of Fire Prevention accepts and that some of mechanical trade's people do not. A competent trade's person will not be affected by this concept. The life safety standards are not reduced in this approach, and in fact new technologies have fostered under such performance based design criteria.

11. IMC allows LPG systems in pits whereas the UMC prohibits such dangerous installations.

    Rejected. The IMC is silent on this subject, neither allowing nor prohibiting such. This would have been prohibited if the IFGC were adopted. It should be noted that the IFC in Chapter 38 prohibits such installations in basements, pits and other such locations. The IMC being silent on this defers to the IFC.

12. There is no compelling reason to adopt IMC, why fix it if it isn't broke.

    Rejected. The coordination with the IBC and IFC makes this change to/adoption of the IMC imperative. As an example the room ventilation requirements are no longer in the IBC. These requirements are located in Chapter 4 of the IMC. Another example is the coordination between the code on the smoke control design criteria for life safety systems. Neither of these is addressed in the UMC. The process ventilation requirements of the IFC are clearly set forth in the IMC, not the UMC. With the adoption of the IBC and the IFC, it is broke if the IMC is not adopted as part of the integrated fire/life safety design concepts allowed by the I-Codes.

13. Don't adopt the structural requirements of the UBC, as they are not easy to understand.

    Rejected. The structural design chapters of the IBC while approaching the subject different from the UBC reach the same end. This is a major reason for the change from three model codes to a single nationwide code. The driving force for this was the federal government's requirement for uniform structural requirements across the country. End result, the new structural design criteria adopted from the BOCA code. Anchorage structural review committee has reviewed the chapters and found that it is not dissimilar to the UBC, but addresses all parts of the nation unlike the UBC.

Subject: Re: Our Phone Discussion
Date: Mon, 12 Feb 2001 16:15:55 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Carol Whelan <Carol_Whelan@dced.state.ak.us>

Carol:

I just reviewed those references. While they reference your requirement for licensing and testing for administrators under those codes, our charge is AS 18.70.080 dealing with fire life safety. The International Mechanical Code is one of those codes dealing with that subject and is published by ICBO. The last edition of the UMC was the 1998 Edition which was published on a off cycle year. The IMC replaces that code as the UMC is no longer published. You can establish an equivalency by looking at the code and the course document 686i published by ICBO.

I don't see any conflict. This office adopts the codes, and your office tests and certifies competency under the adopted codes. It does appear however, that since the UMC is no longer published there needs to be a change to the statutes referenced the basis for such testing since the referenced code will be a thing of the past.

I just got off the phone with Debbie Stovern. We had discussed this very point of equivalency and she seemed to think that this was doable. I also suggest that you talk with Ron Watts of the MOA as they are shortly going to adopt the IMC as well as Steve Shuttleworth in Fairbanks.

Hope this helps.

Ross

Carol Whelan wrote:

> *Thanks for the written confirmation regarding what was or was not stated. I*
> *appreciate your response.*
> >
> *Did you get a chance yet to review AS 08.40.270 and AS 08.40.490(3)(A) and see*
> *if you think there is potential conflict between your agency's new final*
> *regulations and our current statute?*
> >
> *Ross Fosberg wrote:*
> >
> > *Carol:*
> > >
> > *You misunderstood what was said.*
> > >
> > *I stated that we will be accepting plans for review under the 2000 I-codes*
> > *(Building, Fire & Mechanical) effective March 1, 2000. Based on the counsel*
> > *from our attorney Michael Stark that, when we submit the "Affidavit of*
> > *Notice of Proposed adoption of Regulations" to the Department of Law, we*
> > *have completed the public comment period and in effect have adopted those*
> > *regulations. This will be completed the week prior to March 1, so therefore*
> > *the effective date that we will be accepting those plans designed under the*
> > *I-codes will be March 1, 2001. Plans will continue to be accepted under the*
> > *UMC, 1997 Edition until the the regulations are effective 30 days after the*
> > *Lt. Governor receives them.*
> > >
> > *We see a window of about 90 days where we will be accepting plans for review*
> > *under both sets of codes. This has been applauded by the design community,*
> > *and has been common practice for each new code adoption cycle.*
> > >
> > *I hope this clarifies where we are at this point.*
> > >
> > *Ross Fosberg, Code Adoption Coordinator*
> > >

: Our Phone Discussion

> > Carol Whelan wrote:
> >
> > > I would like a written clarification regarding our phone conversation
> > > the other day while you were at the course given by ICBO, Pam Ronning.
> > >
> > > You stated that the regulations had been submitted to the Department of
> > > Law and that you had a letter which stated the regulations would be
> > > effective 3/1/01. I would like a written clarification and also a copy
> > > of the letter and the "final" regulations that have been approved by the
> > > Department of Law. (I have the copy of the draft regulations that were
> > > sent to Law for adoption/approval but I need the "final" signed version
> > > before I can move forward with this and how it will affect the
> > > Mechanical Administrator's laws.
> > >
> > > Please review AS 08.40.270 and AS 08.40.490(3)(A) and see if you think
> > > there is potential conflict between your agency's new final regulations
> > > and our current statute.
> > >
> > > Your immediate response is appreciated because if there are
> > > conflict/problems with our existing statutes and regulations this office
> > > must fix the conflicts ASAP.

Subject: Re: Our Phone Discussion
Date: Mon, 12 Feb 2001 15:25:19 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Carol Whelan <Carol_Whelan@dced.state.ak.us>

Carol:

You misunderstood what was said.

I stated that we will be accepting plans for review under the 2000 I-codes (Building, Fire & Mechanical) effective March 1, 2000. Based on the counsel from our attorney Michael Stark that, when we submit the "Affidavit of Notice of Proposed adoption of Regulations" to the Department of Law, we have completed the public comment period and in effect have adopted those regulations. This will be completed the week prior to March 1, so therefore the effective date that we will be accepting those plans designed under the I-codes will be March 1, 2001. Plans will continue to be accepted under the UMC, 1997 Edition until the the regulations are effective 30 days after the Lt. Governor receives them.

We see a window of about 90 days where we will be accepting plans for review under both sets of codes. This has been applauded by the design community, and has been common practice for each new code adoption cycle.

I hope this clarifies where we are at this point.

Ross Fosberg, Code Adoption Coordinator

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> *of the letter and the "final" regulations that have been approved by the*
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> *and our current statute.*
> >
> *Your immediate response is appreciated because if there are*
> *conflict/problems with our existing statutes and regulations this office*
> *must fix the conflicts ASAP.*

Subject: State Regulations
Date: Fri, 02 Mar 2001 13:50:26 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: grayjd@ci.anchorage.ak.us

James:

Attached is a copy of the final new state regulations with our revisions to the I-Codes integrated into them. Effective March 1, 2001 we are accepting plans for review under these regulations. The old regulations using the 97 Uniform codes will still be in effect until 30 days after the regulation package hit the Lt. Governor's desk, so we anticipate a 60-90 day transition time before we will no longer accept designs for review under the 97 codes.

Could you place these reg's on your web site for the Muni code changes in place of the existing "Proposed Changes"?

Thanks,
Ross

Subject: Response Letter of February 24, 2001
Date: Mon, 05 Mar 2001 10:13:10 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Granville L Couey <granville_couey@dot.state.ak.us>

Granville:

We appreciate your observations and the work of your staff, particularly Anna Walker, who talked with us and researched some of the material that creates conflict between your area of responsibility and ours.

Sorry for the delay in response, but the last two weeks have been rather hectic.

The adoption order for the 2000 International Building, Fire and Mechanical Codes as part of the State Fire Regulations was signed on February 20th. Beginning
March 1, 2001 the Fire Marshal's office will begin accepting projects designed under those codes.

As requested, we accepted your recommendation #2 and revised, not only Section 1103.5, but also Section 1105.1 to say "Aircraft motor vehicle fuel-dispensing stations shall be in accordance with NFPA 407, Sections 2-5 and 2-6."

The second suggestion was deemed not to be possible without creating a possible disparity in requirements between rural and urban areas of the State. Those matters will have to be handled on case-by-case basis.

Thank you for your input. The complete text of the new State Fire Regulations will be available at the DPS/Fire Prevention web site by the end of this week.

Ross Fosberg
Code Adoption Coordinator

Subject: Response to "PACE" letter of January 16, 2001
Date: Mon, 05 Mar 2001 10:42:29 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: dblessman@isdn.net

David Blessman:

Thank you for your input and comments regarding the two section of Appendix L as adopted by the Department of Public Safety under 13 AAC 50.020 item 74.

On February 20th, the Order of Adoption was signed by the Public Safety Commissioners Office, and effective March 1, 2001 the Fire Marshal's office began accepting projects designed under the 2000 International Building, Fire and Mechanical Codes.

The two sections you commented on were left as they were proposed. It was felt in our review of the Building Code that the Appendix Chapter L, as written, was more restrictive and better addressed the life safety issues than the code as written without the revision. The provisions of the H-4 classification still apply if the threshold amounts exceed those set forth in Table 307.7(2), and the second exit requirement for a U Occupancy would be at 1000 sq. ft. under the un-revised provisions of the Building Code, so the second exit at 250 sq. ft. in Appendix L is far more restrictive.

Again, we thank you for your input. The complete text of the new State Fire Regulations will be on our web site (DPS/Fire Prevention Division) by the end of this week.

Ross Fosberg
Code Adoption Coordinator

Subject: Response to Letter of January3, 2001
Date: Mon, 05 Mar 2001 11:02:19 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: enslowda@bp.com

Don Enslow:

Thank you for your input on 13 AAC 50.030 (h)(4).

For your information, the Order to Adopt the new State Fire regulations was signed on February 20, 2001. Beginning March 1, 2001 the Fire Marshals Office has begun accepting projects designed under those regulations. A complete copy of those regulations will be available by the end of this week at the Public Safety web site (www.dps.state.ak.us/Fire Prevention).

In regard to your proposal, the Fire Marshal's office has chosen to leave the regulation as proposed. This will require certification of persons performing monthly inspection at a Class I level. The change from the previous regulations however will allow those individual having a Class I certification to do the annual inspections and service as long as no "invasive" maintenance is required. This means that as long as the extinguisher does not have to be opened, or repaired, then a Class two certification is not required. It was never the intent to do away with certification for monthly inspections. This fits the intent of NFPA 10, Sections 4-1.2, 4-1.4 and 4-3.

Again, we thank you for your input on this matter.

Ross Fosberg
Code Adoption Coordinator

Subject: Re: [all_anchorage_fp] Statewide reminder
Date: Wed, 14 Mar 2001 08:09:53 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Pamela Brandt <pamela_brandt@dps.state.ak.us>

Pamela:

The 2000 IBC, IFC & IMC were adopted effective March 1, 2001. The 97 Codes will continue to be an acceptable design basis until approximately June 1, 2001.

Ross

Pamela Brandt wrote:

> *Please include the attached information in your weekly bulletins and monthly bulletin.*
>
> *Any suggestions as to other avenues to reach state wide would be appreciated.*
>
> *Thank you very much for any assistance you can give us.*
>
> ---
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> *IT IS THE LAW.doc* — *Name: IT IS THE LAW.doc*
> *Type: Winword File (application/msword)*
> *Encoding: base64*

Subject: I-Code Adoption Process
Date: Wed, 21 Mar 2001 10:58:44 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Harold Murray <liberalcitybldg@swko.net>,
Gary Powell <gary_powell@dps.state.ak.us>

Harold:

Per Gary Powell's request, I would love to inform you that there were transcripts of our meetings, but there are not. Out process was as follows:

1. Off a list of interested fire, building, architectural, engineering, state and local government, general contracting and primary industry organizations we asked for individuals either from those organizations or specifically representing those organizations that would wish to participate in workshops that would develop revisions to the I-Codes adopted by the State Fire Marshal under the State of Alaska Fire & Life Safety Regulations.

2. Letters of interest were received and a committee of 44 individuals were tasked with research and input for the project. This group was divided into three groups of eleven governmental agencies from around the state assigned to either the IBC, IMC or the IFC. The remainder were an at-large group (15) of engineering, architectural, industry or other governmental agencies that would work on and comment on any or all of the codes. The foundation document that they worked from was a document that was developed in-house by the fire prevention staff based on previous revisions to the UBC, UMC and UFC, with transition work to the I-Code terminology along with other additional revisions that staff felt were needed to address our geographic problems.

3. Four one day work sessions were held in the different areas of the state. All work committee members were invited to attend and/or participate via teleconference. The "foundation document" was used with either written suggested or verbal suggested changes suggested. The meeting were open and free flowing in regard to input with only myself serving as moderator and keeping the process on track. All notes from these meetings were then incorporated into the "foundation document". The final document was reviewed in-house with final approval resting with the Fire Marshal, then prepared according to the regulatory hearing guidelines for the state, advertised for public comments for 45 days. The comments received during that time covered 5 areas with about 50% being incorporated into the final document which was adopted at the end of February.

4. The comparison work was completed by myself using ICBO various comparison books and a great deal of research. The general comparison work took about three months of dedicated work and is a continuing process. We are still finding little nuances to the I-Codes.

This brief summary gives a overview of our process. If you would like to discuss specifics, please feel free to call me, my number is 907-269-5061. I am here on Monday, Wednesday and sometimes Friday. Remember, we are three time zones away from you (I think).

Ross Fosberg
Code Adoption Coordinator

Subject: Adoption of International Building, Fire & Mechanical Codes
Date: Thu, 28 Jun 2001 13:37:56 -0800
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Ron Watts <wattsrk@ci.anchorage.ak.us>,
Gary Powell <gary_powell@dps.state.ak.us>,
Robert Springer <springer@ci.kenai.ak.us>, Harry Chartier <harry@cityofsitka.com>,
Leonard Kimball <lenk@ptialaska.net>, Dick Bower <dbower@ci.soldotna.ak.us>,
Steve Shuttleworth <sshuttleworth@ci.fairbanks.ak.us>,
Dave Calvert <dcalvert@arctic.net>,
David Aden <david_aden@pssun02x.dps.state.ak.us>,
Kelly Nicolello <kelly_nicolello@pssun02x.dps.state.ak.us>,
Randy Waters <Randy_Waters@ci.juneau.ak.us>,
Chris Roust <Chris_Roust@ci.juneau.ak.us>, Edith Curry <fneic@uaf.edu>,
Jim Emery <jemery@ci.valdez.ak.us>, Carol Olson <caroi_olson@dps.state.ak.us>,
Frank Carpenter <carpenterfe@ci.anchorage.ak.us>,
Ron Thompson <thompsonrj@ci.anchorage.ak.us>,
Ernie Misewicz <edmisewicz@dps.fai.state.ak.us>,
Andy Nault <anault@city.kodiak.ak.us>,
Doug Mathers <dmathers@city.kodiak.ak.us>, David Squires <sewardfd@arctic.net>,
Steve Homan <steveh@seward.net>, Dave Miller <d..vem@cityofsitka.com>,
Donnie Blackburn <dblackburn@ci.valdez.ak.us>,
David Gildersleeve <fire@ci.valdez.ak.us>,
John McCool <jmccool@mcgalaska.com>, Pat Krochina <pat@krochina.com>,
Bob Painter <rpainter@ci.homer.ak.us>, Ruben Scherle <rscherle@ceiak.com>,
Tim Janneck <timjanneck@pdceng.com>, Lee Holmes <lholmes@rsa-ak.com>,
Jack Krill <jkrill@msb.co.mat-su.ak.us>, Dan Contini <bldg_insp@palmerak.org>,
Bill McNeal <mcneal@alaska.coffman.com>,
Tami Hamler <thaml@amc-engineers.com>,
Edmond Thompson <thompsep@bp.com>,
Paul Yoder <paul_yoder@labor.state.ak.us>,
Don Brandon <don_brandon@labor.state.ak.us>,
Steve Flodin <steve_flodin@dot.state.ak.us>,
"Henry D. Kim" <henry.kim@veco.com>, Greg moore <mooreg@bp.com>,
Scott Walden <swalden@ci.kenai.ak.us>,
Gary Powell <gary_powell@dps.state.ak.us>,
Walter Winston <Walter_Winston@dps.state.ak.us>,
Jerry Gentile <jerry_gentile@dps.state.ak.us>,
Kelly Nicolello <kelly_nicolello@pssun02x.dps.state.ak.us>,
Carol Olson <carol_olson@dps.state.ak.us>,
David G Aden <david_aden@dps.state.ak.us>,
John S Bond <john_bond@dps.state.ak.us>,
David W Andrews <david_andrews@dps.state.ak.us>,
Robert J Plumb <robert_plumb@dps.state.ak.us>,
Theresa A Smith <theresa_smith@dps.state.ak.us>,
Thomas N Depeter JR <thomas_depeter@dps.state.ak.us>,
Daniel A Diehl <daniel_diehl@dps.state.ak.us>

Greetings:

The 2000 International Building, Fire and Mechanical Codes with revisions were adopted by the Department of Public Safety, Division of Fire Prevention on
June 22, 2001 when the Deputy Commissioner of Public Safety signed the Adoption Order. The package was reviewed by the Department of Law and forwarded to the Lieutenant Governor who signed and filed the Adoption Order on June 25, 2001. The regulations have an effective date of Septen ber 15, 2001.

The Fire Prevention Division will accept plans for projects designed under I-Codes as of the date of the adoption order and will continue to accept projects designed under the 97 Uniform Codes that are currently in effect until September 15, 2001. On September 15, 2001, submittals for plan review must be designed under the 2000 International Codes as adopted under 13 AAC 50.010-.060 and 13 AAC 55.150.

A copy of these regulations will be on the Fire Prevention web site by next week.

Thanks to all of you for your assistance in this project.

Ross Fosberg
Code Adoption Coordinator

Subject: **Error in "Notice of Proposed Regulations Changes"**
Date: Mon, 18 Dec 2000 08:52:57 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Ron Watts <wattsrk@cj.anchorage.ak.us>,
Gary Powell <gary_powell@dps.state.ak.us>,
Robert Springer <springer@ci.kenai.ak.us>, Harry Chartier <harry@cityofsitka.com>,
Leonard Kimball <lenk@ptialaska.net>, Dick Bower <dbower@ci.soldotna.ak.us>,
Steve Shuttleworth <shuttleworth@mosquitonet.com>,
Dave Calvert <dcalvert@arctic.net>,
David Aden <david_aden@pssun02x.dps.state.ak.us>,
Kelly Nicolello <kelly_nicolello@pssun02x.dps.state.ak.us>,
Randy Waters <Randy_Waters@ci.juneau.ak.us>,
Chris Roust <Chris_Roust@ci.juneau.ak.us>, Edith Curry <fneic@uaf.edu>,
Jim Emery <jemery@ci.valdez.ak.us>, Carol Olson <carol_olson@dps.state.ak.us>,
Frank Carpenter <carpenterfe@ci.anchorage.ak.us>,
Ron Thompson <thompsonrj@ci.anchorage.ak.us>,
Ernie Misewicz <edmisewicz@dps.fai.state.ak.us>,
Andy Nault <anault@city.kodiak.ak.us>,
Doug Mathers <dmathers@city.kodiak.ak.us>, David Squires <sewardfd@arctic.net>,
Steve Homan <steveh@seward.net>, Dave Miller <davem@cityofsitka.com>,
Donnie Blackburn <dblackburn@ci.valdez.ak.us>,
David Gildersleeve <fire@ci.valdez.ak.us>,
John McCool <jmccool@mcgalaska.com>, Pat Krochina <pat@krochina.com>,
Bob Painter <rpainter@ci.homer.ak.us>, Ruben Scherle <rscherle@ceiak.com>,
Tim Janneck <timjanneck@pdceng.com>, Lee Holmes <lholmes@rsa-ak.com>,
Jack Krill <jkrill@msb.co.mat-su.ak.us>, Dan Contini <bldg_insp@palmerak.org>,
Bill McNeal <mcneal@alaska.coffman.com>,
Tami Hamler <thaml@amc-engineers.com>,
Edmond Thompson <thompsep@bp.com>,
Paul Yoder <paul_yoder@labor.state.ak.us>,
Don Brandon <don_brandon@labor.state.ak.us>,
Steve Flodin <steve_flodin@dot.state.ak.us>,
"Henry D. Kim" <henry.kim@veco.com>, Greg moore <mooreg@bp.cpm>,
Scott Walden <swalden@ci.kenai.ak.us>

To all committee members:

Thanks to the keen eye of Bill McNeal who picked up the error, attached please find a revised copy of the "Notice of Proposed Changes in the Regulations of the Department of Public Safety".

We all (staff and attorney) missed the error in item #3. It should read that the 1997 Uniform Mechanical Code is being replaced with the International Mechanical Code, but I had inserted the International Fire Code.

The attached "Notice" reflects the correct code reference.

Sorry for the additional, paper work, but thanks to Bill for his keen eye.

Ross

A-Notice Change to Regs doc.doc	**Name:** A-Notice Change to Regs doc.doc **Type:** Winword File (application/msword) **Encoding:** base64

Subject: RE: Notice of Public Comment Period for Fire Regulations
Date: Fri, 15 Dec 2000 14:32:17 -0900
From: "McNeal, Bill" <McNEAL@alaska.coffman.com>
To: 'Ross Fosberg' <ross_fosberg@dps.state.ak.us>

Ross,
It appears that there may be a typo in item #3 in the first attachment, which indicates that the UMC will be replaced by the 2000 Intrnational Fire Code.
Bill McNeal
Coffman Engineers
800 F Street
Anchorage, AK 99501
(907)276-6664

> *-----Original Message-----*
> *From: Ross Fosberg [SMTP:ross_fosberg@dps.state.ak.us]*
> *Sent: Friday, December 15, 2000 10:48 AM*
> *To: Ron Watts; Gary Powell; Robert Springer; Harry Chartier; Leonard Kimball; Dick Bower; Steve Shuttleworth; Dave Calvert; David Aden; Kelly Nicolello; Randy Waters; Chris Roust; Edith Curry; Jim Emery; Carol Olson; Frank Carpenter; Ron Thompson; Ernie Misewicz; Jason Elson; Andy Nault; Doug Mathers; David Squires; Steve Homan; Dave Miller; Donnie Blackburn; David Gildersleeve; John McCool; Pat Krochina; Bob Painter; Ruben Scherle; Tim Janneck; Lee Holmes; Jack Krill; Dan Contini; Bill McNeal; Tami Hamler; Edmond Thompson; Paul Yoder; Don Brandon; Steve Flodin; Henry D. Kim*
> *Subject: Notice of Public Comment Period for Fire Regulations*
>
> *To all committee members:*
>
> *Attached is the "Notice of Proposed Changes to the Regulations of the Department of Public Safety" and a copy of the regulations that you worked on, plus or portions of the regulations that were changed as a result of the new I-Codes.*
>
> *These will be on the State web site early next week and on our Public Safety web site late this afternoon.*
>
> *If there are any questions that I can answer, please contact me.*
>
> *Ross Fosberg << File: A-Notice Change to Regs doc.doc >> << File: A-Final Regs Submitted.doc >>*

Subject: Error In Notice of "Proposed Changes"
Date: Mon, 18 Dec 2000 08:22:30 -0900
From: Ross Fosberg <ross_fosberg@dps.state.ak.us>
Organization: Department of Public Safety
To: Robyn E Ramos <robyn_ramos@dps.state.ak.us>

Robyn:

It appears we all missed an error in the "Notice of Proposed Change". Item 3 of that document should read the 1997 Uniform Mechanical Code is being replaced with the International Mechanical Code, not the International Fire Code.

Attached is the corrected "Notice". Also, find attached better copies of the signed notices.

Sorry, but we all missed it

Ross

A-Notice Change to Regs doc.doc	**Name:** A-Notice Change to Regs doc.doc **Type:** Winword File (application/msword) **Encoding:** base64

1_A-Additional Regs Notice1.doc	**Name:** 1_A-Additional Regs Notice1.doc **Type:** Winword File (application/msword) **Encoding:** base64

1_A-Notice Change to Regs doc1.doc	**Name:** 1_A-Notice Change to Regs doc1.doc **Type:** Winword File (application/msword) **Encoding:** base64

NOTICE OF PROPOSED CHANGES IN THE REGULATIONS OF THE DEPARTMENT OF PUBLIC SAFETY

The Department off Public Safety, Division of Fire Prevention proposes to adopt regulation changes in Title 13 of the Alaska Administrative Code, dealing with Codes and Standards of Construction and Plan Review Fees, including the following:

(1) 13 AAC 50.010 Occupancy Classifications will be as defined in the International Building Code, 2000 Edition.

(2) 13 AAC 50.020 Building Code is proposed to be repealed and readopted. The intended effect of this is to repeal the Uniform Building Code 1997 Edition with related revisions, and adopt the International Building Code 2000 Edition with related revisions.

(3) 13 AAC 50.023 Mechanical Code is proposed to be repealed and readopted. The intended effect of this is to repeal the Uniform Mechanical Code, 1997 Edition with related revisions and adopt the International Mechanical Code 2000 Edition with related revisions.

(4) 13 AAC 50.025 Fire Code is proposed to be repealed and readopted. The intended effect of this is to repeal the Uniform Fire Code, 1997 Edition with related revisions and adopt the International Fire Code, 2000 Edition with related revisions.

(5) 13 AAC 50.027 Plan Review and Approval is revised with a new Valuation and Plan Review Fee Schedule.

(6) 13 AAC 50.030 Fire Protection System (Installed & Portable) is revised with updated standards and a revision to the work allowed under Class I fire extinguisher permit activity.

(7) 13 AAC 55.150 Definitions is revised with updated design standards and definitions consistent with new International Codes use of the terms Building and Fire Official.

You may comment on the proposed regulation changes, including the potential costs to private persons of complying with the proposed changes, by submitting written comments to Ross Fosberg, Code Adoption Coordinator at Department of Public Safety, Division of Fire Prevention 5700 East Tudor Road Anchorage, Alaska 99507-1225. The comments must be received no later than 4:30 p.m. on January 31, 2001.

If you are a person with a disability who needs a special accommodation in order to participate in this process, please contact Ross Fosberg at (907) 269-5061 no later than January 15, 2001 to ensure that any necessary accommodations can be provided.

For a copy of the proposed regulation changes, contact Ross Fosberg at (907) 269-5061 or go to http://www.dps.state.ak.us/fire.

After the public comment period ends, the Department of Public Safety, Division of Fire Prevention will either adopt these or other provisions dealing with the same subject, without further notice, or decide to

take no action on them. The language of the final regulations may be different from that of the proposed regulations. YOU SHOULD COMMENT DURING THE TIME ALLOWED IF YOUR INTERESTS COULD BE AFFECTED.

Statutory Authority: AS 18.70.010; AS 18.70.080; AS 18.70.090.
Statutes Being Implemented, Interpreted, or Made Specific: AS 18.70.010; AS 18.70.080; AS 18.70.090.
Fiscal Information: The proposed regulation changes are not expected to require an increased appropriation.

DATE: December 15, 2000

Ross Fosberg, Code Adoption Coordinator

Note! The Department of Public Safety, Division of Fire Prevention keeps a list of individuals and organizations interested in its regulations. Those on the list will automatically be sent a copy of all of the Department of Public Safety, Fire Prevention Divisions Notices of Proposed Regulation Changes. To be added to or removed from the list, send a request to the Department of Public Safety, Division of Fire Prevention at 5700 East Tudor Road Anchorage, AK 99507-1225, giving your name, and either your e-mail or mailing address, as you prefer for receiving notices.

ADDITIONAL REGULATIONS NOTICE INFORMATION
(AS 44.62.190(d))

1. Adopting agency: Department of Public Safety, Division of Fire Prevention
2. General subject of regulation: State of Alaska Building and Fire Regulations
3. Citation of regulation: 13 AAC 50.010 through 13AAC 50.55.150
4. Reason for the proposed action:
   ( ) compliance with federal law
   ( ) compliance with new or changed state statute
   ( ) compliance with court order
   ( ) development of program standards
   (X) other: New International Building, Mechanical & Fire Codes unifying the previous three model codes into a new national standard that addresses the most up-to-date application of life and property safety design criteria.
5. Program category and BRU affected: Health/Safety-Fire Prevention

6. Cost of implementation to the state agency and available funding (in thousands of dollars)

	Initial Year FY 2001	Subsequent Years
Cost	$ None	$ None
General fund	$ None	$ None
Federal funds	$ None	$ None
Other funds (specify)	$ None	$ None

7. The name of the contact person for the regulations:

   Name: Ross Fosberg
   Title: Code Adoption Coordinator
   Address: 5700 East Tudor Road
   Anchorage, Alaska 99507-1225
   Telephone: (907) 269-5061

8. The origin of the proposed action:

   _XX_ staff of state agency
   _____ federal government
   _____ general public
   _____ petition for regulation change
   _____ other (please list)_____

9. Date: December 15, 2000 Prepared by: _____

   Name: Ross Fosberg
   Title: Code Adoption Coordinator
   Telephone: (907) 269-5061

AMC
ENGINEERS

June 7, 2001

Mr. Gary Powell, State Fire Marshal
Mr. Ross Fossberg, Code Coordinator

Alaska State Fire Marshal's Office
5700 East Tudor Road
Anchorage, Alaska 99507

Via fax to: 338-4375
And email to: gary_powell@dps.state.ak.us
ross_fosberg@dps.state.ak.us

RE: Adoption of 2000 International Mechanical and Fuel Gas Codes

SUBJ: Recommendation in Favor of Adoption of 2000 IMC & IFGC, with reservations.

Gentlemen:

This letter reviews the current situation with the Code adoption process, and contains some of our thoughts regarding the 2000 International Mechanical Code (IMC) and 2000 International Fuel Gas Code (IFGC). We support adoption of both the 2000 IMC and the 2000 IFGC, with the recommendation that an additional reference document be prepared and adopted by the Alaska State Fire Marshal's Office to supplement the new IMC which is incomplete as a stand alone document.

The Code adoption process is in a awkward situation at present. The State should adopt a complete set of unified codes, such as the International Code series, or a Uniform Code series, but unfortunately, neither option is currently possible given the present situation in Alaska. The State Department of Labor has eliminated the option of adopting the entire suite of International Codes by adopting the Uniform Plumbing Code. On the other hand, the Uniform Code series has been discontinued and will no longer be maintained in the future.

The best choice for replacement of the UBC and the UFC are the new International Building Code (IBC) and International Fire Code (IFC). These codes appear to be reasonably well received, and have the advantages of being well coordinated and in wide circulation. From this base, the logical choice would appear to be to adopt the new IMC and IFGC as well. The IMC is well coordinated with the IBC and the IFC, which will significantly reduce the number of conflicts between Codes. Likewise, The IFGC is well coordinated with the IMC. Unfortunately, the new IMC has some serious drawbacks, as appropriately pointed out by the Mechanical Contractors of Alaska.

A major advantage of the current Uniform Mechanical Code (UMC) is that it contains clear performance requirements with supporting tables and guidelines. The IMC, on the other hand, relies on external references for much of the important technical material. External references are not a problem for an established engineering firm like AMC, but it is unlikely that the average mechanical contractor or

Adams, Morgenthaler and Company, Inc.
701 East Tudor Road • Suite 250 • Anchorage, AK 99503
fax 907-257-9191 • amc@amc-engineers.com • phone 907-257-9100

plumber will have all of the reference material available. Human nature being what it is, this could lead to a lot of confusion and error in the field as people "wing it" for lack of good information. "Winging it" will not serve the public's best interest for safety.

Considering the balance of interests that must be weighed, we recommend that one of the following two alternative courses of action be taken:

First Choice: Adopt the 2000 IBC, IFC, IMC, and IFGC and also issue a companion reference document published by the Alaska State Fire Marshal's Office that includes a copy of all the major reference tables and related documents identified in the IMC. The primary idea here is to create a coordinated code set that is nearly as complete as the UMC, in just one additional supplement.

(5)

Additional amendments should be adopted to address the many individual technical issues that have been identified. An logical amendment would be a ruling stating that in the event of a conflict, the Uniform Plumbing Code (UPC) will take precedence over the International Fuel Gas Code (IFGC).

Alternative Choice: Stick with the existing Uniform Code Series entirely, and wait a few years for the dust to settle in the Code arena. The entire purpose of a body of Codes is to protect the public interest. No one will be protected if we have chaos, which could easily occur if the code set is incomplete or contradictory. Certainly there are warts on the Uniform Codes, but realistically they are a pretty good set of documents. The Uniform Codes have come a long way over the past 20 years, and are probably adequate to survive a few more years.

We like the idea of consistent and well coordinated Codes. Like a new car, all of the parts should work together. The radio, or the muffler, and even the tires can be manufactured by almost anyone, but the engine and transmission need to be from the same company. No one would dream of buying a new Chevy with a Ford transmission. The Building Code, Fire Code and Mechanical Code are the power train of the Code series, and need to be coordinated. The International series has great promise in this regard, but the important issues raised by the Mechanical Contractors should be cleanly resolved.

We realize that this is an extremely difficult situation, and wish the best of luck in coming to a suitable resolution.

Sincerely,

AMC ENGINEERS

Tami Hamler, P.E
Mechanical Engineer

Boyd Morgenthaler, P.E.
Principal Mechanical Engineer.

KENAI PENINSULA FIRE CHIEFS ASSOCIATION

231 S. Binkley Street Soldotna, Alaska 99669

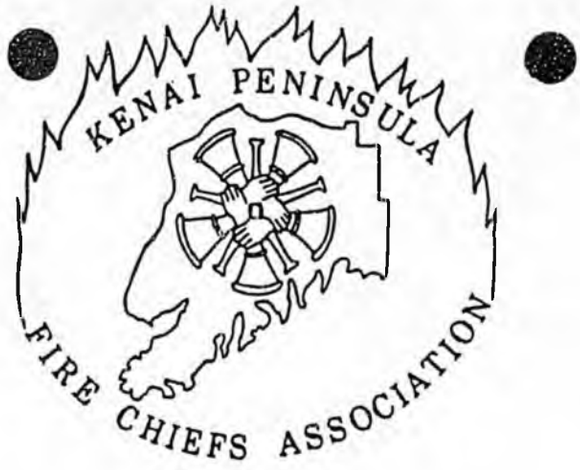
May 25, 2000

Attached is Resolution 2000-02 from the Kenai Peninsula Fire Chiefs Association. This Resolution was passed unanimously by the members in attendance at the May 19, 2000 meeting.

We would appreciate the support of your office regarding this Resolution.

Sincerely yours,

Chief Billy W. Harris
President
Kenai Peninsula Fire Chiefs Association



RESOLUTION 2000-02

A RESOLUTION OF THE KENAI PENINSULA FIRE CHIEFS ASSOCIATION RECOMMENDING THE INTERNATIONAL CODE SET NOT BE ADOPTED FOR THE STATE OF ALASKA BY THE STATE FIRE MARSHALS OFFICE.

Whereas, the Kenai Peninsula Fire Chiefs Association is dedicated to public fire prevention and promoting life safety issues throughout the Kenai Peninsula and the State of Alaska, and

Whereas, the State of Alaska adopted the 1997 Uniform Fire, Building, and Mechanical Codes on March 27th of 1999 and the Uniform Code Set has been the adopted Code for this State since the late 1950's, and this code has protected Alaskans for more than 40 years, and

Whereas, the Uniform Fire Code and the National Fire Protection Association are in the process of developing a National Fire & Building Code to be released in the year 2003, and,

Whereas, the International Code set is a first edition and not a proven code, and,

Whereas, by adopting a new code standard, Deferred Jurisdictions responsible for code enforcement will have an added burden and cost associated with such adoption, and

Whereas, the Kenai Peninsula Fire Chiefs Association consists of three Deferred Jurisdictions (Kenai, Soldotna, and Seward) that will be directly effected by such code adoption, and

Whereas, Deferred Jurisdictions who are responsible for code enforcement should have a vote on which code is adopted in the State of Alaska, since they bear the costs of enforcement in their jurisdictions,

NOW, THEREFORE BE IT RESOLVED that the Kenai Peninsula Fire Chiefs Association recommends that the State of Alaska continue using the 1997 Uniform Code set, and that the International Code set not be adopted during the 2000 code cycle, but wait until the 2003 code cycle to give all major codes an equal chance for consideration.

Bill W. Harris

Chief Bill Harris, President
Kenai Peninsula Fire Chief's Association

Thursday, June 15, 2000 11:35:07 AM
Fire Chiefs

From: Jason Elson

Subject: Code Issues

To: Fire Chiefs

After reading the recent remarks on the Code adoption process and representing a deferred jurisdiction I feel compelled to write and express my opinion on this highly controversial issue.

This issue first came to my attention in Kenai at the State Fire Chiefs Conference in the fall of 1999. At that time a motion was made to support adoption of the Uniform Fire Code. The State Fire Marshal raised an objection, based on the fact that he was not willing to support any code without first looking at all that was out there to look at in the Code world. At the time this sounded like a fair objection and I, very vocally, supported the State Fire Marshal. My remarks at that time included the statement that I felt all those involved in the Code enforcement process should be involved in the review and adoption process. The Chiefs agreed and the Fire Marshal had his stay.

Between this meeting and the Spring Chiefs meeting I began to hear word of how the State Fire Marshals Office had begun to support the adoption of the IFC. Along with this rumor came the inference that this code was going to be adopted whether the Chiefs liked it or not. This disturbed me, considering I had been so vocal in supporting the State Fire Marshal in what I thought was going to be a fair process. Needless to say nothing about the code adoption process was discussed until the spring Chief's meeting in Juneau when the State Fire Marshal approached me and we discussed these "rumors". In my discussions with the State Fire Marshal I made it clear that I was not willing to accept the adoption of any Code without a fair public hearing process that included comments and concerns of the states fire chiefs. The State Fire Marshal assured me this would take place. Unfortunately it did not happen while we were in Juneau.

From the time we left Juneau to the date of the invitation to participate in a teleconference I have not been contacted by any member of the State Fire Marshals Office with regards to any particular Code preference or what my opinion would be about the adoption of any particular code. THIS IS WHAT DISTURBS ME AND SHOULD DISTURB ANY CHIEF RESPONSIBLE FOR ENFORCING THE FIRE CODE IN ALASKA. As the Fire Marshals Office has stated just recently, why should I just accept at face value what others are telling me?

The second question that comes to mind, what is the rush? What is the driving force behind adopting a code when the current code works so well? This would not be the first code cycle to have been skipped. Ron Coleman, a leading authority in the nations fire service wrote in the May issue of Fire Chief's magazine a response to an article he wrote "I never said in the column that fire chiefs weren't included. I said they were being treated in a deplorable fashion and excluded from the decision-making process regarding the overall system of organization for the family of codes." Sound familiar to anyone? When discussing the consensus of a single national fire code he goes on to state "I don't think so. I said in the column that I believe the issue will remain contentious for some time to come. I'll be so bold as to predict that period of time: two more code cycles. It will take that long to work out the conflict." If that is the case again I ask, what is the rush?

And finally, I offer up as evidence that the International Code is not exactly considering the best interests of the fire service, the press release page for the International Fire Code Insitute(www.ifci.org). Under top ten advantages architects should know about the IBC, #3 Less restrictive provisions for egress through adjoining rooms. #5 Allows for larger floor areas with lesser fire resistance. #7 Escape and rescue openings not required where a rated corridor provides access to two exits or in sprinklered buildings. Do these sound like changes that are in the best interests of those we are trying to protect?

For me the bottom line is this, there should be no rush to adopt any new code until the dusts settles on these controversial issues and all those responsible for code enforcement have an opportunity to review all codes that are available to us. At that time there must be a public hearing process that involves all those responsible for enforcing the codes and then and only then should the State Fire Marshal begin the adoption process for the next fire code. I might also add that the State Fire Marshal would be wise to consider the consensus of the fire chiefs of this state, for believe it or not, these are his constituents.

Jason A. Elson
Fire Chief
City of Kenai

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

RONALD L. OTTE
COMMISSIONER

DEPARTMENT OF PUBLIC SAFETY

DIVISION OF FIRE PREVENTION

May 3, 2000

Len A. Malmquist
Fire Chief
Central Emergency Services
231 South Binkley
Soldotna, AK 99669-8084

Dear Chief Malmquist:

In response to your letter to me dated March 6, 2000, I will not attempt to reply on a point by point basis. I fail to see the purpose or benefit in answering 22 questions of which you know most of the answers. I will, however, tell you where we are on the adoption of the 2000 edition of the fire, building and mechanical codes. I believe that is the real intent of your letter.

As you know, the code issue has been quite fluid over the last several months, if not years. In the time that I have been in the State Fire Marshal position I have:

- Read numerous articles in trade journals on the issue
- Met with or had phone conversations with several building officials
- Met with or had phone conversations with several fire officials
- Met with a number of architects and engineers
- Attended overview classes of the IBC
- Attended the State & Provincial Fire Marshals Forum at NFPA
- Attended and participated in code hearings for the IBC and IFC
- Examined copies of the IBC, IFC and IMC
- Watched closely the developments of the WFCA, NFPA and IAPMO

These activities have helped formulate our direction for adoption of the next set of building safety codes for Alaska.

At this point in time, we intend to adopt the International set of codes, specifically the IBC, IFC and IMC. We have broad based support for this direction, and in fact would have difficulty justifying any other position. As you know, no other current building code exists at this time.

Our concept of the adoption process is to form code committees to review each of the respective codes and make recommendations for state amendments. Local jurisdictions then have the

MAIL TO: ☐ P.O. BOX 111200
JUNEAU, ALASKA 99811-1200
PHONE: (907) 465-4331
FAX: (907) 463-5860
TDD: (907) 465-5491

☑ 5700 EAST TUDOR ROAD
ANCHORAGE, ALASKA 99507
PHONE: (907) 269-5604
FAX: (907) 338-4375
TDD: (907) 269-5094

☐ 1979 PEGER ROAD
FAIRBANKS, ALASKA 99709
PHONE: (907) 451-5200
FAX: (907) 451-5218
TDD: (907) 451-5344

ATTACHMENT #4

option to adopt local amendments, if necessary. Our goal is to have as few different local amendments as possible. In other words, if a local amendment is adopted in Fairbanks regarding assisted living facilities, we would hope the same amendment would work for Soldotna or Seward, etc. The makeup of the committees will involve all the deferred jurisdictions as well as at large members and representatives from architects, engineers and builders. Each deferred jurisdiction will be entitled to a building official on the building code committee and a fire official on the fire code committee. Participation will be at the jurisdiction's expense but we will attempt to keep meetings to a minimum and conduct as much as possible electronically. Throughout the process meetings for the purpose of public input will be held in Fairbanks, Anchorage, the Kenai Peninsula and possibly Southeast Alaska (Juneau). We will hire a project coordinator to facilitate the process and do expect it to take 12 to 18 months.

I encourage you or a representative from your department to participate in the code revision meetings in San Francisco this September. Each deferred jurisdiction is entitled to at least one class A voting member on the fire code changes, and one on the building code. Contact ICBO for information and registration materials. I would also encourage support for Deputy Chief Jim Tidwell from Ft. Worth, Texas. He is running for a vacant seat on the ICBO Board of Directors. Having been primarily involved in the negotiation process as WFCA attempted to become a member of the International Code Council, he should be a good advocate for the fire service.

Sincerely,

Gary L. Powell
State Fire Marshal

TONY KNOWLES, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

OFFICE OF THE COMMISSIONER

P.O. BOX 111200
JUNEAU, ALASKA 99811-1200
PHONE: (907) 465-4322
FAX: (907) 465-4362

May 23, 2000

Fire Chief Len A. Malmquist
Central Emergency Services
231 South Binkley
Soldotna, AK 99669-8084

Dear Chief Malmquist:

I have received and reviewed your recent letter and attachments. I have discussed the fire code issue with State Fire Marshal Powell on numerous occasions. We recognize that you have a strong position on the fire code issue, and we certainly support your right to have an opinion on the matter. Other fire chiefs, building officials, architects and engineers also have the right to an opinion on the fire code issue. The same is true of the industry. The issue has been discussed, reviewed and debated. The preponderance of support is in favor of the new International Codes.

In his briefings to me after the Fire Chief's conferences, State Fire Marshal Powell discussed the code issue. At the Kenai conference, Mr. Powell expressed that a last minute resolution to adopt a *future* code was premature. He also stated his opposition to the manner in which the resolution was brought to the floor. If any deception took place in Kenai, it was by those who proposed the resolution. In my opinion, it is irresponsible to propose a resolution of this type without involving the State Fire Marshal in the process. It is my understanding that State Fire Marshal Powell raised those two concerns during the conference and the resolution was withdrawn.

At the Spring Conference in Juneau, State Fire Marshal Powell's recollection is that the fire code was not much of an issue. On the last day of the conference, in a room with eight or ten people remaining, he was given an opportunity to give his general report. In that report he mentioned that no formal decision had been made, but "the handwriting was on the wall." In plain language, there was no other building code to choose from and NFPA would not have a code available for two to four years. The State would not adopt incompatible building and fire codes and therefore, the International Codes were the only option.

State Fire Marshal Powell has made an informed decision which he believes is in the best interest of all Alaskans. I support his decision and feel that he made it appropriately and with integrity. I would like to make it clear that State Fire Marshal Powell vigorously supports the fire service in general and the Alaska Fire Chiefs in particular. It would be unfortunate if that support were not reciprocal in nature. I am sure there are many other issues on which you can agree, and I encourage you to continue working with the State Fire Marshal's Office on those issues.

Sincerely,

Ronald L. Otte
Commissioner

cc: Gary Powell, State Fire Marshal

ALASKA MECHANICAL CONTRACTORS ASSOCIATION, INC.
P.O. Box 92950 - Anchorage, Alaska 99509-2950
Phone 1-907-229-1700 - Fax 1-907-243-8466

May 30, 2001

To Whom it may concern:

I attended the May 7th, 2001 meeting of the Anchorage Mechanical Contractors Association. At that meeting, Mr. Ross Fosberg, representing the State Fire Marshal's Office, stated that the reopening of the public comment period for the repeal of the 1997 Uniform Mechanical Code and the adoption of the 2000 International Mechanical Code was due to a mistake in the original advertisement and was merely a formality. He stated that the adoption was a "done deal", and that he would entertain no suggestions concerning adopting the 2000 Uniform Mechanical Code.

Signed,

General Mechanical, Inc.
Sheetmetal Fabricators Inc.
H & K Sheet Metal Fabricators, Inc.
Central Plumbing & Heating
International Mech. Inc.
Patrick / Last Frontier, LLC
Norcoast Mechanical
CRL Services, LLC
Mechanical Construction & Consulting
Superior P & H, Inc.
Mantech Mechanical Inc.
Alaskan Plumbing & Heating Co. Inc.
Noble Mechanical / Inc.
Noble Mechanical Inc
AVM, Inc.

A VIKING MECHANICAL, Inc.
Post Office Box 230804
Anchorage, Alaska 99523-0804

Phone (907) 346-8384
Fax (907) 346-2153
E-mail avm@gci.net

June 8, 2001

Ross Fosberg
Code Adoption Coordinator
Dept of Public Safety
Division of Fire Protection
5700 E. Tudor Road
Anchorage, Alaska 99507-1225

Re: Proposed Changes to 13 AAC 50

Dear Mr. Fosberg:

Please put the attached copy to the letter regarding your statements to the Alaska Mechanical Contractors Association into the public record.

Sincerely;

Don L. Crane

ALASKA CHAPTER

national electrical contractors association, inc.

712 West 36th Avenue • Anchorage, Alaska 99503
(907) 561-1958 • FAX (907) 561-8633

June 6, 2001

Ross Fossberg, Code Adoption Coordinator
Dept. of Public Safety, Div. of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

RE: Proposed Changes in Title 18 dealing with Codes and Standards of Construction

Dear Mr. Fossberg:

I would like to make the following comments regarding the proposed changes:

- I notice that reference is made to 8 AAC 70.025 regarding the National Electrical Code as the Electrical Standard. Our organization supports the use of this standard and consider it a foundation of our industry. It is used not only for construction inspectors but also provides a major portion of our craft people's training and continued education. To make a change in this standard would be ludicrous.
- We would like to know why this change (96 pages) is being pursued. There is no mention of a fiscal analysis. It seems that this would be a significant change to implement for the construction industry. Based on this, we would strongly oppose making these changes without any impetus from the industry being impacted.

In summary, we are opposed to these regulation changes, but if they are changed we are strongly in favor of retaining the National Electrical Code as the electrical standard.

Sincerely,
Alaska Chapter, NECA

Steven F. Boyd
Chapter Manager

CC: Fran Ulmer, Lieutenant Governor

No change is being made. All reference to the Electrical Code in the IBC, IMC + IFC are to the Dept of Labor Adoption of the NEC.

PREMIER MECHANICAL
PLUMBING & HEATING CONTRACTOR'S
PO BOX 4011
KODIAK ALASKA 99615
(907) 486-5594 FAX 486-5596

KODIAK - ALASKA
99615
MAY 21, 2001

Dear Ross,

I would like to take the time to tell you I am strongly dosed to the possable change from the I.M.C. To the I.M.C. If for years something has worked for the City why fix it. Enclosed are some very good reasons to stay the course. I personally own 5 plumbers here in Kodiak and none them want this change.

Please Reconsider This Action.

Respectfully,

Lonnie Wolff

Jon Mac

Mechanical Contractors Association
MCA
MECHANICAL CONTRACTORS
of Alaska, Inc.

Comments on the International Mechanical Code (I.M.C.):

1. Section "Maintenance" of I.M.C. has a significant disclaimer for any liability resulting from compliance or non-compliance with I.M.C. The U.M.C. contains no such disclaimer. (7)

2. Under paragraph (11) of 13AAC 50.023 of the proposed regulations the addition of the Table 304.7 would not be needed if 2000 U.M.C. were adopted. This information is contained in Table 3-1 of 2000 U.M.C. This is a concrete example of how much more prescriptive the U.M.C. is.

3. The code users currently using the 1997 U.M.C. will find it a relatively smooth transition to the 2000 U.M.C. in comparison to adopting the I.M.C. It is clear from comparing the size of the two books that the U.M.C. 2000 is significantly more prescriptive in its approach, a philosophy that has been utilized in the development of the Uniform codes. This philosophy is evident in the fact that the 2000 U.M.C. reproduces important standards in the code for ease of use while the I.M.C. only references them. The State Fire Marshal needs to examine these differences and consider their impact on the health and safety of the communities in Alaska. (10)

4. The 2000 I.M.C. consists of 110 pages, the 2000 U.M.C. consists of 284 pages. The 2000 U.M.C. is a much more descriptive, stand-alone, document. Part of the difference in size is probably due to the fact that the publishers of the U.M.C. have many more years of experience publishing a Mechanical Code than the publishers of the I.M.C. The I.M.C. relies heavily on incorporating other codes and standards by reference. This makes the I.M.C. more cumbersome for the user and therefore more prone to mistakes and misunderstandings. Exactly the sorts of problem codes are designed to avoid. (9)

5. Since the Fire Marshal's proposed regulations already incorporate the 2000 Uniform Plumbing and 2000 Uniform Solar Energy Code, doesn't it make sense for him to adopt the 2000 Uniform Mechanical Code?
   Then there would be an integrated family of Uniform Codes that cover all of the plumbing, heating and ventilation systems in a building. Considering that these Uniform Codes are superior to their International Code counterparts and that the installers (Plumbers, Pipe Fitters and Mechanical Administrators) are licensed (as required by statute) according to the Uniform Codes and are familiar with Uniform Codes it seems apparent that better, safer systems could be installed. (3)
   To my knowledge, today there are no installers or mechanical administrators licensed per the International Mechanical Code in the State of Alaska.
   Once more we raise the question "What is the compelling reason to adopt the International Mechanical Code? (12)

6. LPG Facilities are prohibited in pits or basements and other specific locations by Section 1313.5 of the U.M.C. The 2000 I.M.C. does not contain any such restriction. (4)

P.O. Box 74796 • Fairbanks, AK 99707-4796
(907) 456-8347 • Fax: (907) 451-6132

7. Referenced Standards: Appendix A of the 2000 U.M.C. contains 7 U.M.C. standards. These standards based on nationally recognized standards are reproduced in their entirety in the U.M.C. The I.M.C. does not have any standards in it and only mentions them by reference. (3)

8. The I.M.C. reproduces text from other codes. As an example refer to Section 513 in the I.M.C. for Smoke Control systems. The U.M.C. does not use this approach. Section 513 of the I.M.C. reproduces portions of the I.B.C. and the I.F.C. for this section. I urge you to study Section 513 of the I.M.C. (3)

9. Chapter 11 Refrigeration:
There are several differences in this chapter. In size alone, the U.M.C. chapter is about double the size of the I.M.C. chapter. The reason is that the U.M.C., while keeping with its philosophy, has several prescriptive provisions so as to allow the user to have all the information needed in the chapter. The I.M.C. refers to both the I.C.C. Building and Fire Code extensively and defers to standards for requirements such as refrigerant control valves. The I.M.C. chapter requires access to several other documents for the user to comply with its provisions. (4)

10. Chapter 14 of the 2000 U.M.C. covers Process Piping. There is no equivalent chapter in the 2000 I.M.C. (4)

11. The U.M.C. 2000 has Appendix A, B, C and D. Appendix A contains 8 standards. Appendix B contains Fuel Gas Piping, Installation and Testing of Gas or Fuel Fired Equipment, Installation and Testing of Oil (liquid) Fuel Fired Equipment. Appendix C has sizing tables for venting systems. I.M.C. has 2 appendices – one for combustion air openings and one for chimney connector pass throughs. The I.M.C. has no provisions for Fuel Gas Piping. (4)

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BRYAN F. BORJESSON, PE
CONSULTING
CIVIL ENGINEER

P.O. BOX 74715 • FAIRBANKS, ALASKA 99707 • (907) 451-4482 • FAX (907) 451-1948

May 25, 2001

Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg:

It has been called to my attention that your office is preparing to adopt a new Mechanical Code. It appears as though you are preparing to adopt the 2000 International Mechanical Code in lieu of the 2000 Uniform Mechanical Code.

Having utilized codes for the last nearly 50 years, I can offer a historical perspective as well as a current perspective as to why the International Mechanical Code should not be adopted and that we should continue with the Uniform Mechanical Code.

As you know codes evolve over time. The series of codes produced by the International Conference of Building Officials have been in use since prior to 1950. As is the case codes of this nature they evolve with time. Then stay up with innovations in the industries that they cover as well as fine tune provisions to avoid confrontation and legal actions as a result of contradictory interpretations. In addition, enforcement officials as well as the contractors and owners of structures come to understand and know the codes if not by studying them, then at least by the use of

industry standards that result from code usage. This knowledge and usage brings with it a uniformity in the field of code interpretation and usage.

Beginning in the early 1990's the Uniform Building Codes had their format changed to be in compliance with most other codes as far as the locations in the codes where certain work items are included. Just this simple change in the codes created enormous confusion and difficulty of use for a time period. Now most everyone in the industry is used to the change in format as well as the under signed and now the confrontation and adjudication processes are back to what they were before the change. The one area that was not changed when the format was changed was the actual contents of the codes themselves. Very little change has occurred other than the normal changes that are to update and upgrade the codes that happen periodically.

We have had an opportunity to go through the new International Mechanical Code and find that not only has the format changed but there are a great deal of other items that have changed. We believe it will be at least 10 to 15 years before these codes are truly tested through the courts and all of the confusion and arbitrariness removed and the full education of the user's is accomplished. I, personally, do not believe that we should have to go through this. I believe we should continue to use and adopt the Uniform series of codes for the next 2 cycles which is approximately 6 years and observe what is happening to the International Codes in other areas of the country. In other words, why should we be guinea pigs and suffer through all of the problems that everyone else is going to suffer through when we can simply avoid it by using a familiar and well known code into the near future and allow others to suffer the trials and tribulations of a new code system. I would suggest that this should be reviewed in approximately 6 years to see if the new International Code is 1) still in existence and 2) is providing the necessary protections for building owners and has been tested in court to eliminate those controversial portions which ultimately will be tested.

(8)

Another point that I would call to your attention is that in any given cycle, to adopt a complete series of new codes will act as a

magnifier to the confusion, misinterpretation and actual misuse of the codes themselves. The various codes should be adopted one at a time so that the magnitude of the change is greatly reduced allowing the user's of the codes to become educated and get used to the changes in format and requirements.

As a Forensic Engineer I testify often in court cases involving codes, their interpretations and applications. I would hate to think of going to court with a new code, trying to interpret it and to show both the judge and a jury that its applications are proper and fair to all concerned. Only if this code has been tried and tested in the field and its applications well known by everyone would I feel comfortable in a court of law offering an opinion on a particular incident as to its correct application.

I strongly recommend that consideration be given to maintaining the series of Uniform Building Codes for at least the next 2 cycles until the International Codes have been tried and tested in the field and found usable.

This concludes my remarks. I appreciate your taking the time to read my letter and hope that it may be of assistance in the determination of which codes to adopt.

Very truly yours,

Bryan F. Borjesson, PE

CC: MCA, E. Rutland
P. O. Box 74796
Fairbanks, AK 99707

BFB:bjh
bfb99.1 Code Adoption Response

A VIKING MECHANICAL, Inc.
Post Office Box 230804
Anchorage, Alaska 99523-0804

Phone: 907-346-8384
Fax: 907-346-2153
E-mail: avm@gci.net

May 29, 2001

Office of the Governor
Tony Knowles, Governor
State Capitol, Third Floor
Post Office Box 110001
Juneau, Alaska 99811-0001

Dear Governor Knowles:

RE: Alaska State Fire Marshal's proposed regulation changes in Title 13AAC 50.023 Mechanical Code

I am writing to protest the Alaska State Fire Marshal's proposed regulation changes in Title 13AAC 50.023 Mechanical Code. He has proposed to repeal the 1997 Uniform Mechanical Code (UMC) and adopt the 2000 International Mechanical Code (IMC). I am concerned that the Fire Marshal is repealing a code which has served this state well for many years and is substituting a code that has no track record, especially in the area of life safety.

I am dismayed at the process by which this code change has occurred. I responded in writing to the proposed changes last fall and received no reply. I also made three phone calls to Mr. Ross Fosberg's office; my calls were not returned. In addition, Ross Fosberg was a guest at the Anchorage Mechanical Contractors Association meeting on May 7, 2001. At this meeting, Mr. Fosberg explained that because of mistakes in the advertising process, public comment had been extended until June 8. When I asked if he would entertain suggestions concerning the adoption of the 2000 UMC instead of the 2000 IMC, he stated that it was merely a formality and that the adoption of the IMC was a "done deal." He went on to say that he would only review comments on the IMC, and that any comment concerning keeping the UMC would be a wasted effort. I question how this can be considered a fair process if the Fire Marshal chooses to ignore any comment that encourages keeping the UMC in place. I also question why Mechanical Administrators were not represented on the board which chose to review the IMC over the UMC. This committee was composed entirely of public officials and engineers. It is certain that the State of Alaska is looking at legal challenges to its arbitrary implementation of the IMC when it ignores the input of licenced administrators - by far, the group most affected by this change.

(2)

As a licenced Mechanical Administrator in the State of Alaska, I utilize the UMC daily and have complete confidence that any work my company performs in accordance with the UMC is to a nationally recognized standard. The IMC contains a disclaimer under Maintenance in the Preface of the code which states that the organizations and their members participating in the development of this code "do not accept any liability resulting from compliance or noncompliance with the provisions." The UMC contains no such disclaimer. I am gravely concerned with the legal ramifications of working under a code that accepts no responsibility for what it embodies. It is no wonder that the UMC is used either in total or as the basis of code in the majority of the United States.

(7)

The State of Alaska requires that all Mechanical Administrators be licensed by statute to the UMC. In addition, the State of Alaska under 12AAC 39.410 requires that Mechanical Administrators document continuing education for the UMC. If the IMC is adopted, the State of Alaska will have to change its statutes to reflect the new code. It makes no sense for the State to adopt a code which lacks the support and confidence of the very people who utilize it. The Fire Marshal's proposed regulations already incorporate the 2000 Uniform Pluming Code and 2000 Uniform Solar Energy Code. It only makes sense to adopt the 2000 Uniform Mechanical Code and keep the family of Uniform Codes complete.

(6)

In closing, I would ask that you reassess the State of Alaska's position on this issue and adopt the 2000 Uniform Mechanical Code. At the very least, the entire process should begin anew to allow equal representation in the review process by all concerned in this proposed change.

Sincerely,

Don L. Crane, President
A Viking Mechanical, Inc.
Alaska Administrators Licence No. 100

cc: Ross Fosberg, Code Adoption Coordinator

May 23, 2001

OFFICE OF THE
MAY 31 2001
LIEUTENANT GOVERNOR

To: Fran Ulmer, Lieutenant Governor
Third Floor, State Capitol
P.O. Box 110001
Juneau, Alaska 99811-0001

From: Gary Hile, Chief Plumbing/Mechanical Inspector, Municipality of Anchorage

Re: Proposed adoption of the International Mechanical Code

Dear Lieutenant Governor Ulmer,

I am very concerned that the State Fire Marshal is considering adoption of the 2000 International Mechanical Code (IMC) in lieu of the 2000 Uniform Mechanical Code (UMC). The State of Alaska and the Municipality of Anchorage have used the UMC since 1964. I question why the State is considering adopting a new document that is essentially unproven. The IMC has only been in existence since 1997, whereas the UMC has been printed since 1964. The UMC has served us well over the years. Engineers, Plan Reviewers, Inspectors, Contractors, and Installers are all familiar with the provisions of the UMC. It has proven to be reliable, user-friendly and most importantly it has maintained a high standard of safety.

The UMC is a turnkey document. All the information needed to install a mechanical system is included in the document. The IMC requires an individual to reference several other documents to achieve the same goal. The additional documents would only add confusion and cost. Most all journeymen have been trained utilizing the UMC. If the IMC were adopted, several training facilities and apprenticeship programs would have to rewrite their courses. The State and Municipal tests would have to be rewritten at great time and expense.

There are some individuals that have concern that the UMC will not harmonize with the International Building Code. The California Building Standards Commission spent several months investigating this issue, and concluded that there are no appreciable conflicts, other than a couple of

definitions. After several months of evaluating the International Codes, the State of California opted not to adopt the International Codes and elected to continue to use the Uniform Codes. They also elected to continue using the older 1997 Uniform Building Code, instead of adopting the newer 2000 International Building Code. I believe their decision was based on the same concerns that I have in reference to safety and user friendliness.

Another issue to take into consideration is the process used in the adoption of code changes to existing codes. The UMC and the Uniform Plumbing Code (UPC) are now created in cooperation with the National Fire Protection Association (NFPA), using the American Standards Institute (ANSI) process. The ANSI process is the only true open consensus process, where anybody and everybody have a vote. The IMC restricts voting privileges to member Government Officials only. Shouldn't the end user, the public, have a voice and a vote on which codes are adopted?

(2)

I do not know of any compelling reasons or justifications to adopt a new Mechanical Code (IMC), when we currently have an excellent Mechanical Code (UMC) already in place. I urge you to please do everything in your power to overturn the State Fire Marshal's decision to adopt the IMC. I do not believe his intentions are in the best interest of the public. He may be very knowledgeable on Fire Codes, but I believe I have more expertise in relation to Mechanical Codes and it is my opinion that the UMC is far superior to the IMC.

Please feel free to call me if you have any questions that I may be able to clarify. I have enclosed my business card.

Respectfully,

Gary Hile
Chief Plumbing/Mechanical Inspector
Municipality of Anchorage

Key Mechanical Co.

of Washington

Contractors

19430 68TH AVENUE SOUTH, SUITE B • KENT, WASHINGTON 98032
#KEYMEW*240 NZ:WA #0093479:OR #20901:AK

(253) 872-7392
FAX (253) 872-7398

June 8, 2001

RECEIVED
JUN 13 2001
Director's Office
DPS, Div. of Fire Prevention

Mr. Ross Fosberg
CODE ADOPTION COORDINATOR
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE PREVENTION
5700 E. Tudor Road
Anchorage, AK 99507-1225

SUBJECT: UNIFORM MECHANICAL CODE

Dear Mr. Fosberg:

Key Mechanical as a Company, and I as an individual, are strongly opposed to the adoption of the International Mechanical Code. Key Mechanical would spend enormous amounts of money and time to become skilled at a new mechanical code that will not provide any increased protection to the public at large. In fact using the two codes proposed, (2000 INTERNATIONAL MECHANICAL CODE and 2000 UNIFORM MECHANICAL CODE) in the way the Fire Marshal proposes results in less protection to the public. (5)

We are presently renewing our Mechanical Administrators License by reviewing changes in the 2000 Uniform Mechanical Code. Why are we being asked to do this? What is the reason to adopt the International Mechanical Code?

We see no positive reason in adopting the International Mechanical Code. The Uniform Mechanical Code is prescriptive in its approach. It is a much more descriptive stand-alone document. The International Mechanical Code refers to standard in the ICC Building and fire codes. Thus, we would have to become versant in other code documents due to the adoption of the International Mechanical Code. (10) (3)

The Uniform Mechanical Code has served the industry well for many decades. We see no compelling reasons to, "...fix what is not broken."

Respectfully,

KEY MECHANICAL CO. OF WASHINGTON

Frank W. Leonard (FWL)

Frank W. Leonard, President
FWL:mmp

Providing Superior Service Since 1975

Cc: OFFICE OF THE GOVERNOR
Tony Knowels, Governor
Third Floor, State Capital
P. O. Box 110001
Juneau, AK 99811-0001

MECHANICAL CONTRACTORS OF ALASKA
Eugene R. Rutland, Executive Director
P. O. Box 74796
Fairbanks, AK 99707-4796

ANCHORAGE PLUMBING & HEATING, INC.

P.O. BOX 201563 ANCHORAGE, ALASKA 99520
(907) 349-6620 FAX (907) 349-0754

June 4, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Rd
Anchorage, Alaska 99507-1225

Dear Sir or Madam:

We are writing this letter to express our disappointment in the proposed change from the Uniform Mechanical Code UMC, a code which has served the state of Alaska and the Municipality of Anchorage well for over 40 years, to the International Mechanical Code IMC. A code that wasn't even published until 1997, has no track record, has never been used in Anchorage, or anywhere in Alaska, and is only used in a couple of states in the whole United States.

Anchorage Plumbing & Heating is a company that readily accepts change when the advantages of doing so are realized. So we went to work trying to find a logical reason why changing would be a good idea.

As we began comparing the two codes, we first thought maybe whoever was making this decision felt the International Mechanical Code was easier to use and understand than the Uniform Mechanical Code. As we leafed through the IMC, the idea of easier became laughable as we found no less than 100 times that it referred to other publications for the information needed. This means as a contractor we would have to purchase and carry volumes of other publications, manuals, and reference materials to do what we can now do with one book. (3)

Ok, so maybe the IMC does a better job of addressing safety than the Uniform Mechanical Code we thought. Not even close! Just one example of many, is non-vented furnaces. This type of gas fired furnace uses mechanical devices to ensure that the deadly gas Carbon Monoxide is not being poured into the dwelling. The IMC accepts these appliances as safe. The Uniform Mechanical Code on the other hand does not allow them to be installed. Perhaps we could find a NASA engineer, one who worked on the Challenger space shuttle to break the tie by telling us whether it's possible for a mechanical device to fail. We wouldn't install them in our homes, and it's a sure bet that given the facts you wouldn't either, but a building contractor given a chance to save a couple hundred dollars by not installing a vent would likely pick this choice every time. (5) (4)

So we think we have stumbled onto someone's justification for changing....MONEY!

ANCHORAGE PLUMBING & HEATING, INC.
P.O. BOX 201563 ANCHORAGE, ALASKA 99520
(907) 349-6620 FAX (907) 349-0754

It is our opinion that the IMC is written in a way that saves builders money by compromising standards associated with safety. It has become a political issue and the focus on protecting our fellow Alaskans will now take a back seat to the building industry making a buck. (5)

Equally as troubling is how this issue is being handled. When concerned contractors in our industry have called the people whose job it is to make the decision to keep the Uniform Mechanical Code or change to the IMC, they have been told that "although it is open for public comment, you can save your breath, because nothing anyone says will change anything. The decision has already been made." It seems that when you have several contractors who stand to make more revenue if the new code is adopted, all saying don't adopt the new code in the name of safety. And all the while the decision makers are plugging their ears saying "we don't have to listen to you", we are on a crash course for disaster. It's like the deck chair salesman on the Titanic telling the owners, "I know I could sell you a couple hundred more chairs, but are you sure you wouldn't rather use this area for a couple more life boats instead?" (2)

When it comes to public safety, let's keep politics out of it and make the safety of our citizens the driving force when deciding which code best serves our community. We need to reinstate the Uniform Mechanical Code. Any help in this matter will be greatly appreciated

Sincerely,

Dave Domas
Owner, Anchorage Plumbing & Heating Inc.

Jerry Brawn
Mgr. Anchorage Plumbing & Heating Inc.

Jim Donaldson
Asst. Mgr. Anchorage Plumbing & Heating Inc.

CC. Tony Knowles, Governor

Eugene Rutland

BITTNER PLUMBING & HEATING, INC.

SERVING ALASKA SINCE 1963
648 E. DOWLING ROAD, #102 ANCHORAGE, ALASKA 99518
(907) 561-8822 FAX (907) 561-8184

May 21, 2001

OFFICE OF THE GOVERNOR
Tony Knowles, Governor
Third Floor, State Capitol
P. O. Box 110001
Juneau, Alaska 99811-1001

Dear Governor Knowles,

Re: Uniform Mechanical Code vs. International Mechanical Code

I am an Alaska licensed Mechanical Contractor and a Mechanical Administrator . I started my business in 1963 and I have many years of experience with the Codes and Code changes. I recently served on the code review committee.

I have been informed the Alaska State Fire Marshal proposes to adopt regulation changes in Title 13AAC 50.023 Mechanical Code. He proposes to repeal the 1997 Uniform Mechanical Code and adopt the 2000 International Mechanical Code.

I am opposed to the adoption of the 2000 International Mechanical Code. The **2000 Uniform Plumbing Code** has been adopted by the Alaska Department of Labor. My Mechanical Administrator License is based, by statute, on the Uniform Plumbing Code and the Uniform Mechanical Code which are coordinated and integrated to provide codes for all mechanical systems within a building to assure the public of safe installations. (6)

I have confidence based on experience in the Uniform Mechanical Code and why should we spend time and money to become skilled in a new mechanical code that is not going to provide the public with any increased protection.

Since the Fire Marshal's proposed regulations already incorporate the 2000 Uniform Plumbing and 2000 Uniform Solar Energy Code, doesn't it make sense for him to adopt the 2000 Uniform Mechanical Code? Then there would be an integrated family of Uniform Codes that cover all of the plumbing, heating and ventilation systems in a building. Considering that these Uniform Codes are superior to their International Code counterparts and that the installers (Plumbers, Pipe Fitters and Mechanical Administrators) are licensed (as required by statute) according to the Uniform Codes and are familiar with Uniform Codes, it seems apparent that better, safer systems could be (1)

installed. I am not aware of any installers or mechanical administrators licensed per the International Mechanical Code in the State of Alaska.

The code users currently using the 1997 U.M.C. will find it a relatively smooth transition to the 2000 U.M.C. in comparison to adopting the I.M.C. It is clear from comparing the size of the two books that the U.M.C. 2000 is significantly more prescriptive in its approach. The 2000 I.M.C. consists of 110 pages and the **2000 U.M.C.** consists of **284** pages. The 2000 U.M.C. is a much more descriptive, stand-alone document. Part of the difference in size is probably due to the fact that the publishers of the U.M.C. have many more years of experience publishing a Mechanical Code that the publishers of the I.M.C. The I.M.C. relies heavily on incorporating other codes and standards by reference. This makes the I.M.C. more cumbersome for the user and therefore more prone to mistakes and misunderstandings which 16Xare exactly the sorts of problems codes are designed to avoid.

(10) (9) (3)

My question, therefore, is "What is the compelling reason to adopt the International Mechanical Code?

(13)

Sincerely yours,

Paul J Bittner

Paul J. Bittner, President
Bittner Plumbing and Heating, Inc.

Cc: Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Mech Bd Licenses #619
Nov. 4 19

CASSIDY'S PLUMBING & HEATING
P O BOX 112278
ANCHORAGE, AK 99511-2278
(907) 522-8126
FAX (907) 522-8590

June 1, 2001

Mr. Ross Fosberg
Code Adoption Coordinator
Division of Public Safety
Division of Fire Protection
5700 East Tudor Road
Anchorage, AK 99507-1225

Re: Proposed Adoption of 2000 International Mechanical Code

Dear Mr. Fosberg:

It has just recently come to my attention your plan to adopt the 2000 International Mechanical Code ("IMC") in place of the 1997/2000 Uniform Mechanical Code ("UMC") currently in effect.

My investigation of the IMC raises serious concerns for public health and safety in our community if in fact adopted. My initial concerns are first; current UMC Section 1313.5 prohibits LPG facilities in pits or basements in order to prevent hazardous explosive conditions. IMC contains no such restrictions. (4)

Furthermore, the 2000 UMC has Appendices A, B, C, and D. Appendix A contains 8 standards. Appendix B contains fuel gas piping, installation and testing of gas or fuel fired equipment, and installation and testing of oil (liquid) fuel fired equipment. Appendix C contains sizing tables for venting systems. The IMC contains two; one for combustion air openings and one for chimney connector pass throughs. The IMC contains no provisions for fuel gas piping. (4)

These two points alone, in my opinion, cause serious concern to public safety issues in the hands of uneducated unscrupulous contractors with only the IMC to follow. (5)

Furthermore, the current UMC book, as adopted today, is a stand-alone document. A contractor equipped with this book has to look no further to answer questions. The IMC document heavily references other codes and standards, meaning a contractor would need a virtual library of reference materials to do his job correctly. All this will undoubtedly lead to misunderstandings and mistakes, with possibly life threatening results. (3)

In conclusion, I see no possible benefits to adopting a new, less restrictive, code in place of the current UMC, but rather, the possibility of less protection to the public at large. I personally see this as a step backward in the progress of our state of Alaska. I would urge all those involved reconsidering the adoption of the IMC and continuing to use the UMC currently in place.

Sincerely,

Brian Cassidy

Brian E. Cassidy
Mechanical Administrator

Ccs: Office of the Governor
Tony Knowles, Governor
Third Floor, State Capitol
P O Box 110001
Juneau, AK 99811-0001

Eugene R. Rutland, Executive Director
Mechanical Contractors of Alaska, Inc.
P O Box 74796
Fairbanks, AK 99707-4796

WHEELER MECHANICAL, INC.

19535 FIRST STREET

EAGLE RIVER, AK 99577-7104

PHONE 907-696-7326 FAX 907-696-5718 PAGER 267-7695

June 8, 2001

Gary Powell
Alaska State Fire Marshall
5700 E Tudor Road
Anchorage, AK 99507-1225

RE: Opposition to adoption of The International Mechanical Code

Mr. Powell,

I am the owner of Wheeler Mechanical Plumbing and Heating Inc. Our work involves commercial and residential plumbing, heating, gas piping, and processed piping in the Anchorage Bowl Area, as well as, other communities through the State of Alaska.

It has been brought to my attention, this week that the State of Alaska is on the verge of dropping the Uniformed Mechanical Code and replacing it with, by it's own admission, a far less prescriptive code, the International Mechanical Code. (10)

I have many concerns involving this code, but the two that I find immediately alarming are:

1) I find it incredibly frustrating that a decision as important as the deletion of one entire code and replacing it with a drastically different code would be pushed through the political process without even one public hearing or the inclusion of the men and women of these trades in the process. (2)
   It appears that while the State accepts the ideas of engineers, architects, and building officials, it did not deem the input from the actual people in these prospective trades that do the hands on installations as important enough to include them in the process.
2) The Uniform Mechanical Code has been used in the State of Alaska from statehood to the present and is as important a tool in the field as a pipe wrench, soldering torch or a power tool. My employees continually use this book as well as the Uniform Plumbing Code book on a daily Basis.

The International Code Book while having vast reference material in it is not a code book that my employees could use in the field without carrying all the reference material described in this new code book. (3)

The International Code Book, to my knowledge, has not address the licensing or training that is needed in this to bring all the people involved up to speed so that quality workmanship can continue not to mention the incredible expense to all to get this training. (6)

In the past couple of days after learning of this decision by you as the State Fire Marshall, I have questioned many people in the Mechanical Trades, as well as the Mechanical Inspectors. I have yet to find one individual working the mechanical trades that agrees with a complete change of this code.

On the other hand many understood the need to tweak and fine tune the Uniformed Mechanical Code to meet the needs of other codes that work in unison with this code book.

I would ask all parties involved to postpone this decision until such time as the Mechanical Trades people can be heard in this process. And that proper information is disbursed to all, so that an educated decision can be made by and for the people of Alaska, with regards to health, life, and safety.

I would be very happy to discuss these matters in more detail any time you could make yourself available. My office phone number is 907-696-7326, or my cell number is 907-360-2185.

Respectfully

Michael R Wheeler
President
Wheeler Mechanical, Inc.

Cc: Governor Tony Knowles
Lt. Governor Fran Ulmer
Commissioner Glenn Godfrey

Western Mechanical Inc

Mailing: P.O. Box 60067 • Fairbanks, Alaska 99706-0067
Physical: 2225 Van Horn Road • Fairbanks, Alaska 99701
Phone: (907) 452-1831 • Fax: (907) 456-3493 • Email: westmech.com
Contractor Registration #333 • Business License #014458

May 9, 2001

State of Alaska
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Attn: Ross Fosberg, Code Adoption Coordinator

Subject: Proposed Adoption of Regulation Changes

Gentlemen:

Thank you for providing notice of the proposed adoption of regulation changes in Title 13 of the Alaska Administrative Code. I offer the following comments.

13 AAC 50.023 Mechanical Code: I am opposed to adoption of the International Mechanical Code 2000 Edition. The 2000 Edition of the Uniform Mechanical Code should be adopted to replace the 1997 Edition of the UMC.

- As a Mechanical Administrator I am licensed by statute to the Uniform Mechanical Code, not the International Mechanical Code. (6)
- I support the adoption of prescriptive codes, because there is a much lower probability of misinterpretation of the Code requirements. (10)
- The IMC lacks requirements for: fuel gas piping; installation and testing of gas- or fuelfired equipment; installation and testing of oil-fired equipment. (4)
- The IMC appears to allow the installation of LPG systems within pits or basements. (11)
- There does not appear to be any compelling reason to replace the Uniform Mechanical Code, other than updating it to the current edition. (12)

13 AAC 50.020 **Building Code:** If the International Building Code 2000 Edition is adopted, please consider replacing the seismic design requirements of the IBC with the seismic design requirements from the UBC, so that the construction industry can actually understand the requirements.

(13)

Yours truly,
WESTERN MECHANICAL, INC.

Mike Desmond

Michael C. Desmond
President
MA #77

HCI

Hankal Construction, Inc.

550 W. 54th Avenue
Anchorage, Alaska 99518
(907) 563-5719
FAX: (907) 562-6496

General Industrial

June 6, 2001

Office of the Governor
Tony Knowles, Governor
Third Floor, State Capitol
P.O. Box 110001
Juneau, AK 99811-0001

ATTENTION: TONY KNOWLES

SUBJECT: MECHANICAL CODE

Gentlemen:

I strongly oppose the adoption of the International Mechanical Code and strongly urge you to adopt the Uniform Mechanical Code.

I currently hold a Mechanical Administrators License and have confidence, based on experience, in the Uniform Mechanical Code. I see no reason to spend time and money to become skilled in a new mechanical code that is not going to provide the public with any increased protection. It appears based on the Mechanical Contractors of Alaska, Inc. research of the 2001 I.M.C. (copy attached) that melding the two codes together, in the way the Fire Marshall proposes, results in less protection for the public. Again I urge you to adopt the Uniform Mechanical Code.

If you have any questions, or require further information, please contact the undersigned at your convenience.

Sincerely,
HANKAL CONSTRUCTION, INC.

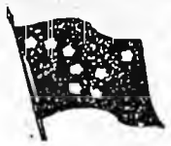
Gary T. Hankal
President

cc: Ross Fosberg, Code Adoption Coordinator
Dept. of Public Safety
Division of Fire Prevention
5700 E. Tudor Rd.
Anchorage, AK 99507-1225

cc: Eugene R. Rutland, Executive Director
Mechanical Contractors of Ak, Inc.
P.O. Box 74796
Fairbanks, AK 99707-4796

GH\mm\LTROOG.606

Mechanical Contractors Association
MCA
MECHANICAL CONTRACTORS
of Alaska, Inc.



Comments on the International Mechanical Code (I.M.C.):

1. Section "Maintenance" of I.M.C. has a significant disclaimer for any liability resulting from compliance or non-compliance with I.M.C. The U.M.C. contains no such disclaimer. (17)

2. Under paragraph (11) of 13AAC 50.023 of the proposed regulations the addition of the Table 304.7 would not be needed if 2000 U.M.C. were adopted. This information is contained in Table 3-1 of 2000 U.M.C. This is a concrete example of how much more prescriptive the U.M.C. is. (10)

3. The code users currently using the 1997 U.M.C. will find it a relatively smooth transition to the 2000 U.M.C. in comparison to adopting the I.M.C. It is clear from comparing the size of the two books that the U.M.C. 2000 is significantly more prescriptive in its approach, a philosophy that has been utilized in the development of the Uniform codes. This philosophy is evident in the fact that the 2000 U.M.C. reproduces important standards in the code for ease of use while the I.M.C. only references them. The State Fire Marshal needs to examine these differences and consider their impact on the health and safety of the communities in Alaska. (9)

4. The 2000 I.M.C. consists of 110 pages, the 2000 U.M.C. consists of 284 pages. The 2000 U.M.C. is a much more descriptive, stand-alone, document. Part of the difference in size is probably due to the fact that the publishers of the U.M.C. have many more years of experience publishing a Mechanical Code than the publishers of the I.M.C. The I.M.C. relies heavily on incorporating other codes and standards by reference. This makes the I.M.C. more cumbersome for the user and therefore more prone to mistakes and misunderstandings. Exactly the sorts of problem codes are designed to avoid. (3)

5. Since the Fire Marshal's proposed regulations already incorporate the 2000 Uniform Plumbing and 2000 Uniform Solar Energy Code, doesn't it make sense for him to adopt the 2000 Uniform Mechanical Code?
   Then there would be an integrated family of Uniform Codes that cover all of the plumbing, heating and ventilation systems in a building. Considering that these Uniform Codes are superior to their International Code counterparts and that the installers (Plumbers, Pipe Fitters and Mechanical Administrators) are licensed (as required by statute) according to the Uniform Codes and are familiar with Uniform Codes it seems apparent that better, safer systems could be installed. (12)
   To my knowledge, today there are no installers or mechanical administrators licensed per the International Mechanical Code in the State of Alaska.
   Once more we raise the question "What is the compelling reason to adopt the International Mechanical Code? (4)

6. LPG Facilities are prohibited in pits or basements and other specific locations by Section 1313.5 of the U.M.C. The 2000 I.M.C. does not contain any such restriction.

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7. Referenced Standards: Appendix A of the 2000 U.M.C. contains 7 U.M.C. standards. These standards based on nationally recognized standards are reproduced in their entirety in the U.M.C. The I.M.C. does not have any standards in it and only mentions them by reference. (3)

8. The I.M.C. reproduces text from other codes. As an example refer to Section 513 in the I.M.C. for Smoke Control systems. The U.M.C. does not use this approach. Section 513 of the I.M.C. reproduces portions of the I.B.C. and the I.F.C. for this section. I urge you to study Section 513 of the I.M.C. (3)

9. Chapter 11 Refrigeration:
There are several differences in this chapter. In size alone, the U.M.C. chapter is about double the size of the I.M.C. chapter. The reason is that the U.M.C., while keeping with its philosophy, has several prescriptive provisions so as to allow the user to have all the information needed in the chapter. The I.M.C. refers to both the I.C.C. Building and Fire Code extensively and defers to standards for requirements such as refrigerant control valves. The I.M.C. chapter requires access to several other documents for the user to comply with its provisions. (4)

10. Chapter 14 of the 2000 U.M.C. covers Process Piping. There is no equivalent chapter in the 2000 I.M.C. (4)

11. The U.M.C. 2000 has Appendix A, B, C and D. Appendix A contains 8 standards. Appendix B contains Fuel Gas Piping, Installation and Testing of Gas or Fuel Fired Equipment, Installation and Testing of Oil (liquid) Fuel Fired Equipment. Appendix C has sizing tables for venting systems. I.M.C. has 2 appendices – one for combustion air openings and one for chimney connector pass throughs. The I.M.C. has no provisions for Fuel Gas Piping. (4)

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South Central Plumbing and Heating
3419 Jerde Circle
Anchorage, Alaska 99504
(907) 337-2444 or (907) 229-0654 Cell

ROSS FOSBERG, CODE ADOPTION COORDINATOR
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

As you may or may not be aware, the Alaska State Fire Marshal proposes to adopt regulation changes in Title 13AAC 50.023 Mechanical Code. He proposes to repeal the 1997 Uniform Mechanical Code and adopt the 2000 International Mechanical Code.

As a State of Alaska Licensed Mechanical Administrator and Mechanical Contractor, I am strongly opposed to the adoption of the International Mechanical Code. (I.M.C.) The 2000 Uniform Plumbing Code has been adopted by the Alaska Department of Labor and is the "law of the land" in Alaska for plumbing and fuel gas installations. The Fire Marshal recognizes this fact in his proposed regulations. We (contractors) have worked with the Uniform Mechanical Code (UMC), since it's adoption by the Municipality of Anchorage and the State of Alaska in 1964. It is not in my best interest, as a contractor or installer, and is not in the best interest of the public, to adopt the IMC. (5)

As you should know, my Administrators License is based, by statute, on the Uniform Plumbing Code and the Uniform Mechanical Code. The mechanical industry has confidence based on experience in the U.P.C. and the U.M.C. and I am not interested in spending time and money to become skilled in a new mechanical code that is not going to provide the public with any increased protection. As an example, the I.M.C. refers me, the installer, to 128 different codes. As a member of the public, it is less restrictive with the installation of gas appliances. This is just two of the numerous problems with the I.M.C. With the U.M.C., I can design and install with just one book and it governs the installation of all gas appliances. (6)

I urge you to stop the Alaska State Fire Marshal in the adoption of the International Mechanical Code and strongly support the adoption of the Uniform Mechanical Code. The Uniform Plumbing Code and the Uniform Mechanical Code are coordinated and integrated to provide a family of codes for all mechanical systems within a building and they assure the public of safe mechanical installations.

I received a letter from Eugene Rutland, the executive director of the Mechanical Contractors of Alaska, Inc. and was given some insight into his research of the 2000 I.M.C. and the 2000 U.M.C. and as a result of that research, I have attached comments that seem useful in explaining our position.

Lee M. Van Ness
South Central Plumbing and Heating

South Central Plumbing and Heating
3419 Jerde Circle
Anchorage, Alaska 99504
(907) 337-2444 or (907) 229-0654 Cell
Lee M. Van Ness

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4. The 2000 I.M.C. consists of 110 pages, the 2000 U.M.C. consists of 284 pages. The 2000 U.M.C. is a much more descriptive, stand-alone, document. Part of the difference in size is probably due to the fact that the publishers of the U.M.C. have many more years of experience publishing a Mechanical Code than the publishers of the I.M.C. The I.M.C. relies heavily on incorporating other codes and standards by reference. This makes the I.M.C. more cumbersome for the user and therefore more prone to mistakes and misunderstandings. Exactly the sorts of problem codes are designed to avoid.

5. Since the Fire Marshal's proposed regulations already incorporate the 2000 Uniform Plumbing and 2000 Uniform Solar Energy Code, doesn't it make sense for him to adopt the 2000 Uniform Mechanical Code?
   Then there would be an integrated family of Uniform Codes that cover all of the plumbing, heating and ventilation systems in a building. Considering that these Uniform Codes are superior to their International Code counterparts and that the installers (Plumbers, Pipe Fitters and Mechanical Administrators) are licensed (as required by statute) according to the Uniform Codes and are familiar with Uniform Codes it seems apparent that better, safer systems could be installed.
   To my knowledge, today there are no **installers** or **mechanical administrators** <u>licensed</u> per the International Mechanical Code in the State of Alaska.
   Once more we raise the question "What is the compelling reason to adopt the International Mechanical Code?

6. LPG Facilities are prohibited in pits or basements and other specific locations by Section 1313.5 of the U.M.C. The 2000 I.M.C. does not contain any such restriction.

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Lee M. Van Ness

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Mechanical Contractors Association
MCA

MECHANICAL CONTRACTORS
of Alaska, Inc.

May 3, 2001

Mr. Gary Powell
State Fire Marshal's Office
State of Alaska, Division of Fire Prevention
5700 E. Tudor Road
Anchorage, AK 99507-1225

Subject: Proposed Regulation Changes
To 13AAC 50.023, Re-Issued

Dear Mr. Powell:

Our Association is opposed to the repeal of the Uniform Mechanical Code. We feel very strongly that the State of Alaska should adopt the 2000 Uniform Mechanical Code.

In order to properly address our concerns during the public comment period we need some information from your office:

1. We need the review analysis you performed that led to your conclusion that the International Mechanical Code is superior to the Uniform Mechanical Code.

2. We need to know how the public comments will be weighed and how the determination is made as to which Mechanical Code will be adopted after the comment period.

Your prompt reply is requested due to the short comment period and the fact that the Mechanical Industry is very busy at this time of the year.

Sincerely,

Eugene R. Rutland
Executive Director

cc: Glenn Godfrey, Commissioner
Department of Public Safety
450 Whittier Street
PO Box 11120
Juneau, AK 99811-1200

P.O. Box 74796 • Fairbanks, AK 99707-4796
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STATE OF ALASKA

TONY KNOWLES, GOVERNOR

Glenn G. Godfrey, Commissioner

DEPARTMENT OF PUBLIC SAFETY

DIVISION OF FIRE PREVENTION

May 21, 2001

Eugene R. Rutland
Executive Director
Mechanical Contractors of Alaska Inc.
P.O. Box 74796
Fairbanks, AK. 99707-4796

Dear Mr. Rutland:

Per your request, the following outlines the review process followed by this office in reaching the conclusion that the International Mechanical Code should be adopted as part of the Alaska Fire safety regulations:

1. A review of the International Mechanical Code (IMC) and Uniform Mechanical Code (UMC), 2000 Editions showed that both codes essentially regulated the same subjects and systems with a few variations and that both codes had changed from the previous 1997 Edition of the UMC. The IMC in addressing the fuel-gas distribution, gas-fired appliances and gas-fired appliance venting deferred to the International Fuel Gas Code (IFGC) which is not being adopted as part of the State Fire Regulations. The UMC defers to the Uniform Plumbing Code adopted by the labor department for fuel-gas distribution while still covering the gas-fire appliances and venting of such in chapter nine. On the other hand, the UMC had no correlation to the building or fire codes construction and process/occupancy requirements as they related to subjects covered and impacted by the mechanical code, whereas the IMC had clear correlation to both the International Building (IBC) and Fire Codes (IFC). Examples of this correlation/cross referencing within the IMC can be found in sections 302. 309-311. 401.4, 502.2-502.15, 507, 509, 510, 513, 603.1, and 607.. Similar cross-references to the IMC are found in the IBC and IFC. An additional important factor is that the International Building Code. in Section 1202.1, now refers you to the IMC for change of air ratios and design purposes whenever mechanical ventilation is provided in lieu of natural ventilation. On the strength of the correlation and cross referencing of the IMC it was felt that to the end user this would be very valuable, if not imperative, and would facilitate clear understanding of the codes requirements and eliminate conflict. All other things being equal, that was an overpowering factor in our selection of the IMC.

2. To corroborate our conclusion. all 40 members of the codes review committees that were formed to review the I-Codes were asked, among other tasks. to look at the correlation between the three codes. Amongst this group were three mechanical engineers representing firms within the state and the State Department of Labor represented by Paul Yoder. Mr. Yoder reviewed the IMC and recommended adoption with suggested revisions that would eliminate conflicts between the labor department's authority and the fire marshal's. Those included the revisions to chapters 10 and 14. Later discussions with Mr.

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FAX: (907) 463-5860
TDD: (907) 465-5491

☑ 5700 EAST TUDOR ROAD
ANCHORAGE, ALASKA 99507
PHONE: (907) 269-5604
FAX: (907) 338-4375
TDD: (907) 269-5094

☐ 1979 PEGER ROAD
FAIRBANKS, ALASKA 99709
PHONE: (907) 451-5200
FAX: (907) 451-5218
TDD: (907) 451-5344

Yoder (after the various work sessions) identified the conflicts of adopting the IFGC and the possible void in the coverage of the gas-fire appliances and their venting. Since this is the labor department's area of jurisdiction Mr. Yoder agreed to review the IFGC as it relates to the subject and move forward with recommendations to revise regulations to cover that. All other mechanical reviewers were complimentary in regard to the correlation between the codes and offered few changes. The adoption of the three I-Codes has been supported by all others commenting from the deferred jurisdictions to the architectural firms and fire departments. The principle reason, the harmony between the three codes and the ease of use.

3. As a result of the resounding support through our previous public comment period we have chosen to go forward with the IMC. During that time it was felt that certain revisions should be added that covered unlisted appliances and unvented room heaters (revisions 10 & 22). These were added for life safety reasons, because, while the IMC does not recognize the existence of unlisted appliances such as barrel stoves, etc., the simple nature of the Alaskan lifestyle dictates that we address such. It should be noted that throughout this process great effort has been put forth to make a clear delineation between the codes and enforcement authority of the fire marshal's office and the labor department.

On the matter of how the comments will be weighed in regard to the adoption of the mechanical code, I can only assure you that it is the intent of this office to adopt by reference a standard that achieves the greatest level of fire and life safety protection to the citizens of Alaska. At this point it is our analysis that the IMC meets that criteria. All comments received during the previous comment period support that position. As additional comments are received they will be weighed in regard to their contribution to the level of fire and life-safety afforded the public in general, the enhancement of the interrelationship between the building, fire and mechanical codes, and their enhancement of the end users ease of interpretation and understanding of the fire and life-safety regulations of the State of Alaska.

Sincerely,

Gary L. Powell
State Fire Marshal

cc: Glenn G. Godfrey, Commissioner

RF/GLP/djb

MECHANICAL CONTRACTORS
of Alaska, Inc.

May 31, 2001

Mr. Gary Powell
State Fire Marshal's Office
State of Alaska, Division of Fire Prevention
5700 E. Tudor Road
5701 Anchorage, AK. 99507-1225

Subject: Proposed Regulation Changes to 13AAC 50.023, Re-issued
Your letter dated May 21, 2001

Dear Mr. Powell:

Thank you for your 5/21/01 letter in response to my 5/03/01 letter.

In the paragraph numbered 1 of your letter:

a. You state that the UMC defers to the UPC in addressing fuel gas distribution. This is not true. Chapter 13 appendix B of the 2000 UMC includes Chapter 12, Fuel Gas Piping, from the UPC in its entirety plus the 2000 UMC contains Chapter 15, Installation and Testing of Gas or Fuel Fired Equipment. There Is nothing on fuel-gas piping in the 2000 IMC.
To have a complete fuel-gas code system you should adopt the 2000 UMC.

clean out

b. Also, in the same paragraph 1, you cite some 14 sections of the IMC that refer to the IBC or IFC. The connotation in your letter is that this cross-referencing poses a problem to the adoption Of the UMC. In Ross Fosberg's memo of 3/21/01 to Royce Weller, Ross lists a total of 211 revisions (32 of these to the IMC) that your department has made to the IBC, IMC and IFC to accommodate the Dept. of Labor. It does not seem unreasonable to make a few more revisions to the IBC and IFC to adopt the 2000 UMC and accommodate 500 plus mechanical administrators in addition to the mechanical contractors, inspectors and installation personnel who are licensed and skilled in the use of the family of Uniform Codes.

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c. Again, paragraph 1, you cite IBC Section 1202.1 reference to IMC for mechanical ventilation. You state that this was an "over powering factor" in your selection of the IMC.
In response to this reasoning I direct you to paragraphs (10) and (11) of your proposed regulations. These paragraphs add clearances for listed and unlisted heat-producing appliances to the IMC. These paragraphs essentially are already contained in the 2000 UMC. Were you to adopt the 2000 UMC these paragraphs would not be necessary for heat-producing appliances. The mechanical ventilation requirements could be substituted in the proposed regulations. No net gain in revisions !

d. In your paragraph 2, I believe that the Dept. of Labor letter of 5/29/01 totally contradicts your statement of Paul Yoder's endorsement of the IMC.
The 40 members of the code review committee appear to be mainly building officials, fire department employees and design professionals. There were not any mechanical administrators, mechanical industry contractors represented, the very people who are licensed and use these codes. These construction professionals were not appointed to committees even though some building officials and fire department employees were appointed to multiple committee posts.

e. Paragraph 3 of your letter refers to "resounding support" in the previous public comment period. Through Dwight Perkins request Royce Weller provided what we were told was a complete copy of the previous regulation review package.
A review of this package reveals no comments at all on the mechanical code. The vast majority of the comments were from foster home providers who objected strenuously to the fire sprinkler requirements in the IBC. All the other comments addressed the IFC and most complained that there was inadequate time to locate copies of a brand new code and prepare comments.

f. Again, in Paragraph 3, Revision (10) to the IMC would not be necessary if the 2000 UMC were adopted since this material is already in the UMC.

In closing I must comment that frankly it appears your office is determined to adopt the IMC. Some of our members have reported that Mr. Fosberg stated that the IMC adoption is a "done deal". This means that the public comment phase of this process is a farce on your part. Your less than forthright conduct in this matter is a sad commentary on the Fire Marshal's office.

Please add this letter to the public comment file for 13AAC 50.023.

Sincerely,

Eugene R. Rutland

Eugene R. Rutland
Executive Director

cc: Office of the Governor
Tony Knowles, Governor
Third Floor, State Capitol
P.O. Box 110001
Juneau, AK. 99811-0001

1. Process:

From the beginning we have wondered how the Fire Marshal's office could propose to adopt a new mechanical code without wanting to get the input from the ones most affected by the change, that being the Mechanical Administrators. From the Fire Marshall's own list of the Mechanical review committee it shows that there are eleven members all of which are either building officials or fire officials (other governmental agencies) and five at large members, one of which is a State Plumbing Inspector and four that are Engineer's. Not one person that holds a Mechanical Administrators License or at least makes their living as a contractor is represented on this list.
We would like to know how this committee was appointed. We know that some Mechanical Administrators asked that they be considered but were never appointed to the review committee.

2. Why is it necessary to change from the UMC to the IMC?

The State has a long tradition of adopting the latest version of the Uniform Mechanical Code every time a new code is published. We have not seen any compelling statement or reason by the Fire Marshall's office that would justify the adoption of the International Mechanical Code, thereby putting the Mechanical Administrators that do business in this state in complete disarray.
In his letter to Mr. Fosberg the project coordinator for the Fire Marshall's office, Mr. Bryan Borjesson of Fairbanks, who is a licensed engineer states " We have had an opportunity to go through the new International Mechanical Code and find that not only has the format changed but there are a great deal of other items that have changed. We believe it will take at least 10 to 15 years before these codes are truly tested through the courts and all of the confusion and arbitrariness removed and the full education of the user's is accomplished. I personally, do not believe that we should have to go through this. I believe we should continue to use and adopt the Uniform series of codes for the next 2 cycles which is approximately 6 years and observe what is happening to the International Codes in other areas of the country. In other words, why should we be guinea pigs and suffer through all of the problems that everyone else is going to suffer through when we can simply avoid it by using a familiar and well known code into the near future and allow others to suffer the trial and tribulations of a new code system. I would suggest that this should be reviewed in approximately 6 years to see if the new International Code is 1) still in existence and 2) is providing the necessary protections for building owners and has been tested in court to eliminate those controversial portions which ultimately will be tested" Again we don't see the necessity to change.

Letter Received

3. Apparent conflict in Policy Regulations and Statutes:

In Chapter 70 FIRE PROTECTION, section 18.70.010 General function of Department of Public Safety with respect to fire protection. States, "The Department of Public Safety shall foster, promote, regulate, and develop ways and means of protecting life and property against fire, explosion, and panic"

In Sec. 18.70.080 Regulations (a) The Department of Public Safety shall adopt regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standard for

(1) fire detection and suppression equipment;
(2) fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units;
(3) any activity in which combustible or explosive materials are stored or handled in commercial quantities;
(4) Conditions or activities carried on outside a building described in (2) or (3) of this section likely to cause injury to persons or property.

(b) the commissioner of public safety may establish by regulation and the department may charge reasonable fees for fire and life safety plan checks made to determine compliance with regulations adopted under (a)(2) of this section.

In the Department of Community and Economic Development, Division of Occupational Licensing. Mechanical Administrators Statutes (AS 08.40.210- 08.40.490) Sec. 08.40.270 Examination of applicant. (a) Each applicant shall be examined to determine the applicant's

(1) ability to understand plans, design specifications, and engineering terms commonly used in the mechanical field;
(2) knowledge of mechanical installations and piping;
(3) familiarity with the requirements of the Uniform Plumbing Code, Uniform Swimming Pool, spa, and Hot Tub Code, Uniform Solar Energy Code, and the **Uniform Mechanical Code** currently in effect in the state; (because of the time lapse of adopting codes by the state the statute gives itself latitude by saying UMC currently in effect in the state)

Then in A.S. Sec. 08.40.490 Definitions.

(4) "mechanical administrator means a person who is responsible for (A) installing or modifying mechanical piping and systems, devices, fixtures, equipment, or other mechanical materials subject to the Uniform Plumbing Code, Uniform Swimming Pool, Spa, and Hot Tub Code, Uniform Solar Energy Code, and the Uniform mechanical Code as published by the International Association of Plumbing and

Mechanical Officials and the International Conference of Building Officials.

Currently, IAPMO is the only organization that publishes the Uniform Mechanical Code. ICBO sponsors the International Code Council which publishes the International Mechanical Code. The background to this is that until 1991 the Uniform Mechanical Code (UMC was cosponsored by the International Association of Plumbing and Mechanical Officials (IAPMO) and the International Conference of Building Officials (ICBO) with each organization owning the copyright to the document. That situation changed in 1994, and again in 1997, when each of the two model code bodies published a separate UMC. Currently only IAPMO publishes a 2000 edition of the UMC with ICBO discontinuing publication of their Uniform Codes set. The point is all the division of Occupational Licensing needs to do is put a period after the word officials and their statute is just fine. In times when departments are trying to do more with less, it doesn't make sense that DCED and DOL should incur costs to change the way they do business when there is a simple solution which we will explain later on.

Division FYI

The Mechanical Administrators are all tested under the Uniform Codes. They receive continuing education based on the Uniform Codes. They have received continuing education on the UMC for the next licensing cycle, through 2003

If the Department of Public Safety adopts by regulation the IMC, it will conflict with State Statute of the Department of Community and Economic Development, causing more confusion. In fact the project coordinator didn't even notify the Division of Occupational Licensing of the proposed changes. The person who administers the M.A. program called to find out when the fire Marshall's office was going to adopt the 2000 edition of UMC and it was only then that she was told "that the fire Marshall's office was going to adopt the IMC"

4. Appearance that the re notice of the proposed regulation is a sham.

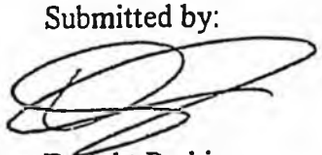
On May the 7th 2001 Mr. Fosberg was a guest at the Anchorage Mechanical Contractors Association meeting. At this meeting, Mr. Fosberg explained that because of mistakes in the advertising process, public comment had been extended until June 8th When asked if he would entertain suggestions concerning the adoption of the 2000 UMC instead of the 2000 IMC, he stated that it was merely a formality and that the adoption of the IMC was a "done deal" He went on to say that he would only review comments on the IMC, and that any comments concerning keeping the UMC would be a wasted effort. I would submit to you that not only is this unethical but maybe illegal.

5. The solution.

As I stated earlier, we have a suggestion that we think both of us can live with. In a memo dated March 21, 2001 from Mr. Fosberg to Mr. Royce Weller, Mr. Fosberg discusses the separation of jurisdiction regarding the Department of Labor. Mr. Fosberg states in the International Building Code where it references the International electrical, plumbing and fuel gas codes that each section is revised and replaced by and it goes on to cite which Alaska Administrative Code it applies to. We ask that you allow us to work with the department to identify in the International Building Code where all references are made to the 2000 IMC that we delete that reference and insert with the words 2000 UMC. The Fire Marshal still gets the International Building Code and the International Fire Code. In return we get the Uniform Mechanical Code which will work in conjunction with the Uniform Plumbing Code. This will also eliminate the problem of the conflict described in number 3

PLEASE SUBMIT FOR THE RECORD TO THE NOTICE OF PROPOSED CHANGES IN THE REGULATIONS OF THE DEPARTMENT OF PUBLIC SAFETY.

Submitted by:



Dwight Perkins
P.O.Box 33922
Juneau, Alaska 99803

MEMORANDUM State of Alaska

TO: Royce Weller
Department of Public Safety

DATE: March 21, 2001

TELEPHONE: 465-4322

FROM: Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention

SUBJECT: Separation of Jurisdiction regarding Dept. of Labor in 13AAC 50.020, 50.023 and 50.025

In our development of the revisions to the new I-Codes under the Fire and Life Safety regulations, we worked with the Department of Labor to assure clear delineation of authority and responsibility for enforcement and code application jurisdiction.

The regulations currently being reviewed by the AG's office have as an example the following references:

(3) *I.B.C.* Chapter 1, Section 101.4.1 Electrical, is revised by deleting the reference to the "*ICC Electrical Code*" and inserting the reference "Electrical Code as adopted by 8 AAC 70.025";

(4) *I.B.C.* Chapter 1, Section 101.4.2 Gas, is revised by deleting the reference to the "*International Fuel Gas Code*" and inserting the reference "Plumbing Code as adopted by 8 AAC 63.010";

(5) *I.B.C.* Chapter 1, Section 101.4.4 Plumbing, is revised by deleting the reference to the "*International Plumbing Code*" and inserting the reference "Plumbing Code as adopted by 8 AAC 63.010";

These three examples are taken from the revision to the International Building Code under 13 AAC 50.020 and reflect the verbiage used in revisions to each of the codes. The IBC has a total of 74 revisions with 21 (28%) of those referring the user to the Department of Labor for either the electrical or plumbing codes. The IMC has a total of 32 revisions with 16 (50%) referring the user to DOL, and the IFC has 105 revision with 34 of those (33%) referencing DOL's jurisdiction.

Throughout this whole process we have been consistent in our goal of giving a clear indication of whose authority the enforcement and interpretation of referenced regulations the end user is subject to. Over all, I believe that this has been very successful, and done so with the assistance of staff from the Department of Labor.

PATRICK MECHANICAL INC.
(907) 452-3334 Fax (907) 452-3369
E-Mail: patrick@ptlalaska.net
Mailing Address:
P.O. Box 80510
Fairbanks, Alaska 99708
Physical Address:
3307 International Street
Fairbanks, Alaska 99701

6/6/01

Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Subject: Adoption of the 2000 IMC

Attn: Ross Fosberg, Code Adoption Coordinator

Dear Sir,
I am a licensed Mechanical Administrator with the State of Alaska and am writing this letter to state my strong objection to the adoption of the 2000 International Mechanical Code (IMC) and my support for adoption of the Uniform Mechanical Code (UMC).

One of the first problems that we, as mechanical administrator's, face is that our license renewal is based upon continuing education. To date, the regulations that govern us still mandate education for the UMC. Additionally, there are no registered classes on the IMC that are approved for the required continuing education credits.

Secondly, to the best of my knowledge, we have been utilizing the UMC since statehood. Is there a problem with the code? If not, why are we forcing the issue and making the administrator's retrain to a new code? It would seem to me that this would create some confusion in installation until we settle into the IMC, thus costing us money and increasing the potential for violations and citations.

It is my belief that the UMC is a better code. The language in the UMC leaves less open to interpretation and is more descriptive in the requirements of the installation. Also, it incorporates the requirements right into the code. The IMC makes reference to other manuals and codes.

The IMC is a looser code that allows practices that are not deemed safe by the industry. One such example is the IMC allows propane to be installed in a basement or pit with the installation of a fan to move air if the propane is detected. What happens if the fan fails or power is shut off to the fan? All safety precautions would then be defeated. If a problem were encountered, it opens both us, as administrators and the State to liability lawsuits. The UMC prohibits this installation.

(5)

There are many more examples of similar items. Again, I want voice my strong opposition to the adoption of the IMC. I sincerely hope your division carefully considers all of the implications in adopting the IMC to us and the State.

Sincerely,

Dave Peet

cc: Office of the Govenor

Chandler
Plumbing & Heating, Inc.
129 Minnie St. • P.O. Box 70534
Fairbanks, AK 99707-0534
Phone: (907) 456-5282 Fax: (907) 451-6973

June 8, 2001

Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Attn: Ross Fosberg

Mr. Fosberg:

The purpose of this letter is to express my support for the adoption of the 2000 Uniform Mechanical Code rather than the International Mechanical Code. As a mechanical administrator (MEC M 55), I have completed my continuing education for both the UPC and UMC as mandated by statute and will be renewing in August of this year.

If the IMC were adopted, my men and I would have to be re-educated to the new code. There is a cost involved with this. Additionally, there is a potential for error due to being unfamiliar with the requirements of the new code. The potential liability cost could greatly exceed the retraining costs. I see no benefit to public health and safety by incurring these direct and indirect costs.

It seems odd that a regulation would require a change in statute to avoid a contradiction. It was my understanding that statutes were the law and regulations were to help implement the law. Adopting the IMC by regulation directly places me as a mechanical administrator in a crossfire between the statute requiring installation by UMC and a regulation requiring installation by IMC. Would it not be more logical to adopt the code mandated by statute? (6)

Again, I would urge you to adopt the 2000 UMC. Thank you for your consideration during the public comment period.

Sincerely,

CHANDLER PLUMBING & HEATING, INC.

Dayn M Cooper

Dayn M.Cooper
Engineer

Fc: Office of the Governer

HARBOR PLUMBING & HEATING, INC.
MECHANICAL CONTRACTORS

P.O. BOX 32117
JUNEAU, ALASKA 99803
(907) 789-7222 FAX (907) 789-0314

June 6, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Mr. Fosberg:

I strongly oppose the adoption of the International Mechanical Code, which is being proposed for adoption by the Alaska State Fire Marshall. There are many reasons why I oppose the adoption of the International Mechanical Code. I believe the Uniform Mechanical Code and the Uniform Plumbing Code coordinate with each other whereas the International Mechanical Code does not. The International Mechanical Code is not an in depth code and leaves room for speculation.

I believe that adopting the Uniform Mechanical Code is in the best interest of all parties involved in the plumbing and mechanical trade.

Sincerely,

James L. White
President
Mechanical Administrator # 188

cc: Office of the Governor

R & S Mechanical Inc.
P. O. Box 80889
Fairbanks, AK 99708
907-456-6052
Fax 907-456-8053

June 6, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Rd.
Anchorage, AK 99507-1225

Dear Mr. Fosberg:

Re: International Mechanical Code

The current 2000 Uniform Plumbing Code and 1997 Uniform Mechanical Code have served the industry and public well. Research of the International Mechanical Code in comparison to the Uniform Mechanical Code does not provide any increased protection to the public.

Since there is no apparent benefit to the adoption of the I.M.C. over the U.M.C., I am opposed to any repeal action as it relates to the U.M.C.

Sincerely,

George Roberts
Mechanical Administrator #121

cc: Office of the Governor

UNITED ASSOCIATION
of Journeymen and Apprentices of the
Plumbing and Pipe Fitting Industry of
the United States and Canada

Founded 1889

Letters should be confined to one subject

UA Local Union: 367

Subject:

(907) 562-2810
(907) 562-2587 FAX

610 W. 54TH AVENUE
ANCHORAGE, ALASKA 99518

Martin J. Maddaloni
General President

Thomas H. Patchell
General Secretary-Treasurer

C. Randal Gardner
Assistant General President

June 1, 2001

RECEIVED
JUN 6 2001
Director's Office
Div. of Fire Prevention
Anchorage, Alaska

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Dear Mr. Fosberg,

I would like to voice my opinion about the proposed regulation change in Title 13 AAC 50.023 Mechanical Code. I am strongly opposed to the adoption of the International Mechanical Code (IMC).

The Uniform Mechanical Code (UMC) has protected public health and safety in Alaska for many years. The similar structures of the UMC and the Uniform Plumbing Code (UPC) **make the codes easier to teach and interpret**

The IMC uses constant referencing to other code books, over 100 when I quit counting. To ensure accurate interpretation and compliance to the code, I see this referencing as a problem. (3)

I feel, after reviewing the IMC, that the UMC is a more descriptive and stringent code for protecting public health and safety. (5)

I urge you to take the advice of a person who has worked in the trade and taught apprentices and journeymen. I feel the UMC is a far superior code and should not be replaced.

Sincerely,

Craig Hately
Training Coordinator
U.A. Local 367

UNITED ASSOCIATION
of Journeymen and Apprentices of the
Plumbing and Pipe Fitting Industry of
the United States and Canada

Martin J. Maddaloni
General President

Michael A. Collins
General Secretary-Treasurer

C. Randal Gardner
Assistant General President

Founded 1889

Letters should be confined to one subject

UA Local Union: Local Union 262
723 West 10th Street
Juneau, Alaska 99801

Subject:

May 25, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Dear Mr. Fosberg,

The Plumbers and Pipefitters U.A. Local Union 262, representing over one hundred members in Southeastern Alaska, strongly oppose the adoption of the International Mechanical Code, which is being proposed for adoption by the Alaska State Fire Marshal. There are many, many reasons why UA Local 262 and its members oppose the adoption of the International Mechanical Code. The main reasons are that the Uniform Mechanical Code and the Uniform Plumbing Code coordinate and mesh with each other whereas the International Mechanical Code will not. Another main reason is that the International Mechanical does not go into depth in some areas and leaves too much for speculation. (1)

We strongly support the adoption of the Uniform Mechanical Code because, together with the Uniform Plumbing Code, they provide a family of codes for all mechanical systems within a building and assure the public of safe mechanical installations.

We currently have many members who are licensed to install mechanical systems, yet there are no licensed installers under the International Mechanical Code. (6)

Yours truly,

Max R. Mielke
Business Manager
UA Local Union 262

cc: Office of Governor

(907) 586-2874
FAX (907) 463-5116
E-mail local262@ptialaska.net

UNITED ASSOCIATION
of Journeymen and Apprentices of the
Plumbing and Pipe Fitting Industry of
the United States and Canada

Founded 1889

Martin J. Maddaloni
General President

Thomas H. Patchell
General Secretary-Treasurer

C. Randal Gardner
Assistant General President

Letters should be confined to one subject

UA Local Union: 375
3568 Geraghty Street, Fairbanks, Alaska 99709

Subject: **Proposed changes to Title 13AAC 50.023 Mechanical Code**

June 4, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Dear Mr. Fosberg:

As the Business Manager of U.A. Local 375 Plumbers & Steamfitters Union representing approximately 500 members who must deal with any proposed changes to the Title 13AAC 50 023 Mechanical Code, I am writing to express my strong opposition to those proposed changes. The members of our industry have supported the Uniform Plumbing Code and the Uniform Mechanical Code to provide a family of codes for all mechanical systems within a building so that the public is assured of safe mechanical installations. These Uniform Codes have a more than thirty year history in our State.

Having read and compared the International Mechanical Code (IMC) to the Uniform Plumbing Code (UMC), I come to the conclusion that the strong opposition to the IMC is based on the following:

1. **UMC provides the industry with the confidence of experience.**
2. **UMC updates to 2000 will be relatively smooth for our industry.**
3. **UMC is a much more common industry standard.**
4. **Adoptions of IMC will not provide the public with added protection, rather it will provide less protection because it is because the UMC is more descriptive.** (5)
5. **There is no compelling reason to change to IMC on this code cycle (if it ain't broke, don't fix it). We should wait a few code cycles to see if the IMC , and the ICC who publishes it, are still around** (12)

I urge you to take into consideration the professionals in this industry who support the adoption of the 2000 UMC as the best code for insuring the residents of the State of Alaska of a practical, economic, and safe code.

Sincerely,

J.C. Wingfield
Business Manager

cc: Office of the Governor
The Honorable Tony Knowles, Governor of the State of Alaska

Randy Bayer
1119 Bruhn Rd.
Fairbanks, Alaska 99709
907-457-2530
goal@mosquitonet.com

Re: Uniform Mechanical Code/
International Mechanical Code
Public comment

Dear Sir,

I am writing to oppose the adoption of the International Mechanical Code (IMC) and urge the adoption of the 2000 Uniform Mechanical Code (UMC). My concern, as should be all of ours, is the health and safety of the public. **I believe the UMC does the best job of fulfilling the need of protection of the public in a cost effective manner.** I hold a Mechanical Administrators license State of Alaska, certified Plumbing Inspector and Certified Mechanical inspector through both International Association of Plumbing and Mechanical Officials and International Conference of Building officials. Below I have pointed out a number of issues that I believe lend value to this request:

1. Unvented room heaters; The 2000 IMC allows for the use of unvented room heaters by reference to the 2000 International Fuel Gas Code (IFGC) in Section 301.3. Unvented fuel burning room Heaters are specifically prohibited under Section 916.3 of the 2000 UMC. **The dangers of unvented products of combustion inside a structure are well founded.** (4)
2. LPG Facilities are prohibited in pits or basements and other specific locations by Section 1313.5 of the 2000 UMC. The 2000 IMC or the 2000 IFGC do not contain any such restriction. **The heavier than air characteristics of LPG make this a very dangerous consideration.** (4)

Denial IFC prohibits

3. Unlisted Equipment; Table 3-1 of the UMC provides for clearances for different types of unlisted appliances. There is no equivalent table in the IMC. The manufacturers installation instruction only address installation and do not take into account maintenance and all aspects of the installation. Because of this the need for clearance table. (4)
4. Referenced Standards: Appendix A contains 7 UMC standards. These standards based on nationally recognized standards are reproduced in their entirety in the UMC. The IMC does not have any standards in it and only mentions them by reference. (3)

NOT CURRENTLY ADOPTED →

5. Fuel Gas provisions: Chapter 13 of the UMC by reference to Appendix B contains these provisions. The IMC refers you to a different document; i.e. the International Fuel Gas Code for these provisions. (4)

→ TO IFC NFPA.

6. Text from other codes: The IMC reproduces text from other codes. As an example refer to Section 513 for Smoke Control systems. The UMC does not use this approach. This factor needs to be considered when we are considering adopting one document over another. (3)

Agree IMC is superior

7. Commercial Cooking Equipment (Chapter 5): There are significant differences between the two codes in this area. The requirements for duct enclosures for Type I Hoods are different; clearances are different with the UMC being more restrictive. The cleanout requirements are different as well. (4)

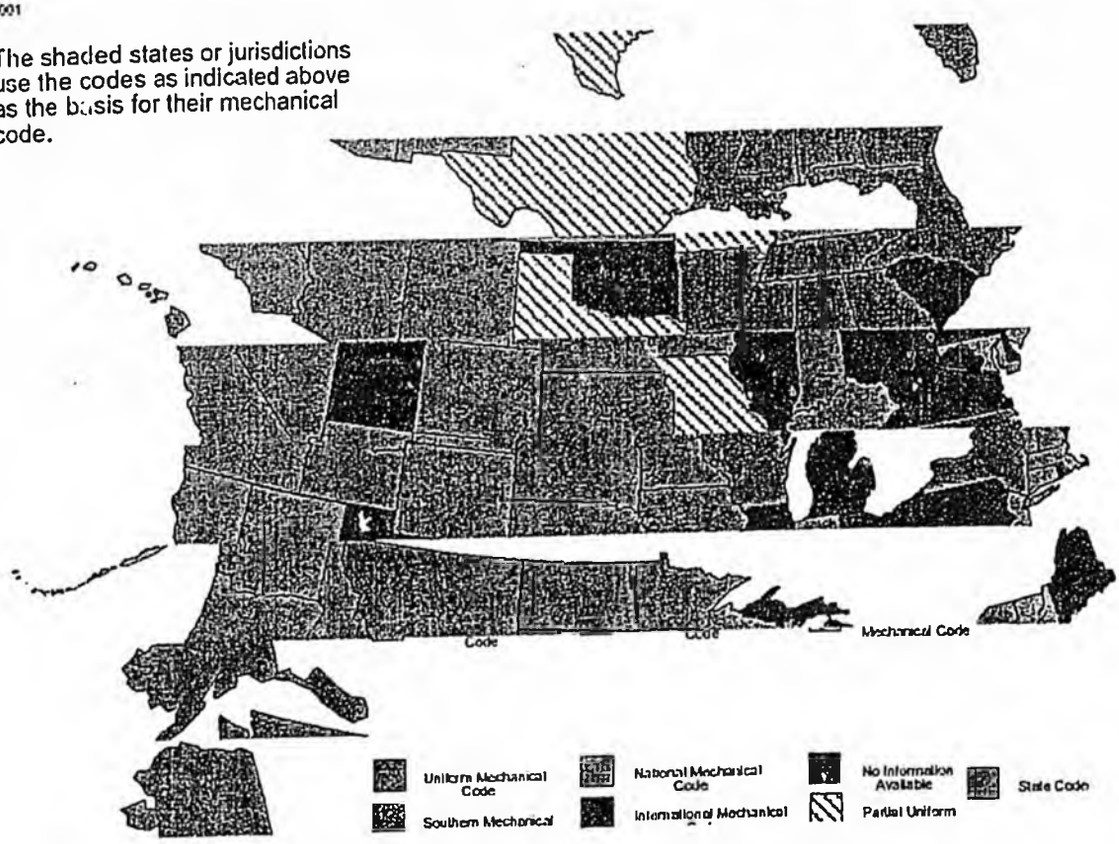
Agree IMC more restrictive

8. The 2000 UMC has Appendix A, B, C and D. Appendix B contains fuel Gas Piping, Installation and Testing of Gas or Fuel Fired Equipment, Installation and Testing of Oil (Liquid) Fuel Fired Equipment. The IMC has no provision for Fuel Gas Piping.
9. Chapter of the UMC covers Process Piping. There is no equivalent chapter in the IMC.
10. The 2000 Uniform Plumbing Code (UPC) has been adopted by the Alaska department of Labor. This is the governing document for Plumbing and Fuel Gas installations. The UPC and the UMC are coordinated and integrated to provide a family of codes for all mechanical systems within a building and they assure the public of safe mechanical installations. **To adopt the IMC will create many conflicts involving code enforcement. A situation we experienced some time ago, before coordination and integration.**
11. The UMC is a much more descriptive, standalone document. The IMC relies heavily on incorporating other codes and standards by reference. This makes the IMC more cumbersome for the user and therefore more prone to mistakes and misunderstandings. **Exactly the sorts of problems codes are designed to avoid.**
12. Engineers and craftsmen currently using the 1997 UMC will make a smooth transition to the 2000 UMC in comparison to adopting the 2000 IMC. Much of the licensing in the state is dependent of the codes. If you adopt the IMC there will be much expenditure of time and money for reeducation not to mention throwing the current licensing situation into and uproar.

Below is a map of the United States showing adopted Mechanical codes

Revised 1/2001

The shaded states or jurisdictions use the codes as indicated above as the basis for their mechanical code.



Mechanical Code Adoption

Thank you for your consideration,

Randy Bayer

ENSTAR Natural Gas Company
A Division of SEMCO ENERGY, Inc.
3000 Spenard Road
P.O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551

June 4, 2001

Gary Powell
Alaska State Fire Marshal
5700 E Tudor Road
Anchorage, Alaska 99507-1225

RE: opposition to adoption of the International Mechanical Code

Mr. Powell

I would like to take this opportunity to express some concerns that I have with the proposed adoption of the International Mechanical Code for the State of Alaska. I am the Service Supervisor and the Mechanical Administrator for ENSTAR Natural Gas Co. certificate # 69. I was a Mechanical Contractor for 12 years before I came to work at Enstar Natural Gas Co. I am on the Code Review Committee for the Municipality of Anchorage. We have reviewed for adoption the International Mechanical Code (IMC) and I have to say that I am opposed to the adoption of this code. The IMC is a good code for Engineers as it allows a lot of latitude in system design but it would be very difficult to install or inspect per codebook. It will be extremely difficult to teach installers how to do the work from the IMC. The Uniform Mechanical Code (UMC) is a prescriptive code that explains how a task must be done therefore it is a given as to what is expected and easier to inspect. The response I have received about teaching the IMC to Installers is to teach them from the UMC and then they will not have problems with the IMC installations. I don't believe this is the type of code that we want in the State of Alaska. (10)

My understanding is that you, as the State Fire Marshall, are trying to push the IMC through to adoption. I do not know of any Mechanical contractor in the State of Alaska that wants the IMC or any of the International codes. I would like to know who else is pushing for the International codes and what your and their reasons are? Most all problems in the UMC have been addressed and corrected. We are all trained and licensed by the Uniform Mechanical Code. We are not having problems with the UMC so why would we want to change it to a less restrictive code? I do not like the idea of changing to a less restrictive code that could lead to unsafe installations. The UMC has proven to be a safe guideline that the contractors / installers have learned to live by and I do not see any need whatsoever to implement a lesser code. If the IMC is adopted, every mechanical contractor / installer will have to obtain every International code book because of the cross referencing required, the International Mechanical, Plumbing, fuel gas, building, Energy Conservation, Fire, Electrical and Residential codes. This would be an unnecessary political change (brought on by people in offices) that would cause many problems for the individuals who have to make it all work. This presents a problem for me as I have 24 Service Technicians that would have to be trained and tested to continue to perform their job. If the IMC is adopted every Mechanical contractor / installer in this state will have to purchase and learn a new code. This letter is to register my support for keeping the Uniform Mechanical Code as the adopted code for the State of Alaska. (5) (3)

In regards to these issues, I would be happy to talk to you at any time. Please feel free to contact me at 264-3701

Respectfully,
ENSTAR Natural Gas Co.

Kit Dahlstrom
Service Supervisor

cc: Tony Knowles
Ross Fosberg

May 24, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225
Reference: 2000 Mechanical Code Change Cycle

Dear Mr. Fosberg:

I understand the Alaska State Fire Marshal proposes to adopt the 2000 International Mechanical Code (IMC) and that it is "a done-deal" even though the adoption process is not complete.

As a Plumbing/Mechanical Inspector for the Department of Development Services, Municipality of Anchorage, I am very concerned about the Alaska State Fire Marshal's proposal to replace the current mechanical code (1997 Uniform Mechanical Code) with the IMC.

As an inspector, I know the life/safety standards required for a mechanical installation, but may not be able to enforce those standards if code requirements are not clear. One significant problem with the IMC is that it refers to so many separate documents. This approach creates confusion, redundancy, and sometimes omits critical information. For example, the IMC covers solid fuel appliances only while the International Fuel Gas Code refers to gas appliances. Neither document covers both installations completely without referencing even more standards and codes. The 2000 Uniform Mechanical Code (UMC) is prescriptive and contained in one document. An entire heating, cooling and ventilation system may be designed, installed and inspected using the UMC. It works. More inquiries need to be made, more time allotted to hear all sides of this issue from design engineers, contractors, installers, inspectors and end users. I have studied both codes and can cite facts and figures to illustrate my concerns. My business card is enclosed should you wish to continue this discussion.

Most important, I believe this change from current code (UMC) will seriously compromise the "minimum standards to safeguard life or limb, health, property and public welfare" (1997 UMC, Section 102) in this state. You and I, our neighbors and friends, all your constituents are the stakeholders here. We will be subjected to a great travesty characterized by vagueness and incongruity and perhaps injury or death if the "I" Codes are adopted.

Respectfully yours,

Marilyn Honeysett

Marilyn Honeysett, Plumbing/Mechanical Inspector, Municipality of Anchorage

May 23, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Re: Adoption of regulation changes in Title 13 AAC 50.023 Mechanical Code.

Dear Sir:

I urge you not to adopt the 2000 International Mechanical Code. The following reasons are why the state should keep the Uniform Mechanical Code.

1.: The Uniform Mechanical Code, here after referred to as UMC, is better established and is a more prescriptive code then the International Mechanical code, here after referred to as the IMC. In my review of the IMC I have found it to be less definitive and more open to interpretation and/or misinterpretation than the UMC. (10)

2.: I have gone to great lengths and expense, as required by state of Alaska statute, to maintain my continued credit hours for renewal of my Mechanical Administrator license. This license, in accordance with 12 AAC 39.410, is based on the Uniform Plumbing code and UMC, not the IMC. The Alaska Division of Occupational Licensing has not notified me in writing, that the continued education is changed to the IMC. If the IMC is adopted I, as a Mechanical Administrator in Alaska, will be licensed to a different code than the law of the land. If the Mechanical Code is to be changed, then adequate time, with advance written notice, should be provided for my retraining to the IMC. This brings up several questions that need to be addressed. Is the state of Alaska going to provide me with a reimbursement of the costs I have incurred, maintaining my continuing education of the UMC? If the IMC is adopted will I be grand fathered into the mechanical portion of my administrators license? Will I be required to submit to an examination to prove I am acknowledgeable competent in the new code to carry out my Mechanical Administrator responsibilities? (6)

3.: I have managed mechanical construction projects for over 17 years to the UMC and I have a working knowledge of this code. I know where to reference the UMC to find the answers to code questions. To learn the IMC will require learning a new codebook. While I am up to any challenge that my career offers, I would rather not waste my time if it does not provide a better product. The UMC has an established history in Alaska. It has provided the people of Alaska quality mechanical construction that meets the health and safety for our communities. The IMC is unproven, it is new, it is still in its infancy, and does not meet all the necessary requirements for Alaska. This code will require extensive review, modifications and addenda to bring it just up to the standard of the UMC. I can find no reason why IMC is an improvement over UMC. Changing to the IMC will be an unnecessary impact to the mechanical construction industry in Alaska, while providing little or no benefit to the public at large. (8)

The purpose of codes is to provide a MINIMUM standard. The UMC is a superior code to IMC. The UMC is more prescriptive than the IMC. The UMC is known and established in the Alaska mechanical industry. To adopt the IMC is to lower the standard of quality for mechanical construction in Alaska, while risking the health and safety of our communities. Therefore, I urge you to not adopt the 2000 International Mechanical Code.

Sincerely,

Mark A. Anderson
Mechanical Administrator License #4

% Western Mechanical, Inc
P.O. Box 60067
Fairbanks, AK 99706

Cheski's Plumbing and Heating, Inc.
11180 Via Appia
Anchorage, Alaska 99515
Phone: (907) 344-3380
Fax: (907) 344-3380

May 29, 2001

Office of the Lt. Governor
Fran Ulmer, Lt. Governor
P.O. Box 110015
Juneau, Alaska 99811-0015

OFFICE OF THE
JUN 0 1 2001
LIEUTENANT GOVERNOR

Dear Lt. Governor:

Subject: Replacement of the 1997 Uniform Mechanical Code with the 2000 International Mechanical Code.

It has come to my attention that the Alaska State Fire Marshal is proposing to adopt a regulation change in Title 13 AAC 50.023 Mechanical Code. This proposal to repeal the 1997 Uniform Mechanical Code and adopt the 2000 International Mechanical Code is absurd!

Although I recently became self-employed and am the owner of my small business, over the years I have worked for other companies and secured the time and licensing needed to do so based on the Uniform Mechanical and Plumbing Codes. I have acquired the Mechanical Administrator's License under these same provisions. Working with these codes is very precise, and they are considered a stand alone document.

The difference between the two codes is obvious and there is no comparison. The International Mechanical Code is a sub book; reproducing and referencing text that is directly from other code books that are currently in use and recognized now. Having this additional information could cause confusion by not knowing which information is current, or questions about the applications of the information could bring up the factor of safety for the public. (3)

By trying to adopt the I.M.C. you are undermining the integrity of the existing system, as well as the structure that has formed from it's use. With this proposed change other common sense questions arise very quickly. There may also be problems with Alaska statutes, testing, continuing code education, and licensing divisions. (6)

If this International Mechanical Code is adopted, there will be much uncertainty, and gray areas will be opened up possibly jeopardizing safety factors that are already in place to protect the public. I strongly urge you to keep the existing Uniform Mechanical Code in place with the State of Alaska and not to settle for anything less for its people. (5)

Sincerely,

John M. Przeczewski

John M. Przeczewski

Owner, Cheski's Plumbing and Heating, Inc.

John Bumgarner
Noble Mechanical Inc.
P.O. Box 111209
Anchorage Alaska 99511
349-8611 349-5832 fax

June 7, 2001

LATE

RECEIVED
JUN 12 2001
Director's Office
Div. of Fire Prevention
Anchorage, Alaska

Office of the Governor
Governor Tony Knowles
State Capital bldg., 3rd floor
Post Office Box 110001
Juneau Alaska 99811-0001

Mr. Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of fire Prevention
5700 East Tudor Road
Anchorage Alaska 99507-1225

Dear Governor Knowles / Ross Fosberg

Re: Alaska State Fire Marshal's proposed regulation changes in title 13AAC 50.023 Mechanical Code

I am writing to object to the Alaska State Fire Marshal's proposed changes in the Title 13AAC 50.023 Mechanical Code. He has proposed to repeal the 1997 Uniform Mechanical Code (UMC) and adopt the 2000 International Mechanical Code (IMC). To this date I have had several conversations and meetings with contractors and Mechanical Administrators and have yet to find anyone that supports these changes. Also I have yet to here any real reason why the changes should be made.

As a licensed Mechanical Contractor and licensed Mechanical Administrator. I work daily with the (UMC) and have confidence that all work done by Noble Mechanical Inc. in accordance with the now (UMC) has been tested and proved.

As far as my Mechanical Administrators License, I am concerned that my need for continuing education credits will not be met with the (IMC). To this date I have not received any information from the Division of Occupational licensing in regards to their accepting any continuing education credits for the (IMC). Enclosed are 6 pages of approved sponsors and course information that is accepted. None of them suggest a new code at all.

In closing I would ask that you reassess the State of Alaska's position on this issue and adopt the 2000 Uniform Mechanical Code

Sincerely;

John Bumgarner
Noble Mechanical Inc.
Alaska Mechanical Administrators License # 36

JCHAHMI172PK

Johansen Mechanical inc.

P.O. Box 1768 • Woodinville, WA 98072
425-481-2266 Bus • 425-486-6933 FAX

Tony Knowles, Governor
Third Floor, State Capitol
P.O. Box110001
Juneau, Alaska 99811-0001

REC
JA
's Of
e Pre
e, Ala

Governor Tony Knowles
Re: 1997 Uniform Mechanical Code

Dear Governor

I am writing to Support the 2000 Uniform Mechanical Code. Current 1997 code users will have an easy transition to the 2000 UMC. These codes are an assurance of safe mechanical installations. The Uniform Mechanical Code is a much more descriptive and comprehensive document than the proposed International Mechanical Code. Much of the condensed IMC relies on other codes and standards by reference. It is more difficult to use and I fear harder to understand which will lead to installation errors. (3)

The 2000 UMC is already incorporated in the Fire Marshall's Uniform Solar Energy Code. It is logical therefore, that he adopt the 2000 UMC. Isn't better to have related codes that include plumbing, and heating and ventilation? There aren't any Mechanical installers that are licensed per the International Mechanical Code in the State of Alaska. What reason do we have to switch to the IMC? (1)

Refrigeration references in Chapter 11 of the UMC go much further in detail than the IMC and provides all the information that is necessary, while the IMC requires the installer to reference several other documents to comply with its provisions. There is no coverage on Piping or specifically Fuel Gas piping in the IMC as there is in the UMC. (4)

I urge you to reconsider the adoption of the International Mechanical Code. Its' adoption will severely confuse and cloud the installation of mechanical systems in the State of Alaska. Please go forward with the nationally recognized standards in the Uniform Mechanical Code updated for 2000.

Sincerely,

Allen Johansen

Allen Johansen
Johansen Mechanical, Inc.

c.c. Ross Fosberg, Code Adoption Coordinator

June 4, 2001

RECEIVED
JUN 0 6 2001
Southcentral Office
Div. of Fire Prevention
Anchorage, Alaska

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg,

This letter is concerning the adoption of a mechanical code for the State of Alaska. As a plumbing and mechanical inspector, and a former Mechanical Administrator in the State of Alaska, I urge the Fire Marshal to adopt the 2000 Uniform Mechanical Code (UMC) instead of the 2000 International Mechanical Code (IMC).

The codes are adopted for the public's safety, meaning you, me, family, friends, relatives, neighbors, visitors to the state, etc. Does this mean a "performance-based" code first published in 1997, is more beneficial than a "prescriptive" code, first published and adopted by the State of Alaska in 1964? I think not. The UMC, a prescriptive code, is written and changed by all people involved, not just government officials. The IMC, a performance-based code, allows only government officials to vote on changes. By changing codes now, are we asking for injury or death because of the numerous cross-references in the IMC, allowing many interpretations of the code? (10) (5)

For example, propane must be allowed in pits and basements according to the IMC, potentially creating a bomb. This is not allowed in the UMC. Fuel gas piping and appliances are not covered in the IMC, but referenced to other codes. Unlisted appliance installation is not addressed. Refrigeration is not covered in detail in the IMC, and also refers to other codes. The UMC covers these examples in detail. (4)

Public safety is of the prime concern, but the cost of converting to a new code should also be considered. The Statutes would have to be changed (UMC is to be adopted by statute). New tests would have to be created and all journeymen, inspectors, contractors, and engineers would have to purchase all the codes referenced and learn them. As you know, most, if not all costs, are passed on to the end user, you and me. (6)

Therefore, I believe that it is in the public's best interest to adopt the UMC, which has proven itself over the years.

Sincerely,

Lyman Meacham

Lyman Meacham

cc: Tony Knowles, Governor

4921 E. 11th Ave. #2
Anchorage, AK 99516

May 21, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

RE: The Mechanical Code (I.M.C.) for the State of Alaska

Dear Ross:

I am a licensed Mechanical Administrator through the State of Alaska. My license number is #107. I have several questions on how the State has chosen to go for their Mechanical Code.

1. Why has the State chosen to change to the International Mechanical code?
2. Combustion Air requirements is another area that is not covered in the I.M.C.
3. There are some large safety problems in the 2000 I.M.C. it does not cover gas piping for one.

(4)

Just these items or even only one could end up in a death if not done right.

The I.M.C. does not cover the present license that I have. It is based on the U.M.C. not the I.M.C. The regulation of required continued education on the U.M.C. not the I.M.C. Why change something that is not broke? This seems to be a large expense to the State and everyone who works with the codes. For the life of me I do not understand why the State is making this change. The code we have been using is the best with no report of a health problem or a complaint from a person using it. So again, why the change?

(6)

Thank you,

Lester H. Bate, Mechanical Administrator
7050 Viburnum Drive
Anchorage, Alaska 99507
(ph: 907-349-1453)

CAMERON

PLUMBING & HEATING

AND SHEETMETAL

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Protection
5700 East Tudor RD
Anchorage, AK 99507-1225

Dear Sir,

Regarding the proposal to adopt regulation c[illegible] Mechanical Code, I believe changing from the 1997 Unif[illegible]000 International Mechanical Code is not in the p[illegible] the best interest of Cameron Plumbing & Heating at t[illegible].

My reasons for this are as follows:

1. The public will not get as good of a code administration deal under the International Mechanical Code as it now gets under the Uniform Mechanical Code .
2. All of our Mechanical Administrator Licenses now come under the Uniform Mechanical Code.
3. The International Mechanical Code falls far short on descriptions, examples and drawings compared to the Uniform Mechanical Code. The Uniform Mechanical Code has 284 pages where as the International Mechanical Code has only 110 pages. They must have left out a lot of information.

Sincerely,

Donald Cameron
Vice President
Cameron Plumbing & Heating

CAMERON

PLUMBING & HEATING

AND SHEETMETAL

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Sir,

Regarding the proposal to adopt regulation changes in Title 13AAC 50.023 Mechanical Code, I believe changing from the 1997 Uniform Mechanical Code to the 2000 International Mechanical Code is not in the public's best interest nor is it in the best interest of Cameron Plumbing & Heating at this time.

My reasons for this are as follows:

1. The public will not get as good of a code administration deal under the International Mechanical Code as it now gets under the Uniform Mechanical Code .
2. All of our Mechanical Administrator Licenses now come under the Uniform Mechanical Code.
3. The International Mechanical Code falls far short on descriptions, examples and drawings compared to the Uniform Mechanical Code. The Uniform Mechanical Code has 284 pages where as the International Mechanical Code has only 110 pages. They must have left out a lot of information.

(6)

(8)

Sincerely,

Jim Cameron

Jim Cameron
Owner/ President
Cameron Plumbing & Heating

Cont. Lic# 4902

MICHELLE GIFFORD

1657 Jewell Dr., #1
Anchorage, AK
99501

June 6, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507

Re: *Proposed adoption of the International Mechanical Code*

Dear Mr. Fosberg:

I have been employed as a licensed trades person since 1984. During this time the equipment and systems I have installed have been engineered and installed in accordance with the Uniform Mechanical Code UMC. During this time, I have seen and installed many different types of equipment that have potential for combustion and fire within homes and buildings. The installation codes of these systems and associated combustion equipment are contained in the UMC, which have served the safety of the Alaskan public.

I am very concerned, for safety reasons, that the State of Alaska is considering adoption of the 2000 International Mechanical Code (IMC) in lieu of the 2000 Uniform Mechanical Code (UMC). The UMC has been in service since 1964 in the vast majority of cities and municipalities of the United States and has be come the standard for engineered structures and associated plumbing, heating, ventilation, air conditioning, fire suppression, refrigeration, gas appliance and piping systems. The UMC has proven to be a reliable, easily indexed code in which contractor's and Inspector's have come to rely on for the installation of building components insuring the safety of the building occupants. (6)

In Alaska, unlisted combustion equipment is frequently installed in the homes for heat. Such as, woodstoves, combustion equipment etc. The installation codes are found in a single chapter of the UMC. On the other hand the IMC lists no codes for the proper installation of unlisted combustion equipment. (4)

Respectfully yours,

Michelle Gifford

Michelle Gifford, Inspector

June 4, 2001

Ross Fosberg, Code Adoption Coordina
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg

As a licensed plumber with the State of Alaska and a master plumber with the City of Fairbanks I would like to voice my support for the adoption of the 2000 Uniform Mechanical Code (UMC). I am not in support of proposed regulation changes in Title 13AAC 50 023 Mechanical Code where the International Mechanical Code (IMC) is being reviewed for adoption.

The State of Alaska adopted the 2000 Uniform Plumbing Code (UPC) last year and adoption of the UMC seems sensible since these codes where designed to compliment each other.

Currently all master plumbers with the City of Fairbanks pass an exam using the UMC and the UPC. This is also true for State Mechanical Administrator exams.

In closing I urge you to investigate the differences between the UMC and IMC and you will find that the 2000 UMC is a preferable code in technical as well as health and safety concerns. Combine this with the training IAPMO provides brings a great benefit to the installer and in turn to the people of Alaska.

Sincerely,

Bret Helms
770 Bennett Rd.
Fairbanks, AK 99712

cc: Office of the Governor
Tony Knowles, Governor

June 4, 2001

Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK. 99507-1225

Re: Alaska State Fire Marshal's proposed regulation changes Title 13AAC 50.023

Dear Mr. Fosberg:

I am writing to express my strong support for adoption of the 2000 Uniform Mechanical Code. It defies reason that your office would consider adopting such a new code, the International Mechanical Code, published by a recently formed publishing group when the Uniform Mechanical Code with a 30 plus year track record is already in place. Who knows if the International Mechanical Code or its publisher, the ICC, will even be in existence a few code cycles from now ?

As a currently licensed mechanical administrator I have invested a great deal of my time and money over the years to become proficient in the use of the Uniform Plumbing Code, Uniform Mechanical Code, Uniform Solar Energy, Uniform Swimming Pool, Spa and Hot Tub Codes. These codes form a family of codes that cover all of the mechanical systems in a building. I believe the adoption of the International Mechanical Code would only weaken the otherwise strong cohesiveness that these codes have. I have studied the International Mechanical Code and in my opinion it adds nothing to this family. (1)

As a public official charged with protecting public safety, you should respect the judgement of the people, that by statute, are responsible for proper mechanical installations (Mechanical Administrators) and adopt the 2000 Uniform Mechanical Code.

I find the deceitful and "stacked-deck" approach to your code review and adoption process appalling and shameful. Your premature press release to ICBO Code Central speaks volumes to the "fairness" with which this review and recommendation was made. The review committees make-up of ICBO members, and the exclusion of the mechanical administrator and contractor "stakeholders", call into question any claim to impartiality (2)

Sincerely,

Richard L. Rutland
Alaska Administrators License # 250

1068 Badger Rd.
North Pole, AK 99705

Cc: Office of the Governor
Tony Knowles, Governor
State Capitol , Third Floor
Post Office Box 110001
Juneau, Alaska 99811-0001

Houston/Nana, JV
P.O. Box 60349
Fairbanks, AK 99706
Phone (907) 450-5368 • FAX (907) 450-5312

May 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Dear Mr. Fosberg,

I have recently taken the State of Alaska's Mechanical Administrators test and now have my license assigned to Houston/Nana. It has been brought to my attention that the Alaska State Fire Marshall is proposing to repeal the 1997 Uniform Mechanical Code and adopt the International Mechanical Code. I strongly oppose this adoption for the following reasons.

1. The UPC and the UMC are dovetailed together to provide the highest level of Safety and Protection to the public. The State of Alaska has already adopted the UPC. By dividing this family of codes, you are severely limiting the level of protection provided by the UMC. (1)
2. Has anyone talked to the people in the industry (plumbers, pipefitters and mechanical administrators) that are licensed by the State of Alaska as to what they think? I personally am opposed. To become licensed in the State, whether it be a certificate of fitness or mechanical administrator's, the tests are reflective of the Uniform Plumbing Code and the Uniform Mechanical Code. As far as I know there is no one in the State certified to the International Mechanical Code. (6)
3. There are several areas that the IMC is very weak in. I am referring to process piping for one. There is no pertinent chapter in the IMC. However Chapter 14 of the UMC covers this subject. Another example would be the LPG installations. The UMC prohibits such installations in pits and basements per Appendix B, Chapter 13, Section 1313.5. The IMC does not contain this restriction. (9)+(11)
4. The IMC relies heavily upon other codes and standards by reference. This will only lead to mistakes and unsafe conditions in the field. (3)

In short, I urge you to review and visit with people in the industry, that this code change would affect. The professionals that deal with the UPC and UMC daily are very satisfied with the coverage and quality of the Uniform Mechanical Code.

Sincerely,

Mike Hale
Mechanical Administrator
Houston/Nana

Cc: Mechanical Contractors Association

American
Mechanical Inc.
P.O. Box 72991 • Fairbanks, Alaska 99707 • (907) 479-5754

Date: June 1, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire protection
5700 East Tudor Road
Anchorage Alaska 99507-1225

Attention: Ross Fosberg

From: Robert Sandstrom

Reference: Title 13AAC 50.023 Mechanical Code

Subject: Proposed Adoption of The IMC Mechanical Code

Dear, Mr. Fosberg

American Mechanical does not support the replacement of the Uniform to the International Mechanical Code (IMC). The Uniform Mechanical Code (UMC) has served the state satisfactorily for many years. No compelling reason has been put forth to justify any such change. Listed below are a few of the concerns we have regarding this proposed code adoption.

1) The IMC is not as comprehensive as the UMC. There are many health and safety concerns that have been addressed in the UMC that are not addressed in the IMC.
2) Alaska statutes require mechanical contractors to have an Administrators License that is based upon the UMC.
3) Journeyman are trained and tested under the rules of the UMC.
4) The IMC is a relatively new code with very little performance record.
5) The IMC contains a disclaimer not accepting any liability resulting from compliance or noncompliance. UMC does not have such a disclaimer.
6) The fire marshal's proposed regulations already incorporate the 2000 Uniform Plumbing Code, and the 2000 Uniform Solar Energy Code. UMC is part of this same family of codes, which are closely coordinated with each other.

(4) (6) (7) (5)

Sincerely,

Robert Sandstrom
Project Administrator
Mechanical Division

4868 Old Airport Road • FAX (907) 479-5771

June 1, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Re: Proposed Regulation change in Title 13AAC 50.023 Mechanical Code

Dear Mr. Fosberg,

I am writing this letter in regards to the proposed regulation change to adopt the International Mechanical Code by the Alaska State Fire Marshal.

I have been licensed in the State of Alaska as a Journeyman Plumber for twenty-one years, and a mechanical administrator since the programs inception. I am also the Apprentice Coordinator and Instructor for the Plumbers and Pipefitters Local Union 262 in Juneau.

I feel the proposed change from the Uniform Mechanical Code (UMC) to the International Mechanical Code (IMC) is a poor idea. Mechanical codes in general set the standards that make our buildings safe and healthy to live and work in. The International Mechanical Code falls short in several areas that affect the publics safety. As an example the UMC addresses fuel gas piping, the installation and testing of gas fired equipment, fuel oil piping, and the installation and testing of fuel oil fired equipment, the IMC does not. This is one example, there are many other areas that the IMC fails to comprehensively address.

(4)

Please review and adopt the 2000 edition of the Uniform Mechanical Code and protect the public's safety.

Sincerely,

Bradley S. Austin
Alaska Mechanical Administrator

cc: Governor Knowles

P.O. Box 211431
Auke Bay, AK 99821

KNIK PLUMBING & HEATING

4915 W. 84th Avenue - Anchorage, Alaska 99502

Phone (907) 248-7305 Fax (907) 243-0498

June 6, 2001

Office of the Governor
State Capitol Third Floor
P. O. Box 110001
Juneau, Alaska 99811-0001

RE: Proposed regulation changes in Title 13AAC 50.023 Mechanical Code

Dear Governor Knowles,

I am writing to you to voice my concern over the Alaska State Fire Marshals decision to adopt the International Mechanical Code instead of the Uniform Mechanical Code.

The UMC is very unique book and along with its counterparts, the UMC study guide and UMC Handbook it is an absolute necessity for the apprentices in the field today. (6)

There is extensive learning that takes places between the time an apprentice starts in the trade and carries on until he or she becomes a journeyman.

The UMC Books provide the knowledge these apprentices need. UMC has been around a long time and many apprentices have gone through their apprenticeship taken their test and have become Licensed State of Alaska journeyman greatly in part by reading these books.

The IMC Books do not offer the same good, clear and concise information as the UMC does. (3)

The books UMC are used in the field everyday. They are not only used by apprentices, but journeyman also refer to them daily. They are as important as any tool to that professional.

Replacing the UMC with the IMC would be a backwards move. I have read many code comparisons and the IMC is an inferior code.

I have yet to hear one good reason why we should adopt the IMC.

Sincerely,

Frank Kapelari

Frank Kapelari
Owner,

Mr. Jerry L. Nicholson
225 East Fireweed Lane
Anchorage, Alaska 99503
907 - 277 - 1830

June 6, 2001

Office of the Governor
Tony Knowes, Governor
Third Floor, State Capitol
PO Box 11001
Juneau, Alaska 99811-0001

Subject: I oppose adoption of 2000 International Mechanical Code

Reference: Alaska State Fire Marshal proposal to repeal 1997 Uniform Mechanical Code

Dear Honorable Governor,

I have been in Alaska for 57 years. Over 38 of these years, I have been in involved in the Alaska plumbing and heating trade. I strongly oppose the adoption of the International Mechanical Code (IMC) into Title 13AAC 50.023 Mechanical code.

I am confident that our current 1997 Uniform Mechanical Code (UMC) serves the life and safety of the people of Alaska. I am familiar with the IMC and I do not have the same respect for it as I do the UMC. The IMC is very vague in interpretation whereas the UMC is more explicit. This is great for new apprentices as well as for us old timers.

I have spent quite a few hundred dollars in continuing education referencing UMC. Why should I spent more in learning IMC, when the bottom line is, I'm going to look into UMC for the same and a better interpretation. The UMC is a better code, recognized all along the west coast.

Sincerely

Gerald (Jerry) Nicholson, M.A.
Alaska Mechanical Administrator #302

cc: (1).. Mechanical Contractors of Alaska - Fairbanks

(2).. Ross Fosberg, Code Adoption Coordinator
Division of Fire Prevention

Scott Mechanical Construction, Inc.
P.O. BOX 670701 • CHUGIAK, AK 99567 • TELEPHONE (907) 688-4820 FAX (907) 688-9395

May 20, 2001

Ross Fosberg, Code Adoption Coordinator
Dept. of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Mr. Fosberg,

This letter is in reference to the proposed regulation changes in the mechanical code. I have been a mechanical contractor in Alaska for the past 20+ years; I have been a mechanical administrator since it has been a requirement. I'm not in favor of adopting the IMC. Adopting a new code system will cost the public and the contractors money and time to retrain with no obvious benefits to the public or the contractors. We have been using the UPC and UMC for longer than I have been in the trade and it has worked well for us. I see no reason to change to a new code that has no benefits to either contractors or the public.

Sincerely,

James N. Scott

PARAGON MECHANICAL

2955 SWEET DREAM LANE
WASILLA ALASKA 99654

http://paragonmechanical.homestead.com PHONE & FAX 376-7210

May 17, 2001

TO: ROSS FOSBERG CODE ADOPTION COORDINATOR
DEPT OF PUBLIC SAFETY
DIVISION OF FIRE PREVENTION
5700 EAST TUDOR RD
ANCH, AK,99507-1225

TODAY I RECEIVED NEWS THAT THE FIRE MARSHAL INTENDS TO REPEAL **THE 1997 UNIFORM MECHANICAL CODE.** AND **ADOPT THE 2000 INTERNATIONAL MECHANICAL CODE** .THE UNIFORM MECHANICAL CODE AND THE UNIFORM PLUMBING CODE IS CURRENTLY WHAT ALL MECHANICAL CONTRACTORS HERE IN ALASKA ARE USING TO GUIDE US IN THIS TRADE. FROM WHAT I UNDERSTAND THE U.M.C. IS A FAR GREATER RESOURCE THAN WHAT IS BEING PROPOSED. AND IT IS NOT IN CONFLICT WITH THE U.P.C. PLEASE TAKE THE TIME TO ADDRESS MY CONCERNS.

(3)

THANK YOU

CRAIG.A.PEARCY

RICK WARINGUEZ

RICK SOS Plumbing and Heating INC

2301 Chandalar · Anchorage · AK · 99504 - Tel: 337-2187

RECEIVED
MAR 2 3 2001
Director's Office
Div. of Fire Prevention

y 20 2001

o Ross Fosberg Code Adoption Coordinator

I am very surprise when I heard
z may go adopt the 2000 IMC and 2000 UMC
de.
I do[illegible] law [illegible] that
d the Uniform MECHANICAL Code has
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ve the decision for people who works
- field and not white collar.
why not vote by Mechanical Contractor?
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ey take money away leave the home

PATRICK MECHANICAL INC.
(907) 452-3334 Fax (907) 452-3369
E-Mail: patrick@ptialaska.net
Mailing Address:
P.O. Box 80510
Fairbanks, Alaska 99708
Physical Address:
3307 International Street
Fairbanks, Alaska 99701

Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

June 6, 2001

ONE LETTER
LIST BOTH NAMES
SALUTATION: GENTLEMEN

Subject: Adoption of the 2000 IMC
Attn: Ross Fosberg, Code Adoption C

Dear Sir,

I am a licensed Mechanical Administrator with the State of Alaska and am writing this letter to state my **strong objection to the adoption of the 2000 International Mechanical** Code (IMC) and my support for adoption of the Uniform Mechanical Code (UMC).

One of the first problems that we, as mechanical administrator's, face is that our license renewal is based upon continuing education. To date, the regulations that govern us still mandate education for the UMC. Additionally, there are no registered classes on the IMC that are approved for the required continuing education credits. (6)

It is my belief that the UMC is a better code. The language in the UMC leaves fewer issues open to interpretation and is more descriptive in the requirements of the installation. Also, it incorporates the requirements right into the code. The IMC makes reference to other manuals and codes. (3)

Again, I want voice my strong opposition to the adoption of the IMC. I sincerely hope your division carefully considers all of the implications in adopting the IMC.

Sincerely,

Michael B. Patrick
President
Mechanical Administrator License # 113

cc: Office of the Governor

UNIVERSAL MECHANICAL, INC.

509 Monroe Street
Fairbanks, Alaska 99701

Tel: (907) 452-5269
Fax: (907) 456-5532

email: mikesexton@gci.net

May 21, 2001

Ross Fosberg, Code Adoption Coordinator
Dept. of Public Safety, Div. of Fire Protection
5700 E. Tudor Rd.
Anchorage, Alaska 99507

Dear Mr. Fosberg,

Re: Fire Marshall's Code Adoption

Please reconsider your choice of codes and select the Uniform Mechanical Code instead of the International Mechanical Code.

There is nothing progressive with the IMC and it more of a step backwards. The Code is more cumbersome to use due to the fact that you must refer to other codes and standards. There are other reasons to numerous to state here.

(3)

The UMC has been developed over time. It is self-contained and easy to use. It is used all over the country. It is used by all facets of the industry: Manufacturing, Engineers, Apprenticeship Training, Licensing Authorities, Continuing Education, etc.

Sincerely,

Michael Sexton

Michael Sexton, President
Mechanical Administrator's No 275

cc: Office of the Governor

1103 Aliak
Kenai, Alaska 99611
May 21, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg:

I wish to voice my concern about changing the Uniform Plumbing Code and Uniform Mechanical Code to the International Mechanical Code. Besides costing time and money to make the change to a code that would not be as practical or efficient, it sounds like the United Nations would be getting into the act making changes and managing our Uniform Mechanical Code and Uniform Plumbing Code.

(5)

Melding the two codes together results in less protection for the public. The International Mechanical Code is more cumbersome to the user and more prone to mistakes. The IMC has no standards in it and only mentions them by reference. Please do not adopt the IMC in Alaska.

(3)

Sincerely,

Harvey E. Buzzell

Harvey E. Buzzell
Mechanical Administrator License # 102

Cc: Governor Tony Knowles
Eugene R. Rutland, Executive Director of Mechanical Contractors

Mr. Rooter
"QUICK AS A WINK"
EXPERT PLUMBING & HEATING
ACE PLUMBING & HEATING, INC. d/b/a MR. ROOTER
EIN: 91-1797266
(907) 456-DRIP (3747) P.O. BOX 75095 • FAIRBANKS, AK 99707 FAX. (907) 457-5094

May 22, 2001

Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 E. Tudor Road
Anchorage, AK 99507-1225

Re: Mechanical Code

Dear Mr. Fosberg:

This letter is for the purpose of expressing my opposition to the adoption of the International Mechanical Code. I strongly support the adoption of the Uniform Mechanical Code.

As a Licensed Mechanical Administrator, the training and licensing for myself and my employees have all been based on the Uniform Plumbing Code and the Uniform Mechanical Code. The Uniform codes are coordinated for all mechanical systems with a building and assure public safety. Most experienced mechanics are familiar with the Uniform codes and readily able to recognize and comply with their requirements.

(6)
(1)

It is in no one's best interest to impose a new mechanical code the would require additional training of mechanics without providing any increased protection for the public.

Sincerely,

Jon McCoy
Licensed Mechanical Administrator #669
City of Fairbanks Master Plumber

cc: Eugene R. Rutland, Mechanical Contractors of Alaska

JLM/pm

Matthew Whitaker
PO Box 230205
Anchorage, AK. 99523-0205

Ross Fosberg
Code Adoption Coordinator
Dept of Public Safety, Div of Fire Prevention
5700 Tudor Rd.
Anchorage, Alaska 99507-1225

Dear Mr. Fosberg,

I am opposed to changing to the International Building Code. I am especially opposed to changing to the International Mechanical and Plumbing Codes.

We have been working under the Uniform codes in Alaska for years, and there is no valid reason to change to the less restrictive codes. I believe we should keep the high standards that we now have.

Sincerely,

Matthew Whitaker
AK. Mechanical Administrator Lic # 730

Matthew J. Whitaker

Kennon C. Jacoby
Alaska Mechanical Administrator
License No. 576

Kennon C. Jacoby
2440 E. Tudor Road
P.M.B. 430
Anchorage, Alaska 99507

May 27, 2001

Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 Tudor Road
Anchorage, AK 99507-1225

SUBJECT: 2000 International Mechanical Code

Dear Mr. Fosberg:

I am strongly opposed to the adoption of the 2000 I.M.C..

I strongly support the adoption of the Uniform Mechanical Code. The Uniform Plumbing Code and The Uniform Mechanical Code are coordinated and integrated to provide a family of codes for all mechanical systems within a building and they assure the public of safe mechanical installations. (1)

Thank you for your attention.

Kennon C. Jacoby
907-242-5370

Phone: 907-242-5370 **Fax: 907-563-2276**

May 29, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg,

This letter will serve as my **strong opposition** to the proposed regulation changes in Title 13AAC 50 023 Mechanical Code. The International Mechanical code (UMC) **does not** have the support of those in the industry. The Uniform Mechanical Code (UMC) **has** the support of those in the industry.

The UMC is a true consensus code as is the Uniform Plumbing Code (UPC). The 2000 UPC and UMC are designed to work in harmony with each other. The State of Alaska has adopted the 2000 UPC. Mechanical Administrators are examined and licensed under the Uniform Codes. (1)

At the May 2, 2001 meeting of the City of Fairbanks Plumbers Examining Board, a motion was made, seconded and carried unanimously to forward a recommendation to the Code Review Commission supporting adoption of the 2000 UMC in lieu of the 2000 IMC. Master Plumbers in the City of Fairbanks are examined and licensed under the Uniform Codes. (6)

Safety and health is contingent upon code compliance. Compliance requires knowledge of our codes. The mechanical industry is trained on the Uniform codes. IAPMO update seminars on the 2000 UPC and UMC are concurrent and scheduled in Fairbanks, Juneau and Anchorage.

In conclusion, I urge you to unite with those who possess the necessary experience and expertise in the mechanical industry and rescind your proposal to adopt the 2000 IMC. The UPC is a far superior and preferable code than the IMC on technical, practical, economic, public health, and safety matters. Adoption of the 2000 UMC is in the best interest of the residents of the State of Alaska.

Thank you for your consideration.

Sincerely,

John Knabe

John Knabe
Chairman, City of Fairbanks Plumber Examiner's Board
Director of Training, Plumbers & Pipefitters UA Local #375

cc: Office of the Governor
Tony Knowles, Governor

3029 [illegible] Riverview Dr
Fairbanks, AK 99709

Clark Courtney
Box 71332
FBKS, AK 99707
907-488-3883

MA# 99

Dear Sir,

I am opposed to the adoption of the International Mech. Code and support the adoption of the Uniform Mech Code and Uniform Plumbing Code.

Sincerely
Clark Courtney

June 4, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Ak. 99507-1225

Dear Mr. Fosberg:

I understand that the Alaska State Fire Marshal proposes to adopt the 2000 International Mechanical Code (IMC) on your recommendation. I urge you to change your recommendation. I feel the IMC is not in the best interest of the public. It refers the user to 128 different codes and has some problems with gas appliances, to name a couple of the problems with the IMC.
The Uniform Mechanical Code (UMC) is a tried and proven code. It allows the user to design, install and inspect an entire heating and ventilation system with just one book.

(3)

As a mechanical inspector for the Municipality of Anchorage for 15 years, I urge you to recommend the adoption of the Uniform Mechanical Code.

Respectfully
Dennis (Bob) Smith
9811 Tolsona Cir.
Anchorage, Ak. 99515

Code Letter

List 5 Names + Submit "Comments"

ALKOTA *Plumbing & Heating,*
P.O. Box 222412
Anchorage, AK 99522-2412
(907) 563-5325 • Fax (907) 562-0141

June 1, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Recently there has been an attempt by persons in public employ to adopt the IMC document in place of the state adopted UMC. For the past 22 years that I have worked in the mechanical trade the UMC has been used exclusively as the adopted code. I was trained using it and I have conducted my business for 17 years using it to provide safe mechanical installations. The UMC has provided the public with a one document set of standards that is safe and effective.

I would like to express my concern that there is no logical reason to adopt a code that is untried and unproven in the State of Alaska and Municipality of Anchorage to appease a small special interest group. This change will result in extreme delays as neither the contractor nor the inspector can expect to implement the new code requirements without a large learning curve. The IMC document is more of a reference book than a working document. We must posses a large number of secondary support documents in order to use the IMC document.

Since we are currently tested and licensed by the UMC and the UPC and they have a proven track record for safety, I ask that we not adopt this new code. The majority of the United States operates using the UMC and the UPC making it relatively easy to go from state of state and be able to be familiar with the basic requirements. Several hundred Mechanical Administrators not to mention several thousand craftsmen will be affected by your decision I for one want to stay with the UMC as written and adopted by the State of Alaska.

12
3
6

Thomas Gervais

Thomas J Gervais

President,
Alkota Plumbing and Heating, Inc.

Contractors License #15762

ALKOTA *Plumbing & Heating, Inc.*
P.O. Box 222412
Anchorage, AK 99522-2412
(907) 563-5325 • Fax (907) 562-0145

June 6, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Recently there has been an attempt by persons in public employ to adopt the IMC document in place of the state adopted UMC. For the past several years that I have worked in the mechanical trade the UMC has been used exclusively as the adopted code. I was trained using it and I have conducted my self for many years using it to provide safe mechanical installations. The UMC has provided the public with a one document set of standards that is safe and effective.

I would like to express my concern that there is no logical reason to adopt a code that is untried and unproven in the State of Alaska and Municipality of Anchorage to appease a small special interest group. This change will result in extreme delays as neither the contractor nor the inspector can expect to implement the new code requirements without a large learning curve. The IMC document is more of a reference book than a working document. We must posses a large number of secondary support documents in order to use the IMC document.

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Kurt Michel

Service Manager,
Alkota Plumbing and Heating, Inc.

ALKOTA *Plumbing & Heating, Inc.*
P.O. Box 222412
Anchorage, AK 99522-2412
(907) 563-5325 • Fax (907) 562-0145

June 6, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

Recently there has been an attempt by persons in public employ to adopt the IMC document in place of the state adopted UMC. For the past 18 years that I have worked in the mechanical trade the UMC has been used exclusively as the adopted code. I was trained using it and conducted my self for many years using it to provide safe mechanical installations. The UMC has provided the public with a one document set of standards that is safe and effective.

I would like to express my concern that there is no logical reason to adopt a code that is untried and unproven in the State of Alaska and Municipality of Anchorage to appease a small special interest group. This change will result in extreme delays as neither the contractor nor the inspector can expect to implement the new code requirements without a large learning curve. The IMC document is more of a reference book than a working document. We must posses a large number of secondary support documents in order to use the IMC document.

Since we are currently tested and licensed by the UMC and the UPC and they have a proven track record for safety, I ask that we not adopt this new code. The majority of the United States operates using the UMC and the UPC making it relatively easy to go from state of state and be able to be familiar with the basic requirements. Several hundred Mechanical Administrators not to mention several thousand craftsmen will be affected by your decision I for one want to stay with the UMC as written and adopted by the State of Alaska.

Curtis Hanson,
Radiant Infloor Specialist,
Alkota Plumbing and Heating, Inc.

ALKOTA *Plumbing & Heating, Inc.*
P.O. Box 222412
Anchorage, AK 99522-2412
(907) 563-5325 • Fax (907) 562-0145

June 6, 2001

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225

I would like to express my concern that there is no logical reason to adopt a code that is untried and unproven in the State of Alaska and Municipality of Anchorage to appease a small special interest group. This change will result in extreme delays as neither the contractor nor the inspector can expect to implement the new code requirements without a large learning curve. The IMC document is more of a reference book than a working document. We must posses a large number of secondary support documents in order to use the IMC document.
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Greg Dawson

Greg Dawson

HVAC Manager,
Alkota Plumbing and Heating, Inc.

ALKOTA *Plumbing & Heating, Inc.*
P.O. Box 222412
Anchorage, AK 99522-2412
(907) 563-5325 • Fax (907) 562-0145

6, 2001

Fosberg, Code Adoption Coordinator
ırtment of Public Safety
ision of Fire Prevention
) East Tudor Road
ıorage, Alaska 99507-1225

ently there has been an attempt by persons in public employ to adopt the IMC document in place of state adopted UMC. For the past 7 years that I have worked in the mechanical trade the UMC has ı used exclusively as the adopted code. I was trained using it and conducted my self for many years g it to provide safe mechanical installations. The UMC has provided the public with a one ument set of standards that is safe and effective.

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rian Larson

oughin crew leader,
lkota Plumbing and Heating, Inc.

K & L Plumbing & Heating, Inc

P.O. Box 774769 • Eagle River, Alaska 99577

907-696-2441 • Fax: 907-694-2441

7 June 2001

Gary Powell
Alaska State Fire Marshall
5700 E. Tudor Road
Anchorage, Alaska 99507

Re: Opposition to adoption of the International Mechanical Code

Dear Mr. Powell:

I would like to take this opportunity to express some concerns that I have with the proposed adoption of the International Mechanical Code for the State of Alaska. I have been a licensed Journeyman since 1968 in Alaska and Washington, and a licensed Mechanical Administrator in Alaska since it was implemented. The Uniform Mechanical Code is a complete document. All the information that is required to install a mechanical system is included in this one document. The International Mechanical Code requires the installer to reference several other documents to achieve the same goal. This will cause confusion as well as additional costs. Most journeymen have been trained with the UMC. The Uniform Mechanical Code and the Uniform Plumbing Code are now created in cooperation with the National Fire Protection Association. (3)

There has not been any Mechanical Administrators on any of the committees regarding this change. The UMC has been safety tested, it has even held up in the courts. Should this change pass we are told by Ross Fosberg, Code Adoption Coordinator to just continue as if we were under the UMC. Then where is the logical reasoning behind the adoption of the IMC. (8)

There is no reason at all to justify adopting the IMC, when our current UMC is working. I do not believe that the State Fire Marshal has the publics best interest in mind. The Uniform Mechanical Code in my opion is far superior to the International Mechanical Code.

In regards to these issues, I would be happy to talk with you at any time. Please feel free to contact me at 696-2441.

Respectfully,

Leslie A. Burnett

Leslie A. Burnett
President

K & L Plumbing & Heating, Inc

P.O. Box 774769 • Eagle River, Alaska 99577

907-696-2441 • Fax: 907-694-2441

21 May 2001

Office of the Governor
Tony Knowls, Governor
Third Floor, State Capitol
P.O. Box 11001
Juneau, Alaska 99811

Dear Governor Knowles,

It has been brought to my attention, the Alaska State Fire Marshal proposes to adopt regulation changes in Title 13AAC50.023 Mechanical Code. He proposes to repeal the 1997 Uniform Mechanical Code and adopt the 2000 International Mechanical Code.

At this time the Mechanical Contractors statewide are using the 1997 Uniform Mechancial Code. All are prepared for a smooth transition to the 2000 Uniform Mechanical Code. The Uniform Mechanical Code is very precise with what is required for code. There is no question to the meaning of these codes.

However, should the International Mechanical Code be adopted there will be great confusion. The International Mechanical Code relies heavily on incorporating other codes and standards by reference. This makes the International Mechanical Code more cumbersome for the user and therefore more prone to mistakes and misunderstandings. The very sort of problem codes are designed to avoid. (3)

Inform the State Fire Marshal that the mechanical industry has confidence based on experience in the Uniform Mechanical Code and is not interested in spending time and money to become skilled in a new mechanical code that is not going to provide the public with any increased protection. By putting the two codes together the way the State Fire Marshal proposes, results in less protection to the public. (5)

Sincerely,

Leslie A. Burnett

Leslie A. Burnett
President

cc: Senator Randy Phillips
Alan Austerman

DENALI COMMISSION
510 'L' Street, Suite 410
Anchorage, Alaska 99501

(907) 271-1414
Fax (907) 271-1415
Toll Free (888) 480-4321
www.denali.gov

January 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Sent via fax to: 338-4375 (2 pages total)

Re: 2000 International Fire Code (IFC) - Comments on Proposed Amendments

Mr. Fosberg:

I have just learned of the 2000 International Fire Code and the proposed State of Alaska amendments. I have the following comments:

1. The proposed code was not available locally for review until last week. It seems that the public comment period may not be adequate in light of the broad change of an entirely new code as well as a lack of reasonable access to the document. Several of the professionals I have contacted were not even aware of the review period. Consideration should be given to extending the comment period.

2. The IFC makes numerous references and in several instances completely defers to NFPA standards, particularly NFPA 30. It appears that the references are to the 1996 edition of NFPA. Some of the referenced items do not exist or are in different locations in the 2000 edition of NFPA. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC.

3. The Division of Fire Prevention and the Alaska Division of Energy entered into Memorandum of Agreement (MOA) 2195027 on January 28, 1999. This agreement was developed to provide practical solutions for unique fuel storage and handling applications in rural Alaska while satisfying the intent of the Uniform Fire Code. The MOA has served to provide guidance to designers and plan reviewers for rural tank farm projects for the past two years. Essentially all of the issues addressed in this MOA will need to be re-addressed with references to the appropriate sections of the International Fire Code. I recommend that a meeting be scheduled between Division of Fire Prevention staff and the Alaska Energy Authority (formerly Division of Energy) to draft a revised MOA prior to final adoption of the new code. The MOA could possibly be expanded to also address some of the new issues that are listed below.

4. IFC Section 2206.2.3 requires a 25' minimum separation between a protected tank and a dispenser, except at fleet fueling stations. The UFC and NFPA have historically allowed the dispenser to be mounted directly on a protected tank for all installations. This has proven to be a very appropriate system for smaller low-volume retail sales facilities in rural locations. I recommend that this section of the IFC be modified to allow installation of tank mounted dispensers when the entire system (pump and dispenser) is a listed assembly. UL Standard 2244 defines factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package.

5. IFC Section 2206.7.7.1 requires installation of a leak detection device on piping between a remote pump and a dispenser if any portion of the piping is buried. These devices only work if the entire piping run is fully buried. If any portion of the piping is above grade, the pressure variation caused by thermal expansion will cause these devices to malfunction. It is common on above-ground dispensing tank installations to have a portion of the piping near the tank above grade and the run out to the dispenser buried. Automatic leak detection systems will not work on these installations. I would recommend that this section of the IFC be modified to waive the requirement for leak detection if the underground piping is extra-heavy wall steel with all welded joints, dielectric coating, and cathodic protection. This would provide an equivalent level of protection and a more reliable system. An additional requirement for periodic pressure testing similar to EPA and Coast Guard requirements could also be added.

6. IFC Section 3404.2.7.5.8 requires an approved means of overfill prevention for all storage tanks. It references IFC Section 3404.2.9.6.6 which specifies additional requirements for protected (fire-rated) above-ground tanks. These requirements, which include alarms and an automatic flow shut off device, seem excessive for many bulk storage tank installations, particularly above-grade tanks that are completely within liquid tight secondary containment. A similar issue in UFC 7904.4.5 was addressed in the previously referenced MOA under item 7. The resolution was to require visual monitor (gauge or gauge hatch) and an audible alarm (whistle vent or electric). I recommend that this section of the IFC be modified to allow above-ground bulk storage tanks that are installed within a liquid tight secondary containment structure to be provided with visual and audible monitoring/alarm systems as described in the MOA.

I appreciate your consideration of these items.

Sincerely,

Charles Y. Walls
Project Manager - Energy

ALASKA INDUSTRIAL DEVELOPMENT
AND EXPORT AUTHORITY

ALASKA
ENERGY AUTHORITY

813 WEST NORTHERN LIGHTS BLVD. ANCHORAGE, ALASKA 99503 907 / 269-3000 FAX 907 / 269-3044

January 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Sent via fax to: 338-4375 (2 pages total)

Re: 2000 International Fire Code (IFC) - Comments on Proposed Amendments

Dear Mr. Fosberg:

I have reviewed the 2000 International Fire Code and the proposed State of Alaska amendments and would like to offer the following comments:

1. I was only able to perform a cursory review since the code was not available locally and I was not able to obtain a copy until last week. It seems that the public comment period may not be adequate in light of the broad change of an entirely new code as well as a lack of reasonable access to the document. Several of the professionals I have contacted were not even aware of the review period. Consideration should be given to extending the comment period.
2. The IFC makes numerous references and in several instances completely defers to NFPA standards, particularly NFPA 30. It appears that the references are to the 1996 edition of NFPA. Some of the referenced items do not exist or are in different locations in the 2000 edition of NFPA. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC.
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I appreciate your attention to these items. If you have any questions please call me at 269-4541.

Sincerely,

David Lockard

David Lockard
Project Engineer

BCG ENGINEERING
Mechanical Engineering - Project Management

January 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Sent via fax to: 338-4375 (2 pages total)

Re: 2000 International Fire Code (IFC) - Comments on Proposed Amendments

Dear Mr. Fosberg:

I have reviewed the 2000 International Fire Code and the proposed State of Alaska amendments and would like to offer the following comments:

1. I was only able to perform a cursory review since the code was not available locally and I was not able to obtain a copy until last week. It seems that the public comment period may not be adequate in light of the broad change of an entirely new code as well as a lack of reasonable access to the document. Several of the professionals I have contacted were not even aware of the review period. Consideration should be given to extending the comment period.
2. The IFC makes numerous references and in several instances completely defers to NFPA standards, particularly NFPA 30. It appears that the references are to the 1996 edition of NFPA. Some of the referenced items do not exist or are in different locations in the 2000 edition of NFPA. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC.
3. The Division of Fire Prevention and the Alaska Division of Energy entered into Memorandum of Agreement (MOA) 2195027 on January 28, 1999. This agreement was developed to provide practical solutions for unique fuel storage and handling applications in rural Alaska while satisfying the intent of the Uniform Fire Code. The MOA has served to provide guidance to designers and plan reviewers for rural tank farm projects for the past two years. Essentially all of the issues addressed in this MOA will need to be re-addressed with references to the appropriate sections of the International Fire Code. I recommend that a meeting be scheduled between Division of Fire Prevention staff and the Alaska Energy Authority (formerly Division of Energy) to draft a revised MOA prior to final adoption of the new code. The MOA could possibly be expanded to also address some of the new issues that are listed below.

3300 Robin Street
Anchorage, AK 99504
Phone (907)338-3035 Fax 338-3034
E-mail: bgray@ak.net

4. IFC Section 2206.2.3 requires a 25' minimum separation between a protected tank and a dispenser, except at fleet fueling stations. The UFC and NFPA have historically allowed the dispenser to be mounted directly on a protected tank for all installations. This has proven to be a very appropriate system for smaller low-volume retail sales facilities in rural locations. I recommend that this section of the IFC be modified to allow installation of tank mounted dispensers when the entire system (pump and dispenser) is a listed assembly. UL Standard 2244 defines factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package.
5. IFC Section 2206.7.7.1 requires installation of a leak detection device on piping between a remote pump and a dispenser if any portion of the piping is buried. These devices only work if the entire piping run is fully buried. If any portion of the piping is above grade, the pressure variation caused by thermal expansion will cause these devices to malfunction. It is common on above-ground dispensing tank installations to have a portion of the piping near the tank above grade and the run out to the dispenser buried. Automatic leak detection systems will not work on these installations. I would recommend that this section of the IFC be modified to waive the requirement for leak detection if the underground piping is extra-heavy wall steel with all welded joints, dielectric coating, and cathodic protection. This would provide an equivalent level of protection and a more reliable system. An additional requirement for periodic pressure testing similar to EPA and Coast Guard requirements could also be added.
6. IFC Section 3404.2.7.5.8 requires an approved means of overfill prevention for all storage tanks. It references IFC Section 3404.2.9.6.6 which specifies additional requirements for protected (fire-rated) above-ground tanks. These requirements, which include alarms and an automatic flow shut off device, seem excessive for many bulk storage tank installations, particularly above-grade tanks that are completely within liquid tight secondary containment. A similar issue in UFC 7904.4.5 was addressed in the previously referenced MOA under item 7. The resolution was to require visual monitor (gauge or gauge hatch) and an audible alarm (whistle vent or electric). I recommend that this section of the IFC be modified to allow above-ground bulk storage tanks that are installed within a liquid tight secondary containment structure to be provided with visual and audible monitoring/alarm systems as described in the MOA.

I appreciate your attention to these items. If you have any questions please call me at 338-3035.

Sincerely,
BCG ENGINEERING

Brian C. Gray, P.E.

URS

January 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Comments
Proposed Code Change – UFC to IFC

Dear Mr. Fosberg:

I have only recently become aware of the proposed change from the UFC to the IFC. Other professionals have reportedly been unable to locate the IFC in Anchorage. I have ordered a copy from ICBO; however, I do no expect that it will arrive until next week at the earliest. Since several other engineers I have spoken with regarding this issue only became aware of it recently, I would suggest that the comment period be extended to allow those of us who have not yet had time to review the IFC to do so and provide comment.

The Division of Fire Prevention and the Alaska Division of Energy (now Alaska Energy Authority – Rural Energy Group(REG)) currently have a Memorandum of Agreement in place to allow for practical design and construction of bulk fuel tank farms in rural Alaskan communities. Prior to adopting the new code, the Division of Fire Prevention should coordinate with REG to ensure that the intent of the MOA is preserved.

I thank you for your consideration of my comments. If you have any questions or if you need any additional information, please call at your convenience.

Sincerely,

URS

Deborah S. Allen

Deborah S. Allen, PE
Engineering Services Manager - Alaska

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January 31, 2001

ross_fosberg@dps.state.ak.us
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Mr. Ross Fosberg,
Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
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Subject: **2000 International Fire Code - Comments to Proposed Amendments**

Dear Mr. Fosberg:

I first learned of the proposed changes to the Fire Code in November while attending a 2000 IBC seminar. At the seminar, we were informed that a public notice was expected to be issued about December 1st, and there would be a 2-month comment period. I checked the State Fire Marshal's website several times in early December prior to emailing your office on December 12th. I received an email in reply from Carol Olson that the notice would occur in "Hopefully next two weeks". I again checked the website during the holidays and found the comment period had started and would end January 31, 2001. I checked the availability of the 2000 IFC at all major book stores in Anchorage, as well as at all public libraries, Municipality of Anchorage, and the State Department of Public Safety and was unable to get a copy. In order to get the 2000 IFC code, it was necessary to order it from ICBO and have it sent to me by Federal Express. As such, I did not obtain a copy of the code until about two weeks ago. Due to the potential extensive changes associated with adopting an entirely new code, the difficulty in receiving the code for review, and the short time frame to review the impact of the new code, I suggest the comment period to be extended to allow sufficient time to adequately address potential code issues.

Following are comments to the above referenced 2000 IFC and the proposed State of Alaska amendments that have been identified so far.

1. The IFC makes numerous references to NFPA standards, particularly NFPA 30. I reviewed both the 1996 and 2000 versions of the NFPA 30 and found that it appears the IFC is referencing the 1996 NFPA 30. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC.
2. The Division of Fire Prevention and the Alaska Division of Energy entered into Memorandum of Agreement (MOA) 2195027 on January 28, 1999. This agreement was developed to provide practical solutions for unique fuel storage and handling applications in rural Alaska while satisfying the intent of the Uniform Fire Code. The

MOA has served to provide guidance to designers and plan reviewers for rural tank farm projects for the p[redacted] two years. Essentially all of the i[redacted]es addressed in this MOA should be re-addressed with references to the appropriate sections of the International Fire Code (in some cases, the IFC has completely omitted similar sections of the UFC - such as dispensing stations not being connected to bulk plants). I recommend that a meeting be scheduled between Division of Fire Prevention staff and the Alaska Energy Authority (formerly Division of Energy) to draft a revised MOA prior to final adoption of the new code. The MOA could possibly be expanded to also address some of the new issues that are listed below.

3. IFC Section 2206.2.3 requires a 25' minimum separation between a protected tank and a dispenser, except at fleet fueling stations. The UFC and NFPA have historically allowed the dispenser to be mounted directly on a protected tank for all installations. This has proven to be a very appropriate system for smaller low-volume retail sales facilities in rural locations. I recommend that this section of the IFC be modified to allow installation of tank mounted dispensers when the entire system (pump and dispenser) is a listed assembly. UL Standard 2244 defines factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package. Additionally, the availability of a UL labeled packaged dispensing/tank system supplied directly from a tank manufacturer provides assurance that a retail dispensing facility provides the highest level of safety to the public. UL 2244 systems are factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package. UL 2244 Listed systems also provide detailed installation and maintenance instructions on all components of the system.

4. IFC Section 2206.7.7.1 requires installation of a leak detection device on piping between a remote pump and a dispenser if any portion of the piping is buried. These devices only work if the entire piping run is fully buried. If any portion of the piping is above grade, the pressure variation caused by thermal expansion will cause these devices to malfunction. Typically, the piping on above-ground dispensing tank installations is above grade from the top of the tank (submersible pump) until the piping exits the dike, and is run below grade to the dispenser. Automatic leak detection systems will not work on these installations. I would recommend that this section of the IFC be modified to waive the requirement for leak detection if the underground piping is a minimum of 2" extra-heavy wall steel with all welded joints, dielectric coating, and cathodic protection. This would provide an equivalent level of protection and a more reliable system. An additional requirement for periodic pressure testing similar to EPA and Coast Guard requirements could also be added.

5. IFC Section 3404.2.7.5.8 requires an approved means of overfill prevention for all storage tanks. It references IFC Section 3404.2.9.6.6 which specifies additional requirements for protected (fire-rated) above-ground tanks that comply with secondary containment requirements via a double wall tank. These requirements, which include alarms and an automatic flow shut off device, are not applicable to above grade bulk fuel storage facilities that are completely within a liquid tight secondary containment dike. A similar issue in UFC 7904.4.5 was addressed in the previously referenced MOA under item 7. The resolution was to require visual monitor (gauge or gauge hatch) and an audible alarm (whistle vent or electric). I recommend that this section of the IFC be modified to allow above-ground bulk storage tanks that are installed within a liquid tight secondary containment structure to be provided with visual and audible monitoring/alarm systems as described in the MOA.

6. IFC Section 3404.2.10 addresses Drainage and Diking. 3404.2.10.2 specifically references "Diked areas containing two or more tanks shall be subdivided in accordance with NFPA 30". There is no reference in Section 3404.2.10 to diking standards or requirements of dike construction, or any reference whatsoever to a dike containing a single tank. Section 3406.4.9, Drainage Control for Loading and Unloading Areas of Bulk Plants or Terminals, refers back to Section 3404.2.10. Section 3406.5.1.5 Spill Control and Secondary Containment for Bulk Transfer and Process Transfer Operations refers to Section 3403.4, which in turn refers to Section 2704.2. Table 2704.2.2 specifically excludes flammable and combustible liquids and refers back to Chapter 34. There does not appear to be a clear standard or clear reference to the diking requirements in NFPA 30. I recommend that this section of the IFC be modified to clearly address the diking requirements of NFPA Section 2.3.2.3

7. IFC Section 3403.5.1 requires "white letters on red background". The industry standard has been "red letters on white background". A "white background" sign is more visible in low light areas and should be continued to be used. I recommend the this section be modified to specify "red letters on white background".

If you have any questions please call me at (907) 349-0100, or fax your comments to (907) 349-8001.

Sincerely,

Alaska Energy and Engineering, Inc.

Steven J. Stassel, P.E.
President

FAX TRANSMITTAL

LCMF Incorporated
A subsidiary of Ukpeagvik Inupiat Corporation

Date	January 31, 2001	**Pages**	3
From	Wiley Wilhelm	**LCMF WO**	
	LCMF Incorporated	**LCMF Fax**	(907) 273-1831
	139 East 51st Avenue	**LCMF Tel**	(907) 273-1830
	Anchorage, Alaska 99503-7205		
To	Mr. Ross Fosberg, Code Adoption Coordinator-	**Fax**	338-4375
	Department of Public Safety, Division of Fire Prevention	**Tel**	
	5700 East Tudor Road		
	Anchorage, Alaska 99507-1225		
Re	2000 International Fire Code (IFC)		

Comments

Architecture

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Surveying

Project Management

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LCMF Incorporated
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January 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Re: 2000 International Fire Code (IFC) - Comments on Proposed Amendments

Dear Mr. Fosberg:

In association with other professional engineers familiar with fuel storage and distribution projects in Alaska, I have reviewed the 2000 International Fire Code and the proposed State of Alaska amendments and would like to reiterate the following common comments which I agree with and support:

1. The public notification of the public comment period was not well advertised. Given that comments are requested from both the general public and the design professionals which use the codes, I feel that formal notification of the review period should be sent to registered engineers and architects since they will have the most input.

2. The IFC makes numerous references and in several instances completely defers to NFPA standards, particularly NFPA 30. It appears that the references are to the 1996 edition of NFPA. Some of the referenced items do not exist or are in different locations in the 2000 edition of NFPA. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC.

3. The Division of Fire Prevention and the Alaska Division of Energy entered into Memorandum of Agreement (MOA) 2195027 on January 28, 1999. This agreement was developed to provide practical solutions for unique fuel storage and handling applications in rural Alaska while satisfying the intent of the Uniform Fire Code. The MOA has served to provide guidance to designers and plan reviewers for rural tank farm projects for the past two years. Essentially all of the issues addressed in this MOA will need to be re-addressed with references to the appropriate sections of the International Fire Code. I recommend that a meeting be scheduled between Division of Fire Prevention staff and the Alaska Energy Authority (formerly Division of Energy) to draft a revised MOA prior to final adoption of the new code. The MOA could possibly be expanded to also address some of the new issues that are listed below.

Architecture
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4. IFC Section 2206.2.3 requires a 25' minimum separation between a protected tank and a dispenser, except at fleet fueling stations. The UFC and NFPA have historically allowed the dispenser to be mounted directly on a protected tank for all installations. This has proven to be a very appropriate system for smaller low-volume retail sales facilities in rural locations. I recommend that this section of the IFC be modified to allow installation of tank mounted dispensers when the entire system (pump and dispenser) is a listed assembly. UL Standard 2244 defines factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package.

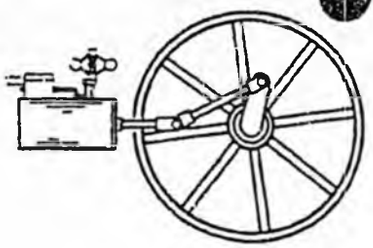
5. IFC Section 2206.7.7.1 requires installation of a leak detection device on piping between a remote pump and a dispenser if any portion of the piping is buried. Due to problems in using these systems in partially buried installations, where thermal pressure changes render them inoperative, I recommend that these system be required for only buried tank/piping systems.

6. IFC Section 3404.2.7.5.8 requires an approved means of overfill prevention for all storage tanks. It references IFC Section 3404.2.9.6.6 which specifies additional requirements for protected (fire-rated) above-ground tanks. These requirements, which include alarms and an automatic flow shut off device, seem excessive for many bulk storage tank installations, particularly above-grade tanks that are completely within liquid tight secondary containment. A similar issue in UFC 7904.4.5 was addressed in the previously referenced MOA under item 7. The resolution was to require visual monitor (gauge or gauge batch) and an audible alarm (whistle vent or electric). I recommend that this section of the IFC be modified to allow above-ground bulk storage tanks that are installed within a liquid tight secondary containment structure to be provided with visual and audible monitoring/alarm systems as described in the MOA.

I appreciate your attention to these items. If you have any questions please call me at (907) 273-1851, or e-mail me at wwilhelm@lcmf.ukpik.com.

Sincerely,
LCMF Incorporated

Wiley W. Wilhelm, P.E.
Engineering Manager



POWER & CONTROL ENGINEERING

P.O. Box 231929 Anchorage, Alaska 99523-1929

Phone: 907-345-7117 Fax: 907-345-9684

This message consists of 4 pages, including this page.

Date: 1-31-01

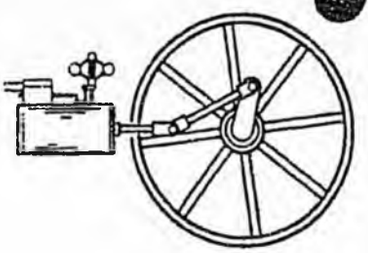
Sent To: ROSS FOSSBERG

Fax No:

Sent by: R. DRYDEN

Hardcopy will be mailed: ____Yes X No

Comments:



POWER & CONTROL ENGINEERING

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January 31, 2001

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5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Sent via fax to: 338-4375 (3 pages total)

Re: 2000 International Fire Code (IFC) - Comments on Proposed Amendments

Dear Mr. Fosberg:

I learned about this change to an entirely new fire code today at 11:00 AM, the last day allowed for public comment. I learned this from two other design professionals actively involved in tank farm design, who only heard about this proposed change a few days ago. As I understand it, copies of the proposed code are not even readily available to review.

The period for public comment should be extended, a source of copies should be established, and every design professional in the state should be notified in some reasonable way. We normally receive notices of change to such items as the Life and Safety Publication and so I am surprised that this same procedure was not followed related to this very important matter.

From verbal discussions with other professionals this afternoon I would like to comment, with the caveat that I have not personnally read the proposed code for the reasons outlined above. Several people have offered comments, copied below. My added comments are in italics.

1. The IFC makes numerous references and in several instances completely defers to NFPA standards, particularly NFPA 30. It appears that the references are to the 1996 edition of NFPA. Some of the referenced items do not exist or are in different locations in the 2000 edition of NFPA. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC. In general this is very bad practice to have one code refer to another, locking in inconsistent ideas. *It would seem that administratively updating acceptance of newer codes should be coupled with updating acceptance of newer NFPA codes to match. NFPA 30 is an excellent code, full of experience, consistent, and practical to design by. I would rather see NFPA 30 as the accepted code with IFC totally deferring to NFPA 30 where applicable.*

2. The Division of Fire Prevention and the Alaska Division of Energy entered into Memorandum of Agreement (MOA) 2195027 on January 28, 1999. This agreement was developed to provide practical solutions for unique fuel storage and handling applications in rural Alaska while satisfying the intent of the Uniform Fire Code. The MOA has served to provide guidance to designers and plan reviewers for rural tank farm projects for the past two years. Essentially all of the issues addressed in this MOA will need to be re-addressed with references to the appropriate sections of the International Fire Code. I recommend that a meeting be scheduled between Division of Fire Prevention staff and the Alaska Energy Authority (formerly Division of Energy) to draft a revised MOA prior to final adoption of the new code. The MOA could possibly be expanded to also address some of the new issues that are listed below. *This memorandum was a landmark in reasonable cooperation between these agencies and the engineers who must apply these codes. It would be a major step backwards to not incorporate these ideas.*

3. .IFC Section 2206.2.3 requires a 25' minimum separation between a protected tank and a dispenser, except at fleet fueling stations. The UFC and NFPA have historically allowed the dispenser to be mounted directly on a protected tank for all installations. This has proven to be a very appropriate system for smaller low-volume retail sales facilities in rural locations. I recommend that this section of the IFC be modified to allow installation of tank mounted dispensers when the entire system (pump and dispenser) is a listed assembly. UL Standard 2244 defines factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package.

4. IFC Section 2206.7.7.1 requires installation of a leak detection device on piping between a remote pump and a dispenser if any portion of the piping is buried. These devices only work if the entire piping run is fully buried. If any portion of the piping is above grade, the pressure variation caused by thermal expansion will cause these devices to malfunction. It is common on above-ground dispensing tank installations to have a portion of the piping near the tank above grade and the run out to the dispenser buried. Automatic leak detection systems will not work on these installations. I would recommend that this section of the IFC be modified to waive the requirement for leak detection if the underground piping is extra-heavy wall steel with all welded joints, dielectric coating, and cathodic protection. This would provide an equivalent level of protection and a more reliable system. An additional requirement for periodic pressure testing similar to EPA and Coast Guard requirements could also be added.

Subject: International Fire Code Adoption
Date: Wed, 31 Jan 2001 17:00:17 -0900
From: "Kevin L. Hansen, P.E." <Kevin@edc-alaska.com>
To: "'ross_fosberg@dps.state.ak.us'" <ross_fosberg@dps.state.ak.us>

Mr. Fosberg,
As a consultant assisting the Division of Energy with rural fuel system upgrades, I would like to add my support to requests for modifications of the IFC to allow less than 25 foot separation between dispensers and protected aboveground tanks. Appendix II-F of the 97 UFC allows dispensers to be mounted directly on or adjacent to tanks. With the restricted space available in some locations, specifically rural communities, this would be an onerous requirement. Getting a code compliant fuel system in rural areas is difficult enough under the current code. I feel that the Fire Marshal's office needs to develop a policy similar to the Memorandum of Agreement between the Division of Fire Prevention and the Alaska Division of Energy developed in 1999.
The following is an excerpt from comments sent to you by Brian Gray concerning the adoption of the IFC.
"IFC Section 2206.2.3 requires a 25' minimum separation between a protected tank and a dispenser, except at fleet fueling stations. The UFC and NFPA have historically allowed the dispenser to be mounted directly on a protected tank for all installations. This has proven to be a very appropriate system for smaller low-volume retail sales facilities in rural locations. I recommend that this section of the IFC be modified to allow installation of tank mounted dispensers when the entire system (pump and dispenser) is a listed assembly. UL Standard 2244 defines factory-assembled systems inclusive of an above ground protected tank in accordance with UL 2085 and all necessary components required for a complete motor vehicle fueling package."
Mr Gray also expressed concern that many professionals were not aware of the impending adoption (this included myself and many of my colleagues). While I understand that there has been a public comment period, it's existence has apparently slipped by a large number of people in the design and professional community, including myself. I feel that there should have been a much more aggressive campaign of notification of the proposed adoption of the International Codes to make sure that affected parties have an opportunity to comment. It may be in the State's best interest to readvertise this action and at least make sure that ALL of the design community is aware of the change in codes.

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Ph. 276-7933
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ALASKA VILLAGE ELECTRIC COOPERATIVE, INC.

January 31, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
Department of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Telephone: 269-5061

Sent via fax to: 338-4375 (2 pages total)

Re: 2000 International Fire Code (IFC) - Comments on Proposed Amendments

Dear Mr. Fosberg:

I have not yet personally reviewed the 2000 International Fire Code and the proposed State of Alaska amendments but have been urged by trusted professionals to offer the following comments:

1. I was not able to perform a review since the code was reportedly not available locally and I was not yet able to obtain a copy. It seems that the public comment period may not be adequate in light of the broad change of an entirely new code as well as a lack of reasonable access to the document. Several of the professionals I have contacted were not even aware of the review period. Consideration should be given to extending the comment period.
2. The IFC makes numerous references and in several instances completely defers to NFPA standards, particularly NFPA 30. It appears that the references are to the 1996 edition of NFPA. Some of the referenced items do not exist or are in different locations in the 2000 edition of NFPA. To ensure that designers and plan reviewers are using the same standard, the specific edition of appropriate NFPA standards should be included in the adoption language. The 1996 editions of NFPA would be most appropriate since these appear to be the ones referenced from the IFC.
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I appreciate your attention to these items. If you have any questions please call me at 565-5337.

Sincerely Yours,

Mark E. Teitzel

Municipality of Anchorage

George P. Wuerch, Mayor

Department of Public Works

Building Safety Division

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June 6, 2001

Gary Powell
Department of Public Safety
State Fire Marshal
Division of Fire Prevention
5700 E Tudor Road
Anchorage, AK 99507

Subject: Support for the Adoption of the 2000 International Family of Codes

Dear Mr. Powell:

This letter provides some background information and explanations for the controversy surrounding the adoption of the 2000 International Codes.

New national codes are published every three years. State and local jurisdictions normally adopt these codes with local amendments and changes. The State of Alaska and local jurisdictions are in the process of reviewing and adopting the new codes, which cover the following aspects of building: accessibility, architectural, electrical, elevator, energy, fire, mechanical, plumbing, residential, and structural.

In the late 1980s a major effort was launched to consolidate into one set of codes the 25 different codes being used across the United States. The federal government, state governments, national professional and building organizations, enforcement agencies, testing agencies, major material suppliers, and code organizations all agreed that this was needed. Architects, engineers, developers, contractors, builders, and owners will be able to use the consolidated codes regardless of where they work or build. In the early 1990s the plans were formulated; in 1994 the effort began. Almost all major stakeholders participated in the effort. A single set of codes was drafted, and it appeared there might be a dream realized to have one set of codes to design and build by. That effort resulted in the 2000 family of International Codes.

Prior to the finalization of the documents the National Fire Protection Association, International Association of Plumbing and Mechanical Officials, and the Western Fire Chiefs Association pulled out of the effort and process. The overall reasons given were that the codes are new, untested, and unsafe. The real reasons were disagreements over who would have control over the codes and the amount of money to be received from codes and standards sales. The disgruntled organizations pulled in labor and trade organizations to support their effort to stop the adoption of the International family of codes. The above-mentioned organizations are planning to have a competing set of codes available in 2003. Currently, they have bits and

pieces of new and old codes they wish to have kept in place until the competing set of codes are ready for adoption.

To support the opposing effort, constant references are being made to California's decision to not adopt the International Codes based on safety concerns. For over one year, an independent task force made up of technical experts worked on reviewing the codes, resulting in the recommendation to adopt the 2000 International Codes. A pro labor governor was elected who appointed new members to the California State Building Codes Commission. The new board ignored the recommendations by the technical task force and decided to stay with the old codes rather than adopting new codes. The decision was strictly political and had little to do with safety.

There have been thousands and thousands of hours put into drafting the 2000 International Codes. The objective was to take the best of all codes and consolidate into a single set of codes. We have the results of that effort in the 2000 International Codes.

The Municipality has spent months reviewing the new codes. We have ten separate committees that are reviewing these codes with the objective of finishing the review process by July of 2001. There are over 150 private sector architects, engineers, developers, contractors, builders, code officials, and private citizens involved in this review process. The Municipality plans to adopt the 2000 family of consolidated and coordinated International Codes with the exception of the plumbing code. The reason for not adopting the International Plumbing Code is that the State Department of Labor adopted the Uniform Plumbing Code with little notice or public input and before most were even aware that it was being considered. Since plumbing has the least coordination and interface with the other codes, the Municipality decided to go along with the State on this code. (5)

The Municipality of Anchorage strongly supports the efforts made by the State of Alaska Department of Public Safety to adopt the International Building Code, International Fire Code, and International Mechanical Code. These codes are current, up to date, consolidated and coordinated. Since they are not the familiar past codes, individuals and organizations have picked out differences and called them unsafe. (8) (9)

To not adopt the coordinated 2000 International Building, Fire, and Mechanical codes would be a major set back for the State of Alaska. The Municipality plans to adopt the codes in the fall of 2001. We feel one set of integrated codes assures a high level of protection for lives and property and provides a consistent design standard for designers, contractors, and enforcers. (10)

Sincerely,

Ron Watts

Ron Watts
Chief Building Official

kl/RW
cc: Ross Fosberg

ACE HANGARS, LLC
Richard S. Armstrong
2321 Merrill Field Drive
Anchorage, AK 99501
Telephone: 907-222-3000 / Fax: 907-222-3001

Ross Fosberg
Code Adoption Coordinator
State Fire Marshal's Office
5700 East Tudor Road
Anchorage, Ak 99507-1225

Gentlemen:

I am very familiar with the Uniform Code Series, as I have served as president of RSA Engineering, Inc for 17 years. Our firm provides mechanical and electrical consulting services, and is one of the largest M/E consulting firms in the state. In order to maintain our practice, it is essential for us to remain current on all of the adopted and proposed codes. I have participated on several code adoption committees for the Municipality of Anchorage over the years, and also took part in the code adoption committee for both the Uniform Plumbing Code and the International Fire Code.

The new International Code Series is bringing the State into the world market, since the International code is where the codes are headed. The International Codes allow more engineering freedom to design in response to local and project specific needs, so it will allow more effective design at less cost of the owner, and thus put Alaska on a more competitive edge with the rest of the market. (7)

There are some factions that want to stay with the old code series, and are actively seeking support to reverse a lot of hard work by committees to adopt the International Fire Code, the International Building Code, and the International Fire Code. I feel that reversing the decision to go with the International Code Series would be a very serious error, and would definitely put the State in an awkward position of being behind the times in building technology. I can remember when we were still using the 1979 Uniform Plumbing Code 15 years later simply because all later codes allowed ABS plastic waste and vent pipe, so special interest groups (8)

blocked adoption of the current UPC series so ABS pipe would not be allowed. This effort to block adoption of the international code series is the same thing.

I urge you to proceed with adoption of the entire International Code Series, since this is clearly the best code series for the State of Alaska.

Very Truly Yours,

Richard S. Armstrong, PE

WARD W. RISTAU, P.E.
17234 SE 57TH PLACE
BELLEVUE, WA 98006

cc:
Ms. Ross Fosdick

May 19, 2001

Mr. Eugene R. Rutland
Executive Director
Mechanical Contractors of Alaska, Inc.
PO Box 74796
Fairbanks, AK 99707-4796

RE: Your Letter of 5/7/01

Dear Mr. Rutland,

Although I cannot speak generally about many of the code issues, I am a relative expert in the field of refrigeration. I have spend a long career in the field and can claim well over 30 years of experience.

I appreciated your letter and always respect one who takes a position and defends it. However, I do want to make you aware of certain code issues as they relate directly to refrigeration.

As well as I can recall, the "current" UMC and UFC pretty much got married in 1991. This was followed in most western states with the 1994 UMC with the 1994 UFC and that followed by the 1997 UMC with the 1997 UFC. In the late 1990s, a new movement began to make the various building codes around the United States universal. If you have ever had to pick up your "tools" in Alaska and take them to Georgia for a job, you would know what I mean. In the eastern part of the country, I think the codes were written by BOCA or some such thing. In any case, the idea of a single matched set of codes was born and, to me, it was an idea whose time had come.

(2)
(9)

In the specific language of the 1997 UMC in the refrigeration chapter, I can show you conflicts with the language in the 1997 UFC in Article 63. Further, there are conflicts within the refrigeration chapter itself in the 1997 UMC. I can say that the same problem existed in the 1994 codes.

I can confidently tell you that the people who wrote the code language in Chapter 11 (Refrigeration) for both 1994 UMC and 1997 UMC did not understand refrigeration issues, whether they be operating issues or safety issues. In drafting these codes, they did not adequately consult with experts in our industry, if they consulted in such a manner at all. In one specific case, it is my opinion that they inserted a specific requirement that reduced the safety of refrigeration systems rather than added to safety.

In your letter under point #9, Chapter 11 Refrigeration, you state that the UMC chapter is twice the size of IMC. Well, that was easy for them to do because all that the drafters of 2000 UMC did was "copy" 1997 UMC and carry forward all the wrong things again.

You go on to suggest that the IMC defers to "standards" for requirements such as refrigeration control valves. Well, this referral to other "standards" is actually intended to defer to two specific standards of the refrigeration industry. There are ASHRAE Standard 15 and IIAR/ANSI Standard 2-1999. ASHRAE is the most well respected organization in our industry.

It has done more to promote safety and efficiency in our industry than have all the code writers in history. IIAR (International Institute of Ammonia Refrigeration) has worked very closely with ANSI (American National Standards Institute) to develop a standard for the safe use of ammonia as an industrial refrigerant. I would venture to say that 90% of the fish processing plants in your state use ammonia. An ammonia system installed per the IIAR/ANSI standard would be a far safer facility than one installed per the 1997 UMC, which effectively ignores IIAR.

(10)

As you can probably see, I am passionate about this issue. In addition to my engineering work, I like to think of myself as an efficiency expert. I try to run my business in an efficient manner. It is not practical or efficient to have contractors in the United States face three or four different codes in their travels around the country. It is not efficient to have three sets of code "writers" who all collect a salary for their work. We need to have a single code set, nationwide, and we can probably live with rewriting it every five or ten years, not every three. We can call such a code either UBC or IBC. That doesn't matter. However, it must be one code.

I do a lot of work in the State of Oregon at this time. Oregon is moving forward with the IMC. The fire folks want to try to stay with UFC but that is simply a power struggle. So, at least for a little longer, Oregon will be confused. In the case of Washington, it is trying to adopt IBC, IMC and IFC. However, there are politics there as well. So for now in the specific case of refrigeration, Washington has Chapter 11 of 1997 UMC and Article 63 of 1997 UFC. However, quite ironically, they have added amendments to both of these which basically replace them with the provisions of IMC and IFC. The language of the amendments is almost word for word from IMC. Go figure that one.

So, it is obvious that Oregon and Washington are good examples of why everyone should move forward immediately with IBC, IMC, and IFC. You can't stop good progress and, in the specific case of refrigeration, who could possibly argue with the idea of finally consulting with the experts in the particular industry being regulated or "codified".

I appreciate your time in reviewing my points. In accordance with the request of your letter, I am sending copies of this letter to Ross Fosberg in Anchorage and the Governor's Office in Juneau. Let me know if you have any questions. Thank you.

Sincerely,

Ward W. Ristau, P.E.
Mechanical Administrator

cc: Governor Tony Knowles
Mr. Ross Fosberg

City of Soldotna
177 North Birch * Soldotna, Alaska 99669 * Phone: (907) 262-9107

May 23, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
AK. Dept. of Public Safety
Division of Fire Prevention
5700 E. Tudor Rd.
Anchorage, AK 99507

Re: Adoption of International Mechanical Code

Dear Mr. Fosberg,

The purpose of this letter is to lend my support to the Division of Fire Prevention's efforts at adoption of the International Mechanical Code.

As the Building Official for the City of Soldotna, I am convinced that the adoption of the International Codes as proposed by the Division is in the best interest of the State and it's citizens. For many years the development of a single set, or family if you will, of codes has been a goal of the building industry and building safety regulators alike. One set of integrated codes, assuring a high level of protection for lives and property and a consistent design standard across jurisdictional boundaries around the United States. After many years of joint effort on the part of the code promulgation bodies, the International Codes are the achievement of that goal. (2)

As one of the few jurisdictions in the State with an active building department and deferral from the State Fire Marshal's Office for fire and life safety plan review and inspection, it is especially important to us that the codes adopted by the State, and enforced by us, are as comprehensive, coordinated and consistent as possible. The adoption of the International Mechanical Code as a part of the overall International Code adoption contemplated by the State will assure that this is achieved. Having served on the review committees for these codes over the past several months, I am confident that the IMC will provide the highest level of protection for the public, the greatest level of consistency for designers, and the least amount of amendment possible. (10)

I understand very well the basis for the controversy between the opposing codes, and the current discussion. For years the plumbing and mechanical officials worked in conjunction with the building and fire officials to produce a set of Uniform Codes under the International Conference of Building Officials. Unfortunately, change is never easy and the shift toward a performance-based code, such as those promulgated by the International Code Council is a significant change. It must be realized that performance based codes are the future. Rapidly advancing technology and its impact on public safety as well as on the bottom line of the building industry has rendered purely prescriptive codes such as the UMC, unresponsive and cumbersome. While it is true that prescriptive codes provide a mechanism for consideration of new technology under alternate materials and methods sections, our experience has been that state agencies such as the Department of Labor have been loathe to even consider exercising the authority provided by these sections thus depriving our building industry of the use of technological advances for years after their acceptance by the building industry in general. (17)

The timely adoption of the 2000 International Building, Fire and Mechanical codes will place the State, for the first time in decades, on the forward edge of thinking in be building safety field.

For a state, which has historically led the industrialized world in the per capita loss of life and property due to fire, this is will be an admirable accomplishment and significant benefit to the Alaska's people. The committee process recently completed marks the first time in recent memory that review and adoption of the State's building, fire, and mechanical codes has involved the active participation of local government and private sector building industry representatives. This too, is a giant leap forward in providing an open, responsive government to the people of Alaska. To lay aside the hours of work by the committees and the staff of the Division of Fire Prevention at this late date would be a disservice to those involved in the process, the building industry at large, and the citizens of Alaska.

Now is the time to move forward with providing the State of Alaska the state of the art in building construction codes. I encourage the organs of state government responsible for the final adoption of the International Building, Fire and Mechanical Codes to finalize their work and place these codes into effect as soon as possible.

Sincerely,

Dick J. Bower, CBO
Building Official

McCOOL CARLSON GREEN
ARCHITECTURE • INTERIOR DESIGN • SPACE PLANNING

29 May 2001

Alaska State Fire Marshal
5700 E. Tudor Road
Anchorage, AK 99507

Attn: Ross Fossberg
Code Adoption Coordinator

I have heard there is now some opposition to Alaska fire marshal adoption of the entire coordinated "family" of model building codes: the International Building Code (IBC), International Fire Code (IFC), and International Mechanical Code (IMC). This comes after recent favorable public hearings for Alaska adoption. The opposition wants to substitute a different mechanical code for use with the IBC and IFC. (2)

As an architect with over 30 years practice in Alaska I am convinced that this is not the best move. The mixing of mechanical or plumbing codes that are not edited, cross-referenced and coordinated with the International Building Code and the International Fire Code is confusing and will require amendments to both codes. This is not necessary with the IMC, and IPC because they have been developed with the coordinated "family" group of International model codes. (5)

Mixing of Uniform Mechanical (UMC) and Uniform Plumbing (UPC) Code with the International Building Code will cost the state money and cause construction conflicts due to lack of coordination and interpretation. It is not in Alaska's best interest to "mix and match" mechanical, plumbing, building and fire codes.

The IBC family of model codes has developed from the three existing national building codes over the past five years with input from suppliers, installers, and designers as well as code and fire officials.

The three IBC predecessors have been in existence for over fifty years with regular semi-annual revision following industry discussion. The three nation wide code groups (Uniform Code - West coast, U.S., BOCA-Northeast, U. S. and Southern Code-Southeast U.S. met over the past five years to form the one IBC group of codes through a lengthy set of public forums including industry and designers. The IBC family has been published over a year; the State Fire Marshal's office has just gone through a series of public discussions of the IBC code group in Alaska.

John E. McCool
Michael P. Carlson
Douglas G. Green

901 W 29th Avenue
Anchorage, Alaska 99503
(907) 563-8474
FAX (907) 563-4572
mcg@mcgalaska.com

Architects and Engineers support IBC as a single well-coordinated group of codebooks. The IBC will be subject to regular updating through national public input every eighteen months similar to the predecessor UBC. It therefore is unwise to "unbundle" IBC and mix with the UMC, and UPC. The IBC group is concise, and easy to use because it cross-references to consensus industry standards such as ASTM, ANSI, NFPA and ADA. But the overall consistent language and framework of the IBC group is needed to eliminate construction confusion. Federal departments of HUD and Department of Energy have already adopted IBC family.

I have attended public hearings to discuss local Alaskan revisions to the IBC and fully support the Alaska State Fire Marshal current proposal to adopt IBC, IFC, and IMC.

Sincerely,
McCool Carlson Green

John E. McCool
Corporate President,
Architect, AIA/CCS

xc: Senator Loren Leman
Representative Ethan Berkowitz

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June 5, 2001

Mr. Ross Fosberg
Code Adoption Coordinator
Alaska Department of Public Safety
Division of Fire Prevention
5700 E. Tudor Road
Anchorage, Alaska 99507

RE: **SUPPORT FOR ADOPTING THE INTERNATIONAL MECHANICAL CODE**

Dear Ross:

It has come to our attention the Mechanical Contractors Association is pressing the State of Alaska to consider adopting of the 2000 Uniform Mechanical Code (UMC) in lieu of the 2000 International Mechanical Code (IMC) as the mechanical code. This letter is providing our support to the Division of Fire Prevention's effort to adopt the IMC as the model for the state's mechanical code.

As a professional architectural firm in Alaska, (and myself as a member of the architectural code adoption committee) we are convinced the adoption of the International Codes as proposed by the Division of Fire Preventions is in the best interest of the State and its citizens. With the pending adoption of the 2000 International Building Code (IBC), Alaska will be adopting a new family of model building codes. This family is a carefully documented, worded, and complementary set of codes that rely on each other to provide a complete, coordinated, and complementary set of building standards. Each portion of this code relies on the associated sister code to provide a complete standard of care. By adopting the UMC instead of the IMC, we will have a disjointed code that will not be coordinated and complete. One example is the International Building Code in Section 1202.1 now refers to the IMC for change of air ratios and design purposes whenever mechanical ventilation is provided in lieu of natural ventilation. The UMC does not address this.

For many years, the development of a single set of nationally recognized building codes has been a goal of the building industry, designers, and building safety regulators alike. By adopting the International family of building codes, we will be coordinated with the rest of the United States in recognizing a national standard in building construction codes. The International family of codes is the national standard, and was written in joint cooperation with the International Council of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), and the Building Officials and Code Administrators International, Inc. (BOCA).

The International family of codes also incorporated performance criteria allowing designers and installers alternative means and methods in accomplishing the required end result. This will aid in permitting new and innovative solutions in resolving difficult situations. This criteria does not appear in the Uniform family of codes.

Change is not easy. But the comfort of status quo should not get in the way of progress. With time, we will all learn to appreciate the performance criteria, complementary language, and national standards offered by the IMC. Not every designer and installer works exclusively in their local jurisdiction. Adopting the complete International family of codes will make Alaska consistent with the rest of the United States offering safety, continuity and familiarity to everyone.

RIM Architects supports adopting the International Mechanical Code as the model mechanical code for the State of Alaska. Please let us know if we may be of further assistance in conveying this message to the State regulatory authorities.

Sincerely,

RIM Architects

Scott Bohne

Scott Bohne, AIA NCARB
Architect

Cc: Lt. Governor Fran Ulmer

SAB/scs

N:\RIM ADMIN\General Office\Support of IMC.doc

P.O. Box 196650
Anchorage, Ak. 99519

Building Safety

May 29, 2001

Ross Fosberg
Code Adoption Coordinator
State of Alaska
Division of Fire Prevention
5700 East Tudor Rd.
Anchorage, Alaska 99507-1225

ATTN: Ross

Ross, I support the states effort to adopt the International Building, Fire and Mechanical Codes, 2000 Edition. It is my understanding that there is an effort to replace the intended adoption of the IMC with the Uniform Mechanical Code. I believe this would be a mistake as the International codes have been coordinated to allow for compatibility. I understand that the final determination will be from the State Fire Marshal's Office. This office should adopt the International codes to ensure public safety for the citizens of Alaska. The State should look to the overall interests of the public and make a sound decision. I have been a part of the Municipality of Anchorages effort to amend locally the International codes. Over the past six to eight months I have become very familiar with all the codes. My view is that they are very thorough and cover the safety of the public with a different approach from earlier codes but I see no real danger. I also believe the international codes will allow Architects and Engineers some additional flexibility in their designs as well as providing review agencies a better coordinated set of documents.

Please contact me with any concerns and questions you may have regarding this letter.

Sincerely,

Ron Thompson, P.E.
Senior Plan Review Engineer
343-8326 wk / 242-4387 cell / 249-7412 fax

Klebs Mechanical, Inc.

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06/08/01

Ross Fosberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 E. Tudor Road
Anchorage, AK 99507-1225

RE: 2000 INTERNTIONAL MECHANICAL CODE

ATTN: Ross Fosberg

I am writing you this letter as a show of support for the adoption of the 2000 International Mechanical Code.

First, let me introduce myself. My family (wife and three children) and I moved to Alaska in 1981. We made this move because of the allure of Alaska; the work and economy of Alaska was a bonus for our life here. In 1986 we started our own mechanical contracting business which has grown to the present at 50 full time employees. I have served on the Municipality of Anchorage Board of Building Regulation Examiners and Appeals for five years, have served as a member of the Mechanical Code Review Committee for the adoption of the UMC 1994, UMC 1997, and the current adoption of the IMC 2000 code.

The Municipality of Anchorage Mechanical Code Review Committee voted to use the 2000 International Mechanical Code (IMC) and just completed its entire review on June 1, 2001. The Assembly will undoubtedly adopt it into law in the near future. Without going into detail on the difference between the UMC and the IMC, I believe the big question is what codes best serve the State of Alaska's people.

Special interest groups including contractors, unions, inspectors, and engineers need to look at the overall picture, not just what is best for them. It makes no difference how many pages the book is, or how much training our inspectors will need. And certainly, no code should be adopted just because this is "what was always used".

The Uniform Mechanical Code (and Uniform Plumbing Code) has failed in the past to allow new listed products to be used and slow to recognize others. This causes less competition between suppliers, additional labor cost, and inflates the cost of construction. The International Mechanical Code is not perfect; however, I feel it serves the people of Alaska better by far.

(3)

Sincerely,

Gary Klebs (SK)
President

pieces of new and old codes they wish to have kept in place until the competing set of codes are ready for adoption.

To support the opposing effort, constant references are being made to California's decision to not adopt the International Codes based on safety concerns. For over one year, an independent task force made up of technical experts worked on reviewing the codes, resulting in the recommendation to adopt the 2000 International Codes. A pro labor governor was elected who appointed new members to the California State Building Codes Commission. The new board ignored the recommendations by the technical task force and decided to stay with the old codes rather than adopting new codes. The decision was strictly political and had little to do with safety.

There have been thousands and thousands of hours put into drafting the 2000 International Codes. The objective was to take the best of all codes and consolidate into a single set of codes. We have the results of that effort in the 2000 International Codes.

The Municipality has spent months reviewing the new codes. We have ten separate committees that are reviewing these codes with the objective of finishing the review process by July of 2001. There are over 150 private sector architects, engineers, developers, contractors, builders, code officials, and private citizens involved in this review process. The Municipality plans to adopt the 2000 family of consolidated and coordinated International Codes with the exception of the plumbing code. The reason for not adopting the International Plumbing Code is that the State Department of Labor adopted the Uniform Plumbing Code with little notice or public input and before most were even aware that it was being considered. Since plumbing has the least coordination and interface with the other codes, the Municipality decided to go along with the State on this code. (5)

The Municipality of Anchorage strongly supports the efforts made by the State of Alaska Department of Public Safety to adopt the International Building Code, International Fire Code, and International Mechanical Code. These codes are current, up to date, consolidated and coordinated. Since they are not the familiar past codes, individuals and organizations have picked out differences and called them unsafe. (8) (9)

To not adopt the coordinated 2000 International Building, Fire, and Mechanical codes would be a major set back for the State of Alaska. The Municipality plans to adopt the codes in the fall of 2001. We feel one set of integrated codes assures a high level of protection for lives and property and provides a consistent design standard for designers, contractors, and enforcers. (10)

Sincerely,

Ron Watts

Ron Watts
Chief Building Official

kl/RW
cc: Ross Fosberg

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June 5, 2001

Mr. Ross Fosberg
Code Adoption Coordinator, Dept. of Public Safety, Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507-1225
Fax 907-338-4375

RE: Adoption of the International Family of Codes
(IBC, IRC, IPC, IMC, IFGC, IEC, IFC)

Dear Mr. Fosberg,

I am writing to offer my thoughts and comments regarding the adoption of the International Family of Construction Codes. I am a residential and light commercial contractor working in the interior of Alaska and have spent the last 25 years of my career involved in the construction industry.

I am also involved with the code review process through the City of Fairbanks Code Review Commission, having served as a commissioner for approximately the last four years and presently serve as the chairman. Although most of my construction experience is related to general building construction, i.e., carpentry and related tasks, as a general contractor, knowledge of the different sub-trades work and the codes they must use as a minimum model, often comes within my overall scope of work and jobsite responsibilities.

The City of Fairbanks Code Review Commission has spent numerous hours in meetings reviewing the different aspects of the new family of codes, and we have cautiously explored the new formats and the coordination built into these new codes. Although it is different, it appears to be a step in the right direction, to serve not only our local community, but for the nation as a whole. Similar codes, similar construction techniques, similar explanations of what is acceptable and what is not. The overall concept makes good sense, in my opinion.

Within the last six weeks or so, it is my understanding that the pipe trades and mechanical contractors have taken exception to the consideration and adoption of the IPC and IMC sections of the code family. While I can understand their reluctance in needing to learn a revised code for their specific line of work, I do not understand their overall reluctance to consideration of the new codes. I'm sure there will be some glitches with adoption of the any new codes, for all the trades, whether they are carpenters, roofers, concrete workers or architects and structural / mechanical designers.

Any new or revised code has glitches that will be worked out over time, they normally are. It is my understanding that the pipe and mechanical trades are unwilling to consider the IPC or IMC in any way, shape or form. They have made that quite clear locally at our code review meetings.

I will state that after hearing testimony from the mechanical contractors at one or two code review meetings, the commission members were not in favor of creating disharmony with the mechanical contractor community over adoption of the IPC. If my memory serves me correctly, by default, we agreed to continue under the latest UPC as adopted by the State of Alaska. It is now my understanding that the latest dispute to arise is over the IMC and the mechanical contractors have brought forth letters urging the state not to consider the IMC for adoption. That may be their position, but in my opinion, not using the family of codes as designed, presents a new form of problems for both the design community as well as the people charged with code compliance and enforcement. Re-working the balance of the codes to exclude IPC and IMC and including the UPC and UMC creates further code confusion for tradesmen and designers alike, no less the compliance and inspection side of the issue.

So, how do we handle this dilemma? Personally, I favor the idea of the family of codes. Does adoption of the new international codes create some form of a life, health or safety issue to the general public? I don't believe so. Does it mean that people in the construction community will need to educate and familiarize themselves with the new code format and information? The answer is yes, but that is not uncommon with each new code revision during the normal 3-year cycle. Will that re-education be insurmountable? I don't believe so. So, how do we handle this issue? In my opinion, possibly allow both of the codes for a specific period of time, both the IPC & IMC, and UPC & UMC. Then, if the architect and mechanical designers choose one or the other for their design process, so be it. If the contractors and tradesmen want to bid the work and install the work, then they will need to follow the prescribed code for that project.

There is no doubt that some confusion may arise at first during this transition period, but I believe over a period of time, things will smooth out and ultimately work. Or, we may discover that the international codes and the new corresponding format are not quite as cumbersome or unique as portrayed. To completely discount the international codes, which circumvents the whole basis and theory of the new code formats, just doesn't make good sense to me. Personally, I have no present knowledge of good or bad reports about the new code format from elsewhere in the USA. But, generally speaking, the international codes have blended the East Coast, Southern, and West Coast building codes into a national format for all to use.

In closing, speaking for myself, I believe we should give the international family of codes the benefit of the doubt. Put them into the building and design community, put them into the hands of the tradesmen and put them to work. I believe this is a viable and workable solution. Let the designers specify which code is being used at the start of the project and follow through with it. I tend to believe in the long run, the compatibility of the international family of codes will surface and rise to the top as the codes of choice.

The international family of codes makes sense, so why not give it a chance out in the field, in the community, and throughout the state. Feel free to call me should you care to discuss this in further detail.

Respectfully submitted,

Richard S. Tilly
President
Tilly & Company, Ltd.

CITY OF
FAIRBANKS
Visit us on the Web at www.ci.fairbanks.ak.us/buildfbks

BUILDING DEPARTMENT PHONE 459-6720
FAX 459-6719

June 8, 2001

Ross Fossberg, Code Adoption Coordinator
Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, Alaska 99507

Re: 2000 International Mechanical Code

Dear Mr. Fossberg:

As we understand the public comment period has been extended as a result of a request made by the Mechanical Contractors Association. During this time frame there has been significant rhetorical debate regarding the International Mechanical Code. As Building Official for the City of Fairbanks I have recommended that this code be adopted. This recommendation has been forwarded to our local Code Review Commission and is pending their review.

As a Building Official I am required to evaluate all proposed codes and amendments in light of public safety, health and welfare. *In essence, the codes are an instrument for consumer protection and consumer affordability.* (10)

The City of Fairbanks has already formally adopted the 2000 International Fire Code. The local Code Review Commission has been reviewing the International Codes since October of 2000 and has recommended the adoption of the International Building Code, International Residential Code, International Fuel Gas Code. These codes will be presented to the City Council for final public comment and adoption.

The International Codes are internally coordinated with the other international family of codes. Adopting the Uniform Mechanical Code however will create fragmentation, time-consuming re-writing, editing and conflicts with other provisions of the International Codes. (6)

The International Mechanical Code is a performance-based code. Providing the designer, owner and ultimate consumer with more options should not be regarded as a bad idea. The adoption of codes should not benefit a particular class of individuals or sector of industry. We hope that the State of Alaska will evaluate any code with a big picture concept for the benefit of all Alaskans. (7)

Sincerely,

Steve Shuttleworth
Building Official

cc: Mayor James Hayes
Code Review Commission
Pat Cole Administrative Director
File

Fairbanks Fire Department

Office of the Fire Chief

656 7th Ave., Fairbanks, AK. 99701
(907450-6604 Fax (907) 450-6666
TDD / TTY (800) 770-8973. RELAYalaska

June 5, 2001

Ross Fossberg, Code Adoption Coordinator
DPS / Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507

SUGJECT: 2000 International Mechanical Code Adoption

Dear Mr. Fossberg;

The City of Fairbanks is in the process of reviewing the International Code Series to include the Mechanical Code (IMC).

The City of Fairbanks City Council adopted the International Fire Code effective January 1, 2001.

The Fairbanks Building and Fire Departments have been working closely for several months, in conjunction with the local Code Review Commission, to a review the remaining codes, make necessary amendments, and prepare them for review and approval (adoption) by the City Council.

The main reason the Fire Department is in favor of the adoption of the International Mechanical Code is that it is a companion document to the International Fire Code as well as the other ICC codes, which are up for adoption. Each of the codes in the ICC series references each other to approach a project in a wholistic manor. The codes (IBC, IFC, IMC, IFGC) complement each other by bringing all requirements together in one set of documents.

We are currently in the middle of our construction season. Our review process has slowed however will continue. We are committed to working with the State of Alaska to adopt a code that will address the needs of the State as well as the City of Fairbanks.

If you have any questions please don t hesitate to give me a call at 450-6604

Sincerely,

Warren Cummings
Fire Chief

cc: James C. Hayes, Mayor
Steve Shuttleworth, Building Official
Code Review Commission

CHARLES BETTISWORTH
AND COMPANY, INC.

ARCHITECTURE

PLANNING

June 8, 2001

Department of Public Safety
Division of Fire Prevention
5700 E. Tudor Road
Anchorage, Alaska 99507-1225

Attn.: Ross Fossberg
Code Adoption Coordinator

RE: 2000 International Mechanical Code

The architectural firm of Charles Bettisworth & Co. supports the adoption of the 2000 International Mechanical Code (IMC) by the State of Alaska, Department of Public Safety.

From a designer's perspective it is prudent to utilize the International Mechanical Code in conjunction with the 2000 International Building Code (IBC) since they are written as companion codes, which refer to one another within their respective code. They share a common code language and benefit from the same author, the International Code Council. We believe that using the two codes together assures improved code compliance during the design phases of a project, and consequently in the finished construction of a building.

Additionally, we do not anticipate the IMC to be any more difficult to comprehend, or apply, than the IBC. With the adoption of any new code, it is customary for designers to attend code seminars and to incorporate the new code provisions into the design of subsequent construction projects. We foresee the transition to these new codes as having minimal impact on the design, or constructability, of a building.

Although the IMC may differ from the Uniform Mechanical Code in various aspects, it does not to do so at the expense of public health or safety, which should remain the principal goal of designers and builders.

As part of the changing construction industry, designers and builders need to advance together to address the challenges of new code requirements and the development of new building materials.

In conclusion, we look forward to the adoption of the 2000 International Mechanical Code by the State of Alaska, Department of Public Safety.

Sincerely,

Charles Bettisworth & Co.

Charles Bettisworth, AIA

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E-mail: dans@bdsak.com

June 4, 2001

Mr. Ross Fosberg, Code Adoption Coordinator
AK. Dept. of Public Safety
Division of Fire Prevention
5700 E. Tudor Rd.
Anchorage, AK 99507

Re: Adoption of the 2000 Edition of the International Building, Fire, and Mechanical Codes

Dear Mr. Fosberg,

The three partners of our firm, who combined have over 70 years of design experience throughout Alaska strongly recommend the adoption of the progressive integrated family of International codes. We frequently are involved in complex renovations of institutional facilities such as schools, residence halls, and university facilities in rural and urban communities where compliance with current codes challenges the resources available. Based on our experience we feel a comprehensive set of codes is imperative to effectively meet the needs of the designer, building official, inspectors and builder and for the ongoing maintenance of a safe facility by the users and local fire response agency.

(5)

An effort by the Mechanical Contractors Association to substitute a portion of the code with a proposed adoption of the Uniform Mechanical Code would in our opinion compromise the coordination and compatibility of the interrelated codes. The International Mechanical Code is correlated to the International Building and Fire Codes. The Uniform Mechanical Code is not correlated to the building and fire code construction and occupancy requirements. This correlation is very valuable in the selection of equipment, building construction type and systems in providing the public with safe code compliant maintainable facilities.

Based on the critical interrelation of fire protection and fire response needed in the building, fire and mechanical code we strongly urge that the International 2000 editions of these codes be adopted by the State of Alaska.

Sincerely,

Bezek Durst Seiser

Dan Seiser, AIA, MOA Building Board Member

Municipality of Anchorage

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Telephone: (907) 267-4900
http://www.ci.anchorage.ak.us

George P. Wuerch, Mayor

FIRE DEPARTMENT
Administration
(1301 East 80th avenue)

June 3, 2001

Gary Powell, Alaska State Fire Marshal
Department of Public Safety
Division of Fire Prevention
5700 E Tudor Road
Anchorage, Alaska 99507

Dear Gary:

Please accept this letter as a document of support for the adoption of the 2000 International Fire, (IFC) Building (IBC), and Mechanical (IMC) Codes.

The code review process has demanded a significant amount of time, effort, and research from numerous agencies, organizations, and individuals. The process has been well organized and thorough.

As you're well aware the IFC, IBC, and IMC do not function solely as stand alone documents. It is imperative that the IMC be adopted, as it is an essential component to the International Fire Code. Application of flammable finishes is one of the significant areas governed by these two documents. Ventilation requirements are another crucial area that is of paramount importance within the fire and life safety realm.

(5)

(10)

Please consider the Anchorage Fire Department in full support for the adoption of the 2000 IFC, IBC and IMC.

Sincerely,

Bridget Bushue

Bridget Bushue
Fire Marshal

Concur:

John H. Fullenwider

John H. Fullenwider
Fire Chief

Homer
Volunteer
Fire
Department

604 east pioneer avenue
homer, alaska 99603
907/235-3155
fax 907/235-3157
fire@ci.homer.ak.us

June 4, 2001

Gary Powell
State Fire Marshal
5700 East Tudor Road
Anchorage, AK 99507

Dear Gary,

I would like to voice my support of the adoption of the International Mechanical Code as part of the family of codes currently being adopted by the State of Alaska. We in Homer have seen first hand how the lack of a "fire friendly" mechanical code can result in catastrophe. Just a few years ago, the Icicle Seafoods Plant here in Homer was completely destroyed by an explosion and fire that resulted from an Ammonia leak in their ice plant. The City of Homer and the entire community still suffers from the impact of the loss of this major source of employment and local revenue.

(2)

As a "family of code" the International Codes are designed to be used in conjunction with one another, and many fire specific codes are either explained or repeated in the International Mechanical Code. The State and Local jurisdictions need these comprehensive codes in order to better correlate our prevention and inspection efforts. Though no one likes change, it is paramount to keep the code set complete as much as possible with the adoption of the International Mechanical Code as a companion to the International Building Code and International Fire Code. Thanks you for your efforts on behalf of fire prevention.

Sincerely,

Robert L. Painter

Robert L. Painter, Chief

Design Alaska

June 8, 2001

Department of Public Safety
Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Attn: Ross Fosberg, Code Adoption Coordinator

Re: 2000 International Codes

The full-service architectural and engineering firm, Design Alaska in Fairbanks, would like to express its support for the State of Alaska adoption of the 2000 International Building Code (IBC), International Fire Code (IFC) and International Mechanical Code (IMC).

Through ICBO led review meetings and our own investigation, we are learning to apply the changes presented by these codes. Of course there is a learning curve to working with new code language, and each time a code is issued, the items must be reviewed and interpreted. The adoption of the International Codes is no different. We are impressed by the thorough review by the State of Alaska and the City of Fairbanks, and support their recommendation to adopt the International Codes.

We specifically support the adoption of the IMC in the State of Alaska as a companion to the IBC. The IMC works with the IBC as a companion document. The references and design philosophies are the same. The IBC and IFC have significantly reworded the fire protection sections of the building codes in the effort to produce a consistent nation wide document. The IMC uses this same language for application of fire and smoke control devises in ventilation systems. The fire and smoke control provisions of the IBC will be difficult to apply during design without the adoption of the companion IMC document. Many interpretations of design will be required by the reviewing authorities in order to confirm a safe building is being provided. Also, interpretations always take time, thereby slowing the review process.

The IMC is also a specific improvement over the UMC in several areas. As an example, the IMC now incorporates a design procedure for outside air ventilation for acceptable indoor quality. Until the IMC, the outdoor air requirement was vaguely defined in the UBC and most design professionals used the ASHRAE standard. Now the ASHRAE standard is excerpted into code and unifies the outdoor air requirements. Since ICBO is no longer supporting the UMC and has not issued a revised document for 2000, other changes developed by the industry will not be included in the code and, therefore, are not available to build better, safer facilities.

We are also encouraging the State Department of Labor to adopt the International Plumbing Code and International Electrical Code in an effort to bring the entire family of codes into the state. We believe it is an improvement to use a national standard that all professional and trades people can apply, no matter where the building is constructed.

Sincerely,

Design Alaska, Inc.

Chris Miller P.E.
Mechanical Engineering Department

Design Alaska Inc. Architects • Engineers • Surveyors
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