

January - December 2000

Mechanical Inspection Memo

Mechanical Inspection Memos are provided as a reference of updated procedures and code clarifications. This information does not change or replace the Pikes Peak Regional Building Code, adopted as law to provide minimum standards to protect the public health and safety. Reference the adopted Codes for exact standards. Permits for work are subject to the latest codes as amended by the Pikes Peak Regional Building Code.

The information is categorized as general information, mechanical, plumbing, manufactured homes and townhomes. Topics are alphabetized for easy reference and includes the month that it was published. You also may use word search.

PIKES PEAK REGIONAL BUILDING DEPARTMENT

General Information

ADDRESS POSTING ON SITE — Address numbers must be a minimum 5" high x ½" wide, clearly visible and legible from the street, permanent (no stick-ons) and of a contrasting color. If the structure is obscured or located more than 100' from the street, the address must also be posted at the street. Refer to Section 16-1-511 of the PPRBC. (December 2000)

HEAT FINAL INSPECTIONS OF MULTI-UNITS — When there are more than 100 units, the heat final inspections will be completed after the utilities inspector verifies that gas pipe stub outs are properly tagged for each unit. Applicable to permits issued after Aug. 1, 2000. (July 2000)

HEAT LOSS CALCULATIONS — All new single family dwelling plans submitted after October 1, 2000 must attach heat loss calculations showing the minimum size of heating equipment needed to provide a system capable of maintaining 70 degrees Fahrenheit at a point 3 feet above the floor in all habitable rooms. The heating rough inspection will include verification that the heating equipment meets or exceeds the value shown in the heat loss calculations. (August 2000)

MECHANICAL COMMITTEE DECISIONS — When the Mechanical Committee recommends approval or denial of Consent Calendar, variance and license requests, it does not become effective until approved by the Board of Review.

PERMIT FOR GARAGE CONVERSION TO TEMPORARY SALES OFFICE — When a garage of a model home is to be used as a sales office, a 434 remodel permit is required; this is not covered under the 101 universal permit. (October 2000)

RE-INSPECTION FEES — A fee of \$30.00 may be assessed for each inspection or re-inspection when the portion of work for which the inspection is requested is not complete or when corrections required by a previous inspection have not been made; PPRBC Section 16-3-210:D. (July 2000)

RETRO FIT INSPECTIONS & HAZARD POLICY — Inspections are limited to work performed under the permit. However, if an inspector observes a hazardous condition, he/she will contact the contractor to see if a hazardous condition report has been filed. If not reported, the contractor has an obligation to do so. (March 2000)

STA-BRITE & STA-BRITE 8 — The Mechanical Committee approved the used of these products as an alternative method and material to brazing for refrigeration lines. However, they are not approved substitutes for brazing under-slab/ground water lines. (September 2000)

VANGARD MANABLOC SYSTEM DECISION — The Board of Review approved the use of the Vanguard Manabloc system but disallowed the use of 3/8" size water piping to fixtures. Work under permits issued on or after Oct. 20 that uses the 3/8" size tubing will be rejected. Pressure or temperature balancing tub/shower valves must be used with the Vanguard system as the control block does not perform a pressure balancing function. (October 2000)

WIRSBO INSTALLATION GUIDELINES — The manufacturer's installation instructions show a 6" minimum clearance from the vent at the water heater; this applies only to single wall vent pipe. (September 2000)

Mechanical

AC COIL GUIDELINES — Coils that have an area not less than 90 percent of the furnace collar are acceptable. If less than 90 percent, one of the following items is applicable: (October 2000)

- a) Verification that it complies with the furnace listing/installation instructions;
- b) Letter from the furnace manufacturer that specifies the model # and approval to use a coil by (named) company;
- c) Duct transition from the outlet of the furnace to the coil with not more than a 45 degree angle from the vertical; or
- d) Variance approved by the Mechanical Committee and Board of Review.

ACCESS TO CRAWL SPACE THROUGH GARAGE — Regarding Section 302.4 of the 1997 UMC, as amended by the PPRBC, access is permitted to a crawl space through a garage if the opening is 18" above the floor or has an 18" barrier constructed of block or concrete separating it from the garage. (June 14, 2000 Mechanical Committee minutes.)

BASEMENT FINISH — Mechanical permit and Heating Rough inspection are required if the basement finish has a restroom with an exhaust fan. A mechanical permit is not required if the basement finish does not include a restroom or has an operable window for restroom ventilation, and has previously installed heat runs. A return air grill is not required in the basement if the return on the upper level is sized large enough for the BTU load of the furnace. (February 2000)

BOILER DRAINS & BACKFLOW PREVENTION — When used for servicing zones in hydronic heating systems, boiler drains do not require back flow prevention; it is already provided on the water feed to the boiler. (August 2000)

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BONDING — Bonding between the electrical & gas piping system cannot occur below the building shut-off valve. (November 2000)

BW AND B/BW OVAL VENTS — The BW oval vent can only be used to vent a wall furnace. B/BW oval vent may be used for any gas burning appliance. B/BW-2x4 labeled oval vent pipe is listed to be used in a 2x4 wall space. Listed spacers must be used at the floor and top plate of the wall cavity. Note: The reduced clearance of this installation is only applicable within the wall cavity. Clearances to combustibles must be 1 inch before and after the wall cavity installation. (July 2000)

CEILING & BOOT INSULATION — Blown-in insulation is acceptable to cover attic duct boots in flat ceilings if that insulation completely covers the duct boot. The boot cannot be installed so close to the roof line that it cannot be covered with the blown-in insulation. When using batted insulation in vaulted ceilings, boots must be individually insulated. (August 2000)

CHIMNEY LINING — A metal liner installation is not required for a new Category 1 furnace installation *only* when a lined interior chimney has at least one draft hood appliance vented through it. (August 2000)

COMBUSTION AIR FROM WITHIN BUILDING — If “all air from inside the building” is used for combustion air, a minimum of 100 square inches per opening is required by Table 7-A of the 1997 UMC. When determining the combustion air openings, use 75 percent of the grill's outside dimensions (area). (November 2000)

COMBUSTION AIR DUCT SIZING — When using two combustion air ducts (one high, one low), the sizing criteria is different for horizontal than it is for vertical. If combustion air is being supplied by two vertical ducts and one or more are offset more than 45 degrees from the vertical around an obstacle in the mechanical room, they have a horizontal section and must be sized as horizontal for their entire length. (April 2000)

CRAWL SPACE FLOOR DRAINS — A non-condensing furnace installation (without air conditioning) in a crawl space is not required to have a floor drain in the crawl space. If AC is added later, a condensate pump must be installed. (June 2000)

CRAWL SPACE VENTILATION — Guidelines for crawl space ventilation provided by a mechanical system:

- a) Two ducts are required, one located at each end of the longest diagonal.
- b) The fan is sized for 2 air changes per hour. (Cubic feet of crawl space x 2) divided by 60 = CFM.
- c) 1/4" screen on the inlet with a back-draft damper on the outlet.
- d) The crawl space is to be exhausted, not pressurized.
- e) Back draft damper location must comply with UMC Section 504.6, Environmental Duct Terminations.
- f) The fan must be controlled by a de-humidistat set at 35%.

Note: When gas appliances are located in a crawl space, it is acceptable to use the foundation vent for combustion air if at least one of the vents is made permanently open. (December 2000)

CSST PIPE —

- a) CSST pipe may be buried under ground if this complies with the manufacturer's installation guide.
- b) Sizing gas pipe with a combination of black pipe and CSST piping requires that each one be sized for the total distance using the appropriate chart. (June 2000)

CSST SIZING CHARTS — CSST sizing charts with more than a .5 inch water column drop are acceptable for use. If this design is used, the chart must be on site for verification that the chart matches the brand of pipe installed. (May 2000)

DAMAGE TO DUCTS — When crushed or pinched in such a manner that restricts the amount of air to pass through it, the duct will not pass inspection. (June 2000)

DRYER VENT DAMPER — Center pivot butterfly type dampers are not acceptable. (February 2000)

ELECTRICAL METER CLEARANCE — CSU Electrical Division provided an illustration showing a 4' x 3' clearance required in front of an electrical meter. Mechanical equipment, such as condensers, should not be located in this area. Please be as aware of this requirement as well as the 3' radius for the gas meter regulator. (December 2000)

EXHAUST OUTLETS — Exhaust outlets are not allowed to be within 3 feet of any opening into the building which would allow air entry into any normally occupied portions of the residence. Garage doors, dryer and bath exhausts, combustion air openings for direct vent appliances, or attic soffit vents are not considered as such openings. (January 2000)

FIRE STOPS INSPECTION — The metal stand off portion for vents must be in place for the Heating Rough inspection. (June 2000)

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FIREPLACE APPLIANCE — Some styles have a short corrugated pipe attached to the control valve. This pipe is *not* a fuel gas connector. A flexible gas connector between this pipe and the shut off valve is acceptable. (February 2000)

FIREPLACE INSTALLATIONS — Fireplace installations must satisfy the manufacturer's installation instructions. In addition, when the access to the gas shut-off valve in a fireplace requires entering the combustion chamber, a shut-off valve must be installed outside the fireplace. (October 2000)

GAS PIPING LABELS — Two-pound systems in residences are required to be permanently labeled "medium pressure" at every 6 feet interval. PPRBC also requires the system to pass a 60# air test on both sides of the regulator. Refer to UMC Section 1319.3, Exception 4 for additional labeling requirements of pressure regulators. (August 2000)

GAS PIPING LABELS FOR RESIDENTIAL & COMMERCIAL — All medium pressure gas piping must be labeled as such every 6 feet, and applies to CSST and black pipe. The factory applied label on CSST does not meet this requirement. (July 2000)

GAS PIPE SYSTEM SIZING — If a gas pipe system falls slightly short of the required size in the Chapter 13 tables, a 10 percent increase is acceptable as a derating for altitude. (August 2000)

GAS PIPING UNDER CONCRETE SLAB — Gas piping can run under a concrete slab if there is no structure or roof over the slab. The patio is not to have a roof or be enclosed in the future and will be noted in the address permit history. (February 2000)

FURNACE REPLACEMENT — When replacing a furnace it is necessary to replace the wye/tee to allow for a 4-inch water heater vent if both appliances are on the same level. When the water heater is replaced the vent must be upgraded; this was determined by the RBD Mechanical Committee. (October 2000)

GAMA TABLES & SMALLEST INPUT APPLIANCE — Footnote 30 of the Gama Tables requires the smallest input appliance to be closest to the common vent — not the main vertical vent. Manifold systems and offsets are permitted with the reduction guidelines of the Gama Tables. The smallest input appliance is to have the shortest vent connector. (September 2000)

HEAT LOSS CALCULATIONS — Plans for R occupancies will be required to provide the heat loss calculations and statement of the BTU input of all heating appliances required to adequately heat the residence. Approved plans must be on site for the first HRR inspection which includes validating that the heating appliances meet or exceed those on the plans. (December 2000)

HEAT RUNS — All habitable rooms must have heat runs, baseboard or in-floor heating. (August 2000)

HEATING ROUGH INSPECTION — (January 2000)

- a) If the roof flashing is not secured, the vent has a brace to hold it in position away from combustibles. (Chimney raincaps do not need to be in place.)
- b) The number of heat runs in the basement is listed, or it is noted if the basement is unfinished with no heat runs.
- c) Return air using the stud bay space is sealed off from the vent chase when next to each other.
- d) The distance from the blower to the C/A tie-in is measured from the top of the blower compartment.
- e) Ducts are sealed and substantially air tight.
- f) S & drive, butterfly joints, and end caps do not need to be sealed, unless there are excessive gaps.
- g) Crimp joints are sealed.
- h) Edges of joist spaces, panned off, are sealed at the side gaps left when they drop down between joists.
- i) Panned joists are blocked off at both ends of the joist space and extend to the return air opening. If the return air duct is dropped below the bottom of the panned joist, it is sealed from the opening in the duct to the panning.

HYDRONIC HEATING INSPECTION — Residential hydronic heating systems require an HWP inspection for the heating lines and piping with concealed joints or tubing imbedded in concrete. The Heating Rough inspection covers the boiler and water heater vents, combustion air, and bath and dryer exhausts. (May 2000)

HYDRONIC PIPING TESTS — Hydronic piping runs without joints are not required to have an air test. Exception: Piping encased in concrete must be on test and hold the test during the concrete pour. (February 2000)

JENN AIR TYPE INSPECTIONS — Provide the manufacturer's cut sheets showing allowable lengths, number of elbows, and termination requirements to the inspector at the time of inspection. (January 2000)

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LOUISVILLE TIN & STOVE INSTALLATIONS — Louisville Tin & Stove Company installation instructions require a metal plate (stove board) under the appliance when installed on combustible flooring. The label that identifies the metal plate should be relocated from beneath the plate to a visible location for verification by the inspector. (November 2000)

MAKEUP AIR REQUIREMENTS & DOMESTIC CLOTHES DRYERS — Assuming the room height is 8 feet, a minimum 500 square feet is required for a room or area to communicate with a room containing a domestic clothes dryer through a 100-square inch makeup air grill. This is twice the size used for combustion air transfer grills for water heaters. (Aug. 2000)

PENETRATIONS FROM U TO R-OCCUPANCIES — (July 2000)

- a) An appliance vent enclosed in a chase may pass through a garage ceiling into and through an R occupancy.
- b) Ducts of 26 gage metal, without openings and having a flexible expansion joint at the furnace, may pass from the garage into an R occupancy without fire/smoke dampers.
- c) Combustion air ducts must be chased in the same manner as vents when the ducts have openings in the garage and pass through an R occupancy.
- d) Ducts contained in the garage are not required to be insulated if the garage is insulated.
- e) Ducts in an enclosure around the furnace do not need to be insulated.

REFRIGERATION PIPE JOINTS — Line set joints must be brazed, not soldered, and tested unless joints remain visible. (June 2000)

REHAU PEX PIPE — This is approved for domestic water piping as well as hot water heating systems. Installation must be per the manufacturer's instruction. The sizing for domestic water must comply with the 1997 UPC. (May 2000)

RESIDENTIAL EXTERIOR DUCT INSULATION — All ducts outside the building perimeter insulation of an R-3 residence are to be insulated with a minimum R-6 insulation. This includes return air ducts, especially those formed by the building construction such as joists and stud bays in a non-insulated garage. (November 2000)

SINGLE FAN ASSISTED GAS APPLIANCE VENTED INTO A CHIMNEY — A metal chimney liner is required. A metal liner is not required for a tile lined chimney if there is an existing pilot appliance vented to the same chimney. (June 2000)

SUPPLY OUTLET RUN FROM HOUSE TO GARAGE — A fire damper (not fire/smoke) is required, and the installation must comply with these minimum standards: (December 2000)

- a) Frame around the sleeve leaving a minimum 1/8" gap per lineal foot.
- b) The sleeve must be a minimum of 26 gauge.
- c) The sleeve must be flanged on all four sides to the garage side of the wall.
- d) Affix the damper to the sleeve with at least 1 screw in each of the four sides.

STYROFOAM — Styrofoam cannot be used as support for equipment, including furnaces; it does not comply with 1997 UMC Section 308.1. (October 2000)

TRANSFER AIR GRILLS — A heat register located within a mechanical room does not eliminate the requirement for transfer air grills to an area of at least 250 square feet to supply combustion air for the water heater. (October 2000)

VENT CONNECTORS FURNACE — 1997 UMC Section 805.1 requires vent offsets to be installed in a manor to prevent "physical damage." Offsets are to be as high as possible to allow for adequate head room. (April 2000)

VENT TERMINATION — Vents exiting lower roofs and located within 8' of a vertical wall, must terminate above the upper roof (plane); UMC Table 8-A. (May 2000)

WATER HEATING PRESSURE TESTS — At the heating rough inspection, testing is not required for water heating systems using base board when permits are issued after July 19, 2000. A visual inspection will be made of piping before it is covered. After the baseboard has been set, an HWP inspection with an air pressure test on the system will be performed. (July 2000)

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ADAPTERS/COUPLINGS — Adapters/couplings used to join plastic pipe to other materials or ABS to PVC, must comply with Section 316.2.3 of the 1997 UPC. Note: Non-shielded couplings are typically not listed for above ground use; and most hub couplings (CISPI) are not listed for plastic. (November 2000)

AIR ADMITTANCE VALVE — IAPMO listed/conditional listed air admittance valves are approved in limited applications by the PPRBC. (October 2000)

BACKFLOW PREVENTERS & INTERIOR FIXTURES — In R-3 occupancies, backflow prevention is not required for hand held showers mounted on roman tubs or kitchen faucets with spray, including the new pull out spray spouts. (Sept. 2000)

BASEMENT BATHROOM VENTILATION — Automatic air admittance valves may be used for an entire basement bathroom provided it is an engineered system. (August 2000)

BATH/WHIRLPOOL TUB P-TRAPS — A minimum 1-1/2 P-trap is required. (March 2000)

COMMERCIAL PLUMBING INSPECTION CLARIFICATIONS — (July 2000)

- a) A **water cooled** ice machine is required to have back flow protection (BFP) only for the equipment cooling coil. (This protection is not required for an **air cooled** machine.)
- b) Carbonators must have stainless steel BFP which can be built in. (Watts model 9-D BFP is not an acceptable.)
- c) An air gap is required for an indirect waste from a soda machine to a sanitary sewer receptacle.
- d) Check valves on compressors must be ported to comply with the code.
- e) Maximum length for the direct connection from a commercial dishwasher to the floor drain tailpiece is 5 feet.
- f) Commercial 3 compartment sinks must be directly connected to the sanitary sewer. The continuous waste must be run with directional fittings.
- g) The "critical level" of the flush valve is a minimum 6" above the top of the urinal. Urinals may be used to wet vent water closets using 2½ " or larger pipe for the vent sections receiving discharge from the urinal.
- h) The discharge line from a grease trap must be vented like any other trap, even if the trap has an integral vent opening. Floor drains and floor sinks in the same area also must drain through a grease trap or interceptor.

CONDENSATE DRAINS RUN TO FLOOR DRAINS IN CLOSETS — If a floor drain becomes an "indirect waste receptor," it cannot be installed in any portion of the building not in general use by the occupants; UPC Section 804.1. (July 2000)

CRAWL SPACE ACCESS AT FINAL — All crawl spaces are to be accessed at the time of final inspection. (Nov. 2000)

DOUBLE ELBOWS/TWIN ELLS — Are not acceptable as drainage fittings, but are allowed as vent fittings. (March 2000)

DRAINAGE ELBOWS — 1/4 bends are allowed above the floor. Horizontal to horizontal under slab and vertical above floor to under slab horizontal require long turn fittings. Exception: Closet bends and horizontal to vertical under slab. (Sept. 2000)

FERRULE TYPE COMPRESSION JOINT — This type of joint is defined as a rigid joint — and is not considered a slip joint. A shut off valve at the fixture is not required when this type of fitting is used. (August 2000)

FLOOR DRAIN ON FIRST FLOOR — The requirement for a floor drain on the first floor was eliminated if an area drain is provided and indirectly wasted to a floor drain in the crawl space below. A catch pan under the water heater with its drain run to the floor drain is an acceptable alternative. Refer to Mechanical Committee June 2000 meeting minutes. (December 2000)

FLOOR DRAINS UNVENTED — Branch outlets from the main drain to unvented floor drains may be sloped a minimum of 1/4" per foot" or be "rolled up" to an angle not to exceed 45 degrees from the horizontal. Any amount of roll up beyond 45 degrees is considered vertical and does not meet the intent of UMC Section 901.0 as amended by PPRBC. (December 2000)

FLOOR DRAINS UNVENTED IN CRAWL SPACES — It is acceptable to run a 3" horizontal waste to and reduce right at a 2" KC floor drain. Consider this set up as an unvented floor drain. (June 2000)

GRAVITY DRAIN LINE & PUMP SIZING — The gravity drain line receiving the discharge from a sewer ejector pump is sized by counting each GPM of the pump as 2 fixture units. The minimum pump size required to serve a single water closet is 20 GPM. The pump discharge line becomes a gravity drain at the point it intersects with a drain line downstream from any gravity draining fixtures. (September 2000)

ISLAND FIXTURE VENTS (LOOP VENT) — Only the horizontal drain and vent pipes need to be increased in size if the foot vent is not used. (January 2000)

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KITCHEN DRAIN P-TRAP & TRAP ARM — One 1½" P-trap & trap arm may be used to drain a kitchen sink and dishwasher when the dishwasher drain is routed through an air gap fitting into either the garbage disposal or tailpiece. (Sept. 2000)

MULTIPLE FIXTURES & DRAINAGE — Back to back or side by side fixtures must drain into a sanitary cross that has a minimum barrel size of 2 pipe sizes larger the inlet size. A fixture fitting with the same barrel size as the inlet may also be used. (March 2000)

MULTIPLE LAVATORIES & DRAINAGE — Back to back or side by side lavatories with 1-1/4 tailpieces are okay to drain into a 2 x 1½ sanitary cross. (March 2000)

MULTIPLE WATER CLOSETS & DRAINAGE — Back to back or side by side water closets may drain into a 4x3 sanitary cross. A double combination wye/eighth bend is also acceptable by code for water closets only. (March 2000)

NAIL PLATES — Nail plates must be in place for the plumbing top out inspection. (July 2000)

NAIL PLATES & FHA STRAPS — Nail plates are required to be on at the Plumbing Top Out inspection. FHA straps installed to comply with 1997 Uniform Building Code Section 2320.11.7 are acceptable substitutes. (February 2000)

OFFSET CLOSET FLANGES — Flanges that have a true offset are permitted. Not permitted are those that have a shelf but the throat does not have a full 3-inch passage way. (January 2000)

PEX PIPE MANUFACTURERS — Wirsbo, Aqua Pex and I-Pex are currently the only PEX pipe manufacturers that have pipe and fittings approval. Piping is tested to the highest standard, either the UPC or manufacturer's requirements. (January 2000)

PIPING INSTALLATION & MANUFACTURED HOMES — UPC standards and tests are required for piping installed in the field for either 101 modular or manufactured homes. If minimal pipe and fittings are added to the drainage system, a flow test may be performed. (September 2000)

PIPING - NONCOMBUSTIBLE — 1997 Uniform Building Code Section 709.7 requires piping that penetrates rated walls to be noncombustible and to remain noncombustible. In cases where plastic piping inside the wall converts to noncombustible piping to exit the wall at the upper end of the stack, the noncombustible piping must continue to the vent above the roof. (November 2000)

PLUMBING BASE INSPECTION REQUIREMENTS — All plumbing base inspections require the building drain to be extended outside the structure. In addition, all water service entries entering through the foundation wall are to be sleeved and water proofed per Section 313.10 of the 97 UPC. Note: 1-1/4" ID sleeve is acceptable for 3/4" service line. (November 2000)

PLUMBING PLANS DEVIATIONS — Plans may have to be revised if significant deviations from the isometric drawings are found during inspection. Fixture numbers, including ADA fixtures, must be accurate and plumbed to code. (July 2000)

PLUMBING DWV TESTING — Testing out the roof for top inspections continues to be required, however, the test is also to be carried up to the highest group of fittings and/or the attic. Effective Nov. 1, 2000, tests up to the attic are required. (September 2000)

RED/YELLOW BRASS PIPING — Variance requests are required for red or yellow brass piping passing through foundation walls without sleeves. This variance request will be placed on the Consent Calendar. (February 2000)

RUNNING TRAPS — Running traps may be wet vented by or be used to wet vent other fixtures. (January 2000)

STAND PIPES — Clothes washer stand pipes dimensions are set by code. Dishwasher stand pipes are not, but must be extended up so that the overflow notch is higher than the bottom of the sink bowl. (January 2000)

STUBBED OUT BUILDING DRAIN CLARIFICATION — The building drain should be stubbed out under the footing/foundation wall whether under slab or in a crawl space. All piping inside the building footprint should be under test, except the downstream joint at the test tee. (October 2000)

TRAPS — All concealed traps, except bathtubs, should be under test at time of inspection. This includes running traps; the inlet to the running trap extends beyond where the waste and overflow will connect. The trap arm for a bathtub should be extended beyond where the trap will be installed. (October 2000)

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VERTICAL WET VENTING & LAUNDRY SINKS — Table 7-3, Footnote 2, applicable to the listed sinks, requires a minimum 2-inch branch drain beyond the trap arm. Footnote 2 does not appear after laundry sinks, therefore a laundry sink draining into a waste stack acting as a vertical wet vent is required to be only 2" in diameter. The vertical drain line size for 2 fixture units may be 1½" according to Table 7-5. (August 2000)

VENT LENGTH - HORIZONTAL — Table 7-5 footnote limits horizontal vents to 1/3 of the total permitted length of the distances shown in Table 7-5. (This does not mean 1/3 of the length actually installed.) (June 2000)

VERTICAL WET VENTED SECTION — Increase by 1 pipe size larger than the size required for the upper drain line. (June 2000)

WATER LINES IN GARAGE CEILINGS & CANTILEVERS — This installation is acceptable if pipes are run tight to the bottom of the floor above with insulation below and against any outside walls in the joist space. (June 2000)

WATER LINES — Water lines entering the building through the foundation wall must be sleeved and water tight as required by 1997 UPC Section 313.10. A 1 1/4" ID sleeve will be acceptable for a 3/4" water entry. (October 2000)

WET VENTING — Stacked tees at the kitchen for the sink and dishwasher drains may be used as a wet vent with either the sink or the dishwasher discharging into the upper most tee. Clothes washer stand pipes may also be used to wet vent; however, when used for a vertical wet vent, the drain line must be sized 1 pipe size larger. (February 2000)

Manufactured Homes

PERMANENT SET/FOUNDATION — (June 2000)

- a) If the perimeter of the crawl space is not insulated, it is required to have heat tape and insulation similar to the method used for mobile homes to protect the water line from freezing.
- b) "101 Universal" permit requires a permanent poured foundation with a permanent skirting and proper grading.

PIPING TO THE GAS PIPE — If a manufactured home is pre-piped to the wrong location for gas pipe - and additional piping is installed - the new piping must be sized correctly to the connection of the existing pipe. (June 2000)

PIPING INSTALLATION & MANUFACTURED HOMES — UPC standards and tests are required for piping installed in the field for either 101 modular or manufactured homes. If minimal pipe and fittings are added to the drainage system, a flow test may be performed. (September 2000)

Townhomes - Plumbing & Mechanical Information

TOWNHOME PROPERTY LINE DEFINITION & VENT/DUCT TERMINATIONS — The property line is the dividing wall between the townhome units. Appliance vents may not terminate within 4 feet of a property line and environmental exhaust ducts cannot terminate within 3 feet; dryer and bath vent terminations are not allowed within 3' of property line. (April 2000)

TOWNHOME UPPER FLOOR — If the upper floor is more than 1,000 SF without a parapet wall on the roof, then the roof ceiling area 5 feet horizontally from the property line is to be of 1-hour construction. This area may only be penetrated with approved fire/smoke dampers or rated shaft protection. (April 2000)

TOWNHOME PLUMBING LINES & P-TRAPS — Plumbing lines in the rated wall between the units which penetrate the membrane must be a listed assembly or noncombustible pipe and cannot be connected to combustibles on both sides of the penetration. Therefore when stubbing a metal trap arm from a plastic drain line through this rated wall, a plastic P-trap is not allowed. (April 2000)