

THE CORPORATION OF THE DISTRICT OF BURNABY

BY-LAW NO. 3298

A BY-LAW for regulating the installation and maintenance of gas burning appliances, gas vents, and gas piping in the Municipality of Burnaby.

The Municipal Council of The Corporation of the District of Burnaby ENACTS as follows:

1. INTERPRETATION:

In the construction and for the interpretation of this By-law the following words and terms shall have the meanings hereby assigned to them unless repugnant to the context hereof:

- (a) Appliance - means any device which utilizes gas to produce light, heat or power.
- (b) Approved - as to materials, workmanship and types of construction, means approval by the Inspector as the result of investigation, inspection and/or tests conducted by him, or by reason of accepted principles or tests by recognized authorities. Recognized authorities shall be the Canadian Gas Association, or the American Gas Association.
- (c) Inspector - means the Chief Building Inspector appointed from time to time by the Council pursuant to provisions of the Building By-law, for the purpose of inspecting and carrying out and enforcing the provisions of this By-law and shall mean and include Assistant Plumbing Inspectors.
- (d) Contractor - means any person who maintains an established place of business for the installation or repair of house piping or appliances.
- (e) Gas Fitting - means the constructing, altering or repairing of any gas piping and includes the installation of gas burners and appliances.
- (f) Gas Fitter - means and includes every person engaging in gas fitting who is the holder of a valid trade license as a Gas Fitter in the Municipality of Burnaby.

- (g) Gas - means natural, manufactured, mixed, or liquified petroleum gas supplied to the public in any manner.
- (h) Gas Company - means any person or Corporation engaged in the sale and/or distribution of gas to the public.
- (i) Gas Piping - means all piping used or to be used to Convey fuel gas.
- (j) Gas Pipeline - means any line of pipe of a gas company used for transmitting or transporting gas and includes the portion of a gas system commonly called street mains and service pipe, but shall not include house piping as defined.
- (k) House Piping - means the gas piping in any premises whatsoever beyond the outlet of the meter and extending to an appliance or appliance connection, and shall include all gas piping within the premises ahead of the meter which is not installed by or on behalf of the gas company for its own account.
- (l) Street Main - means a portion of the system used for distributing gas, generally located entirely outside of the customer's premises, and which is designed to supply gas to the service pipes of one or more customers.
- (m) Service Pipe - means the pipe and fittings used to convey unmeasured gas from the main to the premises to be supplied, and in general extends underground through the main foundation wall to the meter, but shall not include that portion of house piping ahead of the meter as defined in Section 1 (k).
- (n) Riser - means any vertical pipe which conducts the gas upwards.
- (o) Vent - means a conduit or passageway designed to convey the products of combustion to the outside air, and may also include an approved chimney.
- (p) Combustible Material - means walls, floors, ceilings, shelves or other parts of a building constructed of wood, wood lath and plaster, composition or paper, and including walls constructed of wooden studding, lath and plaster,

as distinct from brick or concrete construction.

- (q) Protected Combustible Material - means combustible material protected with a metal shield extending over an area exposed to the effects of heat from a gas appliance, so formed that an air space of not less than one (1) inch is created between such shield and the combustible material; provided, that in lieu of such air space cellular asbestos not less than one-quarter ($\frac{1}{4}$) inch in thickness or other approved equally effective insulating material may be used between such metal shield and any combustible material.
- (r) Owner - shall in addition to any other meaning be deemed to extend to and include tenant or occupier.
- (s) Outlet - means a threaded connection in a gas piping system to which a gas burning appliance is or may be attached.

2. APPLICATION

This By-law shall apply to all house piping, appliances and vents, but shall not apply to pipe lines.

3. CONFORMITY WITH BY-LAW

No person shall do or cause to be done any gas fitting as defined by this By-law on any premises within the Municipality without complying with all provisions of this By-law applicable thereto.

4. RIGHT OF ENTRY

(1) The Inspector shall have the right at all reasonable hours to enter in and on all premises in the performance of his duties.

(2) If the Inspector finds that any appliance has been installed in breach of Section 8, or is defective or dangerous to life or property, or that any house piping or vent from an appliance is defective or dangerous to life or property, he may shut off such appliance or house piping or require the gas company, to whose pipe line such house piping is connected, to shut off such house piping. Where such disconnection has been made, a notice shall be attached

to such appliances or gas piping which shall state that the same has been disconnected, together with reasons therefor, and such notice shall not be removed nor shall the appliance or gas piping be reconnected without authority from the Inspector.

(3) Any person who shall deny admittance to the Inspector seeking to enter premises pursuant to subsection (1) and who has properly identified himself, and any person who obstructs or interferes in any way with the Inspector in the performance of his duties, or obstructs or interferes with an employee of a gas company in performance of duties under subsection (2), shall be liable to the penalties hereby imposed.

5. AUTHORITY TO RENDER GAS SERVICE:

(1) It shall be unlawful for any person, firm or corporation, excepting an authorized agent or employee of the gas company whose service pipes supply or connect with the particular premises, to turn on or reconnect gas service in or on any premises where and when gas service is not at the time being rendered.

(2) In any case where an appliance or house piping is disconnected or shut off as aforesaid in Section 4 (2), it shall be unlawful for any person to reconnect or turn on such appliance or house piping unless and until authorized by the Inspector so to do.

6. SUSPENSION OF WORK:

The Inspector is hereby authorized and empowered to direct the immediate suspension of all or any portion of any gas fitting on any premises by posting a notice to that effect on such premises whenever it appears to him that such gas fitting is being carried on without a proper permit having been obtained in respect thereof or whenever the Inspector shall deem that such gas fitting is not being done in accordance with the permit issued in respect thereof.

7. PERMITS

(1) Before any person commences the installation, alteration or repair of any house piping, appliance or vent in any

premises, he shall submit to the Inspector an application in writing, giving a description of the work to be done, and particulars of the number and kinds of appliances and of the size and length of house piping and of the size, length, kind and location of the vent proposed to be installed, altered or repaired.

(2) If such application is approved by the Inspector, he shall issue a permit for such installation, alteration or repair upon payment of a fee as hereinafter fixed:

For one (1) appliance - one dollar (\$1.00) plus one dollar (\$1.00) for each appliance in excess of one (1) up to and including ten (10) appliances;

For eleven (11) appliances - ten dollars (\$10.00) plus seventy-five cents (75¢) for each appliance in excess of ten (10) up to and including twenty (20) appliances;

For twenty-one (21) appliances - fifteen dollars (\$15.00) plus fifty cents (50¢) for each appliance in excess of twenty (20) appliances.

8. INSPECTION:

(1) Any person doing work pursuant to a permit shall notify the Inspector when he has completed his work.

(2) The Inspector shall make the following inspections and shall either approve that portion of the work as completed or shall notify the permit holder wherein the same fails to comply with this By-law:

(a) Rough Piping Inspection:

This inspection shall be made after all gas piping authorized by the permit has been installed, and before any such piping has been covered or concealed, or any fixture or appliance has been attached thereto. This inspection will include a determination that the gas piping size, material and installation meet the requirements of this code.

(b) Final Piping Inspection:

This inspection shall be made after all piping authorized by the permit has been installed and after all portions thereof which are to be covered or concealed are so concealed, and before any fixture or appliance has been attached thereto.

This inspection may, at the discretion of the Inspector, include a pressure test at which time the gas piping shall be

subjected to an air pressure that will support a column of mercury twelve (12) inches in height and shall hold this pressure for a period of ten (10) minutes without perceptible pressure drop. This test shall be made using air only. A spring gauge shall not be used. All necessary apparatus for conducting the test shall be furnished by the Inspector but the permit holder shall invariably provide for this test by ensuring that the entire gas piping system is properly sealed off except at one point where a fitting suitable for the Inspector's pressure test shall be provided.

Where the work authorized by the permit consists of additional piping to be installed on gas piping already connected to a gas meter, the Inspector may, at his discretion, waive the pressure test but will make such inspection as he deems advisable to assure himself that the work has been performed in accordance with the intent of this Code.

(3) The provisions of this Section shall not be construed to prohibit the making of a first and final inspection at one and the same time, in the event that the gas piping is not concealed, covered or enclosed in any manner that will interfere with a thorough inspection thereof.

9. CERTIFICATE OF INSPECTION:

(1) When the final piping inspection has been made, if the installation is found to comply with the provisions of this Code, a certificate of inspection shall be issued by the Inspector.

(2) A notification of such final piping inspection and approval for connection shall be issued to the Gas Company supplying gas to the premises.

(3) It shall be unlawful for a Gas Company to turn on or cause to be turned on any gas meter until such notification of inspection as herein provided shall have been issued.

10. MATERIAL FOR GAS PIPING

(1) All pipe used for the installation, extension, alteration or repair of any gas piping shall be standard weight wrought iron or steel. Copper or brass pipe in iron pipe sizes assembled with threaded fittings of the same materials may be used with gases not corrosive to such materials.

(2) All such pipe shall either be new or shall previously have been used for no other purpose than conveying gas. It shall be free from internal obstructions and the ends shall be properly reamed.

(3) All fittings shall be of iron or steel, copper or brass.

(4) All joints in the piping system, unless welded, shall be screwed joints having standard pipe threads. Such screwed joints shall be made up with an approved thread compound applied to the male threads only.

11. INSTALLATION OF GAS PIPING

(1) All gas piping installed below ground outside of any building shall be protected against corrosion to the satisfaction of the Inspector. Such underground piping shall be one pipe size larger than would normally be calculated by the procedure specified in Section 13.

(2) All gas piping shall be graded toward the meter wherever possible. Piping trapped by a change of grade shall be provided with a suitable drip pipe at the points where condensation will tend to collect. The drip pipe shall be at least six (6) inches long, the end capped and accessible for draining.

(3) All gas piping shall be supported at intervals of not more than ten (10) feet by supports capable of carrying four (4) times the weight of the pipe being supported.

(4) Bushings and unions shall not be used in concealed locations.

(5) If air or oxygen under pressure is interconnected with the gas piping system, an approved spring-loaded check valve shall be installed to prevent air or oxygen from entering the gas piping.

(6) All pipe connections to appliances shall be made by means of a union.

(7) An approved lever handle valve shall be installed at each house piping outlet ahead of the union connection.

(8) All outlets shall be properly and securely connected to appliances or capped or plugged with screwed joint fittings.

(9) When, in running gas pipe, it is necessary to cross wood joists or beams, they may only be notched in that portion of the span within three (3) times the joist or beam depth from a support. Such notches shall not exceed one-fifth (1/5) of the depth of the timber.

(10) The installation of gas piping in relation to electric wiring shall be in accordance with regulations of the Canadian Electrical Code, Part 1, and amendments thereto.

12. REQUIRED GAS SUPPLY

(1) All regulations and tables are based on the use of gas of approximately 0.65 specific gravity with respect to air.

(2) Where a gas of specific gravity in excess of 0.75 is delivered, the Inspector may require the application of a correction factor to the gas piping table. Other conditions being equal, the capacity of a gas piping system varies inversely as the square root of the specific gravity of the gas being delivered.

(3) The hourly volume of gas required at each piping outlet shall be taken as not less than the maximum hourly rating as specified by the manufacturer of the appliance or appliances to be connected to each such outlet.

(4) Where the manufacturers rating of an appliance is given in British Thermal Units (B.T.U.) per hour, this rating shall be divided by the Heating Value of the gas to be delivered, in B.T.U. per cubic feet, to obtain the corresponding gas demand in cubic feet per hour.

(5) Where the gas appliance to be installed has not been definitely specified, Table I may be used as a reference to estimate approximately the requirements in cubic feet per hour of typical appliances.

(6) In no case shall an appliance connector or the gas pipe to any gas appliance be installed having a diameter smaller than the inlet connection of that appliance provided that the minimum pipe size to any domestic gas range shall be three-fourths ($\frac{3}{4}$) inch, except as provided in Section 13.

(7) The minimum hourly demand at any outlet installed to supply an unspecified type of appliance shall be:

40 cubic feet of 460 B.T.U. manufactured gas
 20 " " " 1000 B.T.U. natural gas
 10 " " " 2500 B.T.U. propane gas

TABLE I

APPROXIMATE MAXIMUM DEMAND OF TYPICAL GAS APPLIANCES
IN CUBIC FEET PER HOUR

Appliance	Manufactured Gas-460 B.T.U. per Cubic Ft.	Demand Natural Gas-1000 BTU/cu.ft.	Propane Gas-2500 BTU/cu. ft.
Domestic gas range	100	50	20
Storage water heater - up to 30 gal. tank.	60	30	12
Storage water heater - 40 to 50 gal. tank.	90	45	18
Gas refrigerator	6	3	1
Gas steam radiators - per section	4	2	1
Wall heaters	20	10	4
Steam boilers - per horsepower	100	50	20
Restaurant range			
4 top burners, 2 ovens	300	150	60
6 top burners, 2-4 ovens	480	240	90

TABLE II

SIZE OF GAS PIPING
MAXIMUM CAPACITY IN CUBIC FEET PER HOUR
DISTANCE IN FEET

Nominal Size Pipe	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	125'	150'	200'
$\frac{1}{2}$ "	135	95	80	65	60	55	50	45	43	40	37	35	30
$\frac{3}{4}$ "	295	200	160	135	125	110	105	95	90	85	80	70	60
1"	560	380	305	260	230	210	190	180	170	165	150	130	110
1 $\frac{1}{4}$ "	1160	800	635	550	485	440	405	370	350	330	295	265	225
1 $\frac{1}{2}$ "	1700	1200	960	825	730	665	610	565	535	500	445	395	340
2"	3200	2200	1875	1590	1400	1275	1170	1090	1025	965	850	775	665
2 $\frac{1}{2}$ "	5100	3700	3000	2600	2300	2150	2010	1890	1775	1675	1450	1300	1100

13. REQUIRED GAS PIPING SIZE:

The size of each section and each outlet of a gas piping system shall be determined by means of Table 2, except as allowed in Section 12 (2).

(1) To determine the size of any section of pipe in a system, proceed as follows if the gas meter is to be located in the building.

(a) Measure the length of pipe from the point where the gas supply enters the buildings to the most remote outlet in the building.

(b) In Table 2, select the column showing that distance, or the next longer distance, if the table does not give the exact length.

(c) Use this vertical column to locate all gas demand figures for this particular system of gas piping.

(d) Starting at the most remote outlet, find in the vertical column just selected, the gas demand for that outlet. If the exact figure of demand is not shown, choose the next larger figure below in the column.

(e) Opposite this demand figure, in the first column at the left in Table 2 will be found the correct size of pipe.

(f) Proceed in a similar manner for each outlet and each section of pipe. For each section of pipe, determine the total gas demand supplied by that section.

(2) If the gas meter is not located at the building proceed as outlined above in subsection (1) for the house piping and as follows for the yard piping.

(a) Measure the length of yard pipe from the gas meter to the building supply inlet.

(b) In Table 2 select the vertical column containing the distance of the measured length of yard pipe, or the next longer distance.

(c) In this vertical column select the figure corresponding to the total demand of all appliances. If the exact figure of demand is not shown, choose the next larger figure below in the same column.

(d) Opposite this demand on the same line will be found the minimum size of pipe allowable. At no time shall the yard pipe be smaller in diameter than the house supply inlet.

(3) For conditions other than those covered by Table 2, such as longer runs of piping or greater gas demands, the size of piping shall be calculated by standard engineering methods in a manner satisfactory to the Inspector. The calculated pressure drop between the meter and the point of use under full load conditions shall not exceed 0.4 inches water column.

14. CLOSURE OF PIPING OUTLETS:

It shall be unlawful to remove or disconnect any gas appliance without capping or plugging with a screwed joint fitting, the outlet from which said gas appliance was removed. All outlets to which gas appliances are not connected shall be left capped gas tight on any piping system being installed, altered, extended, or repaired.

15. LEAK TESTS:

(1) Leaks in gas piping shall be located by applying soapy water to the exterior of the piping.

(2) Fire or acid shall not be used to locate leaks, nor shall water be introduced into the gas piping.

(3) It shall not be permissible to repair defects in gas piping or fittings, but, having been located, the defective pipe or fitting shall be removed and replaced with sound material.

16. GAS METER LOCATIONS:

(1) All gas meter locations shall be approved by the Inspector and acceptable to the Gas Company.

(2) All gas meters shall be so placed as to be at all times readily accessible for inspection, reading, testing and shutting off the gas supply. Gas meters shall not be placed under steps, under a show window, in an unventilated closet or other small confined space, in a coal bin, driveway, passage or other location where it will be subject to damage, or near a furnace or boiler or other equipment which produces large heating effects.

(3) Every riser in any building having more than two (2) meters shall be plainly marked with a suitable metal tag clearly indicating the number of the room, apartment or section of the building which it serves.

17. GAS APPLIANCES

(1) Each gas appliance and accessory designed for domestic or commercial use shall be in conformity with the provisions of this Code.

(2) Used gas appliances may be reinstalled when, in the opinion of the Inspector, they may be used without danger to persons or property.

(3) Fully automatic appliances controlled by a thermostat or controlled remotely shall be equipped with an automatic pilot control which will cut off the gas supply to the main burner in the event of a pilot outage. If the gas served has a specific gravity greater than (1.00) with respect to air, the gas supply to the pilot as well as to the main burner must be cut off in the event of a pilot outage.

(4) It shall be determined that the appliance has been designed for use with the gas to which it will be connected. No attempt shall be made to convert the appliance from the gas specified on the rating plate for use with a different gas without consulting the local gas supply company or the manufacturer for complete instructions.

(5) Appliances shall be installed in a location in which the facilities for ventilation permit satisfactory combustion of gas and proper venting, under normal conditions of use. Where such facilities for ventilation do not exist, there shall be a permanent opening or openings to the outside or source of adequate air supply, having a combined area of not less than one square inch per 1000 B.T.U. per hour of input rating of appliance.

18. APPLIANCE CONNECTIONS

(1) Except as hereinafter provided, every gas appliance shall be rigidly connected to the house gas piping outlet with

standard weight ferrous pipe and ferrous fittings of correct size and threaded. An approved lever handle valve shall be installed at each gas piping outlet on the meter side of the disconnect union so that the gas may be cut off when moving the appliance.

(2) Appliances rated at, or less than, 100,000 B.T.U. per hour may be connected with seamless, semi-rigid metal tubing connectors which comply with the following requirements:

(a) End fittings shall be screw or union type, permanently attached at the factory.

(b) The method of attaching such connectors to the gas piping and appliance shall not depend upon separate ferrules, washers, gaskets, or other detachable parts for gas tightness, nor shall such separate parts be used to establish and maintain the method of seal provided within the connector and fittings.

(c) End fittings shall be of a pipe size not less than that of the inlet connection to the appliance as provided by the manufacturer of such appliance.

(d) The overall length of such connectors shall not exceed three (3) feet.

(e) The connector shall attach to an outlet in the same room as the appliance.

(f) The connector shall be installed so as to be protected against mechanical injury.

(3) Flexible metal tubing permanently equipped with union or screw type end connectors at the factory may be used for connecting gas appliances designed for portable use, such as washing machines, ironers, clothes dryers, flat irons, dentists' torches, or other appliances, the location of which must be changed prior to or during operation, provided, however that such flexible tubing shall not be used to connect room heating appliances and shall not exceed three (3) feet in length.

(4) Flexible gas tubing (gas Hose) shall only be used for the connection of laboratory appliances and for lance type torches used for the lighting of large industrial appliances. An approved tap shall be installed ahead of such gas hose within convenient reaching distance of the appliance served by the hose. Gas hose should not be confused with semi-rigid tubing or appliance connectors

of flexible metal tubing and fittings. Only listed gas hose shall be used. Gas hose shall not be used where it is likely to be subject to excessive temperatures (above 125°F).

19. VENTING OF APPLIANCES:

Every gas appliance, except domestic gas ranges and domestic clothes dryers designed and not having flue collars, shall be connected to an approved type gas vent, or chimney which shall be at least the full size of the vent outlet of the appliance to be vented.

20. GAS VENTS - GENERAL:

(1) An effective flue for carrying off the products of combustion of gas shall mean either:

(a) A properly constructed masonry chimney free from obstructions and which normally conducts the products of combustion above the roof to the outer air, or

(b) A corrosion-resisting and insulated vent properly installed with a vertical rise inside the building and projecting through the roof to a position above the eaves of the roof in a clear, exposed area, or

(c) A corrosion-resisting and insulated vent projecting through the wall of the building to an area clear of air circulation obstructions at least 60% of the overall height of the building above ground level and terminating in a fitting approved by the Inspector.

(2) All vents shall rise vertically within the building as far as possible before passing through an outside wall and shall not terminate directly below a window, door or ventilator or within four (4) feet thereof. No vent or flue shall project from the wall of any building on to any street other than a lane.

(3) A metal vent pipe, exposed to view throughout its entire length in the room housing the appliance may be used to connect a gas appliance to the flue. Such vent pipes shall not be installed in any attic roof space or under any portion of a building, unless within the confines of a basement area.

(4) The vent pipe shall not be less in cross-section than the vent outlet of the gas appliance which it serves. Every vent pipe shall have a rise of at least one-quarter ($\frac{1}{4}$) inch per foot of length where the horizontal run is less than fifteen (15) feet

on a rise of at least one half ($\frac{1}{2}$) inch per foot of length where the horizontal run is fifteen (15) feet or more. The maximum length of horizontal run shall not exceed seventy-five (75) per cent of the height of the flue or vent.

(5) Every vent connection shall be securely supported at intervals of not more than five (5) feet.

(6) A rectangular or oval vent may be used, provided its internal cross-sectional area is not less than that of the vent outlet of the appliance which it serves. In no case shall any vent or portion thereof have a cross-sectional area of less than twelve (12) square inches, or a minimum internal dimension of less than two (2) inches.

(7) All sheet metal constituting a part of any single wall vent shall be at least No. 26 U.S. Standard Gauge. Straps, stirrups or hangers shall be at least No. 20 U.S. Standard Gauge and not less than three-quarter ($\frac{3}{4}$) inch wide. All ferrous sheet metal shall be galvanized except that bright or black sheet iron pipe is permissible if the entire run of such pipe is confined within the room housing the appliance and provided further that sheet iron vent pipes for water heaters and space heating furnaces shall in all cases be galvanized.

(8) Except as specified in Section 24, the area of any vent serving more than one appliance shall be not less than the area of the largest vent connection plus fifty (50) per cent of the areas of all other additional vent connections.

(9) Every vent, thimble, and inlet extending into or through any wall, partition, floor, ceiling or roof of any building shall have a perforated and ventilated sleeve extending the full length of such space between the ceiling and floor above, or through any partition or wall. Such sleeve shall provide at least a three-quarter ($\frac{3}{4}$) inch air space at every point around the vent. Such sleeve or air space may be omitted in noncombustible construction.

(10) Where two or more inlets are provided in any vent, such inlets shall be off-set in such a manner that no section of any inlet shall be opposite to other inlets in such vent.

(11) Vent inlets not in use shall be tightly closed by means of an approved cap.

(12) Corrosion resisting material shall be used in the construction of concealed vents. All joints in concealed vent piping shall be fume tight and permanent.

(13) In the venting of all automatic appliances and heating appliances, proper provision shall be made for the prevention of down drafts.

(14) No damper in a vent from any gas appliance shall, when completely closed, shut off more than seventy-five (75) per cent of the cross section area of the vent.

(15) No damper shall be installed in any vent to which a gas water heater or space heating gas furnace is connected.

(16) A flue or vent connector shall not be connected to a chimney flue having a fireplace opening unless the opening is permanently sealed.

21. APPLIANCE CLEARANCES FROM COMBUSTIBLE MATERIAL

Appliances so constructed that the burners are not shielded by metal or other approved insulating material shall not be located within twelve (12) inches of any combustible material. All appliances, except floor and wall furnaces so constructed that metal shields or other approved insulating materials are an integral part of their construction, shall not be located so as to permit such metal shields or other approved insulating material to be within six (6) inches of combustible material or within three (3) inches of protected combustible material. However, appliances found to comply with national standards of safety for installation at lesser distances from combustible material and protected combustible material may be installed at the distance at which they are found to be safe, provided such installations are not in conflict with the provisions of the Building Code. Gas appliances having open flames, such as gas plates and ranges, shall not be installed within three (3) feet of any ceiling or overhanging construction of combustible material.

22. GAS PLATES AND RANGES

Gas plates and ranges shall not be installed in rooms used for sleeping purposes, excepting approved Combination Rooms.

23. WATER HEATERS:

(1) A compartment used to house a water heater shall be of such size that the heater is readily accessible for adjusting, servicing or replacement, with one side completely open unless closed by a removable panel. Openings for air shall be provided not less than thirty-six (36) square inches in area, each, near the floor and ceiling of the compartment.

(2) Uninsulated domestic water heaters shall not be installed closer than six (6) inches to any combustible wall or partition nor closer than three (3) inches to any protected wall or partition. Insulated domestic water heaters shall not be installed closer than three (3) inches to any combustible wall or partition nor closer than one (1) inch to any protected wall or partition.

(3) No gas water heater shall be installed in any bathroom, clothes closet, attic or in any room used or designed to be used for sleeping purposes.

(4) All water heating appliances which are installed in a closed system of water piping and/or any water heater connected to a separate storage tank and having valves between said heater and tank, shall be protected with an approved water pressure relief valve set at a pressure of not more than fifty (50) pounds per square inch above the pressure of the water supply. Every relief valve shall be readily accessible. No valve of any kind shall be installed between the relief valve and the equipment protected by it.

24. WARM AIR FURNACES:

(1) Every gas burning warm air furnace other than a floor or wall furnace shall be equipped with an automatic control or controls. Such controls shall be arranged to shut off the main fuel supply in the event that the temperature in the warm air pipe exceeds 250 degrees Fahrenheit, within twenty-four (24) inches of the point where the hot air pipe connects to the furnace. Where a gravity warm air heating system is installed with at least one warm air outlet having an area not less than thirty-five (35) square inches and permanently open and unobstructed, except by an open-faced grill, the automatic control will not be required. Such warm air

outlet shall not be subject to control by any manually operated shutter, louvre or damper.

(2) Every heating appliance shall be readily accessible for inspection repair or replacement without removing permanent construction, and sufficient room shall be available to enable the operator to observe the firebox, burner and pilot while starting the appliance.

(3) The top of every warm air gas furnace shall not be less than nine (9) inches from protected combustible material nor less than eighteen (18) inches from unprotected. The side walls of such furnace shall be not less than twelve (12) inches from unprotected combustible material nor less than six (6) inches from protected combustible material. The clearances may be reduced for appliances which are designed and approved for installation adjacent to combustible materials and installed in accordance with such approval.

(4) Every floor of combustible construction under a warm air gas furnace shall be covered with one-quarter ($\frac{1}{4}$) inch of asbestos board or other equivalent fire protective material. The floor covering shall project twelve (12) inches beyond all sides of the furnace or to the furnace enclosure.

(5) No floor furnace shall be installed in the floor of any aisle or passageway of any room used as a place of public assembly or in any egress from such room.

No floor furnace shall be installed where it will extend below the floor into any garage, finished room, or space used for storage of flammable materials or wastes, unless portions of the furnace extending below the floor are entirely encased within a metal enclosure constructed of No. 20 U.S. Gauge iron or steel. The enclosure shall be connected with the outside air through metal ducts of sufficient capacity to properly support combustion in such furnace within the enclosure. The metal enclosure shall be made or installed so as to make the furnace accessible for inspection or repair.

25. ROOM OR SPACE HEATERS:

(1) A room or space heater shall be placed so as not to cause a hazard to walls, floors, curtains, furniture, doors when

open, etc., and so as not to obstruct the free movements of persons within the room.

(2) Room heaters having an outer jacket surrounding the combustion chamber arranged with openings top and bottom so that air circulates between the inner combustion chamber and the outer jacket and without openings in the outer jacket to permit direct radiation shall have clearances at sides and rear of not less than twelve (12) inches.

(3) Only those wall type room or space heaters approved by Fire Underwriters Laboratories and Provincial Fire Marshal's Office shall be installed in walls of combustible construction.

26. NO LIABILITY ON CORPORATION:

This By-law shall not be construed as imposing on the Corporation any liability for damages to any person suffering any injury or disability due to any defective or faulty gas fitting or gas piping, nor shall the Corporation or any official thereof be considered as assuming any such liability by reason of any inspection made pursuant to the provisions of this By-law.

27. PENALTIES:

Any person, firm or corporation guilty of any infraction of this By-law, (and for the purposes hereof every infraction shall be deemed to be a continuing, new and separate offence, for each day during which the same shall continue) shall upon conviction of such infraction or infractions before the Police Magistrate or any Justice of the Peace or any Magistrate or Magistrates having jurisdiction within the District of or for the District of Burnaby on the oath or affirmation of any credible witness forfeit and pay at the discretion of the said Police Magistrate, Justice of the Peace or other Magistrate or Magistrates convicting, a fine or penalty not exceeding the sum of One hundred dollars for each day or part of day upon which any such infraction shall be committed and a further fine or penalty not exceeding One hundred dollars for each day or part of a day upon which any such infraction shall be continued together with the costs for each such offence; in default of payment thereof forthwith it shall be lawful for such Magistrate or Magistrates so convicting as aforesaid to issue a warrant under

his or their hand and seal to levy the said fine or penalty and costs or costs only by distress and sale of the offender's goods and chattels; and in case of sufficient distress not being found to satisfy the said fine or penalty and costs, it shall and may be lawful for such Magistrate or Magistrates so convicting as aforesaid, to commit the offender to the common gaol or any lock-up house within the District of Burnaby for any period not exceeding two calendar months (with or without hard labour) unless the said fine or penalty and costs be sooner paid.

This By-law may be cited as the "BURNABY GAS FITTINGS BY-LAW, 1953."

DONE AND PASSED in Open Council this Twenty-third (23rd) day of March, A.D. 1953.

RECONSIDERED AND FINALLY PASSED this Thirtieth (30th) day of March, A.D. 1953.



W. R. Beaman

REEVE

Charles B. Brown

CLERK