Oregon
Interpretive Ruling No. 93-83
GAS PIPING UNDER BUILDINGS

Requested By: PPPI MANUAL REVIEW COMMITTEE

REQUEST

Retain PPPI-4106, as amended, to reflect current code sections.

QUESTION

Some building officials are authorizing buried gas pipes under buildings, a practice which can be very hazardous with the potential for corrosion and fire. Can anything be done to correct this?

APPLICABLE CODE SECTIONS

1993 Oregon Mechanical Specialty Code (OMSC) Section 2213(b), One and Two Family Dwelling Specialty Code (Dwelling Code), Section M-1707.1.5 and NFPA 54, Section 1.2.9.5.

BACKGROUND

The Mechanical Specialty Code prohibits the installation of gas piping in the ground or on the ground under a building, but allows the building official to authorize this installation when structural conditions make it necessary.

Gas piping in contact with the soil always presents a potential for corrosion and gas leaks with the possibility of explosion and fire. The buried gas piping of the utility is periodically inspected for leaks as required by the Public Utility Commissioner. The piping after the meter is not as carefully controlled; therefore, it is deemed wise to further protect this pipe by removing it from soil contact to minimize corrosion.

Building officials are urged to discourage underground installations under buildings, but if this is not practical, then the following is an approved alternate method:

NFPA 54 says:

> **1.2.9.5 Piping Underground Beneath Buildings:** When the installation of gas piping underground beneath buildings is unavoidable, the piping shall be encased in a conduit. The conduit shall extend into a normally usable and accessible portion of the building and, at the point where the conduit terminates in the building, the space between the conduit and the gas piping shall be sealed to prevent the possible entrance of any gas leakage. The conduit shall extend at least 4 inches outside the building, be vented above grade to the outside and be installed in a way as to prevent the entrance of water. If a gas leak occurs in the conduit, the gas will not enter or accumulate in the building. The leaking gas will be vented to the outside and will be detected, due to the odor.
>
> OMSC, SECTION 2213(b) Exception: (Same as NFPA 54 with a few minor changes that don't change the content of the Exception.)
>
> Dwelling Code, Section M-1707.1.5 Piping beneath buildings: Fuel gas piping located beneath buildings shall be encased in conduit which is capable of withstanding superimposed loads. The terminal point where the conduit enters the building shall be sealed to prevent the possible entrance of any gas leakage. The conduit shall extend at least 4 inches outside the building and be vented above grade to the outside. This section shall not apply to piping in ventilated crawl spaces.

FINDINGS

This interpretation is authorized by ORS 455.060, Rulings on Acceptability of Materials, Designs or Methods of Construction and Attorney General's Opinion OP-5208 issued October 1, 1981, which advised the statute permits authoritative interpretations of existing code requirements.

DISCUSSION AND CONCLUSION

The installation of underground gas piping may be allowed by the building official per OMSC Section 2205(c) "Exception," Dwelling Code, Section M-1707.1.5 or shall conform to NFPA Standard Section

54.1.2.9.5, as set forth in this interpretation. Slabs (sidewalks, driveways, etc.) which abut buildings or may trap leaking gas and permit it to leak into an adjacent structure, should be protected by conduit and vented as required by this Interpretive Ruling.

Interpretive Ruling 93-83 replaces PPPI-4106.

(See attached drawing for clarification.)

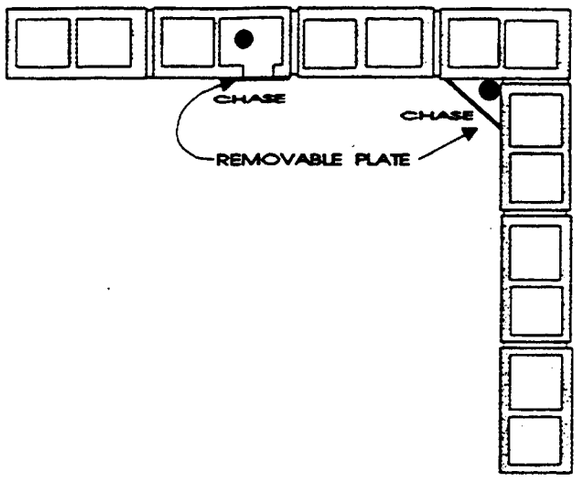
(signed January 26, 1994)
John Talbott, Chairman
Structural Code Advisory Board

Date

The recommendations and findings of the Structural Code Advisory Board are accepted and the conclusions are adopted.

(signed January 26, 1994)
Gary Wicks, Administrator
Building Codes Division

Date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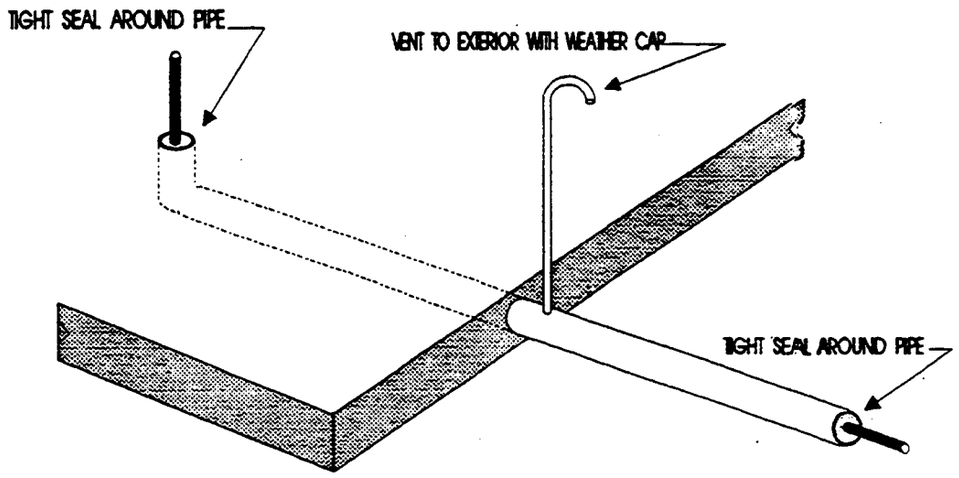
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