

**NC Department of Insurance  
Office of the State Fire Marshal - Engineering Division  
1202 Mail Service Center, Raleigh, NC 27699-1202  
919-647-0000**

**Indoor Gas Piping**

**Code:** Fuel Gas Code  
**Section:** 404.9<sup>1</sup>  
**Code:** Residential Code  
**Section:** G2415.9

**Date:** August 20, 2019

**Question:**

Per section 404.9, ferrous metal exposed in exterior locations is to be either painted or galvanized. Is an attic or crawl space installation considered outdoors or exterior?

**Answer:**

No.

See NCFGC Section 404.9. It is reprinted below for convenience. Piping installed inside a ventilated attic or ventilated crawl space is not outdoors, and these are not<sup>2</sup> exterior locations.

See Section 403.8, and NC DOI Interpretation<sup>3</sup> to Section 403.8 for conditions that may exist in certain applications, most likely commercial or industrial settings.

**404.9 Above-ground outdoor piping.** All *piping* installed outdoors shall be elevated not less than 3-1/2 inches (152 mm) above ground and where installed across roof surfaces, shall be elevated not less than 3-1/2 inches (152 mm) above the roof surface. *Piping* installed above ground, outdoors, and installed across the surface of roofs shall be securely supported and located where it will be protected from physical damage. Where passing through an outside wall, the *piping* shall also be protected against corrosion by coating or wrapping with an inert material. Where *piping* is encased in a protective pipe sleeve, the annular space between the *piping* and the sleeve shall be sealed. Ferrous metal exposed in exterior locations shall be protected from corrosion with one coat of exterior paint. Zinc coatings (galvanized) shall be deemed adequate protection for gas piping above ground.

**Keywords:**

Pipes, corrosion, rusting

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<sup>1</sup> This code language appeared in section 404.7 in the 2012 NC FGC.

<sup>2</sup> There is no guarantee rusting will not occur in these locations, but minimum code does not require painting or galvanizing.

<sup>3</sup> [http://www.ncdoi.com/OSFM/Engineering\\_and\\_Codes/Default.aspx?field1=Code\\_Interpretations&user=State\\_Building\\_Codes](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Interpretations&user=State_Building_Codes)