



MIKE CAUSEY, INSURANCE COMMISSIONER & STATE FIRE MARSHAL
BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

August 19, 2022

Mr. Bob Haynes
Permit & Inspections Director
Buncombe County Permits & Inspections
30 Valley Street
Asheville, NC 28801

RE: 2018 NC Plumbing Code Section 306.2.4 Tracer wire and 2018 NC Residential Code Section P2604.1.4 Tracer wire

Mr. Haynes:

This letter is in response to your request for formal interpretation dated June 30, 2022, that was received in NCDOI by email on June 30, 2022. Your request for formal interpretation states: "Mr. Burns, I am asking for a formal interpretation of section 306.2.4 of the 2018 NC Plumbing code. In that section it states, *"shall be installed adjacent to and over the full length of the piping."* When on a private sewer line utilizing plastic piping connecting to a public sewer system. Where does the tracer wire begin? Where does the tracer wire end? When on a private sewer line utilizing plastic piping connecting to a private sewer system. Where does the tracer wire begin? Where does the tracer wire end?"

Remarks:

Code sections noted in this letter reference the 2018 edition of the NC Plumbing Code, except sections beginning with a "P" reference the 2018 NC Residential Code, unless otherwise noted. Attachment A is comprised of the request for formal interpretation as well as all supporting information submitted with the request.

Code Analysis:

For installations regulated under the 2018 NC Plumbing Code, Section 306.2.4 "Tracer wire" states the following:

306.2.4 Tracer wire. For plastic sewer piping, an insulated copper tracer wire or other approved conductor shall be installed adjacent to and over the full length of the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate at the cleanout between the building drain and building sewer. The tracer wire size shall be not less than 14 AWG and the insulation type shall be listed for direct burial.

Comments: Plastic sewer piping installed underground requires a tracer wire to be installed. The tracer wire allows the plastic sewer piping to be identified prior to future excavation work in the vicinity of such piping. A damaged underground sewer pipe creates potential unsanitary conditions and negative impacts to the environment. The tracer wire shall be provided for the full length of plastic sewer piping regulated by the 2018 NC Plumbing Code.

For installations regulated under the 2018 NC Plumbing Code, Chapter 2 Definitions states the following:

BUILDING DRAIN. That part of the lowest piping of a drainage system that receives the discharge from soil, waste and other drainage pipes inside and that extends to 10 feet (3048 mm) beyond the exterior walls of the building and conveys the drainage to the *building sewer*.

Combined. A *building drain* that conveys both sewage and storm water or other drainage.

Sanitary. A *building drain* that conveys sewage only.

Storm. A *building drain* that conveys storm water or other drainage, but not sewage.

BUILDING SEWER. That part of the drainage system that extends from the end of the *building drain* and conveys the discharge to a *public sewer, private sewer*, individual sewage disposal system or other point of disposal.

Combined. A *building sewer* that conveys both sewage and storm water or other drainage.

Sanitary. A *building sewer* that conveys sewage only.

Storm. A *building sewer* that conveys storm water or other drainage, but not sewage.

SEWER.

Building sewer. See "Building sewer."

Public sewer. That part of the drainage system of pipes, installed and maintained by a city, township, county, public utility company or other public entity, and located on public property, in the street or in an approved dedicated easement of public or community use.

Sanitary sewer. A *sewer* that carries sewage and excludes storm, surface and ground water.

Storm sewer. A *sewer* that conveys rainwater, surface water, subsurface water and similar liquid wastes.

INDIVIDUAL SEWAGE DISPOSAL SYSTEM. A system for disposal of domestic sewage by means of a septic tank, cesspool or mechanical treatment, designed for utilization apart from a public sewer to serve a single establishment or building.

Comments: A building drain connects to the building sewer at a point 10 feet beyond the exterior walls of the building. A building sewer extends from the connection to the building drain to the point of connection to the public sewer, private sewer, individual sewage disposal system or other point of disposal. A public sewer is installed and maintained by a city, township, county, public utility company or other public entity. A private sewer and individual sewage disposal system is installed and maintained by the property owner but is regulated by the local health department.

Code Analysis:

For installations regulated under the 2018 NC Residential Code, Section P2604.1.4 “Tracer wire” states the following:

P2604.1.4 Tracer wire. For plastic sewer *pipng*, an insulated copper tracer wire or other approved conductor shall be installed adjacent to and over the full length of the *pipng*. Access shall be provided to the tracer wire or the tracer wire shall terminate at the cleanout between the *building drain* and *building sewer*. The tracer wire size shall be not less than 14 AWG and the insulation type shall be listed for direct burial.

Comments: Plastic sewer pipng installed underground requires a tracer wire to be installed. The tracer wire allows the plastic sewer pipng to be identified prior to future excavation work in the vicinity of such pipng. A damaged underground sewer pipe creates potential unsanitary conditions and negative impacts to the environment. The tracer wire shall be provided for the full length of plastic sewer pipng regulated by the 2018 NC Residential Code.

For installations regulated under the 2018 NC Residential Code, Chapter 2 Definitions states the following:

BUILDING DRAIN. That part of the lowest piping of a drainage system that receives the discharge from soil, waste and other drainage pipes inside and that extends to 10 feet (3048 mm) beyond the exterior walls of the building and conveys the drainage to the *building sewer*.

Exception: Drain lines connecting to septic tanks within 25 feet (7620 mm) of the building foundation wall for one-and two-family dwellings with three water closets or less shall be considered to be the *building drain* with a minimum size of 3 inches (76.2 mm).

[RP] BUILDING SEWER. That part of the drainage system that extends from the end of the *building drain* and conveys the discharge to a *public sewer, private sewer, individual sewage disposal system* or other point of disposal.

Sanitary. *A building sewer that conveys sewage only.*

Storm. *A building sewer that conveys storm water or other drainage, but not sewage.*

[RP] SEWER.

Building sewer. See "Building sewer."

Public sewer. That part of the drainage system of pipes, installed and maintained by a city, township, county, public utility company or other public entity, and located on public property, in the street or in an approved dedicated easement of public or community use.

Sanitary sewer. A sewer that carries sewage and excludes storm, surface and ground water.

Storm sewer. A sewer that conveys rainwater, surface water, subsurface water and similar liquid wastes.

[RP] INDIVIDUAL SEWAGE DISPOSAL SYSTEM. A system for disposal of domestic sewage by means of a septic tank, cesspool or mechanical treatment, designed for utilization apart from a public sewer to serve a single establishment or building.

Comments: A building drain connects to the building sewer at a point 10 feet beyond the exterior walls of the building. A building drain connecting to a septic tank within 25 feet of the building foundation wall for one-and two-family dwellings with three water closets or less shall be considered to be a building drain with a minimum size of 3 inches. A building sewer extends from the connection to the building drain to the point of connection to the public sewer, private sewer, individual sewage disposal system or other point of disposal. A public sewer is installed and maintained by a city, township, county, public utility company or other public entity. A private sewer and individual sewage disposal system is installed and maintained by the property owner but is regulated by the local health department.

Conclusions: *The tracer wire code requirements of 306.2.4 and P2604.1.4 for plastic sewer piping installed underground apply only to the piping regulated by the 2018 NC Plumbing Code or the 2018 NC Residential Code. The building drain and building sewer are regulated by the 2018 NC Plumbing Code or the 2018 NC Residential Code. A public sewer, private sewer or an individual sewage disposal system do not fall under the purview of the 2018 NC Plumbing Code or the 2018 NC Residential Code. Building drains or building sewers that cross property lines or are located within a right-of-way or utility easement are not subject to the tracer wire code requirements of the 2018 NC Plumbing Code or the 2018 NC Residential Code for plastic sewer piping installed underground. Check with the local utility provider as they may have tracer wire requirements for right-of-way and utility easements not included in the 2018 NC Plumbing Code or the 2018 NC Residential Code.*

Please call or email if you have comments or questions.

Sincerely,

A handwritten signature in black ink that reads "D.B. Rittlinger". The signature is written in a cursive style with a large, stylized "D" and "R".

David B. Rittlinger, PE, LEED AP
Chief Code Consultant
NCDOT-OSFM Engineering & Codes Division

cc: File
Bridget Herring, Chair – BCC
Mark Matheny, Chair – BCC Plumbing Ad-Hoc Committee
Nathan Childs, Assistant Attorney General, Insurance Section, NCDOT
John Hoomani, General Counsel, NCDOT

ATTACHMENT A



Permits & Inspections

Bob Haynes
Director

June 30, 2022

Mark Burns
Chief Plumbing Code Consultant
NC Department of Insurance
Office of State Fire Marshal
325 N. Salisbury Street
Raleigh, NC 27603
VIA EMAIL PDF to mark.burns@ncdoi.gov

RE: Formal Interpretation Request

Mr. Burns, I am asking for a formal interpretation of section 306.2.4 of the 2018 NC Plumbing code. In that section it states, "*shall be installed adjacent to and over the full length of the piping.*"

When on a private sewer line utilizing plastic piping connecting to a public sewer system.
Where does the tracer wire begin?
Where does the tracer wire end?

When on a private sewer line utilizing plastic piping connecting to a private sewer system.
Where does the tracer wire begin?
Where does the tracer wire end?


Regards,

Bob Haynes

Bob Haynes
Buncombe County
Permits & Inspections
30 Valley Street
Asheville, NC 28801



[External] RE: Formal Interpretation

 Bob Haynes <Bob.Haynes@buncombecounty.org>
To: Rittlinger, David B

Fri 7/1/2022 8:47 AM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

David, I appreciate it.

Thanks,



Bob Haynes

Permit & Inspections Director
(828) 250-5388 / cell (828) 989-1675
30 Valley Street., Asheville, NC 28801
#respect. Integrity. Collaboration. Honesty. Equity.
[Facebook](#) • [Twitter](#) • [Instagram](#) • [YouTube](#) • [LinkedIn](#)

From: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Sent: Friday, July 1, 2022 8:37 AM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Cc: Bob Haynes <Bob.Haynes@buncombecounty.org>; Burns, Mark <mark.burns@ncdoi.gov>
Subject: RE: Formal Interpretation

Bob,
I am in receipt of your request for a formal interpretation. Our office will provide a formal interpretation letter to you as soon as possible.
Thank you

David B. Rittlinger, PE, LEED AP
Code Interpretations Supervisor
Chief Code Consultant
Chief Mechanical & Fuel Gas Code Consultant
Engineering Division



N.C. Department of Insurance
Office of State Fire Marshal
1022 Mail Service Center
Raleigh, NC 27699-1022
919.847.0008

david.rittlinger@ncdoi.gov

Link to free view of 2018 NC Codes
<https://codes.iccsafe.org/codes/north-carolina>

FW: Formal Interpretation

 Martin, Carl
To: Rittlinger, David B
Cc: Bob Haynes Burns, Mark
You replied to this message on 7/1/2022 8:37 AM.

 Formal Interpretation.pdf
299 KB

Thu 6/30/2022 1:15 PM

David,
As Bob's request is for a "formal interpretation" it falls to you as the Chief Code Consultant to provide such an interpretation.

Carl Martin, RA
Deputy Commissioner
Division Chief of Engineering



N.C. Department of Insurance
Office of State Fire Marshal
1022 Mail Service Center
Raleigh, NC 27699-1022
cell: 919-888-0284

"Consistency" as defined by Merriam-Webster – "harmony of conduct or practice with profession"

From: Bob Haynes <Bob.Haynes@buncombecounty.org>
Sent: Thursday, June 30, 2022 9:24 AM
To: Burns, Mark <mark.burns@ncdoi.gov>; Martin, Carl <Carl.Martin@ncdoi.gov>
Subject: [External] Formal Interpretation

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Good morning, I am requesting a formal interpretation on section 306.2.4 Tracer wire. of the 2018 NC Plumbing Code.
See attached. Just let me know if I need to add or make my request more clear.

Thanks,



Bob Haynes

Permit & Inspections Director
(828) 250-5388 / cell (828) 989-1675
30 Valley Street., Asheville, NC 28801
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Sign up to receive emergency texts directly from Buncombe County for breaking health and safety news. Text **BCALERT** on your smart phone to **99411** to receive alerts on important information such as floods, communicable disease, county office closings, and relevant traffic safety notifications OR visit buncombeready.org

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