

February 12, 2024

Senator Brian J. Feldman, Chair
Senator Cheryl C. Kagan, Vice Chair
Education, Energy, and Environment Committee Maryland General Assembly
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

Re: SB0586 - Public Safety - Corrugated Stainless-Steel Tubing for Gas Piping Systems
Requirements and Prohibitions

Dear Senator Feldman and Senator Kagan,

My name is Craig Matthews, and I am a Captain for the Howard Department of Fire and Rescue Services, specifically in the Office of the Fire Marshal's Fire Investigation Division. I have been assigned to investigate the origin and cause of fires for the last 11 years, having investigated approximately 700 fire incidents to date.

I write to bring your attention to a recurring safety issue that has caused significant property damage and, tragically, fatal injuries in some instances. Over the years, I have come across numerous cases where lightning strikes have resulted in the failure of Corrugated Stainless-Steel Tubing (CSST), leading to fires within structures, often in concealed spaces. As the energy is transferred from the lightning strike to the CSST, as the energy moves through the CSST, the energy can result in an arcing event with causes a hole in the CSST and the escaping fugitive gas then ignites simultaneously. The arcing event is caused by the very thin wall of the construction of the CSST arcing to nearby metallic.

One particular incident that stands out is the tragic loss of Lieutenant Nathan Flynn from the Howard County Department of Fire & Rescue Services in 2018. During my investigation, it was determined that a lightning strike had hit a large oak tree behind the house, transferring the energy to the ground and creating a trench that reached the underground propane tank. From there, the energy traveled through the CSST, which failed in a hidden crawlspace beneath the living room. The energy from the lightning strike transferred over 100 feet from the tree to the propane tank and then to the house. The fire burned for approximately 30 minutes before the first 911 call, and Lieutenant Nathan Flynn made the ultimate sacrifice while operating on this incident.

In another case, the line of duty death of Battalion Chief Josh Laird in Frederick County was also attributed to a lightning strike causing the failure of the CSST system, igniting the structure's flooring system resulting in Battalion Chief Josh Laird making the ultimate sacrifice.

Throughout my career, I have investigated numerous incidents involving lightning strikes and CSST failures, even in cases where lightning protection systems were installed on the roofs to prevent such incidents. It is crucial that we consider all these incidents when deliberating on the passage of SB0586.

I kindly request that you give due consideration to the passage of SB0586, which addresses the issues surrounding CSST failures caused by lightning strikes. This proposed legislation aims to enhance safety measures and prevent further property damage and loss of life.

Thank you for your time and attention to this matter. Your support in passing SB0586 will undoubtedly contribute to the safety and well-being of our community. I am here to seek a favorable report from the committee on SB0586, which will contribute to ensuring the safety and well-being of the residents and firefighters of Maryland. If you require any further information or would like to discuss this matter in detail, please do not hesitate to reach out to me.

Yours sincerely,

A handwritten signature in black ink that reads "CAP. Craig Matthews, 3568 CFI". The signature is written in a cursive style.

Captain Craig Matthews, IAAI-CFI, CFEI
ADC Handler "K-9 Sowell"
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