

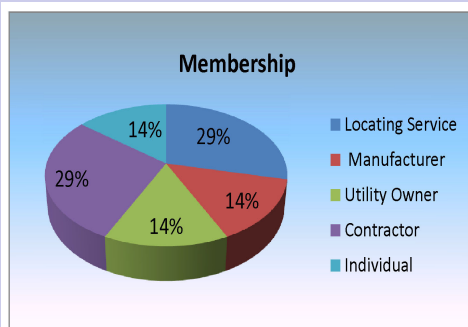


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Mission Statement

The purpose of the Cross Bore Safety Association is to bring persons and organizations together to create comprehensive high quality standards, guidelines, best practices, means and methods, courses, training, instructional materials and other related resources for the education and training of owners, installers, regulators, users, inspectors, maintainers and others who can benefit. All to minimize the risk for injury, loss of life and property damage from utility cross bores in an effective and efficient manner."

Initial Focus

The association recognizes the impact from all types of utility cross bores. The association concludes that setting priorities and focus for different types of cross bores will best serve our stated mission statement. The association agrees that the initial focus will be to address cross bores where natural gas lines intersect sewer lines.

Other types of cross bores can occur between other combinations of utilities. These may be disruptive, costly and have potential for injury. Intersecting buried electric cables can cause death. Intersecting communications cables can interrupt calls for emergency assistance.

Cross Bore Safety Association

7424 Creekton Drive
Louisville, KY 40241

812.719.4800

www.crossboresafety.org/membership.htm
Email: info@crossboresafety.org



Association Information

The Cross Bore Safety Association is a community of industry professional that have joined together to address all aspects of utility cross bores..... your membership and participation is essential for protection of yourself and your industry.



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Trenchless Installation Techniques

Trenchless installation techniques have been used since before 1970. These methods often offer lower cost installations and less disturbance to yards, streets, driveways and trees.

Moles can be guided only by their initial positioning. If rocks, roots or other objects are hit as the percussive action of the mole moves it forward, unseen deviation from planned alignment can occur.



Plows can install new utilities by pulling a vertical curved steel plate through the soil while a small diameter utility is fed into the ground simultaneously. There is no opportunity to observe the bottom of the excavation. Elevation and horizontal positioning are good with plows.



HDD (horizontal directional drills) are the newest tools in this category. They have the ability to be steered by using sondes and receivers respectively emitting and receiving radio frequencies. Accuracies vary as to size of machine, but generally have assumed to have a comport range of +/- 2 ft for horizontal location. Vertical



depth accuracy can be accurate or can vary due to calibration error or interference from local anomalies.

With trenchless, there is no opportunity to observe the conditions directly. At best, some deduction may be noted by sound and feel by the HDD operator during installation.



Cross bore prevention starts with knowing utility locations, using suitable tools and methods to install new utilities. Existing utilities, installers, locators and new utility owners are all part of the solution. Effective verification process are frequently required.

Legacy installations inspections can verify and "clear" older construction.

Drain cleaners can be provided "all clear" information. Their practices can prevent injury. Post installation inspections can be made to insure no cross bores have been created.

Cross bores are defined as an intersection of an existing underground utility or underground structure by a second utility resulting in direct contact between the transactions of the utilities that compromises the integrity of either utility or underground structure.



Cross Bores are Ticking Time Bombs

Cross bores found per mile of mainline sewer inspected have been between 2 and 3.

Utility companies have become aware of the cross bore safety issues. Some more recent installations have used processes that include pre-locating of sewers, effective alignment design and controls, and finalizing with post verification inspection to ensure that construction occurred as planned.

It is expected with millions of miles of sewers and where utility lines have been installed with trenchless technologies, there exists a legacy of thousands of cross bores of gas lines in sewers.

Drain cleaners, home owners, contractors and utility personnel are at risk of injury and death. Drain cleaners can cut cross bored gas lines which allows the pressurized gas to fill a structure. Ignition sources such as a switch or pilot light can cause a catastrophic explosion. Damages claims paid have been as high as \$30,000,000 for single house and those injured. Deaths and disabling burns can result.

Damage done to existing utilities is dramatic. Holes broken into sewers increases I & I (infiltration and inflow) of water into sewers and create structural deficiencies that can be extremely expensive to repair. EPA mandated fines can be in the millions of dollars. EPA lawsuits and resulting consent decrees force sewer authorities to meet strict timelines to improve systems. Damaged sewer lines are counterproductive and expensive. Cooperation between all utilities makes sense.

New cross bores must and can be prevented. Existing "legacy" cross bores need to be removed.