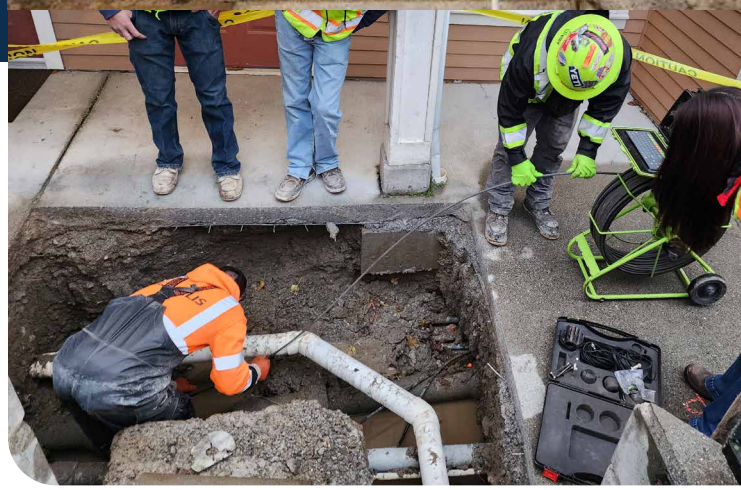
AQUALIS

TACOMA, WASH.

LEAK REPAIR WITH HYDRO-EXCAVATION



AQUALIS undertook a project for one of Washington's prominent mechanical contractors after one of their properties experienced significant water leakage from within. As the leading stormwater management company, AQUALIS responded swiftly, deploying skilled professionals and utilizing advanced tools to assess the situation. Through a thorough investigation, the team identified a cracked pipe joint as the source of the issue. A well-structured plan was implemented to address the problem, leading to a successful resolution and restoration of proper water flow.

PROBLEM

Water was rushing from inside one of the buildings, seeping under the door and running down the sidewalk, creating a clear concern for tenants in and around the property. However, the source of the issue remained unknown. As the industry leader in stormwater management, AQUALIS was called upon to assess and resolve the problem. The team at AQUALIS' Pacific Northwest Headquarters was promptly contacted to investigate the situation and take swift action in identifying and addressing the root cause.

During the investigation AQUALIS' skilled team members determined that the issue originated beneath the concrete. Recognizing the need for a thorough approach, they developed a strategic plan to remove a section of the cement to locate the exact source of the problem and implement a lasting solution. While accessing the surrounding areas, the team identified a second location requiring further evaluation. Their expertise and familiarity with similar situations enabled them to proactively address potential problem areas that tenants may have overlooked due to the absence of immediate visible issues. AQUALIS remains committed to ensuring that every stormwater drainage concern is fully resolved, preventing future complications and maintaining the integrity of the system.

The AQUALIS team began by installing shoring and protective barriers around the affected area to safeguard the building and its surroundings. Additionally, traffic barricades were placed to ensure the safety of both crew and customers, emphasizing AQUALIS' commitment to maintaining a secure work environment. The team then used jackhammers to remove large chunks of concrete from the area. Once concrete was removed, dirt and gravel were exposed. The team was then ready to start the hydro-excavation process. Hydro-excavation is used to clear out soil, grit and other materials located near underground infrastructure. Pressurized water is used to break down the soil and a powerful vacuum collects everything into a holding tank. Once the hydro-excavation was completed the problem was clearly identifiable at its source. The old concrete sewer pipe under the gravel had a leak that needed to be sealed.

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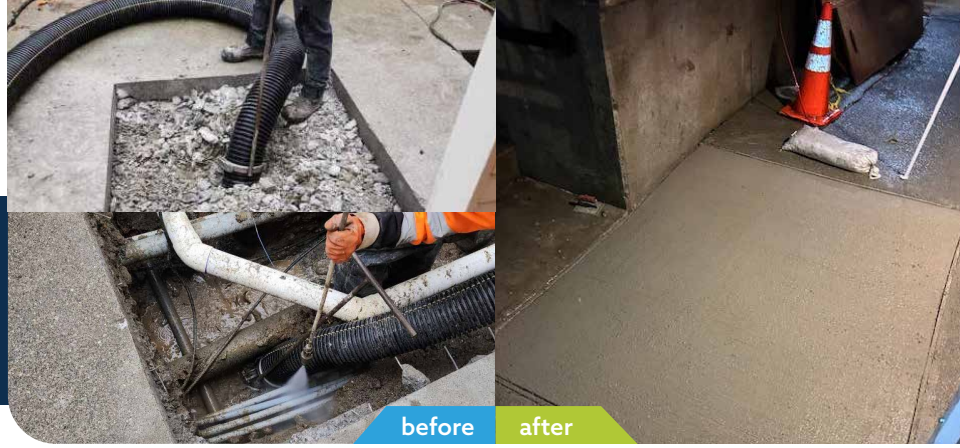

SOLUTIONS

CCTV equipment was deployed into the pipes to assess the water coming into the line. AQUALIS' team used a push cam to help identify where the water was entering into the pipe. Push cameras are powerful tools for professionals who are using equipment for these types of inspections, typically for smaller diameter utilities. Push cameras provide an efficient solution for evaluating pipes, allowing for detailed inspections without the need for expensive and disruptive excavation work. These cameras can easily navigate through pipes to identify issues such as blockages, cracks or corrosion, all while saving time and resources. This technology helps to streamline the inspection process, providing accurate results quickly and reducing the need for costly repairs or extensive digging. By using push cameras, you can minimize disruption to the surrounding environment while still ensuring a thorough evaluation of the pipeline condition. Jetting was also used to help facilitate push camera operations.

Utilizing the CCTV, the surrounding pipes were inspected. Team members checked the 90-degree bend turn to confirm no leaks were present. Circuit lines were also assessed. AQUALIS exercises through diligence to guarantee a precise result, ensuring the issue is fully resolved.

At the first location a leak was located near the end of the concrete pipe, which initially suggested the need for further evaluation at a second site. Upon hydro-excavating the second location, a pocket of water was quickly discovered, confirming the presence of a leak. Further inspection revealed that a crack in the coupler fitting was the root cause of the issue. The damaged pipe was promptly repaired, restoring proper water flow and effectively eliminating leaks and draining issues from inside and around the building.

After completing the necessary pipe repairs, the open hole was repaired by backfilling and compacting the soil in layers, ensuring a stable and secure foundation. Once the backfilling process was completed and the area has been thoroughly compacted, the next crucial step involved constructing a reinforced cage. This structural component is essential for providing additional support before the reapplication of concrete. To accommodate natural expansion and contraction due to temperature fluctuations, joint expansion material was carefully placed, allowing the concrete to flex appropriately during hot weather conditions preventing cracks or structural damage over time. Finally, the surface of the sidewalk was restored, eliminating any safety concerns.

By diligently inspecting the area, AQUALIS was able to identify the root cause of the flooding and quickly repair the issue with minimal disruption to residents.