



What is potholing and keyholing technology?



Potholing and Keyholing is more specifically known as SUE (subsurface utility engineering). It is the only way to know exactly where buried utilities are. Hawaii Geophysical Services is the only utility locating company in Hawaii to utilize this technology. We use a vac truck that employs air to excavate. Using air means there is no waste. The excavated earth can be placed right back into the hole. Hawaii Geophysical Services utilizes keyhole technology to pothole.

Potholing and Keyholing Technology:

When it comes to making holes, smaller is better. Surgeons have recognized this fact for years. Keyhole surgery is less intrusive and causes less trauma and tissue damage to the patient, which contributes to a shorter recovery period. The same holds true for cutting holes in roads to access, repair or view buried infrastructure.

Pothole and Keyhole methods can cut excavation, repair and restoration costs in half. With these techniques, maintenance and investigative activities are conducted through small pavement openings, resulting in significant cost savings, reduced public inconvenience, and more efficient repairs.

These technologies provide a cost-saving alternative to common excavation and repair methods, which often require large "open" holes, followed by the removal and disposal of unwanted pavements and soils. These conventional practices – which involve several large pieces of equipment (backhoes, dump trucks, pavement breakers) - can account for 80% of the total cost of a job.

How Potholing and Keyholing technology benefits everyone:

Reduced Traffic Disruption: Faster one-step permanent pavement repair means reduced traffic disruption with fewer and shorter road closings with no repeat visits. Roads are open for traffic just 30 minutes after the repair.

Saves Dollars: Less intrusive, more precise, pavement coring and reinstatement process means less structural damage to road system, longer pavement life and reduced maintenance. Saves dollars.

Reduced Footprint: Neat, almost invisible, 18 inch diameter circular, keyhole core (area: 1.75 sq. ft.) vs. 2 ft. x 4 ft. conventional rectangular road cut (area: 8 sq. ft.) means reduced 'scarring' of the community landscape.

Environmentally Friendly: No road-cut spoil to be disposed of and no temporary patching compounds with volatile organic compounds (VOC's) to escape into the atmosphere.

Cleaner, Safer, Less Intrusive Worksite: No jackhammers or large excavation equipment means less mess during and after the excavation and reduced disruption for neighbors.

What is the potholing and keyholing process?



1. The coring truck sets up and cores up to an 18" diameter hole up to 22" deep in the sidewalk or roadway in minutes.



2. Using a core puller, the core is easily removed, allowing vacuum excavation and the utility repair to proceed.



3. After the repair is complete, the hole is backfilled to the base of the pavement. The bonding agent is mixed with water and poured in.



4. The core is replaced, the excavation and reinstatement site is virtually invisible, and the road can be reopened in thirty minutes