

# HONOLULU CIVIL BEAT

## Honolulu's Potholes Cost Drivers — And Taxpayers — Millions

A 2016 study found the city had the 11th-worst roads among large urban areas, and residents pay more than the national average for related car repairs.

By [Courtney Teague](#) | 07/25/2017

Everybody, it seems, has something to say about potholes.

Take Renee Castle, a regular bicyclist in the Manoa Valley who said she'll sometimes "swerve to miss one and end up hitting three or four."

Or Pearl City resident Kyle Kurata, who recalls blowing out a tire after hitting a pothole in the rain.

"Our potholes are only temporary fixes, if they ever do get fixed," Kurata said, adding he thinks that mainland roads in general are in better shape than those in the islands.



An estimated 76,000 potholes were repaired on Oahu last year.

Or Nick Clark, who thinks downtown Honolulu streets aren't bad, but those farther west in Makaha, Kalihi and Waipahu are in sorry shape.

"If you go anywhere other than town, you'll experience something," Clark said.

And then there's Derek Fujikama, who brings up another common topic: repaving. Unlike Clark, Fujikama thinks downtown streets are "terrible" but says the road in front of his Kaneohe home has been repaved twice in 10 years, even though there was nothing wrong with it.

"(The city) should be repaving someplace that really needs it," Fujikama said.

Alberto Hernandez hears stories like these all the time. The office manager and salesman at Tires Today in Kakaako said customers come in with wheel or tire damage caused by road problems at least once a day.

Hernandez lived in Arizona and Nevada for 24 years and says Hawaii's roads come in "dead last" in his experience. Roads here appear more eroded because of weather and water, he said, and the asphalt seems to wear down tires quicker.

"People don't even realize the puncture in their tire is due to a road hazard," he said. "A lot of people just think, 'Oh, my tire failed,' and that's not really the case."

### Mapping The Pothole Claims

Some people with tire damage do blame the city.

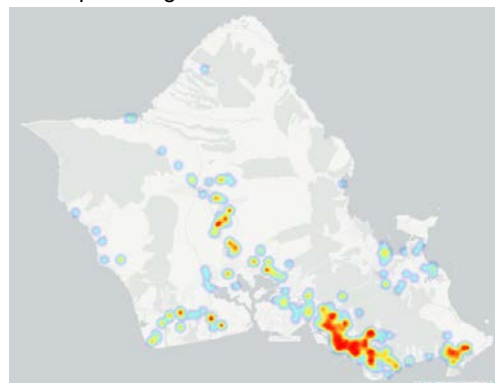
The areas with the most pothole claims filed tend to have the most heavily used streets. Outside of urban Honolulu, parts of Manoa, Hawaii Kai, Mililani, Ewa, Pearl City, Kapolei, Nuuanu and Wahiawa have produced the most complaints in recent years.

Some of the problem roads have since been repaved through Honolulu Mayor Kirk Caldwell's street improvement initiative.

When Caldwell was running for mayor in 2012, he [promised](#) to repave more roads. After he was elected, he announced a goal of repaving 300 "lane miles" — miles of road multiplied by the number of lanes — every year for five years, for a total of 1,500 lane miles by 2018.

He's made good on that promise so far and averaged 337.5 miles per year [as of June 30](#), though Caldwell [lowered his funding request](#) for road repaving projects for the current fiscal year.

Despite that progress, the pothole claims — and general complaints about road conditions — keep coming.



This map, based on a Civil Beat analysis of city records, shows the location density of nearly 500 pothole claims filed with the city from January 2012 to June 2017. A map detailing city road repaving projects since 2013 and future projects can be found [here](#). A list of all projects completed can be found [here](#).

**In 2016 Honolulu was ranked as having the 11th-worst roads in an urban area with more than 500,000 people, according to a [study](#) based on Federal Highway**

**Administration data by TRIP, a nonprofit that tracks U.S. road issues.**

**The TRIP study also found Honolulu drivers paid \$745 annually in car maintenance because of vehicle problems that arose from poor road conditions — more than \$200 higher than the national average and the 13th highest dollar amount of U.S. urban regions.**

**In 2012, another TRIP [analysis](#) found drivers statewide pay \$485 million in additional vehicle costs caused by poor roads, lose \$350 million because of traffic-related delays and pay \$255 million because roads "lack some desirable safety features," for a total annual cost of more than \$1 billion.**

Caldwell and city officials who manage pothole repairs and repaving, would not talk with Civil Beat for this report, instead communicating through spokespeople and email.

The city filled more than 36,000 potholes last year, according to Ross Sasamura, director of the Department of Facility Maintenance.



This type of cracking in Kalihi can cause potholes if enough water gets under the pavement.

Many heavily used roads downtown (including Punchbowl Street, which fronts the Capitol and Honolulu Hale) and in Manoa are among those that have yet to be repaved.

More than a quarter of all 1,811 claims filed against the city in the last five years were for pothole damage.

Honolulu has shelled out more than \$2.5 million to settle 490 pothole-related claims and eight lawsuits, records show.

The most costly of those was a [\\$1.7 million settlement](#) with Loah McCoy, a tourist from Alaska who hit a large pothole while driving a moped without a helmet. McCoy lapsed into a coma and suffered skull fractures and broken bones. According to 2013 court records, her brain injuries caused memory loss, a droopy

face, chronic pain, difficulty walking, and vision, hearing and speech impediments. The other seven pothole lawsuits resulted in payouts amounting to a combined \$4,282.

## Filling Potholes Is A Short-Term Fix

Local asphalt industry expert Jon Young and Panos Prevedouros, professor and chair of the University of Hawaii Civil and Environmental Engineering Department, agree that the city's methods for filling potholes are cost-effective, but not the longest-lasting.

"Dramatic deterioration" of Oahu's roads at the turn of the century forced the city and state to be more proactive about maintenance, said Prevedouros, who once [ran for mayor](#) on a platform that focused on fixing infrastructure. He said the city — and especially the state — could improve maintenance strategies.

The state paid UH \$1 million over about five years for a report by Ricardo Archilla, associate professor of Civil and Environmental Engineering, that looked at ways Oahu could improve its roads and created the recommendations, Prevedouros said.



"Alligator" or "crocodile cracking" on Punchbowl Street. When the cracks are sealed, the treatment looks like winding, black lines placed over the cracks.

Though the city did not pay for the report, Prevedouros said it has been quicker to adopt its findings and conduct field assessments. Archilla told Civil Beat that officials in several state Department of Transportation branches and districts must approve decisions, which can slow things down.

Potholes form when the pavement's structure is gone, and even repairs completed with expensive asphalt mixes won't be permanent, Archilla said.

State DOT officials also did not talk with Civil Beat for this report. Department spokeswoman Shelly Kunishige wrote in an email that the department is responsible for more than 1,000 lane miles of highways and freeways.

Over the past decade, she wrote the DOT has filled 40,000 potholes annually and spends \$355,000 annually. The DOT focuses extending the life of a road using methods such as "crack sealing," which looks like

"black squiggly lines" and "fog sealing," which involves applying a thin sealant across the road surface to keep water out, she wrote. The state has a six-person crew that fixes potholes around the entire island every five weeks, she wrote, though dangerous potholes are fixed sooner and landscaping crews help pitch in after heavy rains. Potholes are filled by cleaning out "loose material," filling it with asphalt and compacting it, she wrote, and a combination of cold mix and hot mix is used.

## Many Ways To Fill A Hole

Prevedouros described the city's pothole repair methods as "amateurish," but cost-effective.

He pointed to "very durable" European techniques as a superior example, which involve squaring off the edges of a pothole and using heavy trucks to pack the pothole down in 30-40 minutes. There's no difference in the amount of time taken to fill the pothole, but there is a difference in quality and longevity of the repair — and cost, he said.

Pothole repairs on state roads take place at night, he said, and more time is spent on them because of the higher traffic volumes.

The city usually fixes potholes quickly during the day in 30 minutes to an hour, Prevedouros said. When crews have to leave for the next pothole, he said the new asphalt isn't completely dry and is already being damaged by traffic.

The city maintains all roads except highways and freeways — more than 3,500 lane miles, Honolulu Department of Design and Construction Director Robert Kroning wrote in an email.

Hot mix asphalt is used in most repairs, Sasamura of the Department of Facility Maintenance wrote in an email.

It's called that because it's mixed and kept hot, but it cools when applied to the road, said Dick Levins, Asphalt Hawaii president.

Currently, the city buys hot mix asphalt from [Grace Pacific LLC](#) — also one of the city's main contractors for repairing roads — and [Black Plumeria LLC](#), Sasamura wrote.

A "pre-bagged pothole repair mix" is sometimes used when the asphalt provider is closed or a small pothole is being repaired, Sasamura wrote.

Young, executive director of the [Hawaii Asphalt Paving Industry](#), said the city usually uses a pothole repair method known as "throw and go." Workers arrive with a dump truck of hot mix asphalt, place some in the hole, pack it down and move on to the next. Sometimes, Young said the city packs down the potholes by driving over them — a longer lasting method.

## Repaving Work Rolls On

Just down the street from where Manoa bicyclist Renee Castle was describing her misadventures with potholes, city workers were busy laying down asphalt and repaving the road.

Filling potholes is quick, but Caldwell's [initiative to repave Honolulu roads](#) is a more permanent solution to fix roads, said Young of the Hawaii Asphalt Paving Industry.

It can take about 10 years after repaving a road before potholes start forming, he said. "(The city) could do a better repair of the potholes, but ... I think they're doing the best they can with the money they have," Young said.



A city repaving project on University Avenue, near its intersection with Dole Street.

Roads are made of a combination of asphalt, "aggregate" (rocks) and "liquid binder" (a product of crude oil), Young said. New roads are black, but older, gray roads indicate oxidation, he said. Oxidized roads are more prone to cracking.

When roads begin to crack, he said it's important to seal cracks and prevent water from getting underneath the asphalt. Potholes are created when traffic "vibrates" the cracked road, water spreads underneath and the road is softened, Young said.

In 2016, the city awarded \$147 million to contractors to repave about 332 lane miles. More than 270 lane miles have been repaved so far this year, Caldwell spokesman Andrew Pereira wrote in an email.

The city's main contractors for repaving roads are Grace Pacific LLC, [Road and Highway Builders LLC](#), [Road Builders Corporation](#) and Maui Kupono Builders LLC, Kroning wrote.

Overall, Prevedouros of the University of Hawaii gave Oahu's roads a D+ grade. The average lifespan of Hawaii roads is short and the powerful sun poses a constant threat, he said.

Road repaving should be prioritized over pothole repair, he said.

"We have made a business of (repairing potholes)," he said. "...It's emergency Band-Aids and that's not a way to run any system ... it shows that (the road) is way past deterioration."

To file a claim with the city, call the [Department of Corporation Counsel](#) at 768-5222. Fill out [this form](#) to file a claim with the state.