



Prioritizing Pleasanton Street Work Using the Pavement Condition Index

Ever wonder how the City prioritizes street work? A lot of thought and effort is used to determine how to best spend the limited funds available for street work as there is simply not enough funding to keep every street in a like-new condition.

Not “Worst is First” Approach

It isn't feasible to approach street repairs with a “worst is first” view. Under that approach, all available funding would go to repairing the worst streets and not much else. More importantly, many streets currently in good or fair condition would deteriorate without maintenance, and the overall condition of the street system would diminish. To ensure effort goes to street reconstruction as well as maintenance, the City utilizes a pavement management program to objectively determine how to best spend the limited resources.

- There are nearly 210 centerline miles, or 508 lane miles, of paved roads in Pleasanton. For inspection purposes, these roadways are divided into 1,338 sections.
- Every two years all 1,338 roadway sections are inspected and assigned a numerical rating between 0 and 100. This is called the Pavement Condition Index or PCI. The last inspection of Pleasanton's street system was completed in May 2021.

- Inspection standards to determine PCI were created by the Army Corp of Engineers and adopted by the Bay Area Metropolitan Transportation Commission. They are used by all the cities in the nine counties of the Bay Area. This allows each city to directly compare roadway conditions.
- In general, a PCI rating of 100 is a newly paved street. A street above a rating of 75 is considered to be in “good” condition; street above a rating of 50 is considered to be in “fair” condition; a street above a rating of 25 is in “poor” condition; and a street with a rating of less than 25 is considered to be in “very poor” or failed condition.
- In general, and without maintenance, street surface conditions move down from a rating of 100 to 50 with about 18 years of service.
- In general, and without maintenance, street surface conditions move down from a rating of 50 to 25 (or failed) in just a more few years of service. As the street ages, the rate of deterioration speeds up.

The goal of the pavement management program is to maintain the City’s overall Pavement Condition Index. This is done by reconstructing streets that are in “poor” or “very poor” condition. It is also accomplished by completing preventative maintenance on streets that are in “good” or “fair” condition. There are essentially three distinct street repair methods utilized, dependent on the street’s condition: sealing the streets that are in “good” condition, overlaying streets that are in “fair” condition, and reconstructing streets that are in “poor” or “very poor” condition. Each method is discussed below.

Slurry Seal

In Pleasanton, the treatment on streets rated “good” with a PCI close to 75 is usually slurry seal, with some crack sealing and isolated full-depth pavement repairs before the seal work. Slurry sealing the streets involves applying a mixture of asphalt, graded aggregate materials

and water to the street surface to seal and rejuvenate the existing pavement. It is relatively economical, costing approximately 50 cents per square foot. At this cost, many street sections can be slurry sealed, increasing the PCI on those streets from the low end of “good” at a rating 75 to the higher end of “good,” closer to a rating of 100.

Asphalt Overlay

An asphalt overlay is the next treatment level. An overlay treatment installs a layer of asphalt 1.5- to 2-inches thick over the existing street surface. Before the overlay occurs, the edges of the street are ground down so the overlay transitions well to the existing curbs. Typically, there are moderate levels of isolated full-depth pavement repairs before the overlay. Overlays cost approximately \$2.50 per square foot. An overlay can take a street with a PCI rating of 50 and increase it to a PCI rating closer to 100, but it costs 5 times as much as the slurry seal.

Street Reconstruction

Finally, when the PCI of a street is rated as “poor” or “very poor,” complete reconstruction is necessary. This process involves reconstructing the roadway base rock as well as repaving of the street surface. This repair method costs approximately \$8.00 per square foot. When done, the street is new and has a PCI rating of 100. At this cost, the available funds do not allow for a lot of work.

As described, the City’s pavement management system, combined with sound engineering judgement, is used to balance the street repair program to meet the goal of keeping the overall condition of the city streets in the best possible condition with the available resources. As of 2021, inspection data rates Pleasanton’s street system with an average PCI of 79, giving the City’s network an overall PCI rating 12 points above the San Francisco Bay Area’s average PCI of 67. The City’s PCI ranked number four as compared with 15 other cities within

Alameda County.

As the City uses the pavement management program, balancing maintenance and reconstruction each year to maintain the overall condition of the street system, questions are often received asking as to why some streets are slurry sealed when there are other streets in worse condition receiving no treatment in a given year. The City's hopes that this explanation helps to answer that question.