

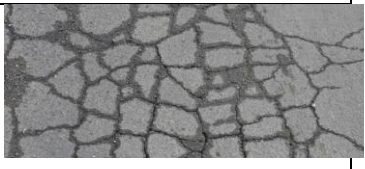


Cost of road repairs

A question the City commonly gets is “Why can’t the City just use all of the funds to re-pave streets in the worst condition?”

The reason is that it is extremely expensive to reconstruct a street in very poor condition – **over 26 times more expensive than the cost to preserve roads that are in decent condition; and 5 times more expensive than restoring a road that is still in repairable condition.** The City has 87 miles of paved streets. With a city block being about 300-feet in length, this equates to over 1,500 city blocks to maintain and preserve. See the table below for the cost per city block for different kinds of repair:

METHOD	COST	WHAT IS IT	DESCRIPTION	APPEARANCE
PRESERVATION	\$3,000 per city block	A seal coat or “crack seal”. A preservative measure that extends the life of the road by many years.	Pavement starts to loosen and ravel. Asphalt loses its binding quality due to weathering. Usually requires a surface treatment.	
RESTORATION	\$15,000 per city block	Overlay the street with 2 inches of pavement. A way to restore roads that are not in good condition, but still repairable.	Connected cracks from large polygon shapes, allowing water to reach the supporting soil. Requires sealing of cracks followed by resurfacing.	
RECONSTRUCTION	\$80,000 per city block	Reconstruction. When the road condition is too poor to be repaired	Connected cracks resemble alligator skin. Serious defect caused by failure of soil under the pavement. Requires soil stabilization, deep patching, resurfacing or reconstruction.	

Crack sealing or seal coats should be done about every 6 2/3-years. Surface wear overlays should be done about every 20-years. On average, reconstruction should be done at least every 80-years.

To fully fund maintenance and preservation of the City’s 87-miles of paved streets based on an 80-year reconstruction life cycle, the following would need to be done:

- Seal coat or crack seal: 250 blocks per year: about \$ 750,000 per year
- Restoration (overlays): 9 ½ blocks per year: about \$ 150,000 per year
- Reconstruction: 19 blocks per year: about \$1,500,000 per year
- Total annual cost: over 1,500 blocks per year: about \$2,400,000 per year

Based on the 2013 pavement management assessment, the City also has a backlog of about \$14,000,000 to \$16,000,000 in deferred maintenance and preservation. To address this backlog by borrowing funds based on a 20-year term, it would cost over \$1,000,000 annually in additional funding.

So, based on our current level of funding, it is far more cost effective to preserve streets that are in good condition than to restore or reconstruct residential streets that are in poor condition.

Additionally, if all the street revenues were spent to reconstruct just a few roads, the number of roads that would fall into an irreparable condition from not being preserved/maintained, would outpace the number being repaired - putting the City even further behind (meaning even more roads would be in poor condition, not less).

Even though it makes good financial sense to focus the funding on preservation methods, the City acknowledges that the worst streets cannot be ignored. Therefore, the City Council committed to spending 70% of the street maintenance utility fee revenues on preservation and restoration; and 30% on reconstruction.

Finally, another factor in determining the order of street repair is the consideration of the condition of the water, sewer, and storm systems under these roads so that upgrades to those utilities can be coordinated with the road maintenance. It is far more efficient and cost-effective to plan such upgrades so that newly restored streets don't have to be torn up to improve the utilities underneath.