



CITY OF MOUNTAIN VIEW

MEMORANDUM

Public Works Department

DATE: March 23, 2021

TO: City Council

FROM: Edward Arango, Assistant Public Works Director/City Engineer
Dawn S. Cameron, Public Works Director

VIA: Kimbra McCarthy, City Manager

SUBJECT: **Pavement Condition Index and Pavement Management Program Update**

PURPOSE

This memorandum provides an update on the City's current Pavement Condition Index (PCI) and Pavement Management Program (PMP).

BACKGROUND

The March 17, 2020 Study Session memo regarding the "Preliminary Review of the Fiscal Year 2020-21 Capital Improvement Program (CIP)" noted that the City's average pavement condition had decreased significantly based on the 2018 biennial PMP report received in 2019. In response to concerns raised by Council at the time, staff committed to evaluating funding and future pavement improvement projects as part of the five-year CIP in 2021 to make progress toward meeting the City's goal for a network PCI of 75. This memo provides new information on the City's latest pavement condition ratings and recommendations for the CIP.

Pavement Condition Index

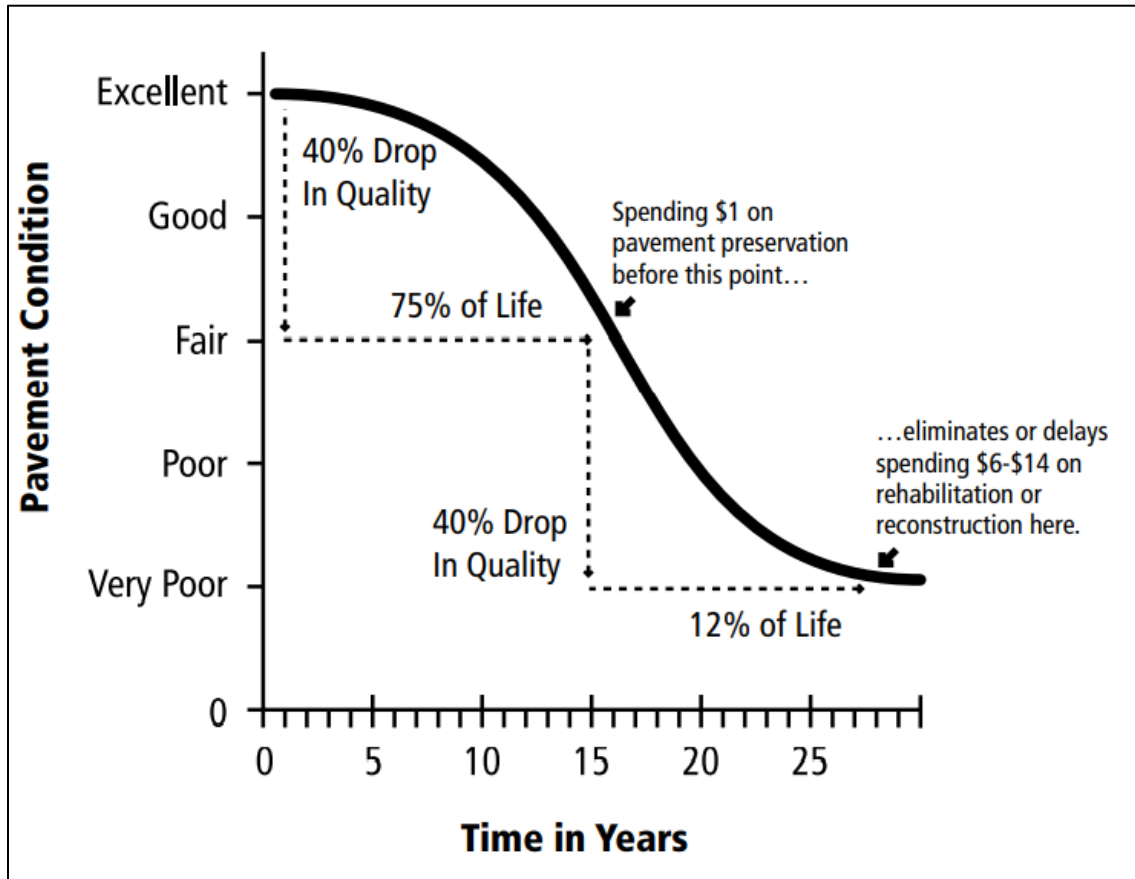
The City coordinates with the Metropolitan Transportation Commission (MTC) to evaluate the overall condition of the City's street network and develop a rehabilitation and maintenance strategy that will improve the overall condition of the street network. The City's street network is evaluated biennially by an MTC-assigned consultant who provides a PMP report with a PCI rating. PCI is a measurement of pavement condition that ranges from 0 to 100. A newly constructed or overlaid street would have a PCI of

100, while a Poor/Failed roadway (requiring major rehabilitation or reconstruction) would have a PCI under 49 (see Table 1).

Table 1 – Pavement Condition Categories

Very Good – Excellent PCI = 80-100	Newly constructed for resurfaced pavement with few signs of distress.
Good PCI=70-79	Pavement requiring mostly preventive maintenance and showing only low levels of distress.
Fair PCI=60-69	Pavement at the low end of this range is significantly distressed and may require a combination of rehabilitation and preventive maintenance.
At Risk PCI=50-59	Deteriorated pavement requiring immediate attention, including rehabilitative work.
Poor PCI=25-49	Pavement showing extensive distress and requiring major rehabilitation or reconstruction.
Failed PCI=24	Extremely rough pavement that needs complete reconstruction.

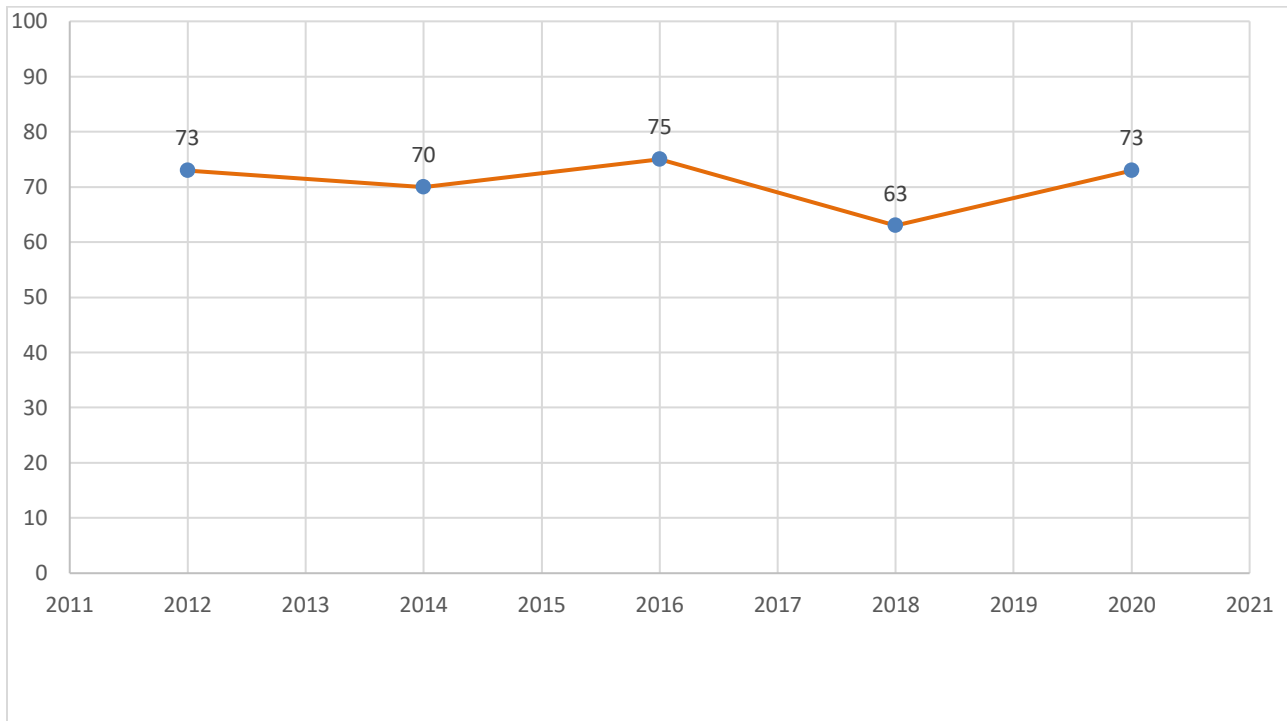
The City's goal is to maintain a Citywide network PCI above 75, which is rated as Good. The most cost-effective way to maintain a Good pavement condition is to avoid deferred maintenance and invest in preventive maintenance and pavement preservation. According to the American Association of State Highway and Transportation Officials (AASHTO), every \$1 spent to keep a road in good condition avoids \$6 to \$14 needed later to rebuild the same road once it has deteriorated significantly (see Figure 1).



Source: AASHTO

Figure 1 – Pavement Condition Costs and Timeline

Figure 2 provides the City's average PCI since 2012. With the exception of 2018, the City has managed to keep its average PCI in the Good range above 70, but the high of 75 in 2016 was just shy of the City's goal to be above 75. The severe drop to 63 in 2018 and current PCI status is discussed in more detail below.



Notes:

- 1) The City network PCI of 73 for 2020 is preliminary with final confirmation from MTC in April 2021.
- 2) The City’s network PCI does not include the pavement conditions on El Camino Real and Central Expressway. These two roads are the responsibility of Caltrans and the County of Santa Clara, respectively.

Figure 2—City of Mountain View’s Historical Pavement Condition Index

DISCUSSION

Based on the 2018 evaluation of the City’s street network, the City received an overall PCI rating of 63, which dropped significantly from the previous rating of 75 in 2016 while the City’s pavement funding and program was generally consistent from previous years. While some streets in the City had degraded to less than 60 PCI (Fair to Failed), this should not have led to a 12-point drop in the Citywide average in just two years. Staff appealed the 2018 rating to MTC and requested and received a third-party audit of the results. The audit concluded that the PCI rating of 63 was valid.

As a result of the significant drop in the City’s PCI, staff recommended, and the City Council approved, increasing funding for the pavement improvement projects (Annual Street Resurfacing Program, Project 21-01, and Street Reconstruction, Project 21-41) to address the poor pavement conditions of Fairchild Drive, Leong Drive, and Crittenden Lane. To fund these pavement improvement projects and work towards meeting the

City's performance measure goal of a PCI above 75, the City utilized numerous funding sources, including the 2010 Vehicle License Fee, Senate Bill 1 (SB 1), Gas Tax, and 2016 VTA Measure B (Local Roads and Streets Program) funds, in addition to the City's Construction/Conveyance Tax and CIP Reserve.

Staff is currently awaiting MTC to complete the 2020 evaluation of the City's roadway pavement condition, and while the PMP report from MTC is not yet available, staff received a very preliminary update showing the City's PCI is currently at 73.

Comparing the last three PCI ratings (75 in 2016, 63 in 2018, and the preliminary 73 in 2020), staff considers the 2018 rating of 63 an anomaly as the City's network ratings prior to and after the 2018 rating have been above 70. While the City has completed some pavement projects in the last two years, Fairchild Drive, Leong Drive, and Crittenden Lane are still in design. Therefore, there is no clear basis for a 10-point increase in just two years. Staff is contacting MTC to better understand the inconsistencies of the City's PCI rating in 2018.

RECOMMENDATION

Staff recommends continuing to prioritize pavement projects in the five-year CIP to maintain and improve the PCI to reach the goal of a Citywide average over 75. The preliminary network PCI of 73 is an average rating for the City overall, and while some streets may have higher PCI ratings, many still remain with low PCI ratings and will continue to degrade if not addressed.

NEXT STEPS

Staff will provide an update to City Council at the scheduled second CIP Study Session in May 2021 based on the PMP report anticipated to be submitted to the City from MTC in April 2021.

EA-DSC/TS/1/PWK
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cc: PWD, APWD – Arango, SMA – Doan, SMA – Goedicke, PCE – Gonzales, AE – Houghton