



DATE: November 4, 2024

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Jeff Stutsman, TE, PE – Deputy Director of Operations, Public Works & Utilities (PW&U)
Gina Benedetti-Petnic, PE – Interim Director, (PW&U)

SUBJECT: Resolution Accepting and Adopting the Five-Year Paving Plan (FY25/26-FY29/30) and Authorizing the Director of Public Works and Utilities, or Designee(s) to Implement this Plan

RECOMMENDATION

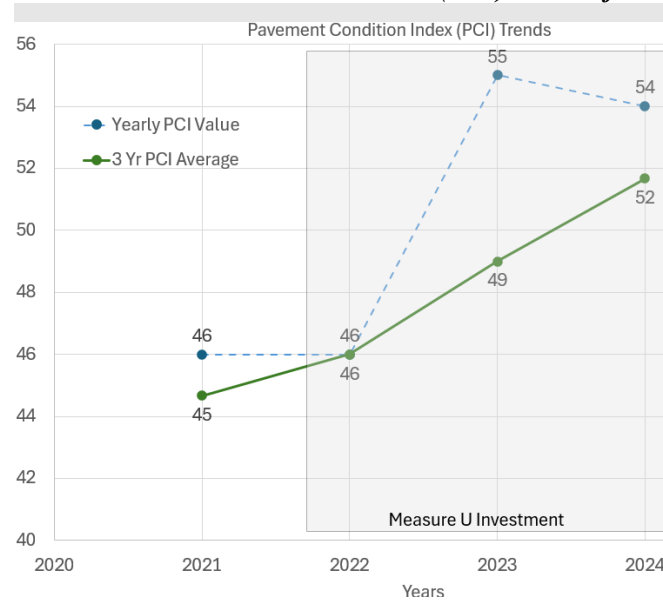
It is recommended that the City Council consider the information presented and adopt the Resolution accepting and adopting the Five-Year Paving Plan (FY25/26-FY29/30) and authorizing the Director of Public Works and Utilities, or designee(s), to implement this plan.

BACKGROUND

The City maintains 393 lane miles (approximately 33 million square feet) of paved streets. The current three-year average Pavement Condition Index (PCI) for the entire road network is 52. PCI is a numerical rating from 0 to 100 used to assess pavement condition, with 100 representing a newly paved or excellent road and scores below 25 indicating failed or very poor conditions. The three-year average helps smooth our short-term fluctuations caused by variations in the PCI calculations and provides a more reliable and consistent assessment of pavement conditions.

In the past three years, Measure U funding has played a critical role in improving the condition of our streets, leading to a noticeable increase in the City's pavement quality. The three-year average PCI has risen from 45 to 52—a 7-point improvement highlighting the tangible impact of these recent investments (see Figure 1). This progress has allowed us to address key pavement needs and make measurable improvements to the road network. These improvements reflect the positive outcomes of strategic planning and resource allocation.

Figure 1: Petaluma Pavement Condition Index (PCI) Trends from 2021 to 2024



However, despite this progress, challenges remain, as approximately 62% of the City's streets still fall within the "fair," "poor," or "failed" categories (as shown in Figure 2 below). While this recent increase in PCI is a positive step, maintaining these gains and further improving our streets will require sustained investment and effort.

Figure 2: Breakdown by Condition Category and Corresponding PCI Range of Petaluma Roadways
Source: 2023 PMP Update, April 2024

Condition Category Breakdown			
Condition	PCI Range	% Of Total	Square Feet
Excellent	100-91	8.67%	2,869,521
Good	90-71	29.29%	9,694,470
Fair	70-51	17.34%	5,737,828
Poor	50-31	16.09%	5,324,564
Failed	30-0	28.62%	9,471,290

To improve the current 3-year PCI average from 52 to 54 and prevent further deterioration, Staff suggest investing an estimated \$11.9 million annually over the next five years. The projected budget for street reconstruction and maintenance projects over the next five years is summarized below:

Fiscal Year	Proposed Budget
FY 25/26	\$14,824,180
FY 26/27	\$11,608,833
FY 27/28	\$10,042,520
FY 28/29	\$12,100,525
FY 29/30	\$10,799,513
Total	\$59,375,571

DISCUSSION

Petaluma's streets have long been notorious for poor conditions, largely due to several factors: challenging soil conditions, outdated one-size-fits-all road design standards, and a historic lack of investment. The city's expansive clay soils, which swell and shrink with moisture changes, cause significant road damage. In response, the City has utilized full-depth reclamation methods using cement and lime to improve soil stability and road strength. Additionally, past standards applied uniform designs to all roads, failing to account for differences in soil, traffic, and usage. Today, each road is designed based on its specific characteristics, such as soil type, traffic volume, and vehicle classification.

Funding for street maintenance has historically been insufficient, relying heavily on grants, utility fees, and gas tax. It was not until 2017 that the City could allocate funds beyond basic operating expenses with the passage of the SB1 gas tax. However, with the passing of Measure U in 2020, Petaluma was able to initiate substantial road projects, significantly improving the City's Pavement Condition Index (PCI) from 47 to 54 through restoration, reconstruction, and maintenance efforts between FY21/22 and FY23/24. For the current fiscal year (FY24/25), the City has \$9.3 million in planned investments, a significant increase from the previous average of \$3–4 million annually.

The City of Petaluma utilizes StreetSaver, a Pavement Management System required by the Metropolitan Transportation Commission (MTC), as its asset management tool for street paving. MTC's Pavement Technical Assistance Program (PTAP) assesses pavement conditions every two years, helping cities update and maintain their pavement management databases. The most recent update, finalized in April 2024, helped to identify necessary treatments and project funding needs and developed budget projections.

As part of this biennial report, the City received estimated budget scenarios using five-year projections to help anticipate funding needs and street maintenance options. StreetSaver identified several funding scenarios to reflect the capital investment required for maintaining and improving the City's streets. Below is a summary of funding scenarios presented in the report:

- Continuing the current funding level of approximately \$5 million annually is estimated to result in a seven-point drop in the yearly PCI value from 54 to 47 over five years.
- To maintain the current yearly PCI value of 54, an estimated annual investment of \$20 million, or \$100 million over five years, is recommended.
- Increasing the yearly PCI value by five points over five years could potentially be achieved with an estimated annual investment of \$32.5 million, totaling \$162.5 million over five years
- Achieving a significant PCI increase from 54 to 83 would require an initial investment of \$304.8 million in the first year, followed by \$51.1 million annually over the next four years.

After a thorough assessment of available funding sources, including bond funds, traffic mitigation fees, grants, and regional partnerships, staff estimates \$59.4 million in available funding over the

next five years. This budget represents the result of maximizing all available funding options to address pavement improvement needs.

Staff conducted their own analysis of the \$59.4 million budget scenario, using more realistic cost estimates based on recent work done in Petaluma. While the consultant's projections were based on higher estimated regional costs, Staff anticipate that the available \$59.4 million will be sufficient to maintain the current PCI with the potential of an increase over the next five years.

Given these financial boundaries, the five-year paving plan aims to maximize the impact of available funds by focusing on two key strategies: preventative maintenance and road rehabilitation. This plan will focus on reconstructing the most critical and failed roadways while prioritizing preventative maintenance for streets in fair condition, aiming to prevent further deterioration and maintain the City's current PCI score.

Preventative maintenance focuses on keeping streets in good condition using cost-effective treatments like slurry and crack sealing to slow pavement deterioration. Road rehabilitation, in contrast, involves more intensive measures such as grinding, overlaying, and reconstruction to restore pavement integrity and address more severe damage.

The total estimated budget was split between these two strategies, with approximately 10% (\$800,000 to \$900,000 annually) dedicated to preventative maintenance and the remaining 90% (\$9 million to \$12 million annually) for road rehabilitation. Funding is equitably distributed between local streets and major thoroughfares, ensuring both community-wide accessibility and attention to streets with the greatest impact.

To ensure the most effective use of funds, staff developed a Street Ranking Framework to determine which streets will be included in the five-year plan. This Street Ranking Framework considers several key factors:

- **Safety:** Collision data from the Police Department and the High Injury Network (from SCTA) is used, along with proximity to schools (within a ¼ mile buffer) and parks (within 1/8 mile). Safe Streets nominations and requests for traffic calming are also factored into the safety evaluations
- **Funding:** Budget constraints are a primary factor in determining how many streets can be addressed. Though qualitative in nature, available funding influences project selection, especially when certain streets, like Caulfield or Ely Blvd South, can be aligned with grant opportunities incorporating active transportation elements.
- **Utility Needs:** Paving projects are coordinated with utility work, where possible, to achieve cost savings and greater project efficiency.
- **Climate Resilience:** Streets on transit and bike routes are prioritized to promote sustainable transportation options.

- Geography Equity: Projects are distributed as evenly as possible across the City and council districts, with an emphasis on clustering projects in areas to create more cost-effective and efficient outcomes.
- Public Input: Public feedback is gathered and tracked in various forms and through diverse forums and contributes as qualitative input.
- Pavement Condition Index (PCI): PCI data helps prioritize which streets require immediate rehabilitation or preventative maintenance, allowing the City to optimize funding allocation. Streets with lower PCI scores are generally prioritized for more intensive rehabilitation, while streets with moderate PCI scores may be placed in the preventative maintenance category to extend their lifespan. This factor ensures the right treatment is applied at the right time to maximize the effectiveness of pavement preservation strategies.

In addition to roadwork, the plan includes broader infrastructure improvements, such as upgrades to water and sewer systems, the installation of recycled water mains, and enhancements to pedestrian and bicycle infrastructure (e.g., curb ramps, bulb-outs, bike lanes, and crosswalks). These projects also present opportunities for traffic calming, lane reconfiguration, and the inclusion of green infrastructure like trees and stormwater treatment.

Using the Street Ranking Framework and staying within the maximized \$59.4 million budget, the proposed five-year paving plan will address critical road needs and prevent further deterioration, ensuring Petaluma's streets remain safe and accessible for years to come.

The proposed five-year paving plan includes the following streets and associated roadwork:

<u>Fiscal Year</u>	<u>Road Segment</u>	<u>Project Type</u>	<u>Projected Budget</u>
FY 25-26	D Street	Rehabilitation	\$7,277,200
	Caulfield Lane	Rehabilitation	\$4,429,280
	St. Francis Drive	Rehabilitation	\$2,402,700
	Various PM	Maintenance	\$715,000
	Total		\$14,824,180
FY 26-27	Casa Grande	Rehabilitation	\$5,532,120
	Old Redwood Hwy	Rehabilitation	\$3,423,013
	North Webster Street	Rehabilitation	\$1,768,700
	Various PM	Maintenance	\$885,000
	Total		\$11,608,833
FY 27-28	Daniel Drive	Rehabilitation	\$2,525,895
	Residential East	Rehabilitation	\$6,631,625
	Various PM	Maintenance	\$885,000
	Total		\$10,042,520
FY 28-29	Western	Rehabilitation	\$2,760,388
	Residential West	Rehabilitation	\$8,455,138
	Various PM	Maintenance	\$885,000

		Total	\$12,100,525
FY 29-30	Washington Street	Rehabilitation	\$5,198,700
	Midtown	Rehabilitation	\$4,715,813
	Various PM	Maintenance	\$885,000
		Total	\$10,799,513

Having priority-ranked streets and a comprehensive multi-year plan allows the City to operate more efficiently and strategically in addressing its street maintenance and improvement needs. With a clear plan in place, the City can manage time and resources more effectively, ensuring projects are well-coordinated to avoid delays and maximize productivity. Additionally, this structured approach provides a full understanding of available funding sources and allows for the strategic allocation of resources to the most critical projects.

A multi-year plan also enhances transparency and accountability. The plan offers the public a clear view of how and where funds are being used by outlining specific projects, timelines, and costs. This level of transparency builds trust and ensures accountability for the work being done. Furthermore, the plan helps set realistic expectations for both staff and the community, providing clarity on the scope of work, project timelines, and expected outcomes.

PUBLIC OUTREACH

The City's Pavement Management Plan is presented to the Council and the public for input three times a year:

- In early spring, as part of SB1, the California Transportation Commission requires a project list for the following fiscal year to be submitted by May 1st each year. Although there is an allowance for flexibility after the list is submitted, the intended list of paving projects must be approved by Council. This list of streets for FY 24/25 is still current, and the five-year plan builds off that list for future years.
- As part of the annual budget cycle and CIP budget presentation, the pavement management plan was discussed.

This agenda item appeared on the City's tentative agenda document on October 21, 2024, which was a publicly-noticed meeting.

COUNCIL GOAL ALIGNMENT

The five-year paving plan supports key City Council goals:

- **A City That Works for Everyone:** By addressing both major roadways and local streets, the plan ensures equitable access and mobility across all neighborhoods, fostering a more connected, inclusive city.
- **An Economy That Prospers:** Well-maintained roads are vital for economic activity. This plan strengthens transportation networks and reduces long-term costs through pavement preservation, supporting local businesses and economic sustainability.

- **An Environmental Legacy We Can Be Proud Of:** The plan prioritizes preventative maintenance, reducing the need for resource-intensive full-scale replacements. Improvements to bike lanes and pedestrian paths also promote alternative transportation and lower emissions.
- **A Safe Community That Thrives:** The plan enhances safety by reconstructing critical roadways and maintaining streets in fair condition to prevent deterioration, ensuring safer routes for vehicles, cyclists, and pedestrians.
- **Spaces and Places That Inspire:** Beyond smoother roads, the plan integrates pedestrian infrastructure, traffic calming, and green elements like tree-lined streets, creating inviting, functional public spaces.

CLIMATE ACTION/SUSTAINABILITY EFFORTS

The five-year pavement plan supports Petaluma's climate action and sustainability goals by prioritizing preventative maintenance, which reduces the environmental impact of full-scale road replacements and extends the lifespan of streets. The plan also enhances sustainable transportation by improving bike lanes and pedestrian pathways, promoting alternatives to car travel and reducing emissions. Additionally, green infrastructure, such as permeable surfaces and tree-lined streets, helps manage stormwater and reduce the urban heat island effect, further aligning the plan with the City's climate resilience efforts.

ENVIRONMENTAL REVIEW

The action before the City Council tonight does not qualify as a "project" under CEQA Guidelines Section 15378. However, any future roadway construction will be considered a "project" and will require its own CEQA analysis. That said, it is likely to be exempt under CEQA Guidelines Section 15301, which exempts reconstruction of existing facilities, with negligible expansion of use.

FINANCIAL IMPACTS

The direction provided in this presentation has no financial impact. Any recommended action that would have a financial impact that has not already been approved would be brought before the Council again for authorization.

ALTERNATIVES

If the Council does not approve this Five-Year Paving Plan, staff will need to reanalyze and reassess, which would delay the plan's adoption. This delay would postpone critical pavement maintenance and rehabilitation projects, potentially leading to further deterioration of streets and increased maintenance costs. Additionally, the delay will impact coordination with other planned infrastructure improvements.

ATTACHMENTS

1. Resolution

- a. Exhibit A – Five-Year Paving Plan (FY25/26 – FY29/30)