



THE CITY OF SAN DIEGO

OFFICE OF THE INDEPENDENT BUDGET ANALYST REPORT

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Review of the Pavement Management Plan

OVERVIEW

The condition of the pavement on all City streets is one of the City's most significant priorities. A condition assessment was recently completed and demonstrated that the overall Pavement Condition Index (PCI) across all City streets decreased from a score of 71 in 2016 to a score of 63 in 2023.

Following the condition assessment's completion, the Transportation Department (Transportation) released the [Pavement Management Plan](#) (PMP) in January 2024, which was then presented to the Active Transportation & Infrastructure Committee (ATI) on January 24, 2024. The PMP provides a summary of how the City's road network operates, what treatments are available for maintenance and rehabilitation, what it would cost to bring the PCI of City streets to an average of 70, and a five-year plan for pavement management activities.

Following the presentation to ATI, our Office conducted additional analysis on the PMP, including the data and plans presented therein, had additional follow up conversations with Transportation, and reviewed other related recommendations for pavement management made by the County Grand Jury and the City Auditor's Office. This report includes our analysis of the PMP, including recommendations for modifications to subsequent PMPs to enhance the City's ability to proactively manage pavement in the right-of-way.

BACKGROUND

The City has invested significant resources into pavement management over the last decade, but the pavement condition, as shown in a recent condition assessment, continues to decline. Across FY 2013 through FY 2024, the City budgeted approximately \$650 million on pavement maintenance activities. This includes \$404 million on rehabilitation and \$246 million on maintenance. Rehabilitation activities include major resurfacing work that significantly increases the lifespan of a road, including asphalt overlay, as well as more significant work such as a full-

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depth reclamation or full reconstruction. Maintenance activities include slurry seal, cape seal, crack seal, and other repairs, which typically only add a few of years of useful life to a street.¹

While the City provided significant funding for streets, they have continued to deteriorate, which indicates that the City is likely not spending enough on the maintenance of City streets. Most Council Policies that address street repair are quite old, dating from the 1970s², and mostly refer to significant street improvements and the financial responsibility for those activities. Many of the practices provided in these policies are either outdated and are no longer implemented, and do not speak to the City's current practices. Consequently, City staff are instead using best management practices to guide their pavement management activities. Some of these best management practices include the goal to have an average PCI of 70 across all streets within the City, and to seek to conduct a pavement condition assessment once every four years.

Notably, there is an exception to outdated policies for unimproved streets. Amendments to [Council Policy 200-01](#) were approved in February 2021, and changed the City's policy regarding unimproved streets and alleys³ to allow the City to consider providing funding for such streets. Unimproved streets are not included in the City's pavement maintenance plans, and do not receive regular maintenance treatments.

In response to the continued deterioration of the City streets, numerous reports have been released that provide recommendations for how the City could better manage its pavement.

On June 8, 2023, the San Diego County Grand Jury filed a report titled "[When Will My Street Be Paved? City of San Diego's Street Paving Challenges.](#)" The report focused on the City's efforts on street repaving, including the growing funding gap between available resources and anticipated street maintenance needs, as well as perceived shortfalls in the City's street repaving website. The Grand Jury made three findings and seven recommendations. The Mayor and City Council provided [a joint response](#) that agreed with two findings, while partially disagreeing with the third. Additionally, the City responded that it had either implemented or would implement five of the recommendations, with two other recommendations requiring further analysis.

The City Auditor's Office also released a [Performance Audit of the City's Street Maintenance Program](#) in February 2024. The audit included five findings and seven recommendations, all of which were agreed to by Transportation. The findings and recommendations included actions such as the development of a five-year workplan for pavement management, updating standard operating procedures to ensure that such a plan is regularly updated, develop an additional strategy to address unimproved streets, and develop a funding strategy to ensure that resources are stable and sufficient to support the program.

¹ More information about these treatments and their impacts to the road surface can be found in the Pavement Management Plan.

² In particular, the two Council Policies that address street improvements or repair are [CP 200-01](#) and [CP 200-03](#).

³ Unimproved streets are defined in CP 200-01 as "a street, which is part of the City's official streets system, that is paved with less than 2 inches of hot mix asphalt, not graded or paved for drainage, and lacks a sufficient underlying base." Unimproved alleys are defined as "a public way that is no wider than 25 feet, which is paved with less than 2 inches of hot mix asphalt, is not graded or paved for drainage, and lacks a sufficient underlying base."

In January 2024, Transportation released the PMP. The purpose of the PMP is to outline the City's needs for pavement maintenance activities, including street maintenance selection criteria, data on the current conditions of City streets, funding needs for these activities, and a potential five-year paving plan if requisite funding is provided. The new five-year plan addresses requests from City Councilmembers, the Grand Jury, and the City Auditor. In total, the plan calls for \$1.9 billion to be spent over the next ten years to bring City streets to an average PCI of 70.

All these reports demonstrate that despite significant investment into City streets over the past decade, the level of investment and strategies for pavement maintenance have been insufficient.

FISCAL AND POLICY DISCUSSION

In our review of the PMP, our Office identified certain potential issues or areas that we believe should be clarified. The report focuses on:

- The lack of a plan for streets that already require reconstruction;
- Potential equity issues including unequal treatment among Council Districts and potential issues on unimproved streets;
- Further analysis of the study to bring some pavement management activities in-house; and
- A lack of clear policy guidance regarding street repair.

The discussion below provides our review and analysis of these issues and includes several recommendations.

Funding Plan Still Leaves Failed Streets Behind

The main policy proposal contained within the PMP is a funding strategy and plan that will bring the average PCI of streets citywide up to 70 at the end of ten years. In doing so, Transportation has proposed what they call the 'Best Value' approach to selecting roads for various maintenance activities. This approach prioritizes performing paving activities on roads, including maintenance or rehabilitation short of reconstruction, before they fall below a PCI level that would make them ineligible for a less intensive form of maintenance and thus require a more expensive form of repair in later years. This approach is informed by the best practices of other jurisdictions and is an attempt to be as cost effective as possible.

In general, our Office agrees with this approach to planning pavement maintenance activities. When analyzing maintenance schedules for cost effectiveness, we looked at full lifecycle costs for streets to ensure that Transportation was not just conducting activities to extend the useful life of a street for as long as possible, but rather was doing so in a way to bring down the overall maintenance cost over a street's expected life. Conducting regular maintenance is expected to decrease the average yearly costs to maintain streets. The table below provides details on various pavement management strategies and compares their average yearly costs. The 'Pavement Maintenance' strategy calls for two slurry seals, one at a PCI of 85 and another at a PCI of 72, before then requiring an overlay at a PCI of 60. The 'Only Asphalt Overlay' strategy calls for two

asphalt overlays, one when the road reaches a PCI of 60 then another at a PCI of 35. The ‘Only Reconstruction’ strategy calls for waiting until the road reaches a PCI of 0 and then performing a reconstruction. While in a given year the ‘Pavement Maintenance’ strategy may allocate resources to streets that are in better conditions than others, it prevents those streets from requiring greater resources over their entire lifespan.

Lifecycle Scenarios (costs in \$ per square foot)				
Pavement Management Strategies	Paving Events	Total Costs	Years of Life	Average Yearly Cost
Preventative Maintenance	3	\$ 11.18	41	\$ 0.27
Only Asphalt Overlay	2	\$ 17.64	42	\$ 0.42
Only Reconstruction	1	\$ 34.00	45	\$ 0.76

Focusing on the total lifecycle costs of a street and planning maintenance activities to achieve cost effectiveness is both cost-effective and adaptable. Importantly, the information in the above table shows average lifespan years for pavement, but those lifespans are averages across different types of roads. As further described in the PMP, the City’s pavement network is split up into different road types, including Primes, Majors, Collectors, Locals, Residentials, and Alleys. These different types of roads all have different deterioration rates based on usage, and thus may require different maintenance regimes.

While the ‘Best Value’ plan seeks to get the City’s pavement to an overall average PCI of 70 by 2034, we believe that a more robust discussion should be had regarding the overall most cost-effective solution for maintaining City streets. Decisions for treatments should focus not just on the potential to defer more costly repairs, but also on achieving the lowest average yearly cost for overall maintenance for the entire street network (rather than letting streets in poorer condition fail). Stated another way, ensuring that streets are maintained in the most cost-effective manner possible over their entire lifecycle should be the overarching goal of the PMP, as opposed to hitting a specific average PCI by a certain date. **Our Office recommends that Transportation continue to look at the total potential lifecycle costs for streets when determining which pavement maintenance activities to conduct on various roads, and provide further information on how specific maintenance regimes either increase or decrease the average lifespan and the cost to maintain different types of roads.**

While the ‘Best Value’ proposal in the PMP achieves the goal of an average PCI of 70 at the least cost, *there are still major concerns associated with the number of streets that will be in a failed state by the end of the next decade.* Presented below is the average PCI for all roads in their current condition, as well as their projected condition in 10 years if the ‘Best Value’ approach is taken and the entire \$1.9 billion in needs is funded. Whereas the City currently has roads in various conditions, in 2034 the PMP’s average PCI of 70 is achieved by bringing a majority of the roads up to the “good” and “satisfactory” level, while at the same time more roads are projected to fall to a “failed” category that will require significant reconstruction at a later date. *Taking the PMP’s ‘Best Value’ approach will still result in approximately 1 in 5 roads having condition of ‘failed’ in 2034.*

Citywide Pavement Condition Index Changes							
Category	Good	Satisfactory	Fair	Poor	Very Poor	Serious	Failed
PCI	100-85	84-70	69-55	54-40	39-25	24-10	<10
Current Condition Assessment (FY 2024)	20%	32%	17%	12%	10%	6.7%	2.0%
Best Value Fully Funded (FY 2034)	48%	32%	1.9%	0.2%	0.2%	0.1%	18%

According to Transportation, most of the roads that fall to failed by 2034 (14% of the 18%) under the ‘Best Value’ approach are roads that currently have a PCI below that which would allow for overlay or a similar rehabilitation activity. These roads thus require the most expensive form of pavement maintenance, which is a full reconstruction. Only 4% of City roads that currently are above a PCI that allows for an overlay would fall below a PCI requiring reconstruction by 2034. As full reconstruction is the most expensive form of pavement maintenance, Transportation instead focused on spending limited resources to prevent more roads from falling into this category. While it is appropriate to maintain streets in a condition that does not require reconstruction, it is concerning that over the next ten years there appears to be no plan for addressing failed streets. It is also important to stress that these failed streets would not be uniform by type, but rather would be clustered into specific types since these roads already require more costly repairs. The major categories of roads that already require reconstruction because they are currently below a PCI of 35 are Alleys, Primes, and Majors. The best estimate for what it would cost to bring the failed streets in FY 2034 back up to normal standards is approximately \$4.1 billion. This estimate does not include inflationary factors that are included for other cost estimates in the PMP.

These streets should be addressed in the City’s pavement plans, and the entire costs of the road network need known, especially given Transportation agreed to a recommendation from the City Auditor to develop a funding strategy for pavement. While the audit suggested that this would be similar to the funding strategy that was done for stormwater, our Office notes three key differences. First, unlike stormwater infrastructure, streets and pavement are not assets that are easily financed through utility-like fees. For stormwater, funding strategies have focused on an impervious surface tax, which has a direct nexus to the impact that certain properties have on the stormwater system. However, there are no similar taxes that are available to the City to raise for streets, and those that are available, such as gas taxes or road usage charges, are typically controlled by other entities like the state and SANDAG.

Second, any funding strategy would have to consider different strategies for different types of activities. For instance, most of the maintenance and rehabilitation activities proposed in the PMP require cash funding and should not be supported by debt financing. While overlay activities have been debt funded in the past, the useful life of an overlay, with appropriate maintenance treatments, is under the 30 years that the City typically utilizes for bond repayments. Other rehabilitation activities, like reconstruction or the improvement of unimproved streets, however, are prime candidates for more traditional long-term financing, including bonds and debt.

Finally, as discussed by both the City Auditor and the Grand Jury, it is not simply a lack of funding that prevents the City from implementing ideal pavement management strategies, but the lack of

consistent funding. Funding pavement maintenance and rehabilitation on a year-by-year basis, with no planning for out-year funding, prevents both the Transportation and Engineering and Capital Projects (ECP) departments from appropriately staffing up and planning out work in a timely manner. Thus, while a new dedicated funding source may not be available for pavement management, Transportation and ECP should work with the Department of Finance (DOF) to consider ways to plan for consistent, year-over-year funding as part of the development of a funding strategy for pavement, potentially including new ways to budget for the CIP that incorporates multiyear funding plans. **Our Office recommends that as part of the development of the funding strategy, Transportation should develop a plan to finance the repair of the failed streets left out of the current PMP. We also recommend that Transportation work with ECP and DOF to ensure that funding sources be appropriately identified for the various maintenance and rehabilitation activities on a consistent, year-by-year basis.**

Equity Concerns – Uneven Outcomes and Unimproved Streets

Another issue with the PMP is related to the City’s equity goals. As part of the PMP, Transportation included equity considerations in the pavement maintenance schedules for repaving specific roads. In 2023, Transportation began incorporating equity factors in the existing street selection tiebreaker criteria, along with other historical factors such as street classification, street use, proximity to freeway on/off ramps and schools, and other criteria.

However, it is an open question if this level of inclusion is enough of a consideration. In particular, there have been concerns over differing levels of planned investment in the PMP across Council Districts, as well as a limited consideration of unimproved streets. This section discusses impacts of the PMP on Council Districts, and how to better plan for the improvement of unimproved streets.

Council District Metrics

The PMP has planned programmatic funding through the ‘Best Value’ approach, which results in varying levels of investment for each Council District. This is to be expected to some extent, as each district has varying quantities of lane miles. The table below provides an overview of the funding allocated to each district, as well as the lane miles and funding to be spent per mile according to the PMP plan.

Spending and Lane Miles by Council District (\$ in millions)									
Council District	1	2	3	4	5	6	7	8	9
Maintenance Funding	\$ 123	\$ 119	\$ 99	\$ 80	\$ 146	\$ 124	\$ 117	\$ 92	\$ 86
Rehabilitation Funding	120	118	71	64	126	132	115	81	64
<i>Total Funding</i>	<i>\$ 243</i>	<i>\$ 237</i>	<i>\$ 170</i>	<i>\$ 144</i>	<i>\$ 272</i>	<i>\$ 256</i>	<i>\$ 232</i>	<i>\$ 173</i>	<i>\$ 150</i>
<i>Percentage of Total Funding</i>	<i>12.9%</i>	<i>12.6%</i>	<i>9.1%</i>	<i>7.7%</i>	<i>14.5%</i>	<i>13.6%</i>	<i>12.4%</i>	<i>9.2%</i>	<i>8.0%</i>
Lane Miles	853	920	580	603	884	828	784	611	550
<i>Percentage of Total Lane Miles in City</i>	<i>12.9%</i>	<i>13.9%</i>	<i>8.8%</i>	<i>9.1%</i>	<i>13.4%</i>	<i>12.5%</i>	<i>11.9%</i>	<i>9.2%</i>	<i>8.3%</i>
\$ per mile	\$0.285	\$0.258	\$0.293	\$0.239	\$0.308	\$0.309	\$0.296	\$0.283	\$0.273

This is not enough to fully see how the PMP will impact each district, however. While they are useful as proxy measures, funding levels and miles of streets repaved fail to adequately show impacts to streets across the City.

To show more impacts of the program, our Office looked at both current and projected PCI scores by Council District, based on the most recent condition assessment and the anticipated 2034 results of the PMP’s ‘Best Value’ strategy. In the table below, we provide data on the overall improvement of PCI scores by each Council District. The table also contains information on both the percentage of streets within each district that are currently above 70, below 24, and what those percentages will be following the implementation of the PMP. The 70 PCI score represents the PMP’s goal for the Citywide average; the 24 PCI score is an approximate metric for when a street will require major reconstruction.

Pavement Condition Index by Council District									
Council District	1	2	3	4	5	6	7	8	9
PCI Current	65	57	61	61	69	62	67	66	62
PCI 2034 Projected	69	64	73	67	74	68	70	74	72
PCI Improvement	4	7	12	6	5	6	3	8	10
% 70 & Up Current	67	60	67	57	67	56	63	65	65
% 70 & Up 2034 Projected	75	70	78	72	78	74	74	78	75
% 70 & Up Improvement	8	10	11	15	11	18	11	13	10
% 24 & Below Current	10	13	11	17	6	12	8	8	14
% 24 & Below 2034 Projected	15	20	11	20	10	18	15	13	17
% 24 & Below Degrade	5	7	0	3	4	6	7	5	3

The overall level of PCI improvement varies by district, with a high of 12 in District 3, to a low of 3 in District 7. There are similar changes in the percentage of streets brought above a PCI of 70 or those falling below a PCI of 24. In many instances, the 2034 projections track the overall level of street degradation that already exists within a Council District. The level of investment, including on a per mile basis, does not have a large direct effect on outcomes. As an example, the outcomes for both District 4 and District 6 are similar: both districts have an overall PCI increase of 6, with similar improvements in both the percentage of streets above 70 and streets falling below a 24 by 2034. However, while District 4 has the lowest investment on a per mile basis, District 6 has the highest.

This suggests that requiring equal investments by district could lead to even greater inequalities. Our Office suggests that the City should focus on more equal *outcomes* in each District, in particular by focusing on PCI levels, such as more equal overall PCI levels by District, or having an equal proportion of the road network requiring reconstruction. To accomplish this, it is critical that Transportation include a strategy to fund projected failed roads in a future PMP. **Additionally, Council may wish to provide more detailed metrics and goals it would like a future PMP to include, such as more equitable outcomes in PCI levels across Council Districts.**

Unimproved Streets

One area in the PMP where there are dramatically unequal outcomes are unimproved streets and alleys. Unimproved streets and alleys are parts of the City right-of-way that have not been improved up to the engineering standards of the City, and typically do not receive city maintenance as a result. Prior to changes in Council Policy 200-01, these streets were also not included in any capital planning efforts by the City to improve them, and their conditions range from thin, uneven layers of asphalt to unpaved dirt roads. Additionally, these rights-of-way generally do not have drainage infrastructure, sidewalks, or other amenities that are typically provided by the City. Council Districts 4 and 8 have the largest number of unimproved streets, as presented below.

Unimproved Streets and Alleys									
Council District	1	2	3	4	5	6	7	8	9
Street Miles	2.03	2.02	2.74	10.57	1.49	0.22	0.06	12.79	1.19
Alley Miles	2.09	8.92	5.04	1.44	0.7	0.8	0.57	2.29	6.22
<i>Total Miles</i>	<i>4.12</i>	<i>10.94</i>	<i>7.78</i>	<i>12.01</i>	<i>2.19</i>	<i>1.02</i>	<i>0.63</i>	<i>15.08</i>	<i>7.41</i>

The PMP *does* lay out potential strategies for developing unimproved streets, including prioritization criteria for selecting right-of-way projects in this category that are specifically designed to center around equity. Additionally, the plan lays out various funding scenarios that would improve these streets from anywhere between 0.1 miles and 0.5 miles per year, with a specific focus on Districts 4 and 8. This work in the PMP also aligns with recommendations from the City Auditor.

However, the lack of funding remains the largest impediment to improving unimproved streets. The \$1.9 billion in spending called for in the PMP does not include any amounts for unimproved streets, and the PMP further estimates that spending on these streets to bring them to City standards could cost anywhere from \$617 million to \$10.9 billion, depending on the annual investment provided. Despite the revisions to Council Policy 200-01 in 2021, little funding has been allotted for these streets.

Funding improvements to these streets should be done *in addition* to other pavement maintenance funding, not in lieu of it. Reallocating existing resources from the current pavement management activities, as explained above, would lead to greater overall costs for the City, and further prevent the adequate maintenance of streets in the future. However, improving these streets, while potentially costly for the City, would be a major step forward on the City's efforts towards equity for access to the right-of-way. To that end, Transportation in a future PMP should include a more robust plan for improving unimproved streets, including more robust criteria for selecting and prioritizing which unimproved streets and alleys the City intends to improve, and a recommended funding strategy to achieve the robust plan. **Our Office recommends that, as part of a future funding strategy, Transportation should continue to include the cost to improve unimproved streets as a separate project, work with DOF and ECP to align appropriate funding for these streets, and develop a specific recommended funding strategy to improve these streets in a cost-effective manner.**

Costs of In-Housing Pavement Activities

The PMP includes an analysis of the cost effectiveness of in-housing various pavement management activities. This was one of the recommendations made by the Grand Jury. The PMP more specifically includes a cost analysis for providing in-house repair teams to cover overlay, slurry seal, cape seal, and scrub seal repairs. The PMP indicates that the only activity that would be more cost effective to bring in-house is overlay work, but only at limited mileage. Due to this analysis, it is anticipated that Transportation will request a new mill and pave team as part of the FY 2025 budget.

Our Office notes that these assessments used conservative cost estimates, particularly with regards to equipment costs. All estimates assumed the City would purchase fully electric vehicles and equipment, which increases equipment costs by approximately 67%. Importantly, most of the City’s contractors do not use fully electric equipment, which means that current bids do not have the same level of equipment cost baked into them; this results in the comparison being more favorable to the contractors than City forces. Our Office provides a breakdown of these costs, including the differences between electric and gas equipment cost estimates, below.

City Crew Cost Estimates				
	AC Overlay		Slurry Seal	
	Electric Equipment	Gas Equipment	Electric Equipment	Gas Equipment
Personnel Costs	\$ 834,771	\$ 834,771	\$ 232,279	\$ 232,279
Materials Costs	481,305	481,305	81,331	81,331
Equipment Costs	230,733	137,822	40,172	23,921
Capital Renewal Factor	4,615	2,756	803	478
Total Costs	\$ 1,551,424	\$ 1,456,655	\$ 354,585	\$ 338,009
Contractor Costs	\$ 1,700,000	\$ 1,700,000	\$ 220,000	\$ 220,000
Percentage Difference	9.6%	16.7%	-61.18%	-53.64%

Notably, even after adjusting for equipment costs, in-housing slurry seal work would still result in additional near-term costs, as City staffing costs alone for slurry seal repairs are larger than the total per mile bids provided by contractors for the same work. Transportation estimated that in house teams would take almost three times as long to do the same number of miles as current contractors for these activities (3.5 days for contractors versus 10 days for City crews).⁴ This is attributed to a steep learning curve for new and existing employees for this new activity (the City currently has no slurry seal crews). The report also attributes contractor pricing superiority to other factors in favor of the contractor, including flexibility in workforce size and ability to leverage subcontractors and achieve specialization. Notably, it could be assumed that contractors maintain these same advantages in overlay work, but they are not more cost effective than City forces.

Our Office did attempt to determine how efficient City crews would need to be at slurry seal to be cost competitive with contractors. Based on our analysis, the assumption for working days to complete one mile would need to be 4.5 days, compared to the 3.5 days for contractors. This

⁴ For this section, we are mostly referring to the slurry seal teams estimate, since in the PMP, the estimates for cape seal and scrub seal teams were based on the same methodology as the slurry seal team estimate.

estimate assumes that electric equipment is purchased and that there is no change in materials costs. While the analysis in the PMP looks at the *upfront* costs of adding new slurry seal teams and suggests that the costs would be much higher than contractors at this time, it appears that *once the learning curve is remedied there is the potential that in-house crews could be cost competitive*, even before additional considerations are included such as increased pricing from contractors for electrical equipment and lack of contractor supply. Given these factors, adding a slurry seal crew as a pilot project could be a long-term benefit to the City.

At this time, however, our Office does not recommend that the City begin in-housing slurry seal teams. As noted in the PMP, Transportation currently is unable to add as many mill and pave teams as would be ideal due to space constraints at the Chollas Operations Yard. This yard is currently reaching its capacity for not only Transportation, but for Stormwater, the Fleet Operations Division of General Services (Fleet), and the Public Utilities Department. While the PMP does provide a cost estimate for a new operations yard at \$265 million, much of the cost/benefit analysis of this purchase is focused on Transportation.

Stormwater will also need additional yard space to comply with its regulatory mandates, as the Stormwater Department also needs additional maintenance and operations teams to maintain existing infrastructure and to maintain future assets for both flood control and water quality. New teams for Transportation and Stormwater will also require additional equipment, which must be maintained by Fleet. The Chollas yard, due to its location on top of an old landfill, would require costly upgrades to be outfitted with the infrastructure needed to charge electric vehicles and other equipment. Building out a new yard could potentially be more cost effective to gain the charging infrastructure necessary to support electric fleet purchases. **Our Office recommends City management and the Department of Real Estate Assets and Airport Management begin proactively looking for a site for a new yard to ensure that Transportation, Stormwater, and Fleet Operations have the space needed to operate efficiently, and that a cost-benefit analysis be conducted on identified sites to ensure that City resources can be used more efficiently at a new location.**

Lack of Clear Policy Guidance

While reviewing the PMP and the other related reports, our Office also sought to review additional policy documents, regulations, and best practices that relate to pavement management. There is little unique to the City that speaks to what goals, objectives, or funding strategies should be when it comes to pavement management and maintenance. The one overarching goal that Transportation identified is to have a citywide average PCI of 70; besides this, the Key Performance Indicators (KPIs) that Transportation reports as part of its budget submission only report the total number of miles resurfaced and the number of miles repaired by in-house crews. Additionally, most of the related Council Policies that do exist are outdated and do not reflect current practices or policy goals of the City. Outside of the update to CP 200-01 for unimproved streets, most policies have not been updated since the 1970s. Even CP 200-01 still divides up the responsibility for improving City streets between abutting property owners, the surrounding community, and the City, based on the classification of the road itself.

There are no other policies that otherwise lay out how roads should be upgraded, what treatments should be considered, and how they should be financed. Without clear policy guidance, it is left to the Mayor and Transportation to set standards for how roads are prioritized and to measure success. As such, the PMP represents the City's most robust written policy document for pavement management.

This lack of written policy documents was brought up by both the City Auditor and by the Grand Jury. The City Auditor called for a plan like the PMP to increase public transparency and accountability, while the Grand Jury recommended the City adopt ordinances that would mandate certain funding levels every year, and the codification of a requirement to conduct a condition assessment every four years, a frequency which is an industry best practice. In the City's response to these recommendations, the City noted that more research is required before the it could move forward.

While the finer details of how to manage assets are typically left to asset managing departments, it would be within the Council's purview to set and convey specific policy goals for pavement management. These policy goals could contain some of the recommendations in this report, as well as other specific KPIs that the Council wishes to see measured and fulfilled. Examples of policy guidance could include specific PCI goals by Council District, preferred funding methods (i.e., cash versus debt) for various activities, appropriate ways to consider lifecycle costs, the requirement for condition assessments at regular intervals, and other considerations. **Council may wish to provide more direction to the Mayor and Transportation Department on specific metrics and policy guidance for City streets.**

CONCLUSION

The Pavement Management Plan is a large step forward for the Transportation Department and the City. It lays out many of the City's key pavement management policies and goals, including best practices for maintenance and rehabilitation activities, and provides projected multi-year funding needs for pavement management activities. The plan is a significant improvement on what has come before.

In this report, our Office makes four recommendations for future improvements to the PMP, and two possible suggestions for Council consideration. The recommendations from this report are:

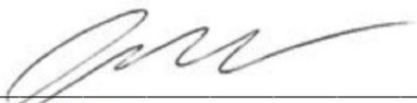
- Transportation should continue to look at the total potential lifecycle costs for streets when determining which pavement maintenance activities to conduct. It should also provide further information regarding how specific maintenance regimes either increase or decrease the average lifespan and the cost to maintain different types of roads.
- As part of the development of the funding strategy, Transportation should develop a plan to finance the repair of the failed streets left out of the current PMP. We also recommend that Transportation work with ECP and DOF to ensure that funding sources be appropriately identified for the various maintenance and rehabilitation activities on a consistent, year-by-year basis.

- As part of the future funding strategy, Transportation should continue to include the cost to improve unimproved streets as a separate project, work with DOF and ECP to align appropriate funding for these streets, and develop a specific recommended funding strategy to improve these streets in a cost-effective manner.
- City management and the Department of Real Estate Assets and Airport Management should begin proactively looking for a site for a new yard to ensure that Transportation, Stormwater, and Fleet Operations have the space needed to operate efficiently, and that a cost-benefit analysis be conducted on identified sites to ensure that City resources can be used more efficiently at a new location.


Recommendations for further Council consideration are:

- Council may wish to provide more detailed metrics and goals it would like a future PMP to include, such as more equitable outcomes in PCI levels across Council Districts.
- Council may wish to provide more direction to the Mayor and Transportation Department on specific metrics and policy guidance for City streets.

We would like to thank the Transportation Department for answering our numerous questions. Our Office remains available to assist the Council further as needed.



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APPROVED: Charles Modica
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