



Measure Z Streets Funding and Pavement Management Program

Public Works Department

Budget Engagement
Commission Meeting
February 28, 2019

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BACKGROUND

1. In December 2016, City Council approved a professional services agreement with Infrastructure Management Services (IMS) to facilitate a proactive street inspection analysis to better manage the City's Pavement Management Program (PMP).
2. In May 2017, City Council adopted a Measure Z Five-Year Spending Plan; includes \$2.9 million in annual funding for streets and roads improvement.
3. In September 2017, IMS completed pavement condition assessment of 875.4 miles of City streets.



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BACKGROUND (CON'T)

4. In May 2018, IMS completed the Pavement Management Analysis Report summarizing the condition of City's road network.
5. In September 2018, City Council received an update on the Pavement Management Program.



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METRICS OF PAVEMENT HEALTH

1. Pavement Condition Index (PCI): The PCI rates the health of a roadway with a scoring system between 0 and 100 (100 being a brand new road). The network average PCI is a good global indicator of a network's overall health.
2. Percent of Excellent Roads: A road is in excellent condition if the PCI rates between 85 and 100. A healthy network will contain 15% or more excellent roads.
3. Backlog: The backlog of roads within a network are those roads in Very Poor and Poor condition (PCIs between 0 and 40). A healthy network will have a backlog of 10% or less.



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UNDERSTANDING THE PCI...VERY POOR (0-25)

- Base & Structural Failures Evident
- Rutting on Arterials
- Extensive Fatigue Cracking

Rehabilitation need often driven by citizen complaints and safety becomes a concern at very low PCI.



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UNDERSTANDING THE PCI...POOR (25-40)

Localized base failures
Rutting at intersections
Extensive cracking
Extensive patching

Tired streets due for a thicker overlay with structural patching, possibly a surface removal and replacement.

High priority to avoid reconstruction



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UNDERSTANDING THE PCI...MARGINAL (40-50)

- Localized base failures
- Rutting at intersections
- Extensive cracking
- Extensive patching

Tired streets due for a thicker overlay, possibly with structural patching.



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UNDERSTANDING THE PCI...FAIR (50-60)

- Progressive cracking
- Few base failures
- Localized distresses

Optimum timing for thin-to-moderate overlay with some prep work.

Many benefits to selecting these streets: early lower cost – greater return, less grinding, drainage.



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UNDERSTANDING THE PCI....GOOD (60-70)

Few localized distresses
Minimal base failures

If distressed due to loading, may need thin overlay, otherwise crack seal and surface treat (micro/chip seal/slurry).

Greatest cost benefit:

Thinner strategies
Less crown build-up
Less intrusive rehab
Maintain existing drainage



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UNDERSTANDING THE PCI...VERY GOOD (70-85)

- Very few distresses
- No rutting
- No base failures

Crack seal with surface sealants treatments.

Extends pavement life at the lowest cost



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UNDERSTANDING THE PCI...EXCELLENT (85-100)

- Like new condition
- Very few minor distresses
- Smooth ride, good drainage

Should provide 5 to 10 years
prior to first treatment



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OPERATING PARAMETERS

1. PCI (85-100): Routine Maintenance
2. PCI (75-85): Preventative Maintenance
3. PCI (60-75): Surface Treatments / Localized Rehab
4. PCI (25-70): Thick Asphalt Resurfacing
5. PCI (0-40): Partial to Full Reconstruction



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5 YEAR FUNDING ANALYSIS

1. Current Budget (\$13.5M):
PCI = 57, Backlog = 26.7%,
2. Steady State Budget (\$24.0M):
PCI = 61, Backlog = 18.8%
3. Recommended Budget (\$30.0M):
PCI = 63, Backlog = 15.2%
4. Maintain Current Backlog Budget (\$34.5M):
PCI = 65, "Poor or Very Poor Roads" = 12.7%



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GOALS

1. Maintain PCI at or above 65 with backlog < 12%.
2. Increase maintenance budget to \$30M in order to attain a PCI of 63 or greater.



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RECOMMENDATION

Receive and provide input on the use of Measure Z funds for City roads and streets and additional funding sources for City's Pavement Management Program such as:

1. Increased Measure Z funds.
2. Fee assessments on biggest contributors to pavement impacts.

