



MEMORANDUM

DATE: March 13, 2018

To: Honorable Mayor & City Council

CC: Dave Bennett, City Engineer/Director of Public Works; Monte Nelson, Police Chief; Chris Heineman, Community Planning and Development Director; Deb Little, City Clerk; Michelle Mahowald, Communications & Human Resources Manager; Teresa Jensen, Director of Library and Information Technology Resources; Chris Hood, City Attorney; Amy Bergemann, Administrative Assistant

From: Ben Martig, City Administrator

RE: "Supplemental Agenda Background Memo" for March 13, 2018 No.1.

Summary Report:

The following is an update on agenda items as supplemental background agenda information made available on Tuesday, March 13, 2018.

Items #1 and #2 – Fire Station Bid Related Action Items.

The Northfield Area Fire & Rescue Services (NAFRS) board met on Monday, March 13th and unanimously passed a motion to recommend the Northfield City Council reject all bids and to re-bid the project under a General Contractor form of project management. They were provided all the background materials from the Council packet including the updated project schedule.

Item 5. – Presentation of Pavement Management Study.

Please see attached presentation for tonight.

Pavement Management Program

City of Northfield

March 13, 2018

Pavement Management

- March 13, 2018: City Council initial review of the updated pavement management program.
- April 10, 2018: City Council review of Financing/Funding for Pavement Condition Index (PCI) goal
- June 5, 2018: City Council establishes (PCI) goal

Pavement Management

1. Review of the recommended process for monitoring and forecasting the overall pavement condition within Northfield.
2. Begin to establish a numerical goal for the pavement condition rating of the City street system.
3. Verify direction of a potential long-term funding program.

What is a Pavement Management System

1. A Planning tool that is used to model the pavement deterioration from traffic and environmental aging.
2. Calculates ratings of Pavement called the Pavement Condition Index (PCI) now and in the future
3. Provide stakeholders with a cause-effect relationship (Funding vs PCI Rating)

Pavement Management Process

Step 1 – Assess Street Network: Conduct field inspections and establish an existing pavement condition rating.

Step 2 – Model Street Network to Determine Future Funding Needs and PCI Rating of the City Street Network

Step 1 – Assess Street Network

Determine Pavement Condition Index (PCI) of the Pavement

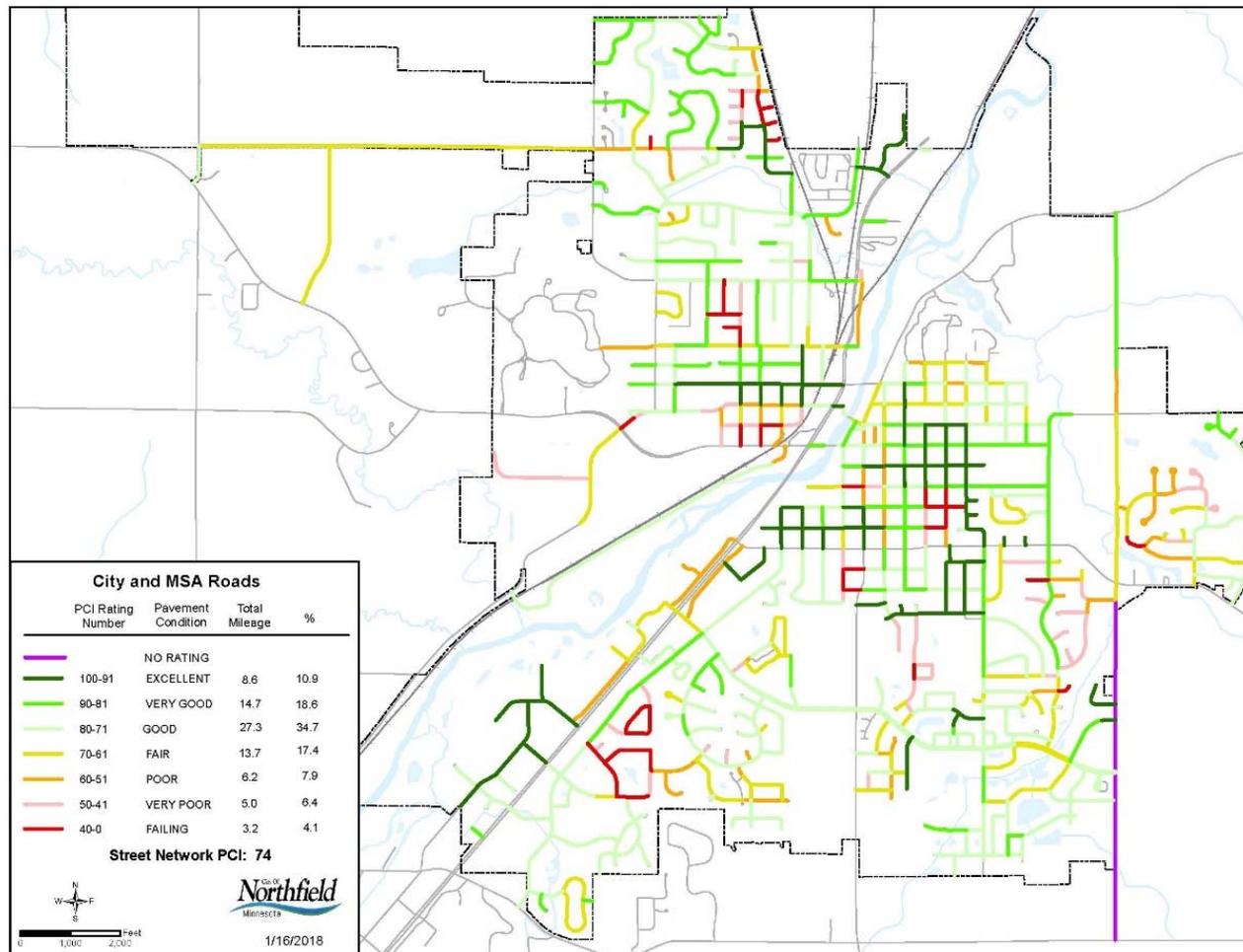
Quantified on a scale of 1 to 100

How that was Done:

- Goodpointe Technology Drove Streets Measured Cracks and Distresses
 - Measure Every Crack and distress based on Severity (low, moderate, high)
 - Information entered into ICON and PCI Rating is Calculated
- Selected Streets to provide spectrum of PCI Ratings
- Driving Streets to do visual verification of street network.

Pavement Condition Index

PCI: 74 **Local Miles: 79**



PCI - 98

Ames Street- Winona Street to Nevada Street



PCI – 95

Lockwood Drive- Lockwood Drive Curve to Linden Street South



PCI - 80

Jefferson Parkway- Indigo Lane to Heywood Road



PCI - 70

St. Olaf Avenue- Plum Street North to Linden Street North



PCI – 60

Prospect Drive- Prairie Street to Lia Drive



PCI - 40

Mayflower Drive- Trail to Parmeadow Drive



PCI - 25

Ninth Street- College Street to Winona Street



Step 2 – Model Street Network

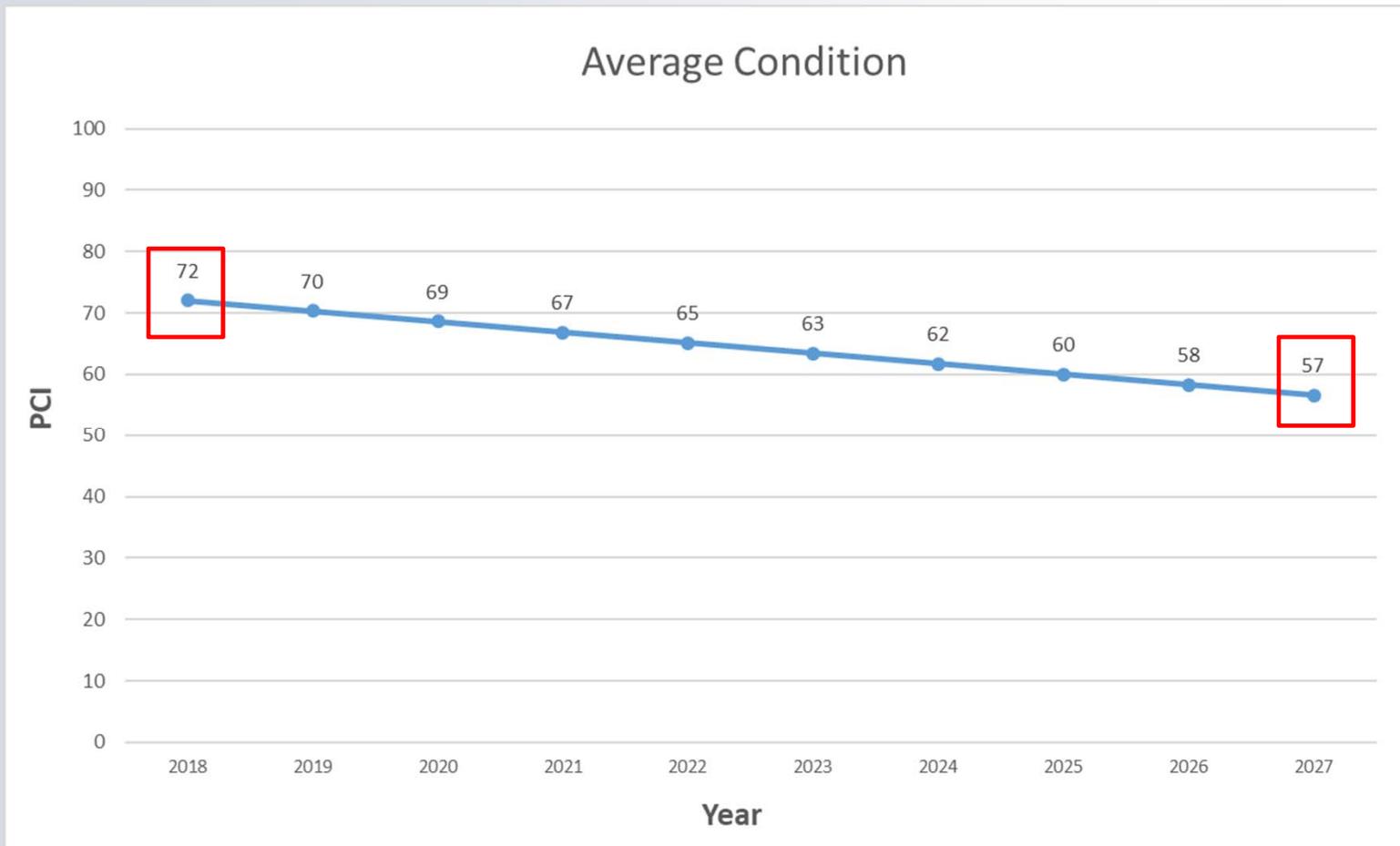
Predict PCI and Funding Needs

Three Modeled Scenarios

1. No Improvements
2. Budget to Forecast PCI
3. Target Driven PCI

10-Year Forecast Pavement PCI Rating

Scenario 1 – Do Nothing



10-Year Forecast Pavement PCI Rating

Scenario 2 – Follow Anticipated Budget and Maintenance Schedule

Preservation – Crack Fill and Seal Coat Streets

Rehabilitation – Mill and Overlay Streets

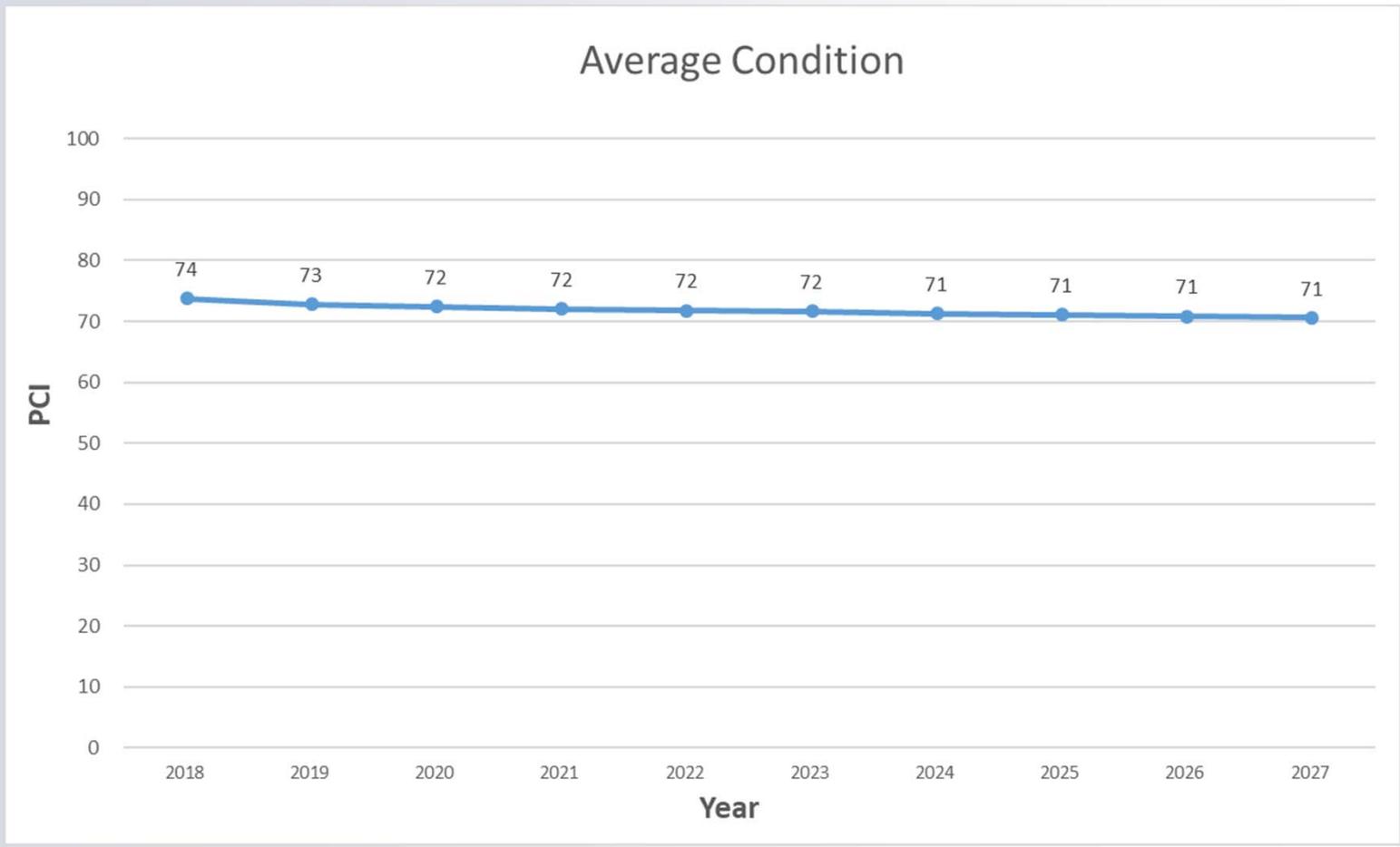
Reconstruction and Reclamation – Recon and Reclaim Streets

Existing Budget with 3% Annual Increase Per Year
Full Capture of available MSA funding

2018	\$2,300,000	2023	\$2,666,330
2019	\$2,369,000	2024	\$2,746,320
2020	\$2,440,070	2025	\$2,828,710
2021	\$2,513,272	2026	\$2,913,571
2022	<u>\$2,588,670</u>	2027	<u>\$3,000,978</u>
Total	\$12,211,012		\$14,155,910
	Grand Total		\$26,366,922

10-Year Forecast Pavement PCI Rating

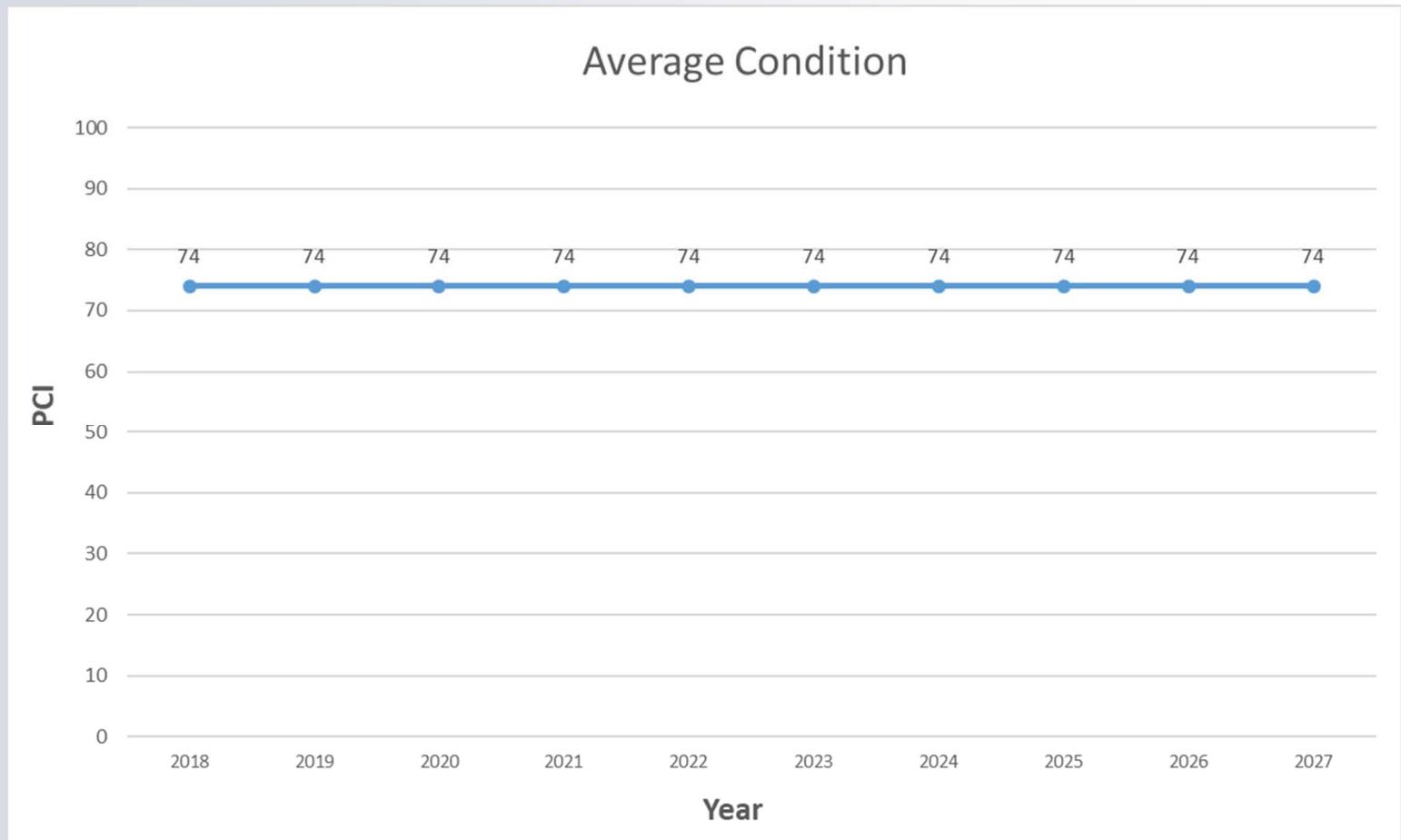
Scenario 2 – Follow Anticipated Budget Maintenance Schedule (10-Year Average \$2.6 Million/Year)



10-Year Forecast Pavement PCI Rating

Scenario 3 – Maintain Existing Network PCI with Maintenance Schedule

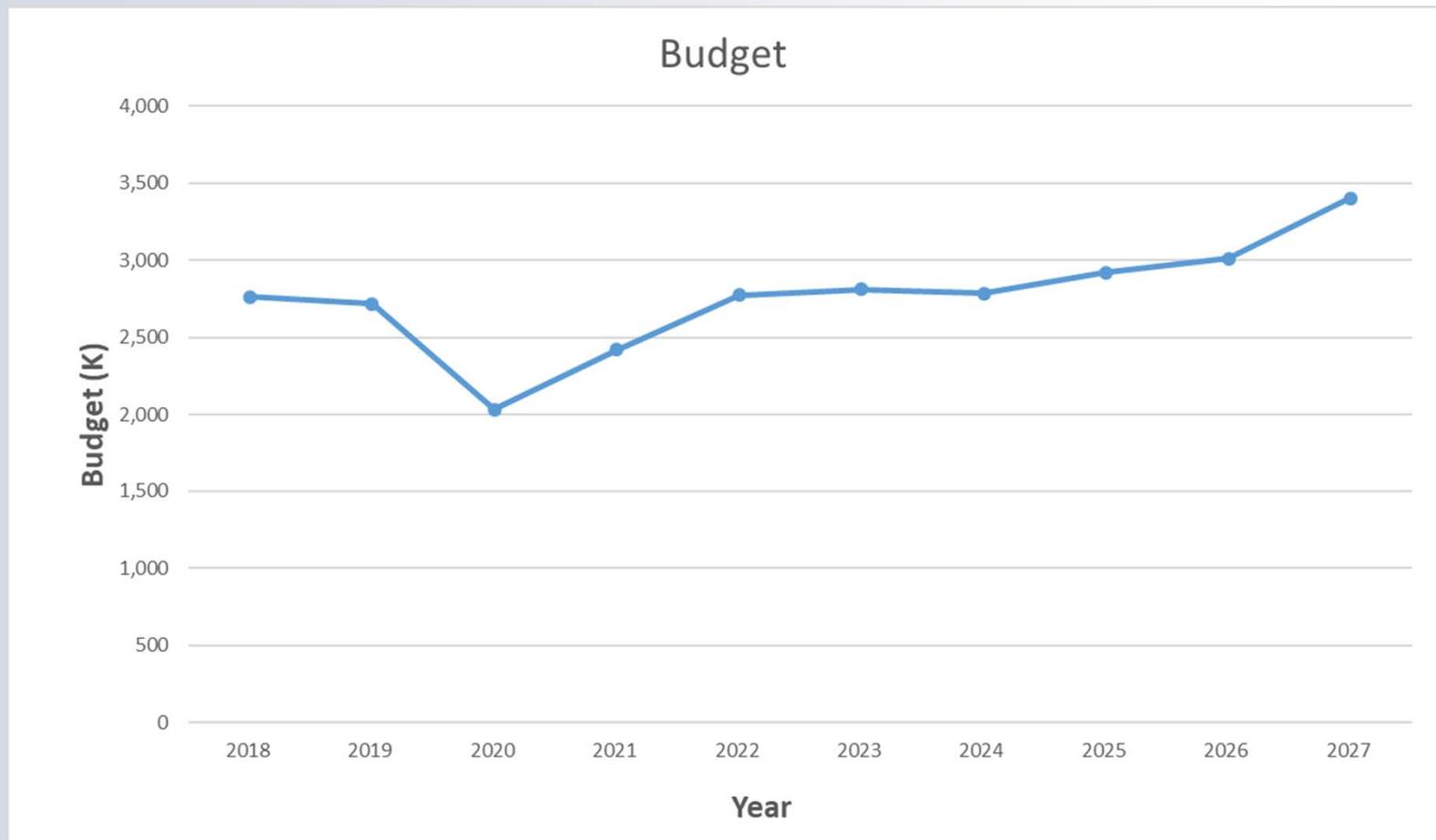
Target PCI - 74



10-Year Forecast Pavement PCI Rating

Scenario 3 – Maintain Existing Network PCI with Maintenance Schedule (Average \$2.8 Million/Year)

Target PCI – 74



10-Year Estimated Cost

Scenario 2

Budget Driven for Forecasting

2018	\$2,300,000
2019	\$2,369,000
2020	\$2,440,070
2021	\$2,513,272
2022	\$2,588,670
2023	\$2,666,330
2024	\$2,746,320
2025	\$2,828,710
2026	\$2,913,571
2027	\$3,000,978
Total	\$26,366,922

or \$2.6 Million/Year

Scenario 3

Maintain PCI 74

2018	\$2,763,516
2019	\$2,718,190
2020	\$2,036,774
2021	\$2,424,277
2022	\$2,776,138
2023	\$2,813,174
2024	\$2,787,730
2025	\$2,923,848
2026	\$3,013,222
2027	\$3,401,836
Total	\$27,658,704

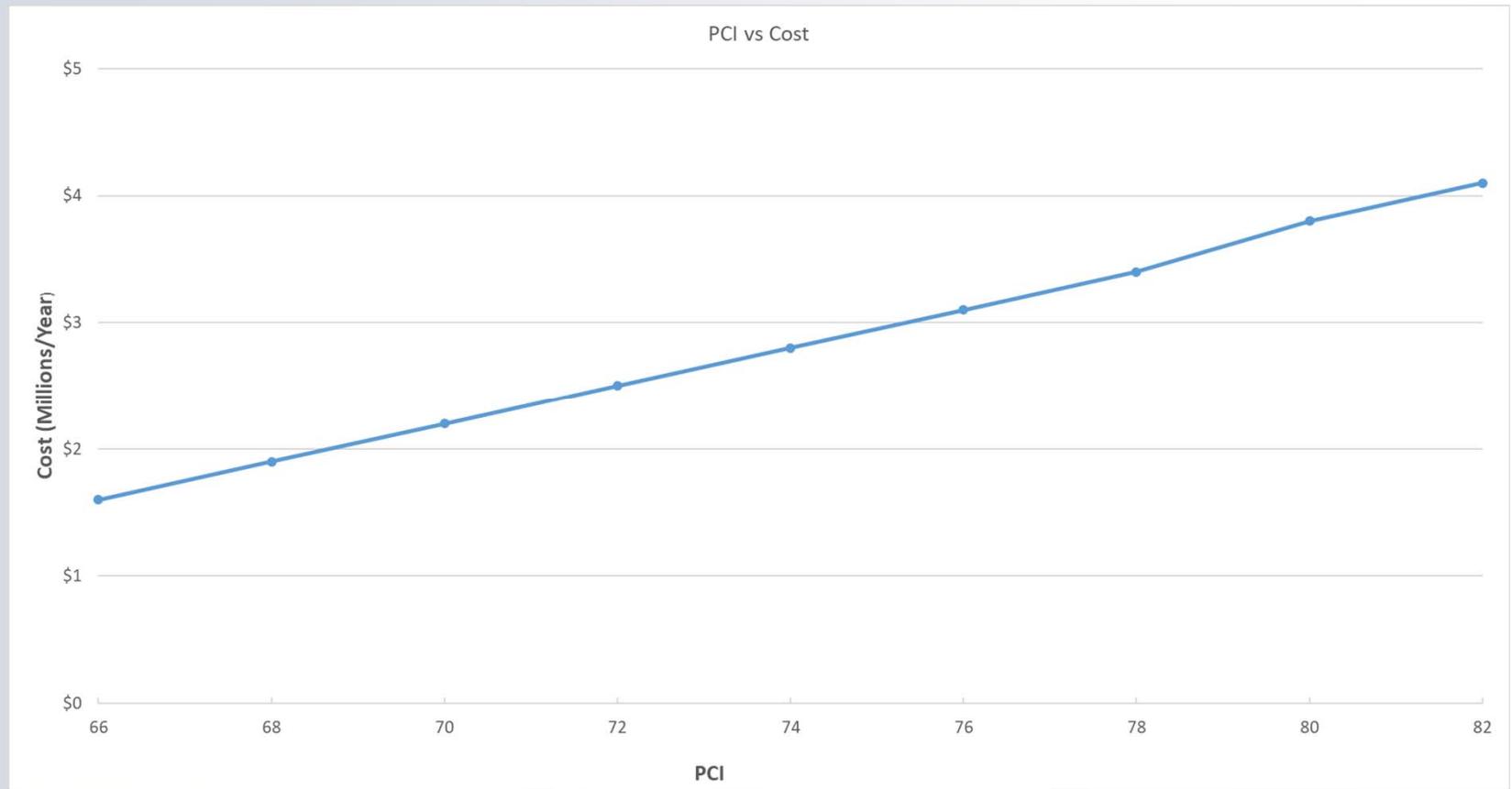
or \$2.8 Million/Year

Funding Shortfall =
\$0.2 Million/Year

10-Year Forecast Pavement PCI Summary

Current PCI 74	Average Funding
PCI Goal	
66	\$1.6 Million/Year
68	\$1.9 Million/Year
70	\$2.4 Million/Year
72	\$2.5 Million/Year
74	\$2.8 Million/Year
76	\$3.1 Million/Year
78	\$3.4 Million/Year
80	\$3.8 Million/Year
82	\$4.1 Million/Year

10-Year Forecast Pavement PCI Summary



Council Discussion/Questions

1. Questions about the Pavement Management Program?
2. Council establish a goal of a PCI range of 70-74?
3. Staff to provide a broader City finance picture to achieve specified PCI Range?