



PAVEMENT MANAGEMENT PROGRAM JANUARY 5TH, 2017 PS&T UPDATE

Program Purpose

Maintain and preserve the integrity of the City's existing roadway surfaces through a combination of pavement rehabilitation measures such as chip seals, microsurfacing, patches, and overlays.

Background

IMS contracted to:

- Provide City-wide pavement assessment based on field survey.
- Provide analysis tool in which City can maintain asset inventory.
- Provide analysis tool in which roadway rehabilitation can be prioritized given resources available.

Analysis – Current Conditions

3 Metrics used to evaluate quality of City's roadway network:

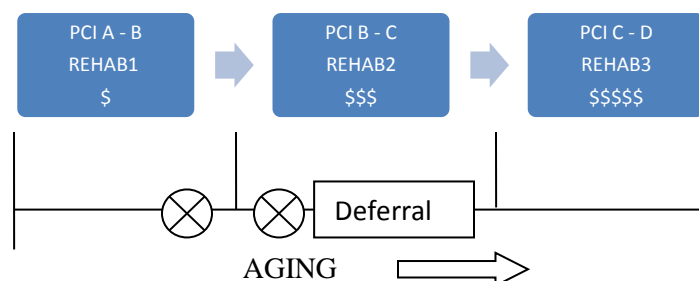
- Overall Pavement Condition Index (PCI) – 69 (Target 60-65)
- # of Streets rated as excellent – 15-20% (Target 15-18%)
- Backlog or % of roadways req. reconstruction compared to network total – 3% (Target 12%)

Current state – Underfunded, Solid PCI, and Excellent Backlog

Analysis – Proposed Pavement Management Strategy

5-year outlook utilized to understand program effectiveness and rehabilitation & roadway priority rehab.

- Current assumptions:
 - Higher Functional Classification priority
 - 90% budget allocated to overlays vs surface treatments – increased benefit for resource
 - South 223rd Street (24th to MVD) – Priority in 2018
- Analysis Dynamics
 - Aging of roadways over time as streets/blocks are selected and rehabilitated
 - Logic of deferral – rehabilitation strategy vs duration of PCI –
 - takes advantage of lower cost rehabilitation strategies for the greatest positive PCI impact and utilizes 'life span' of current PCI (Deferral)
 - Low PCI roadways may not receive priority





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Analysis – Proposed Pavement Management Strategy (Continued)

Current annual allocation of \$1.1M beginning in 2018

- Budget Scenarios – Analysis
 - Maintain Current Backlog - \$2.7M
 - Recommended (using 3 Metrics, no commitments) – \$2.35M
 - 5-year outcome PCI 73 (current 69); Backlog 5.9% (current 3%)
 - Steady State PCI - \$1.78M
 - **Selected Budget - \$1.1M**
 - **5-year outcome PCI 64 (current 69), Backlog 12% (current 3%)**
 - Worst First - \$1.1M
 - 5-year outcome PCI 64 (current 69), Backlog 15% (current 3%)

Next Steps

2017

- Partner with franchise utilities to develop design and contract for South 223rd Street
- Depending on cost for 223rd, identify potential sites for additional rehabilitation

2018

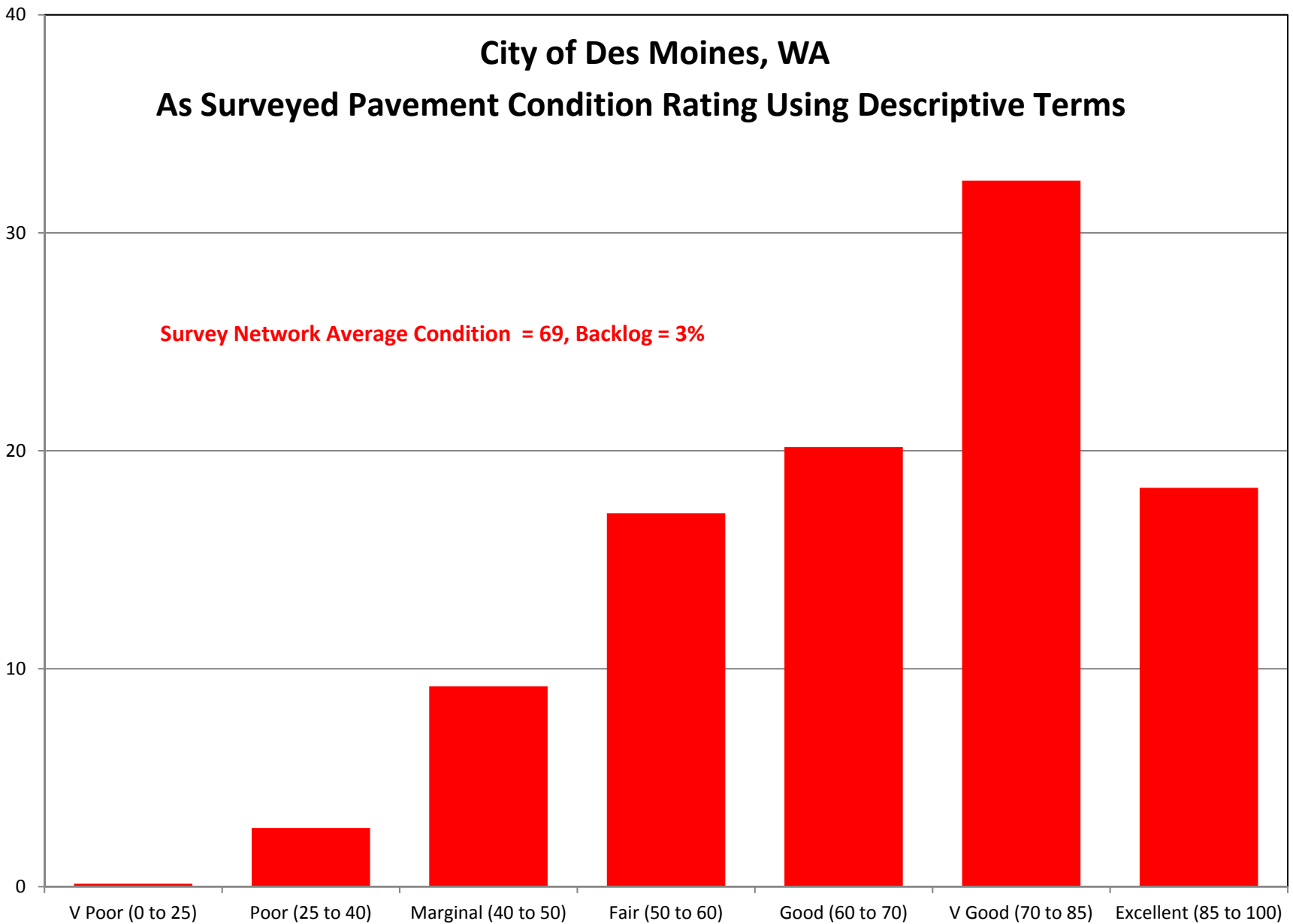
- Construct South 223rd Street rehabilitation – 24th Ave S to MVD
- Develop 2019 Citywide Asphalt Overlay program



City of Des Moines, WA
As Surveyed Pavement Condition Rating Using Descriptive Terms

Survey Network Average Condition = 69, Backlog = 3%

Percentage of Network By Area



Pavement Condition Using Descriptive Terms

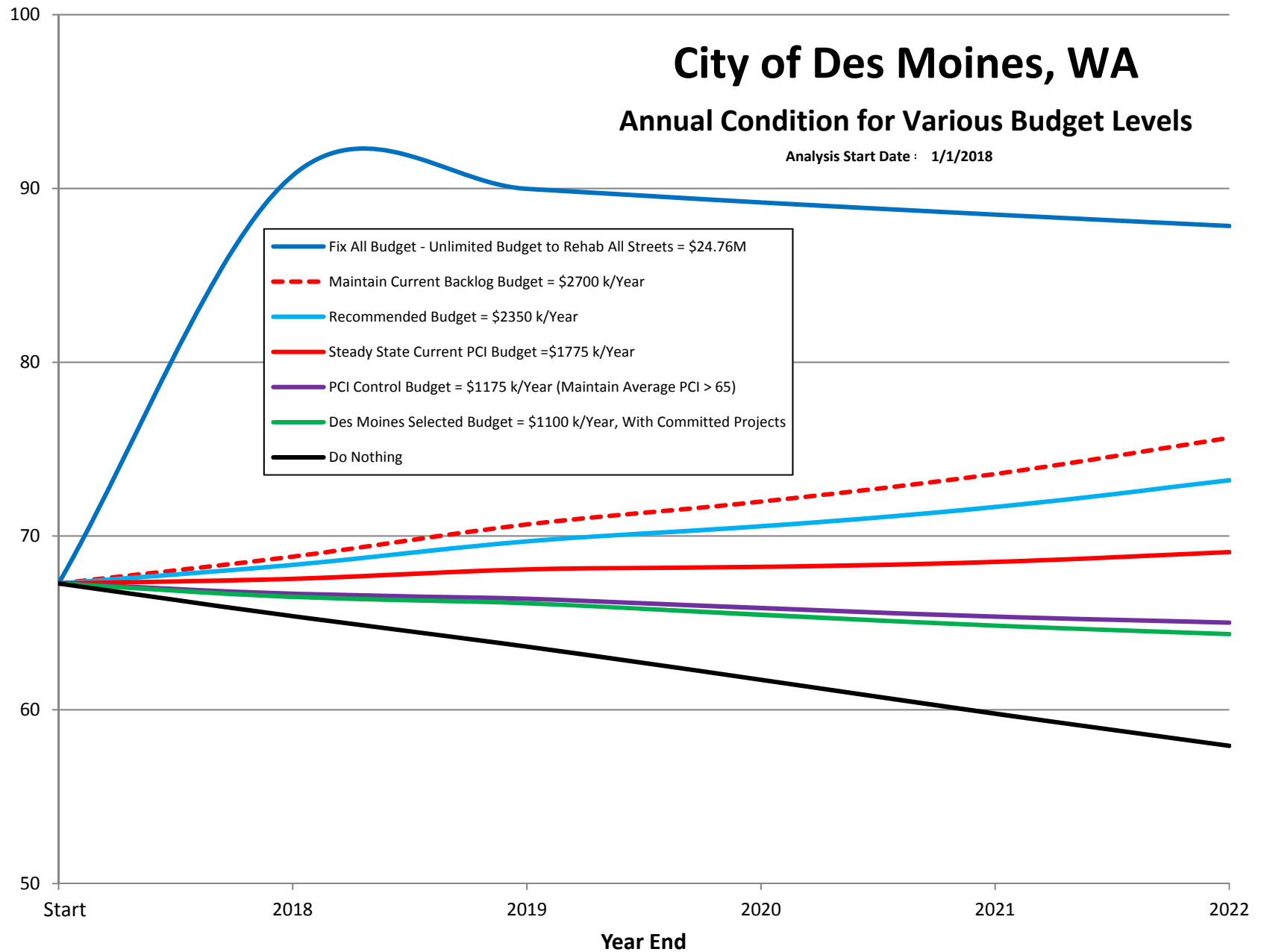
Survey Date = 9/5/16

City of Des Moines, WA

Annual Condition for Various Budget Levels

Analysis Start Date : 1/1/2018

Network Average Pavement Condition Index



City of Des Moines, WA

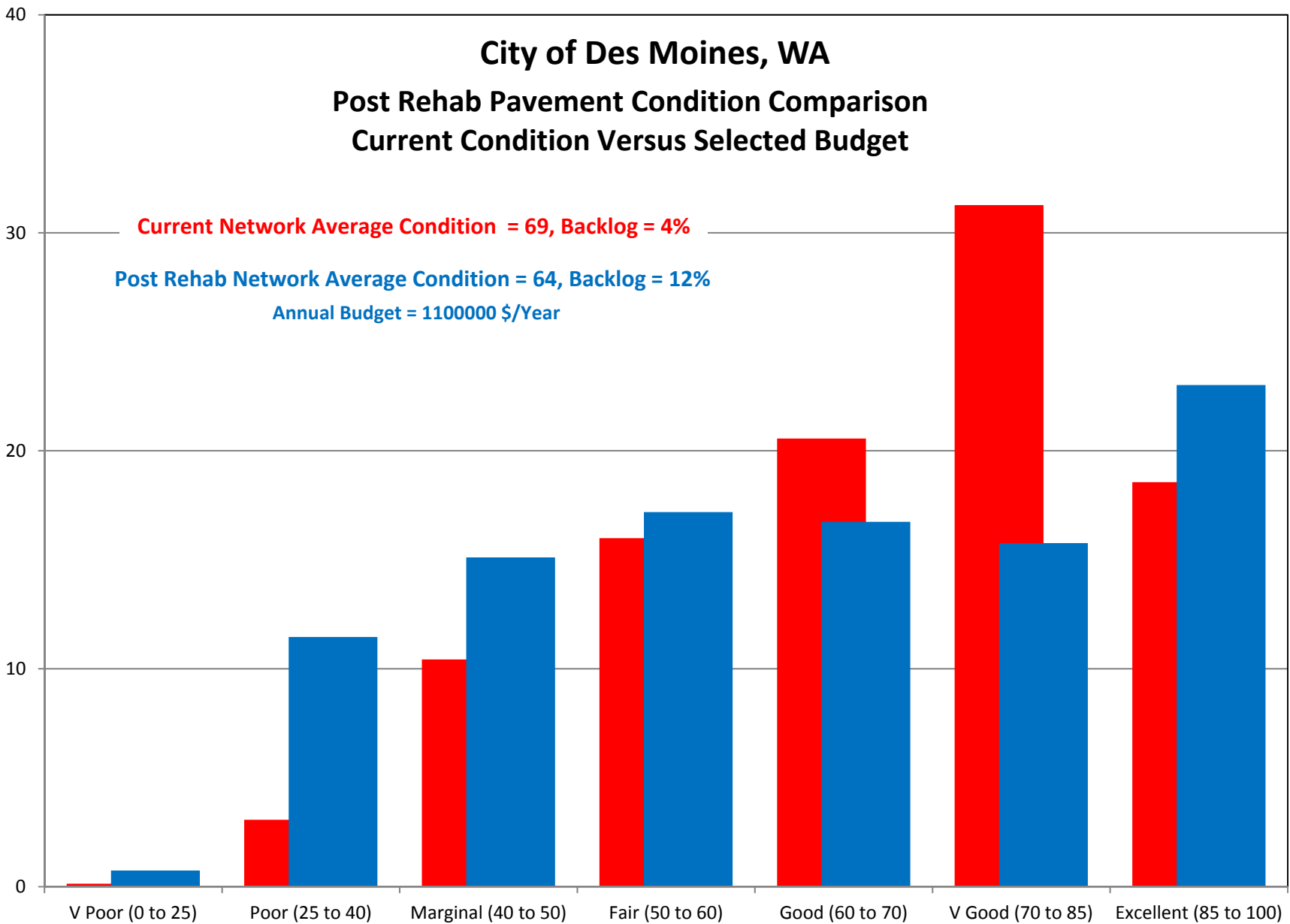
Post Rehab Pavement Condition Comparison Current Condition Versus Selected Budget

Current Network Average Condition = 69, Backlog = 4%

Post Rehab Network Average Condition = 64, Backlog = 12%

Annual Budget = 1100000 \$/Year

Percentage of Network By Area



Pavement Condition Using Descriptive Terms

Analysis Date = 1/1/2018