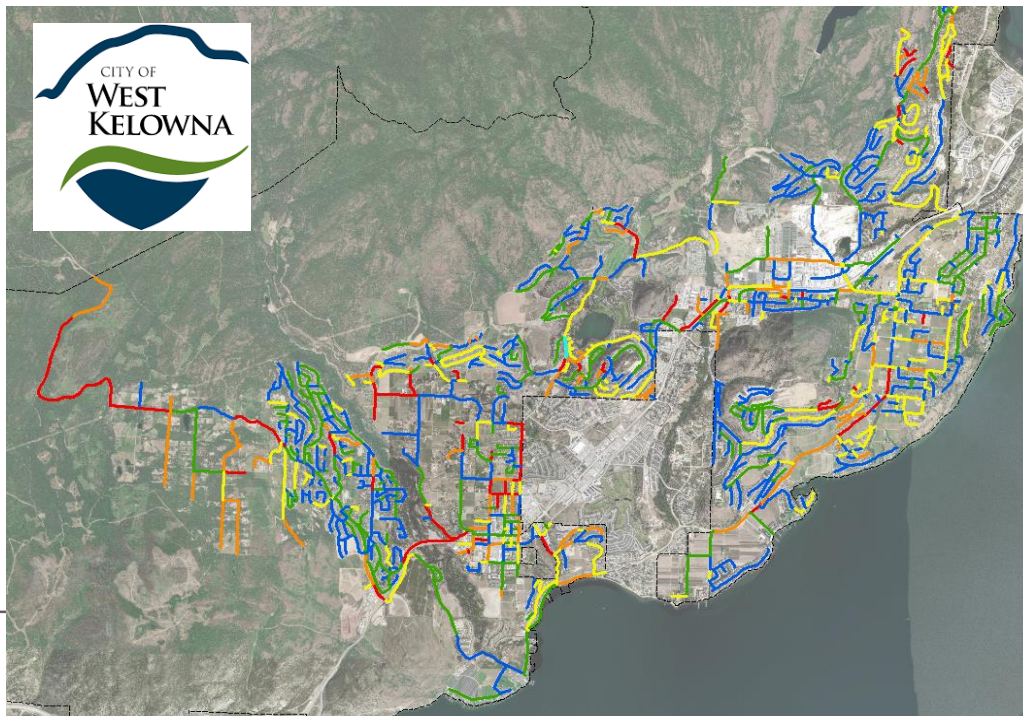


# 2022 Pavement Management Plan



Council Meeting

May 16, 2023

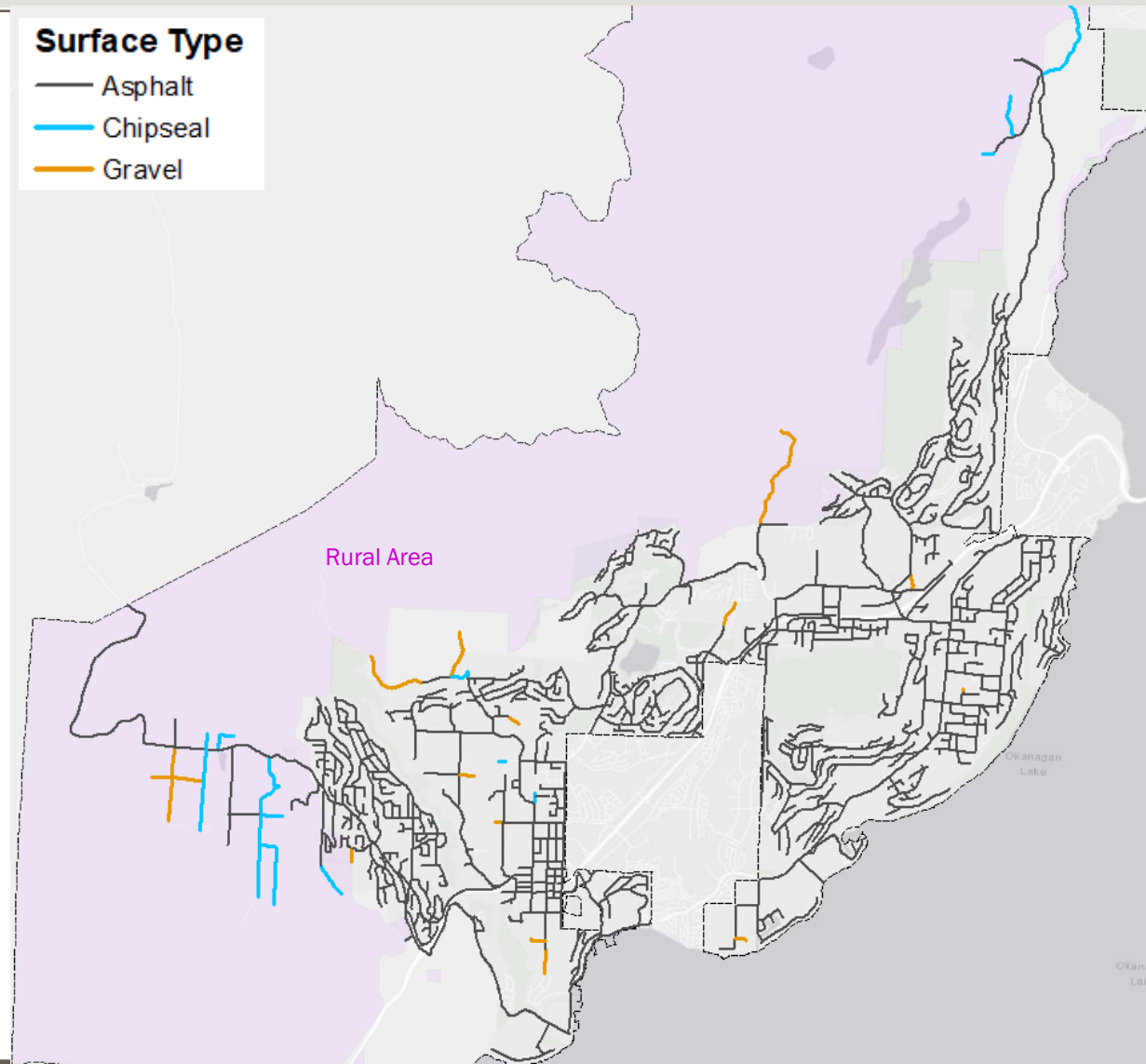
# Agenda

1. Introduction
2. Collection of Pavement and Gravel Surface Condition
3. 2022 Pavement Condition Status
4. Pavement Management Analysis and Results

# Introduction

## Road Network

Surface Type	Length (km)
Asphalt	242.8
Chipseal	8.5
Gravel	7.5
<b>Total</b>	<b>258.8</b>



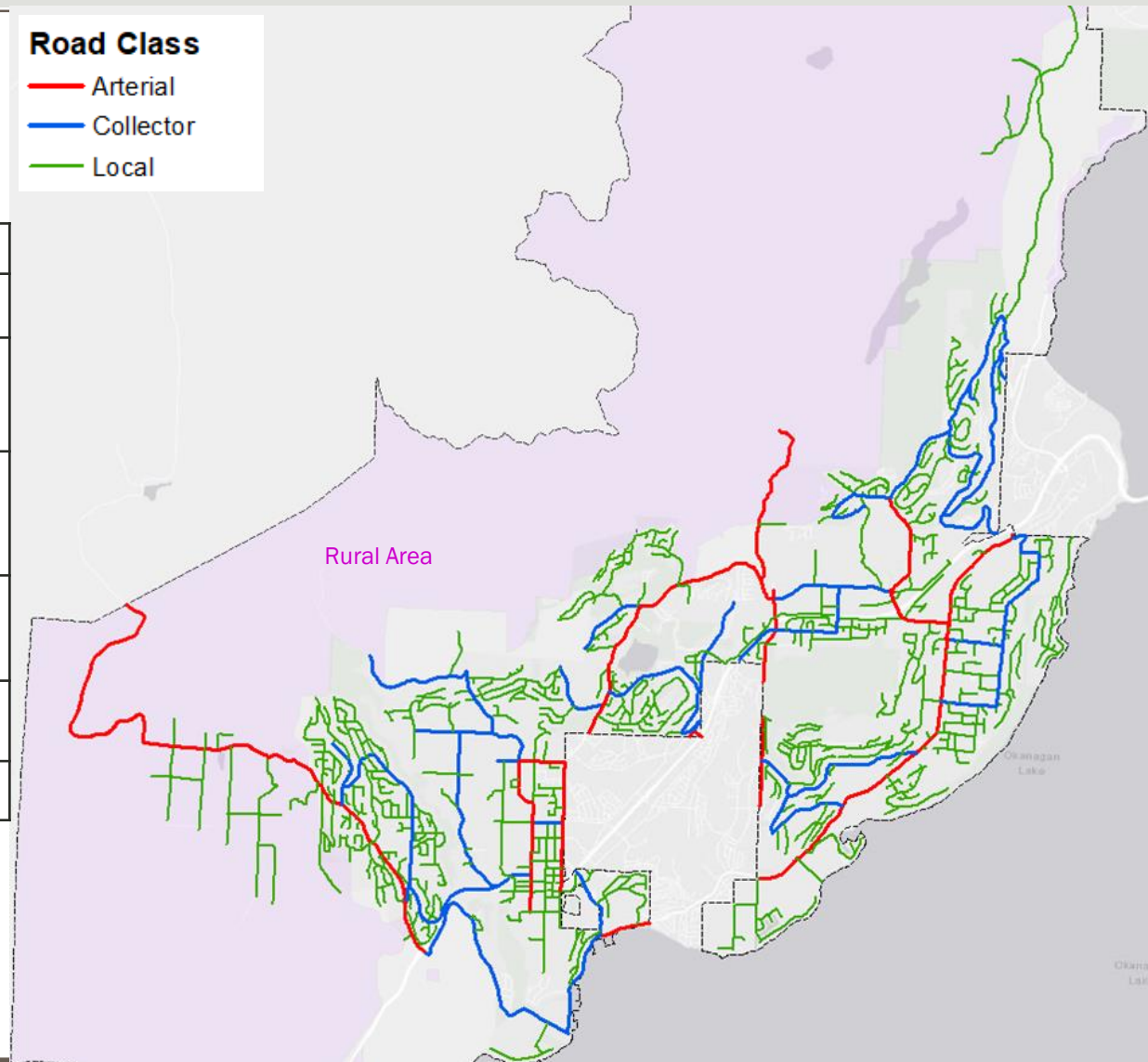
# Introduction

## Road Network

Road Class	Length (km)	
	Paved	Unpaved
Arterial	30.7	1.5
Collector	47.2	1.5
Local	173.5	4.4
Total	251.3	7.5
	258.8	

### Road Class

- Arterial
- Collector
- Local



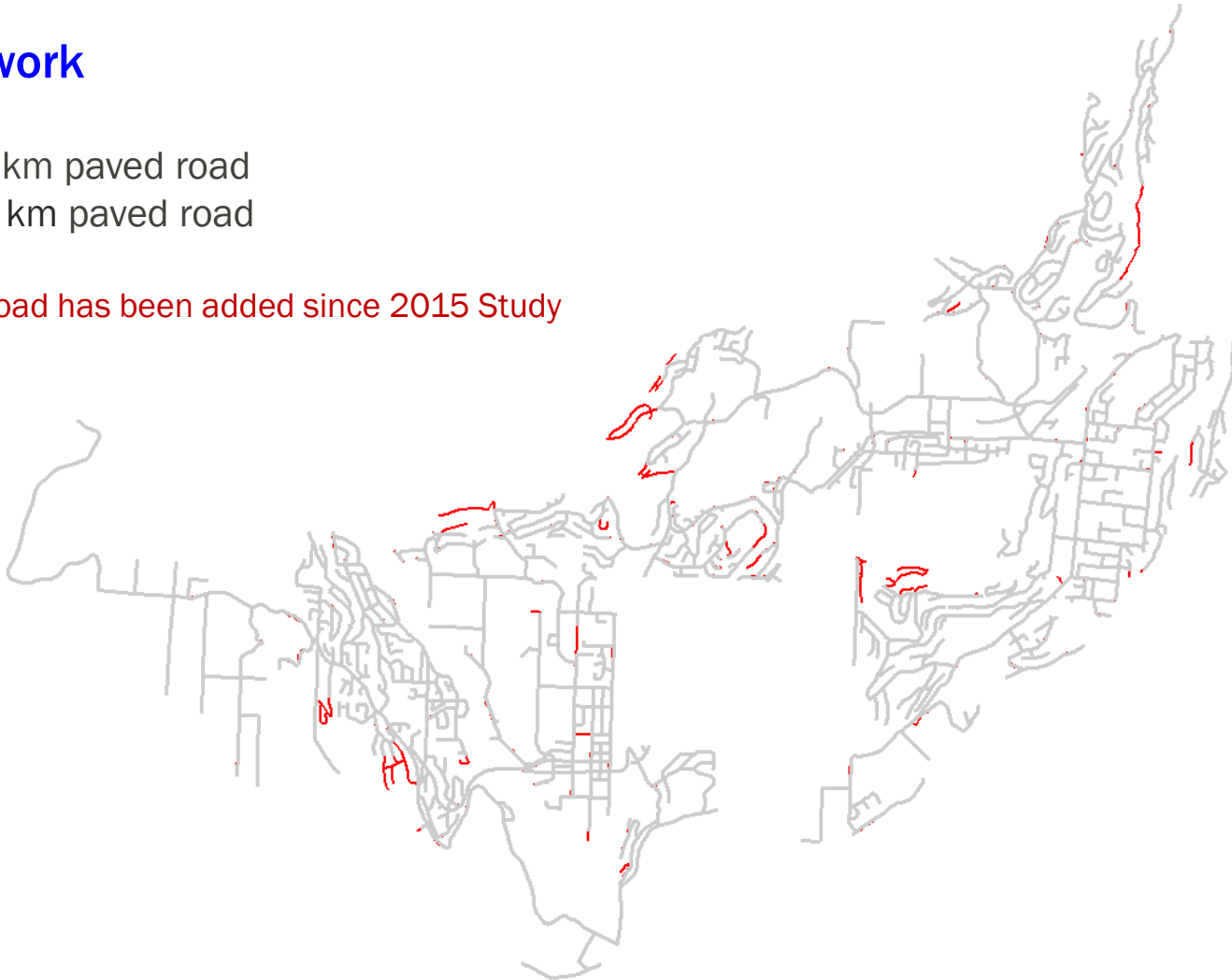
# Introduction

## Road Network

2015: 242 km paved road

2022: 252 km paved road

10 km paved road has been added since 2015 Study

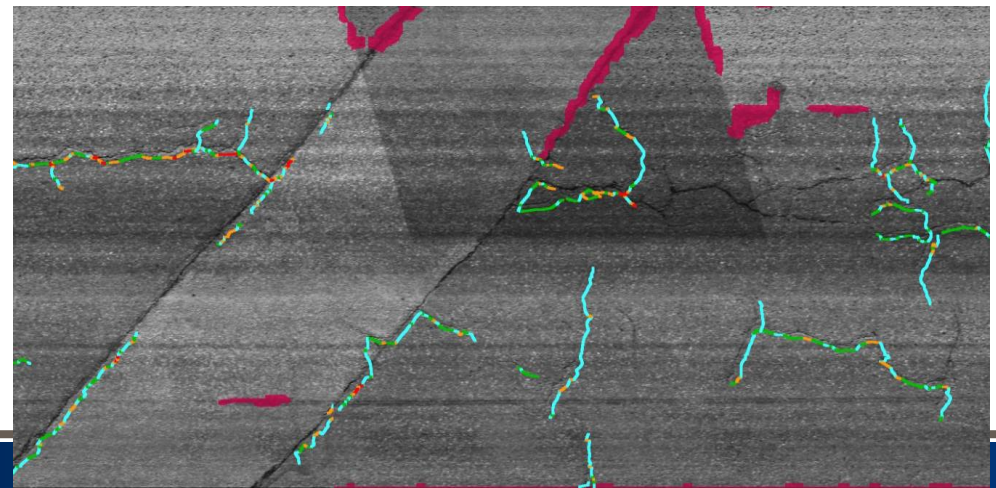




# Collection of Pavement and Gravel Surface Condition

## Pavement Condition Assessment

- ✓ Pavement Surface Distresses
- ✓ Pavement Roughness
- ✓ Digital Image Log
- ✓ Crack Maps



# Collection of Pavement and Gravel Surface Condition

## Gravel Road Condition Survey

- ✓ Gravel Thickness
- ✓ Gravel Road Geometry
- ✓ Digital Image Log



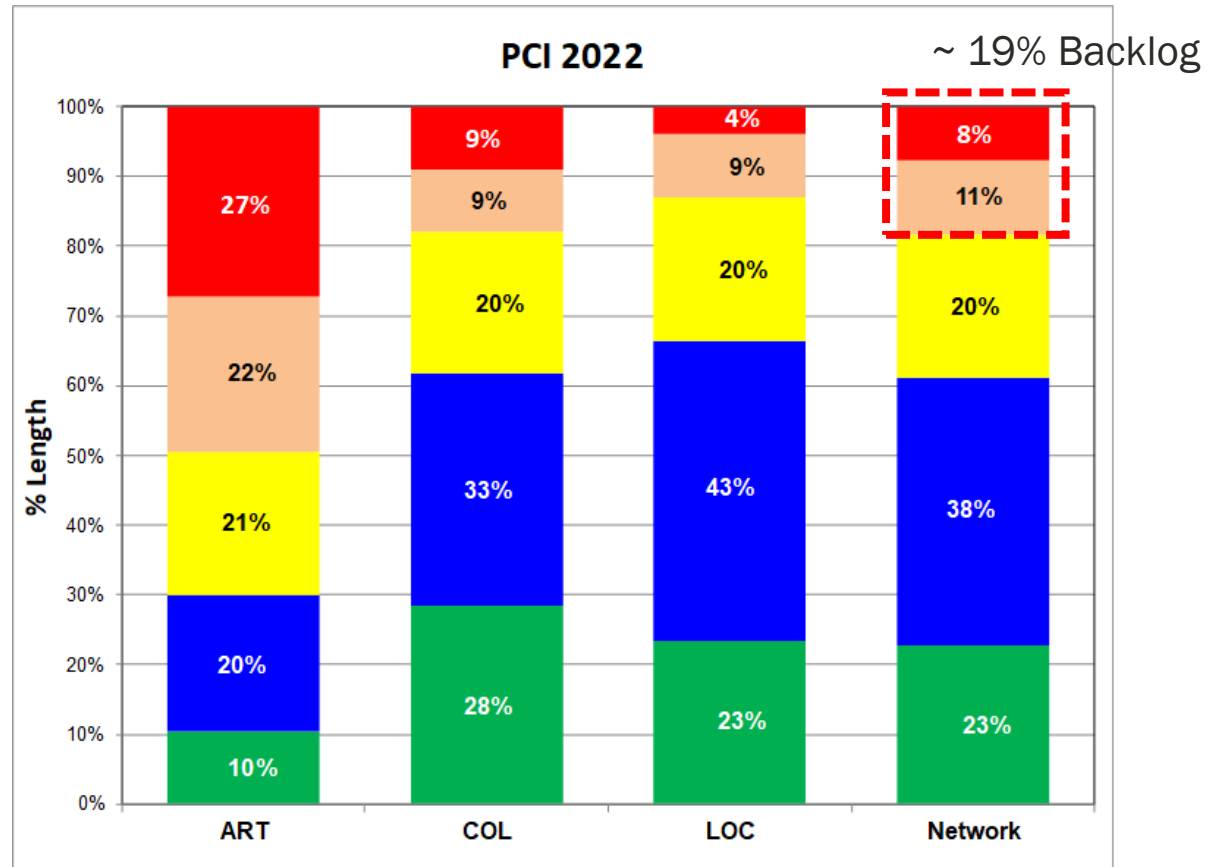
# 2022 Pavement Condition Status

The Pavement Condition Index (PCI) is a standard index commonly used in North America, ranges from 100 to 0, with 100 as the best possible condition and 0 as the worst possible condition

## Average 2022 PCI

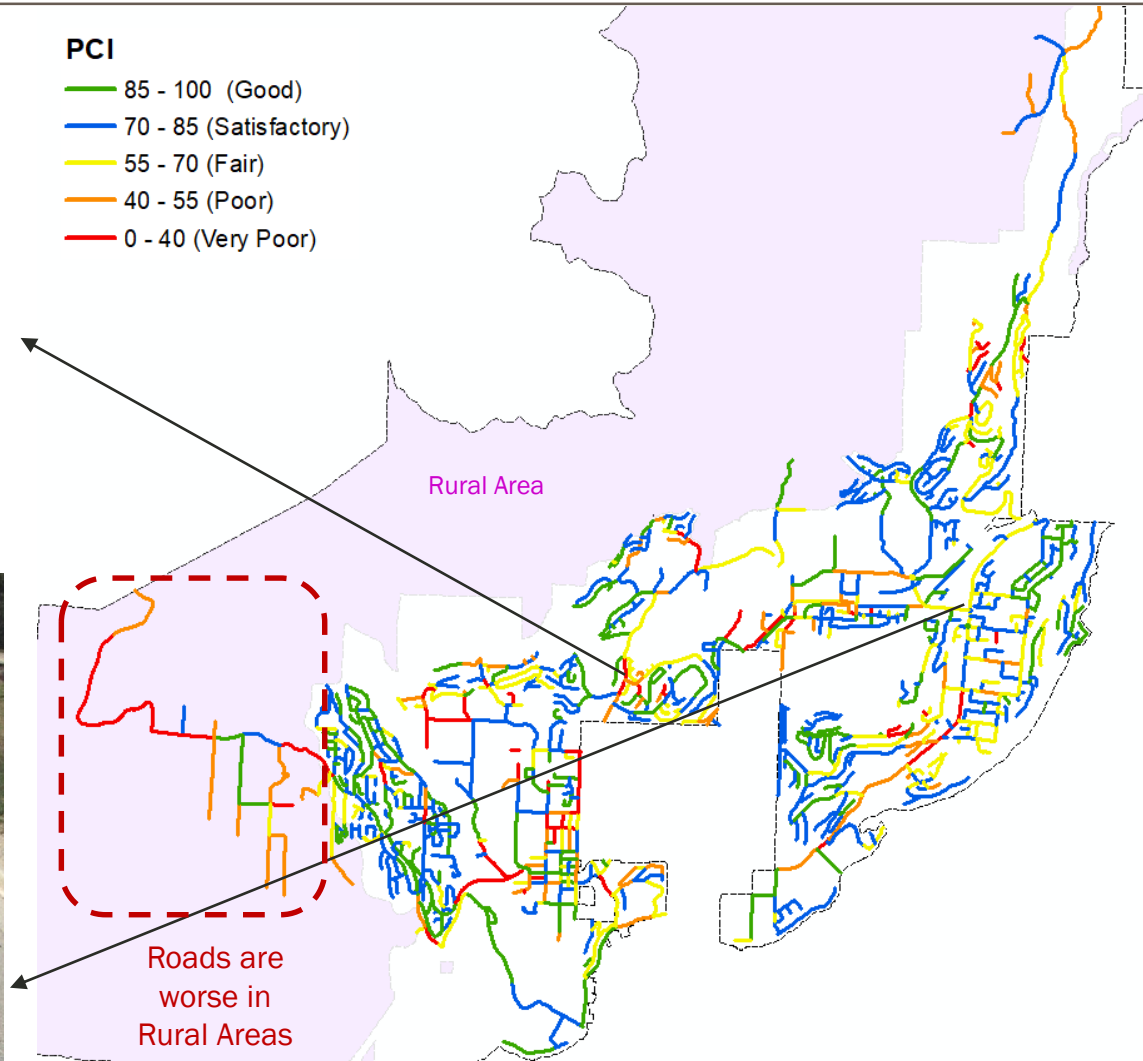
Road Class	Length (km)	PCI
Arterial	30.1	55
Collector	47.2	72
Local	171.7	74
<b>Network</b>	<b>251.3</b>	<b>71</b>

PCI	Rating
85-100	Good
70 - 85	Satisfactory
55 - 70	Fair
40 - 55	Poor
0 - 40	Very Poor





# 2022 Pavement Condition Status



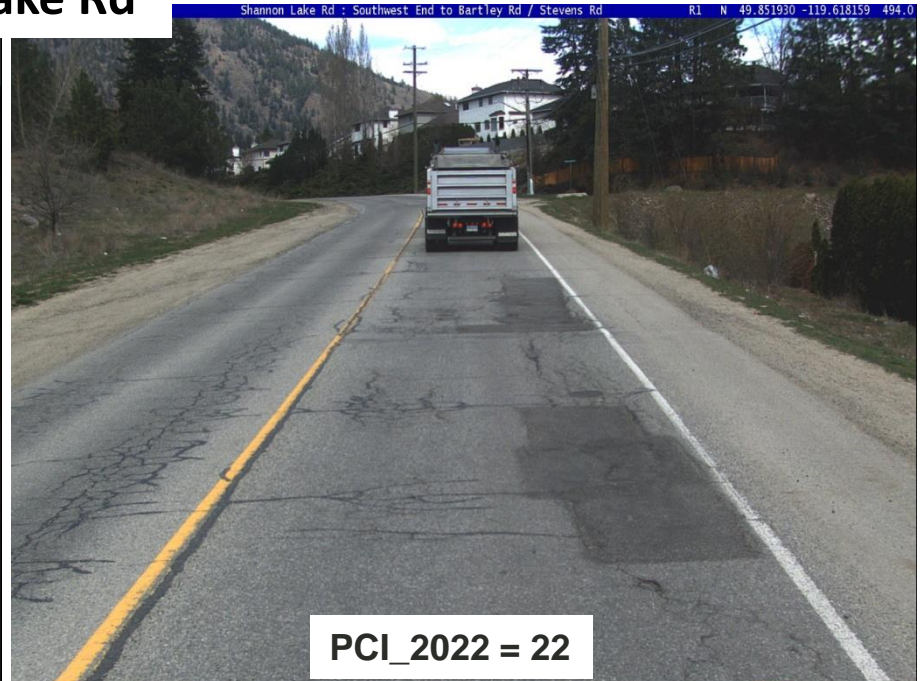
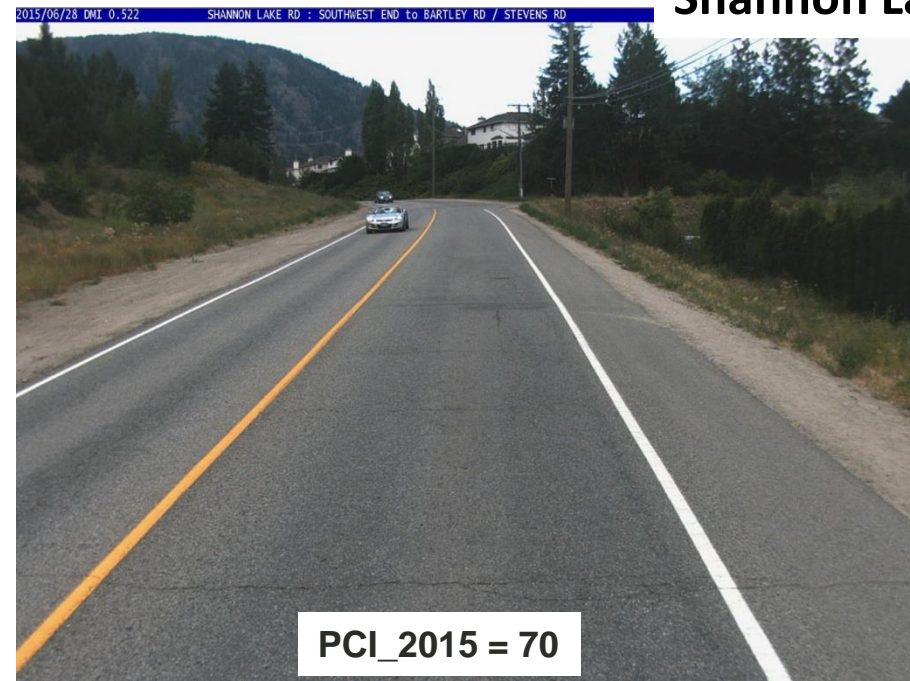
## Historical Pavement Condition Comparison

Road Class	Compared Length (km)	PCI 2015	PCI 2022
Arterial	29.7	73	55
Collector	45.2	81	72
Local	163.2	81	74
Network	238.1	80	72

- Pavement condition has deteriorated across the entire network since 2015
- Arterial Roads are deteriorating faster

# Historical Pavement Condition Comparison

## Shannon Lake Rd



Highest PCI Drop (- 48 point)



# Treatment Costs



PCI= 50  
Treatment Cost: \$34 /m<sup>2</sup>



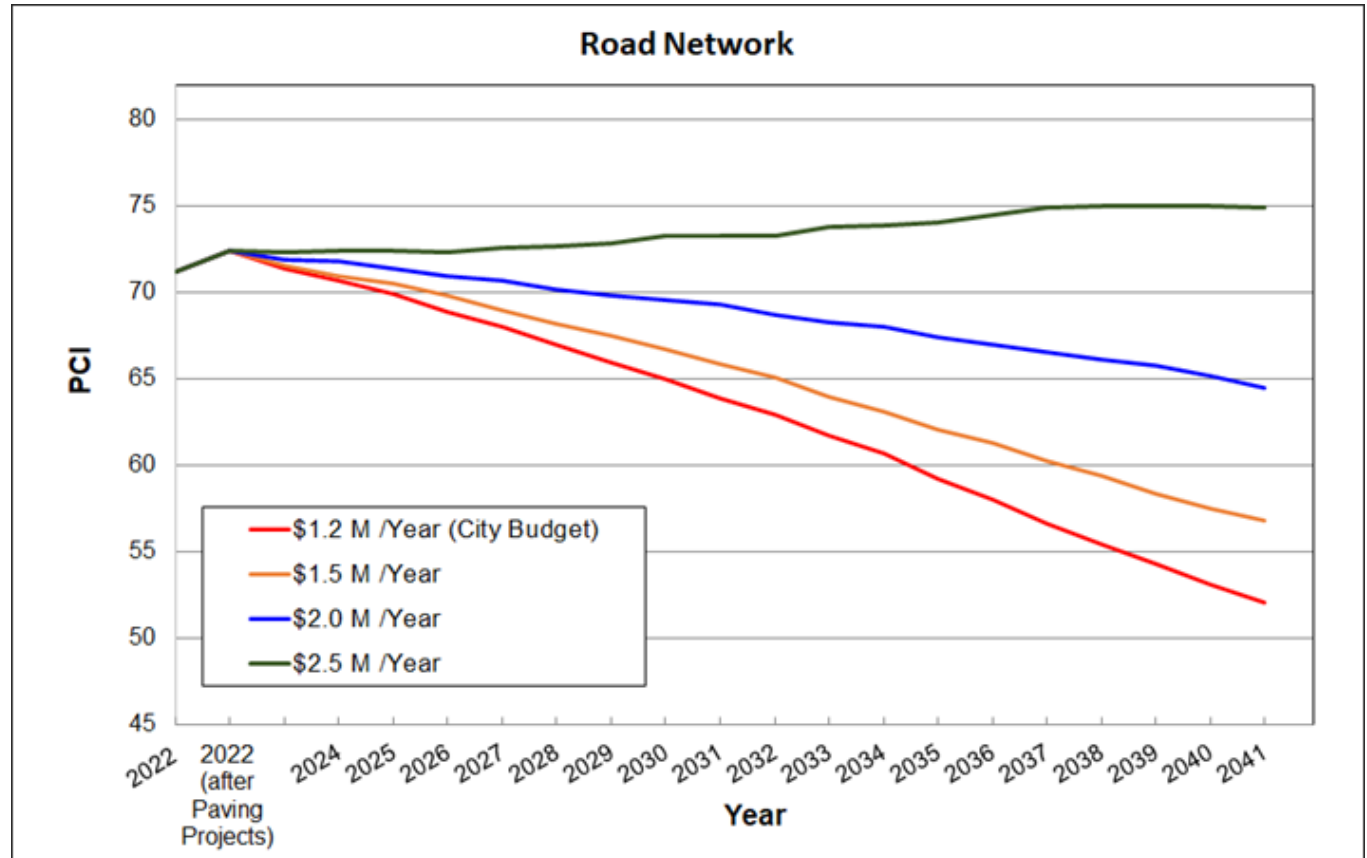
PCI= 30  
Treatment Cost: \$61 /m<sup>2</sup>



# Pavement Management Analysis

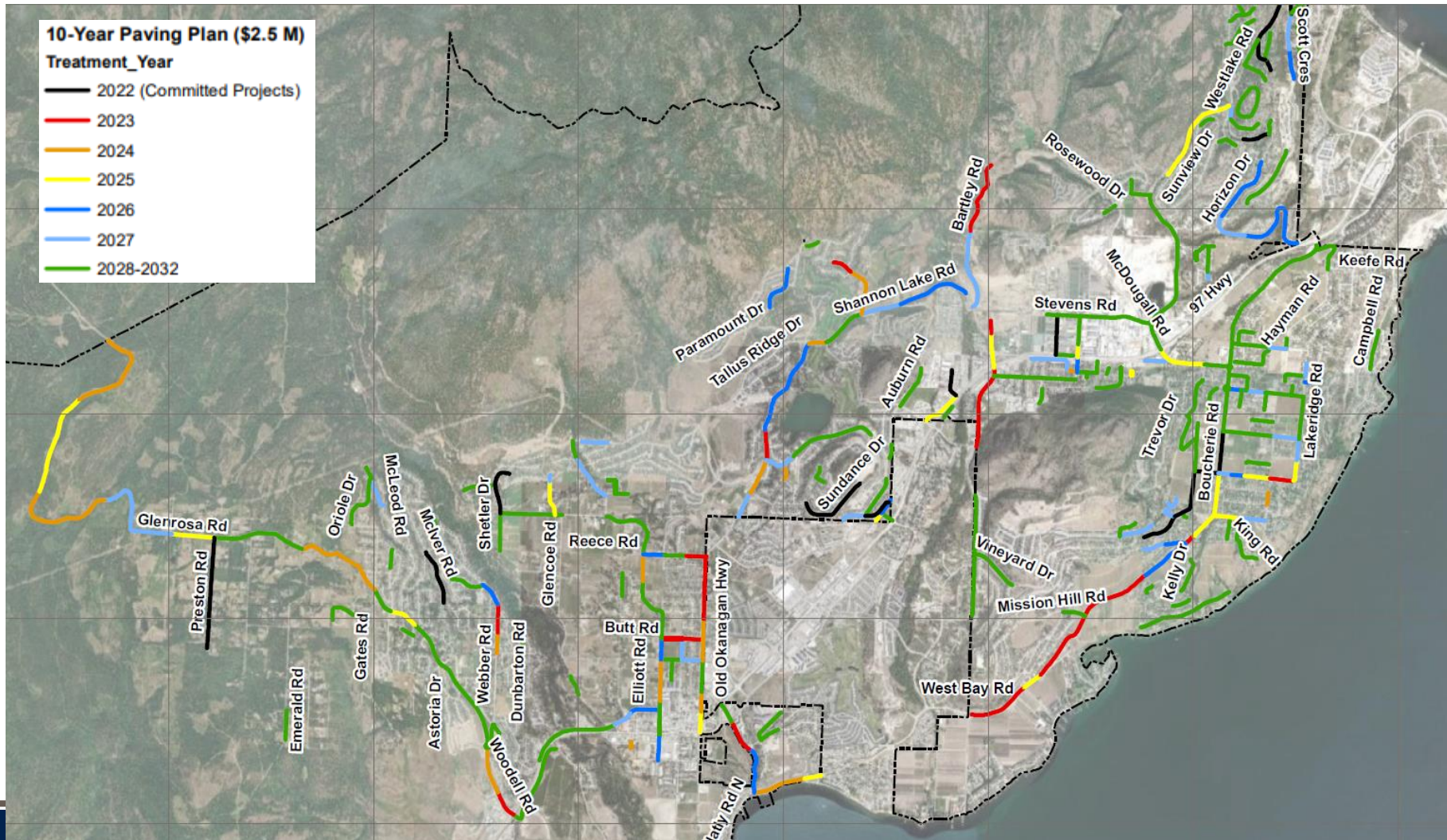
## Constrained Budget Analysis

The City would require a **funding level of \$2.5 M per year** to maintain current condition (PCI of 71), in the long term



# Pavement Management Analysis

## 10-Year Rehabilitation Program based upon \$2.5 million Annual budget



# Pavement Management Analysis

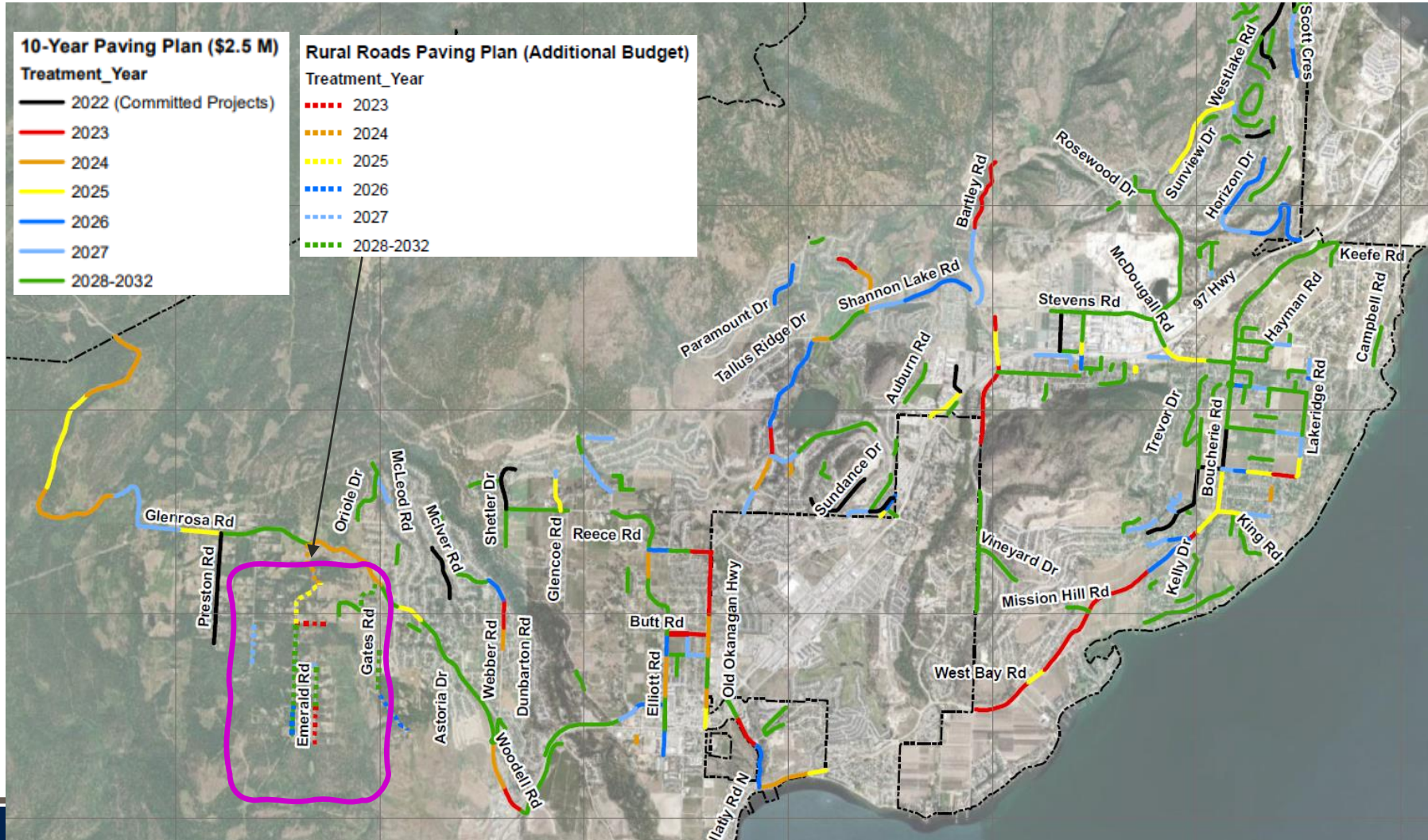
## Additional Budget for Rural Road Improvement

- If the City would like to upgrade chip-sealed rural roads, a minimum budget of **\$2.7 million** would be required.



# Pavement Management Analysis

## 10-Year Rehabilitation Program based upon \$2.7 million Annual budget







**Good Assets Cost Less !!**