



City of Placentia

2022 Pavement Management Plan and Report

June 21, 2022

Outline

- Why Pavement Management
- Placentia Roadway Statistics
- Pavement Condition Index (PCI) and Summary
- City Funding History
- Treatments and Costs
- Budget Projections and Scenarios
- Report Recommendations
- Upcoming Projects and Schedule
- Q&A



Why Pavement Management

- Roadway system is the City's most visible and valuable asset
- Required by OCTA to receive Measure M2 funds
 - Arterial streets physically inspected every two years, Residential streets physically inspected every six years
- Assesses the *Overall Condition* of the roadway system
- Quantifies Maintenance vs Rehabilitation Needs
- Planning and Maintenance Strategies; long term and short term
- Budgeting Tool for Effective use of Limited Funds



Placentia Roadway Network Statistics

Current street network consists of **133.45** centerline miles of paved streets

81.7 centerline miles of low volume residential streets

49.2 centerline miles of arterial and collector streets

2.55 centerline miles of alleys

24.3 million square feet of pavement

\$255.3 million replacement value

City's most valuable public asset



Pavement Condition Index

Pavement Condition Index (PCI) Qualitative Scale

Pavement Quality	PCI Threshold
Very Good	90 - 100
Good	70 - 89
Fair	50 - 69
Poor	25 - 49
Very Poor	0 - 24



Factors that Impact Pavement Life

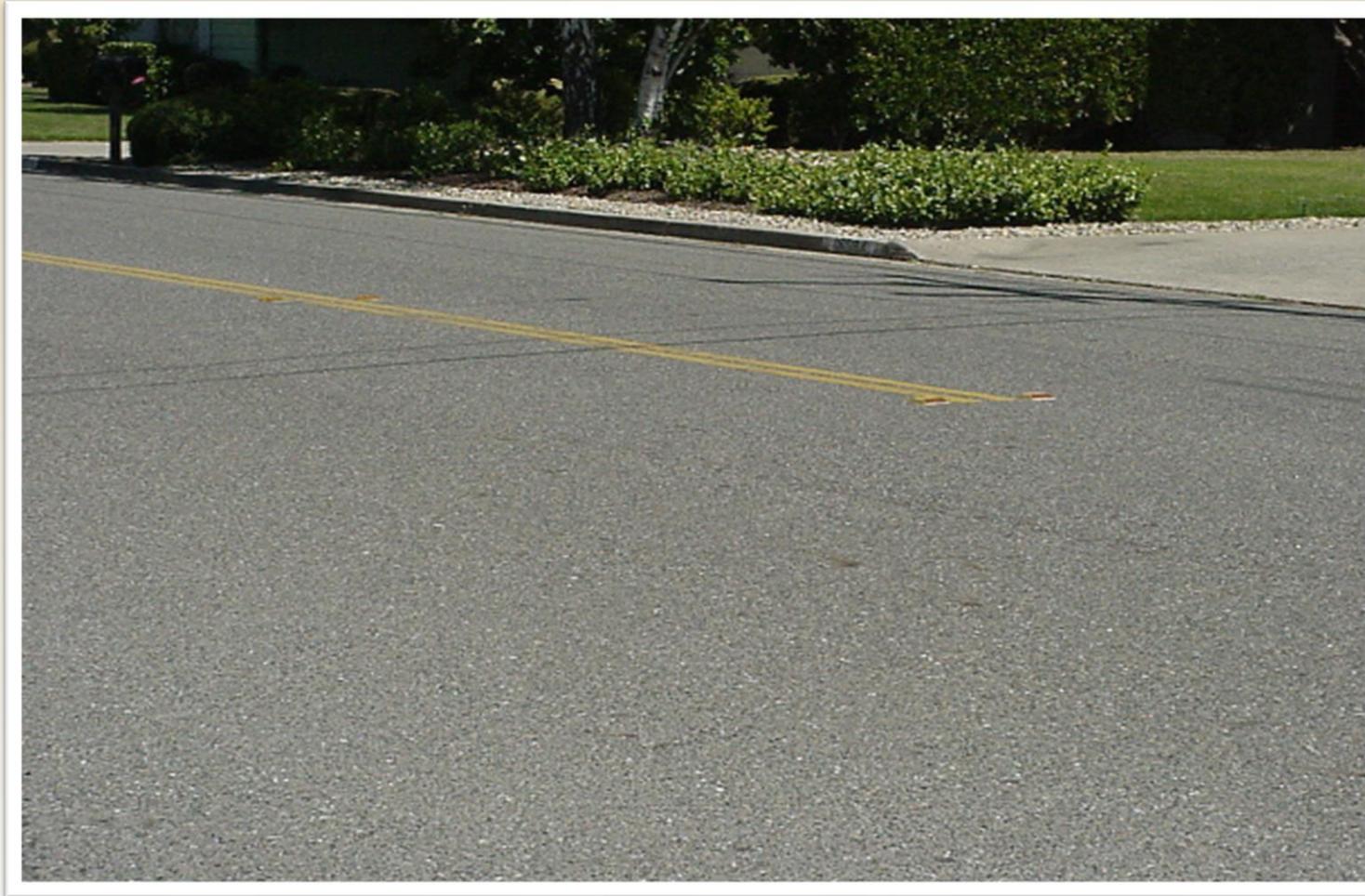
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- Delay of Preventive Maintenance
 - Traffic Volume and Loading
 - Age of Pavement
 - Type of Pavement (PCC vs AC)
 - Soil and Base Material Under Pavement
 - Storm Water Infiltration into Subgrade
 - Utility Trench Cuts



100 PCI (Very Good)



83 PCI (Good)



69 PCI (Fair)



40 PCI (Poor)

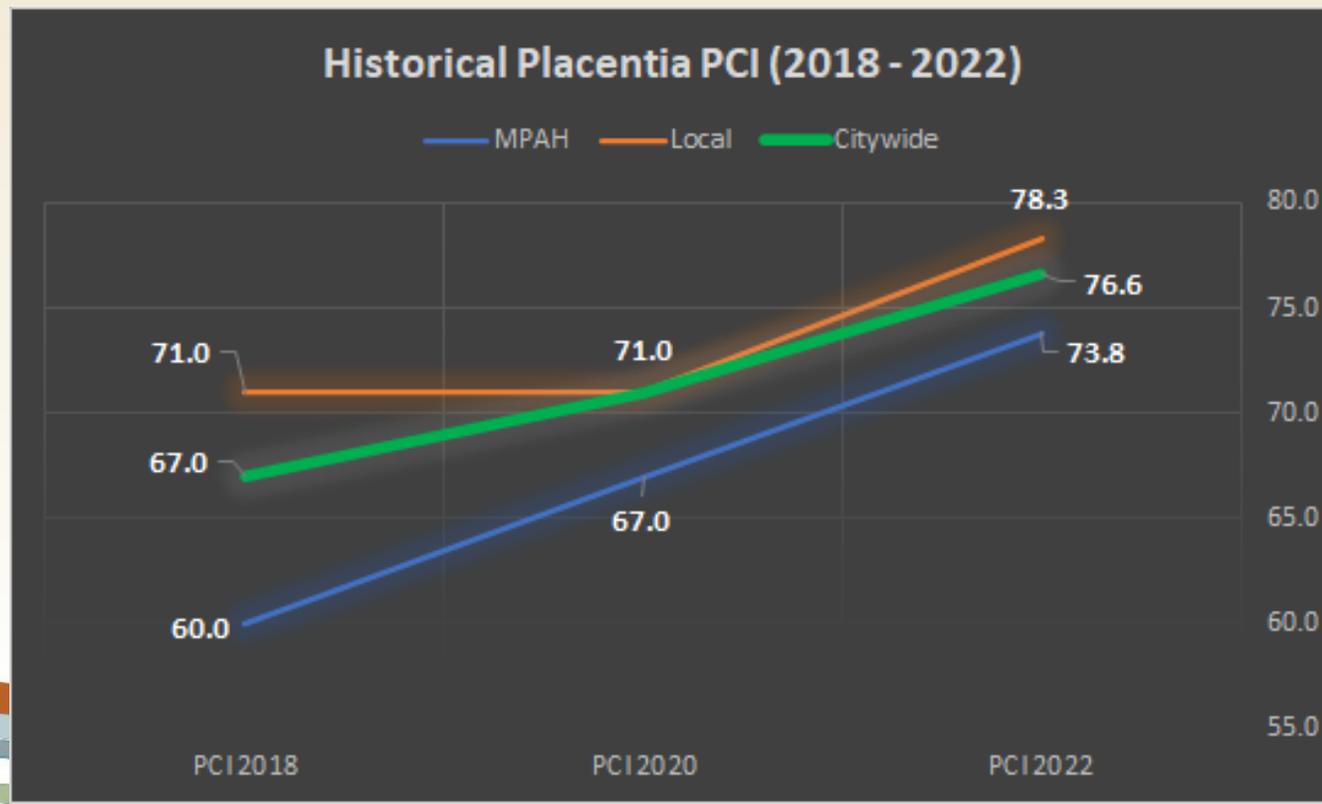


15 PCI (Very Poor)



Placentia's PCI Rating Summary

Year	2018 PCI	2020 PCI	2022 PCI
Arterial Streets	60	67	73
Residential Streets	71	71	78
Overall Network	67	71	76



2022 Pavement Condition Summary

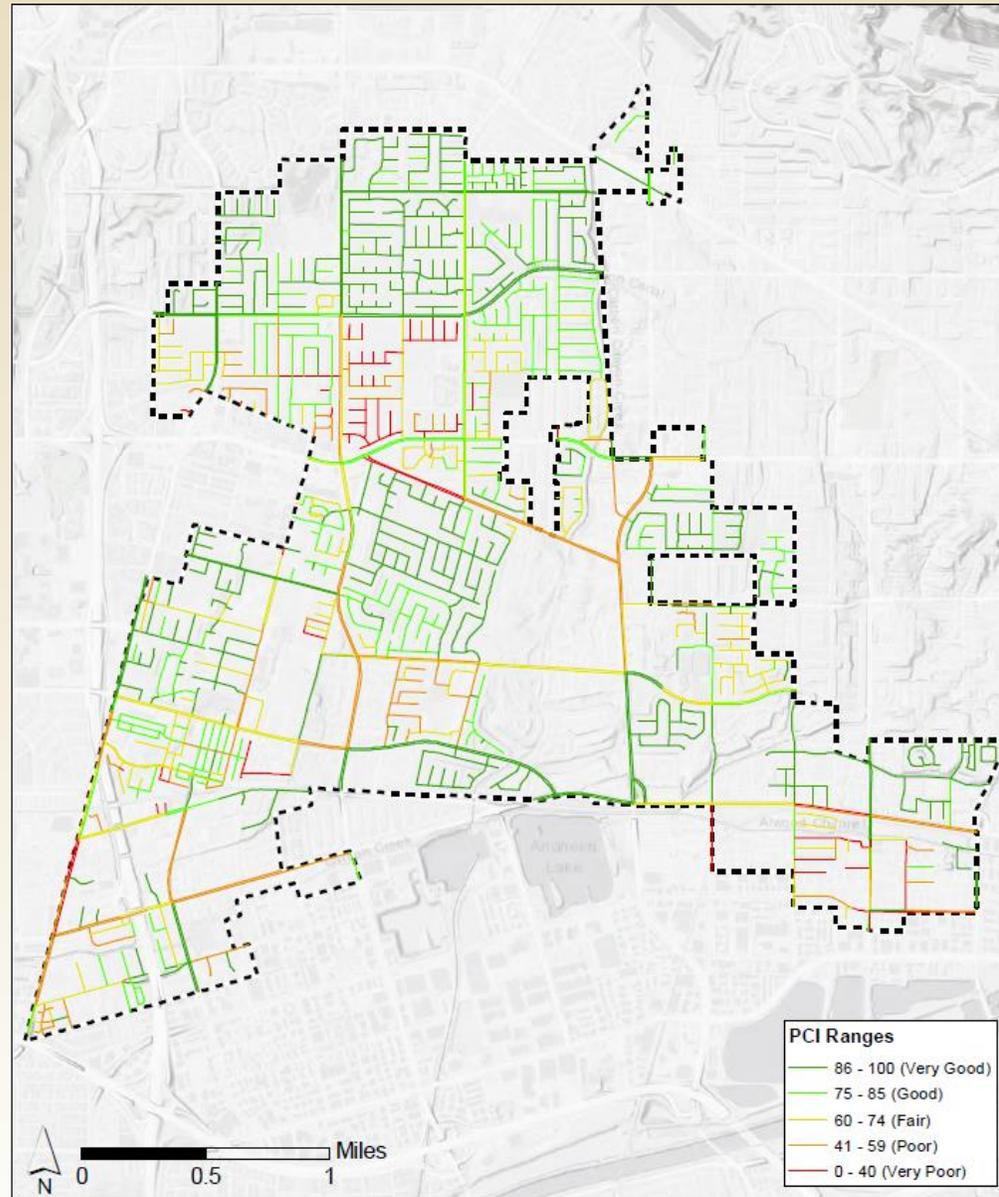
- The overall condition of Placentia's road network based on the 2022 evaluation is an average weighted Pavement Condition Index of **76**; County PCI average is 79

Condition	PCI Range	% of Network
Very Good	86-100	28.1%
Good	75-85	13.4%
Fair	60-74	12.8%
Poor	41-59	10.8%
Very Poor	0-40	3.7%

- 41% of the City's street network condition is now rated as Very Good or Good
- 2022 Deferred Maintenance backlog amounts to: **\$7.2 million**
- Improved PCI now qualifies the City to reduce its required matching fund contributions to 10% from 20% on future grant-funded street resurfacing projects



Current Pavement Condition Map



City of Placentia, CA
2022 Pavement Condition Index Map

Prepared by
BUCKNAM
INFRASTRUCTURE GROUP, INC.



Pavement Maintenance and Rehabilitation Expenditure Summary: 2017-2022

Fiscal Year (FY)	Measure M	Measure U	SB 1 / Gas Tax	General Fund	Total
FY 2017-18			\$149,140		\$149,140
FY 2018-19			\$672,267	\$64,658	\$736,925
FY 2019-20	\$500,000	\$ 722,606	\$924,999		\$2,147,606
FY 2020-21	\$523,891	\$1,907,901	\$194,500		\$2,626,292
FY 2021-22	\$340,430	\$2,858,450	\$1,333,000		\$ 4,531,880
Total	\$1,364,321	\$5,488,957	\$3,273,907	\$64,658	\$10,191,843

	Measure M	Measure U	SB 1 / Gas Tax	General Fund	Total
Average per Year by Funding Source	\$454,774	\$1,829,652	\$817,500	\$64,658	
Average Annual Funding over 5 Years					\$3,101,926
Total Sq. Ft. over 5 Years					9,688,504

Pavement Rehab/Maintenance Costs & Strategy

- 21-year pavement maintenance cycle: Based on 7-year intervals
 - Slurry seals in years 7 and 14
 - Asphalt overlay in year 21
- Maintenance/Rehab Cost Comparison by Treatment:

Treatment Type	Per SF Cost FY 2022-23
Slurry Seal	\$0.50
Thin Asphalt Overlay	\$1.90
Thick Asphalt Overlay	\$3.50
Reconstruction	\$10.50

- Effective preventative maintenance is key to managing long-term road maintenance costs

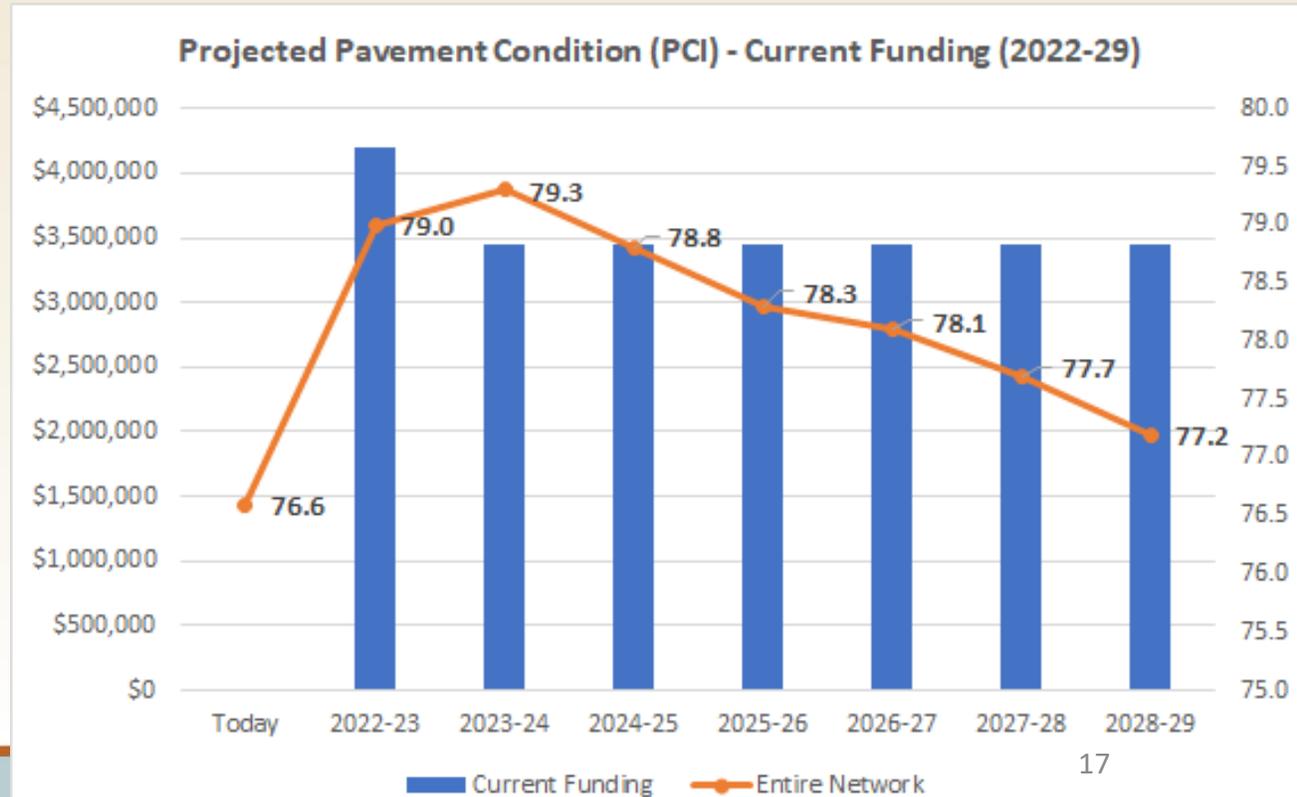


Projected Pavement Condition Index

- Current Funding Levels

Fiscal Year	Current Funding	Entire Network
Today		76.6
2022-23	\$4,200,000	79.0
2023-24	\$3,450,000	79.3
2024-25	\$3,450,000	78.8
2025-26	\$3,450,000	78.3
2026-27	\$3,450,000	78.1
2027-28	\$3,450,000	77.7
2028-29	\$3,450,000	77.2
Total	\$24,900,000	
Average Annual Funding	\$3,557,143	

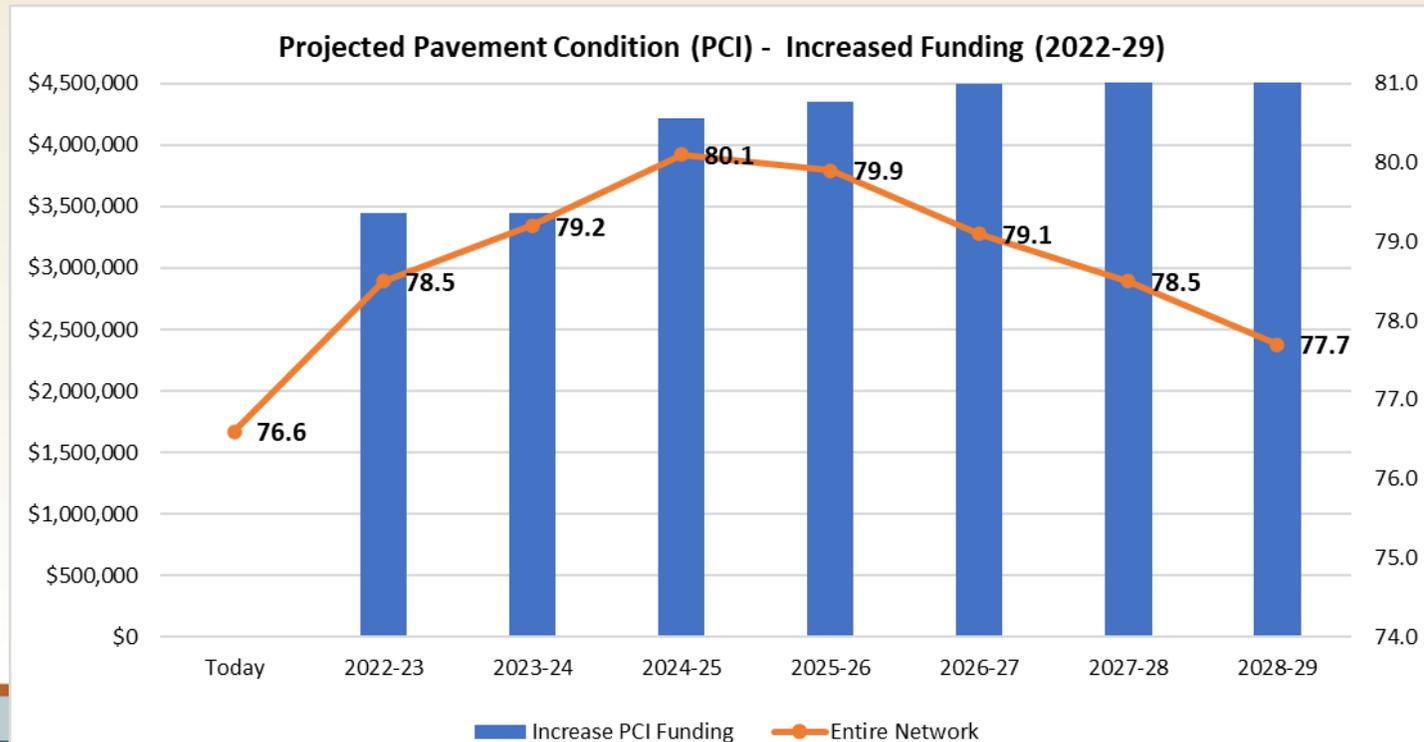
At this funding level, maintenance backlog increases to \$14.9 million in FY 2028-29



Projected Pavement Condition Index

- Increased Funding Level

Fiscal Year	Increase PCI Funding	Entire Network
Today		76.6
2022-23	\$3,450,000	78.5
2023-24	\$3,450,000	79.2
2024-25	\$4,215,000	80.1
2025-26	\$4,350,000	79.9
2026-27	\$4,500,000	79.1
2027-28	\$5,000,000	78.5
2028-29	\$5,500,000	77.7
Total	\$30,465,000	
Average Annual Funding	\$4,352,143	



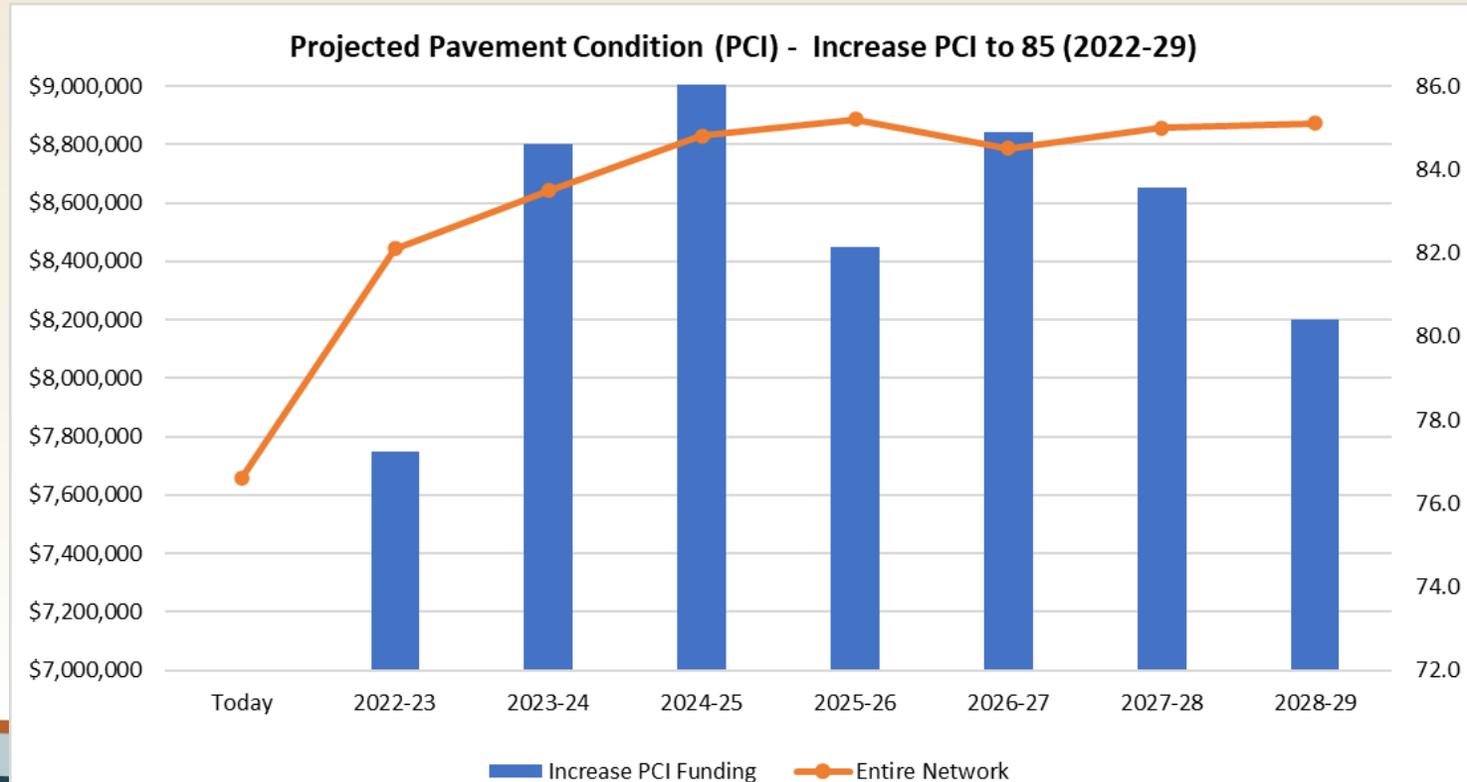
At this funding level, maintenance backlog grows to \$8.4 Million in FY 2028-29

Projected Pavement Condition Index

- Increased PCI to 85

Fiscal Year	Increase PCI Funding	Entire Network
Today		76.6
2022-23	\$ 7,750,000.00	82.1
2023-24	\$ 8,800,000.00	83.5
2024-25	\$ 9,655,000.00	84.8
2025-26	\$ 8,450,000.00	85.2
2026-27	\$ 8,840,000.00	84.5
2027-28	\$ 8,650,000.00	85.0
2028-29	\$ 8,200,000.00	85.1
Total	\$60,345,000	
Average Annual Funding	\$8,620,714	

At this funding level the maintenance backlog is reduced to \$773,400 by FY 2028-29



Pavement Management Report Recommendations

Arterial Streets

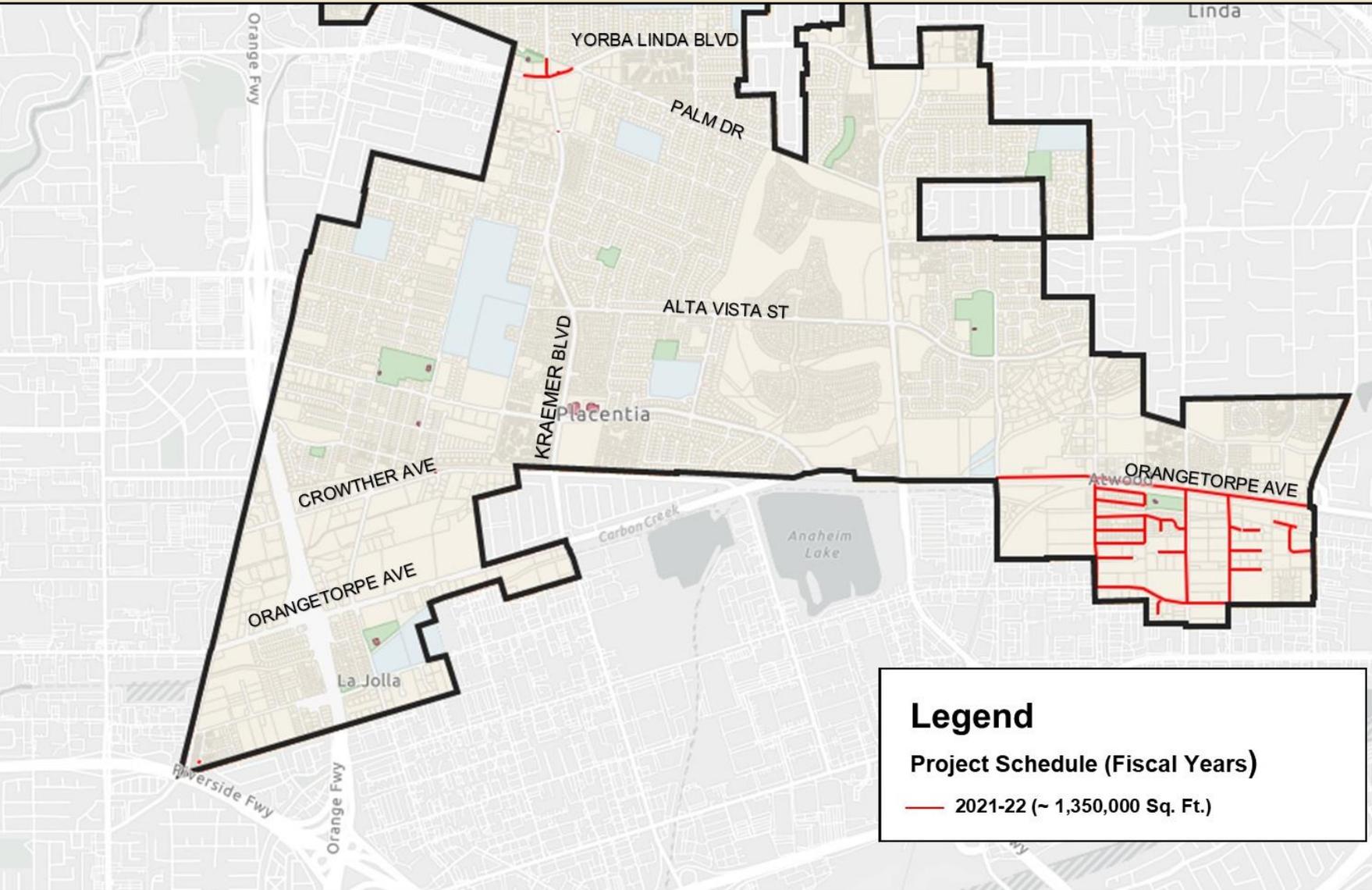
- Maintain the Arterial funding allocation at an average annual funding level of \$2,100,500/year to maintain an average PCI of 75
- Perform pavement inspections on the arterial network every two years to build a solid planning model

Residential/Local Streets

- Maintain the Local streets budget allocation at an average annual funding level of \$1,650,000/year for the term of the CIP to generate an average CIP of 80
- Perform pavement inspections on the Local street network every four years to build a solid planning model.

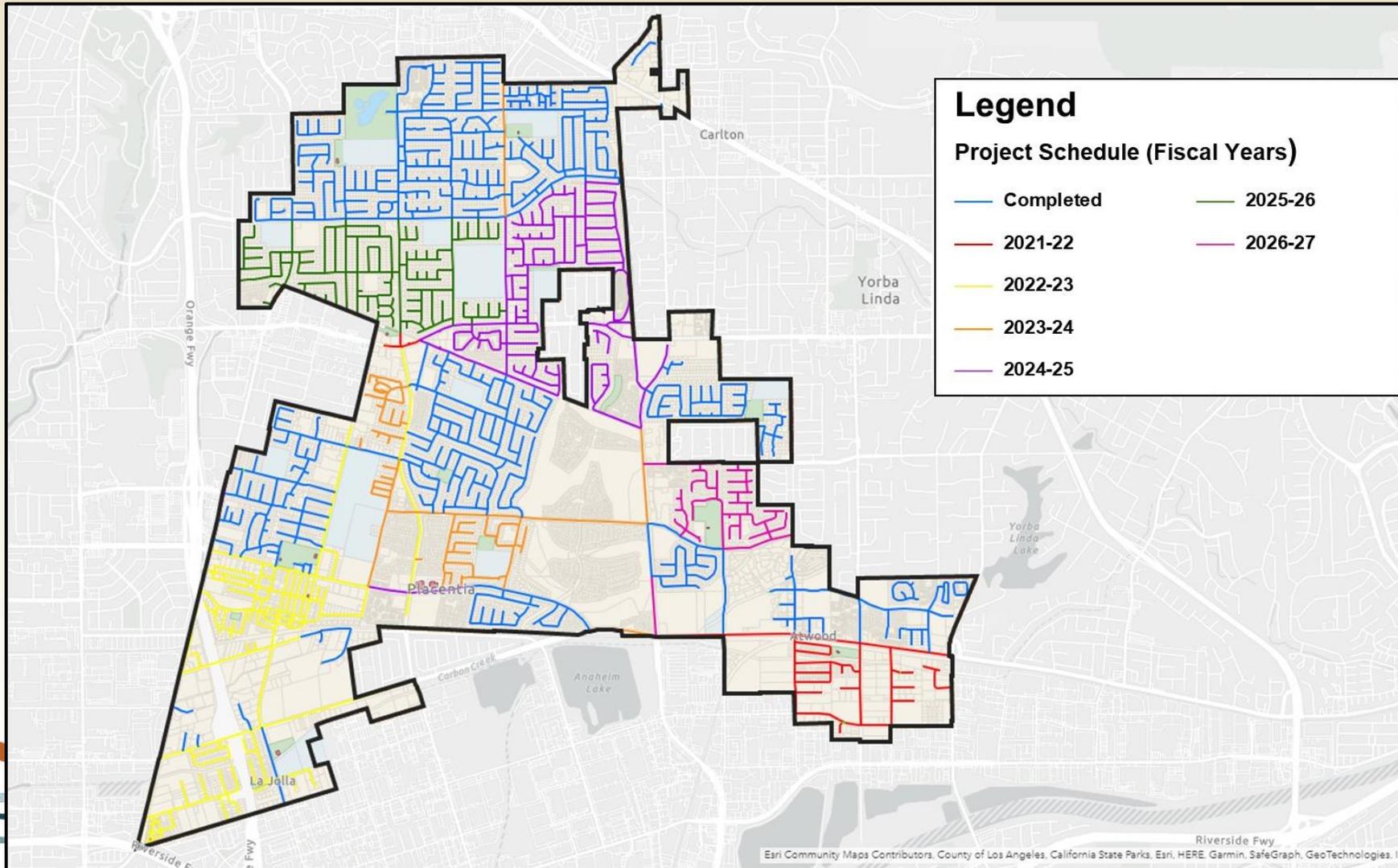


FY 2021-22 Street Rehabilitation Project



**Projected PCI:
78.5**

Citywide Pavement Maintenance Schedule



Questions & Answers

