



▶ Safe Streets & Pavement Management Program Workshop

March 25, 2025

AGENDA

- Deferred Infrastructure
- Pavement Conditions and Rehab
- Transportation and Road Safety
- Funding Projections
- Policy Considerations
- Next Steps and Action





1

Deferred Infrastructure

CAPITAL PLANNING: DEFERRED ROADWAY RELATED INFRASTRUCTURE

Infrastructure Area	Data Source(s)	Cost Estimates
Roads & Streets	<ul style="list-style-type: none"> Five Year Paving Plan 2023 Metropolitan Transportation Commission Pavement Technical Assistance Report Street Savers 	\$250 million
Sidewalks	2025-2029 Capital Improvement Program	\$60 million
Bicycle Safety	2017 Bicycle Plan	\$62 million
Pedestrian Safety	2020 Pedestrian Plan	\$61 million
Green Infrastructure	2019 Green Infrastructure Plan	Varies
Accessibility	American with Disabilities Act (ADA) Self Evaluation & Transition Plan	\$47.5 million

CAPITAL PLANNING: VISION 2050 ENCOURAGES INTEGRATION



- Vision 2050 strategy 1: Use integrated and balanced planning
- Infrastructure will be guided by existing adopted plans

Pavement Plan

Vision Zero

Bike and Pedestrian Plans

Sustainability and Green Infra.

ADA Self Evaluation & Transition Plan

General Plan

CAPITAL PLANNING: CHALLENGES TO ADDRESS

Planning level documents are not construction ready

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graph TD; A[Planning level documents are not construction ready] --> B[Net new staffing required to scale program]; B --> C[Rapid construction pricing escalations]; C --> D[Expectation management: pavement condition will not reach target];
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Net new staffing required to scale program

Rapid construction pricing escalations

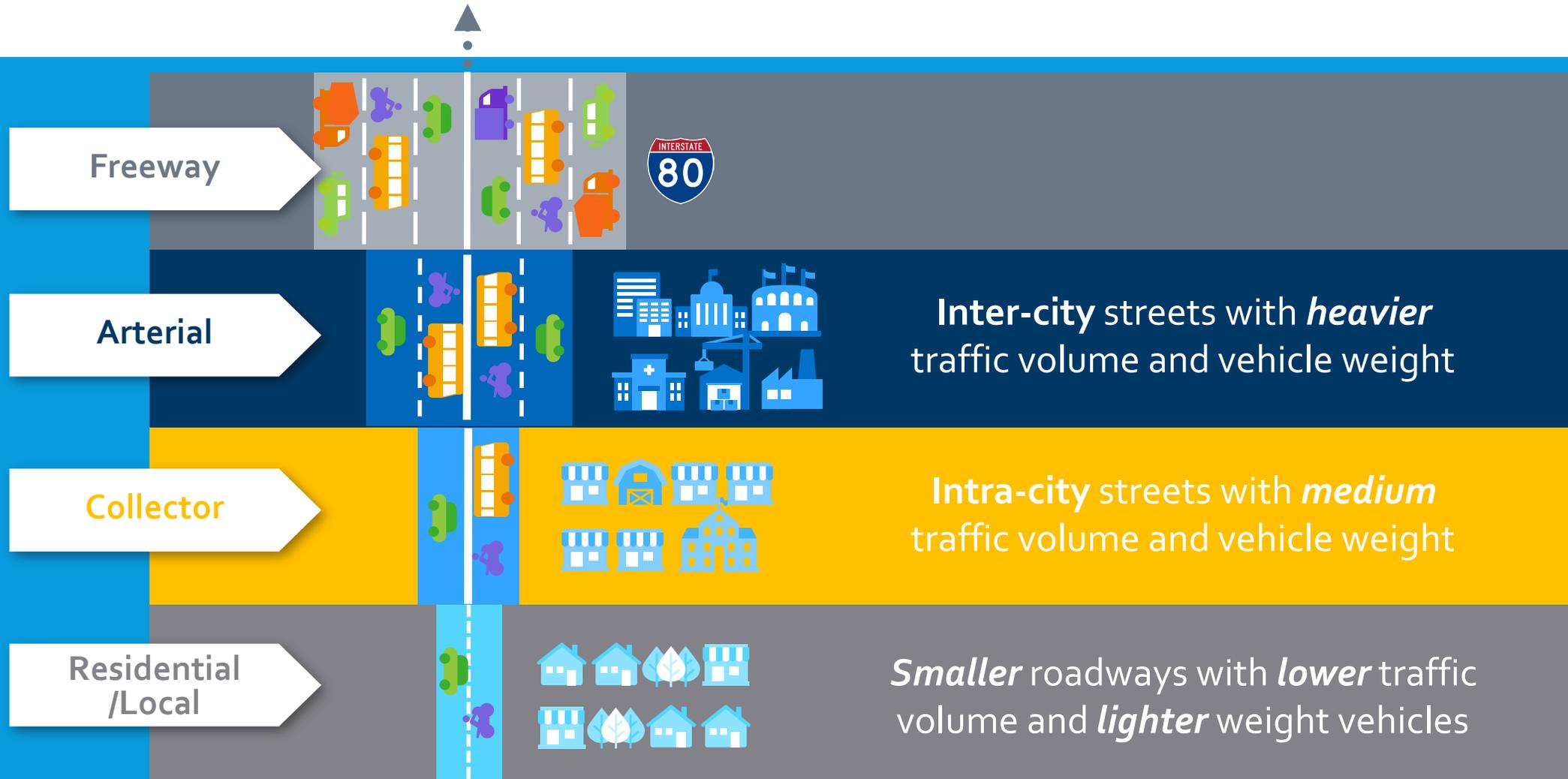
Expectation management: pavement condition will not reach target



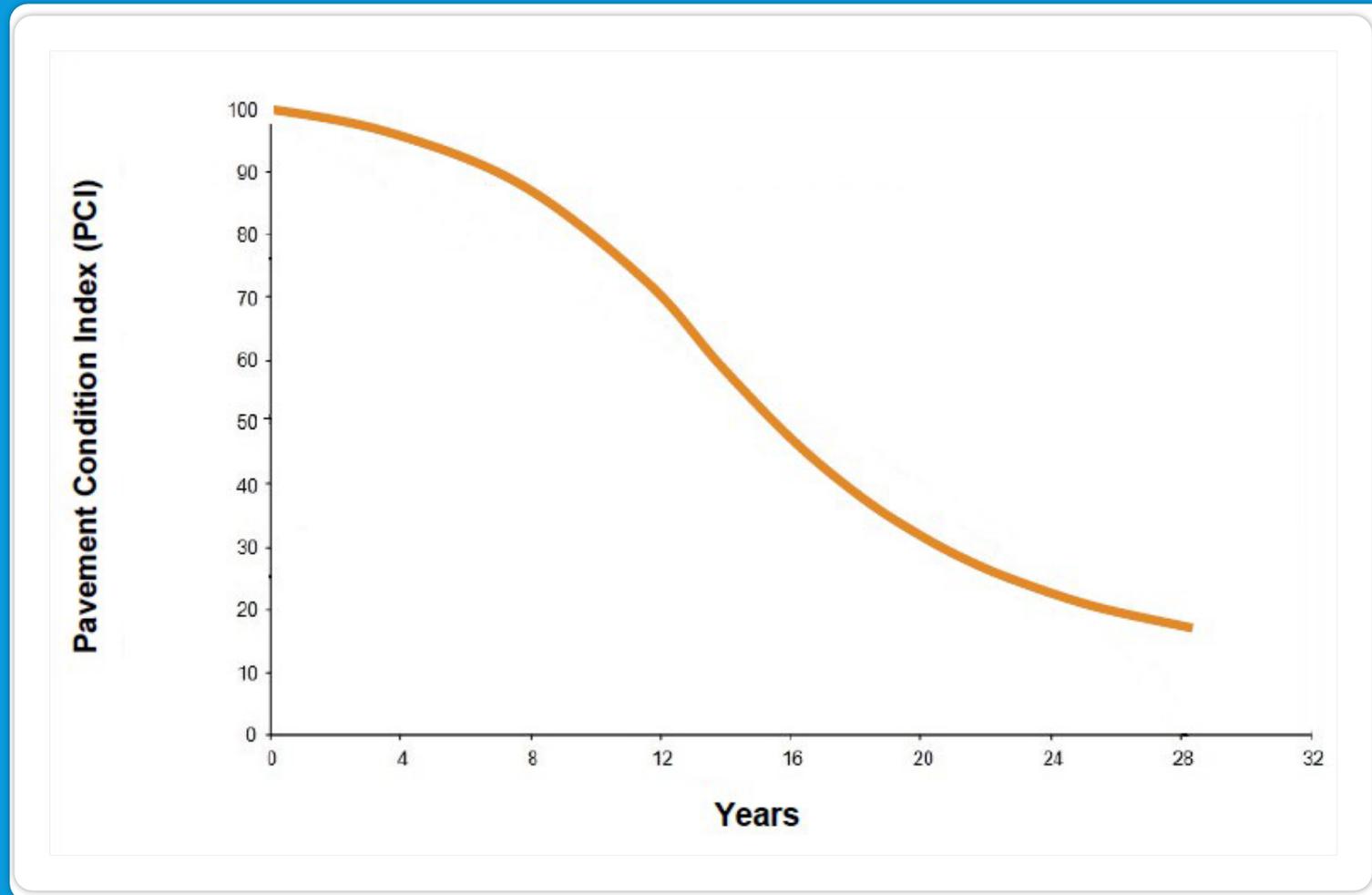
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Pavement Conditions & Rehabilitation

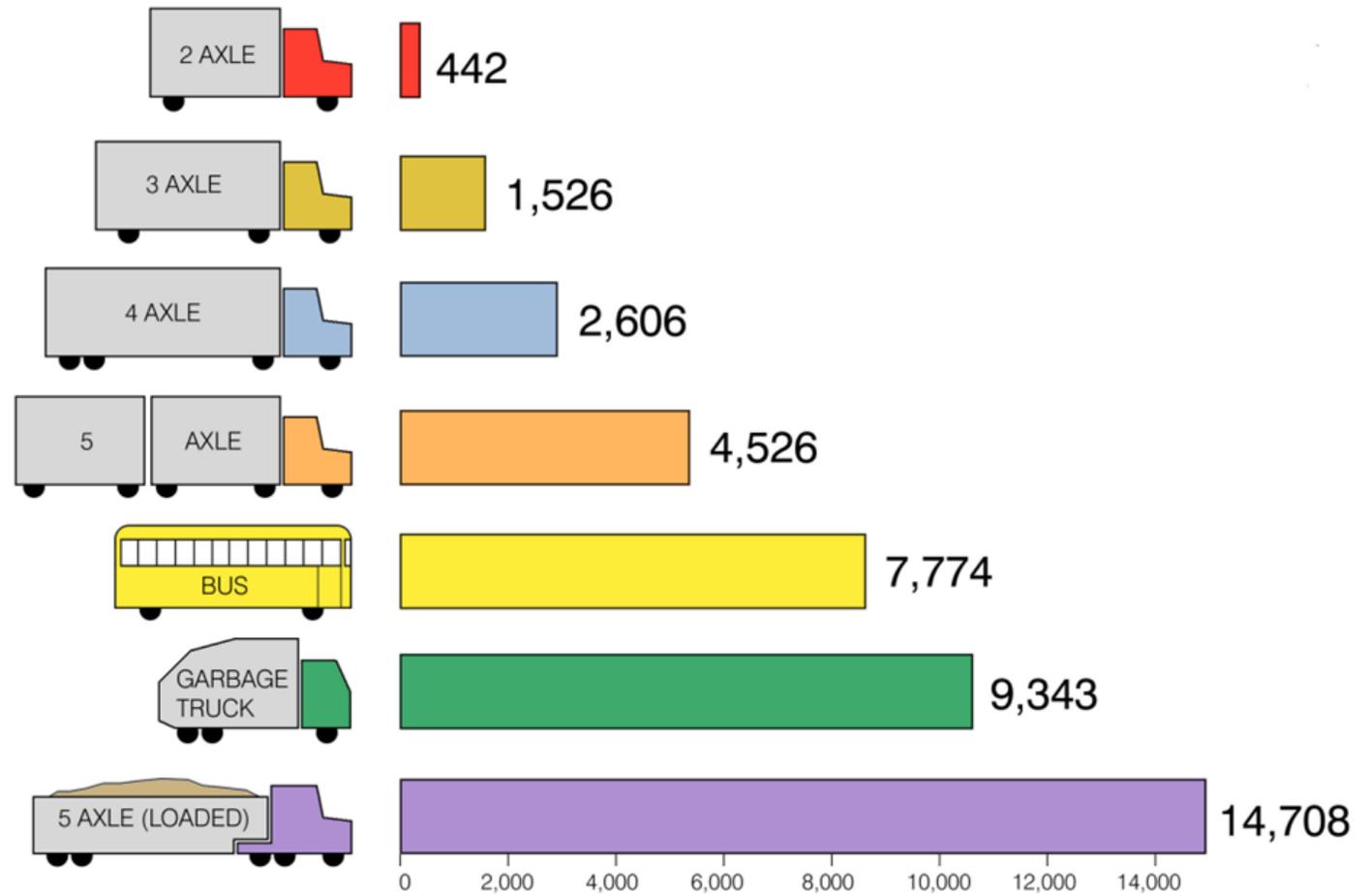
STREET CLASSIFICATIONS



PAVEMENT DETERIORATION CYCLE



THE IMPACT OF HEAVY ROADS



COMPARATIVE VEHICLE PAVEMENT STRESS

(S-10 BLAZER = 1 VEHICLE UNIT)

COMMON PAVEMENT DISTRESSES



**Weathering or
Raveling**



**Transverse or
Longitudinal Cracking**



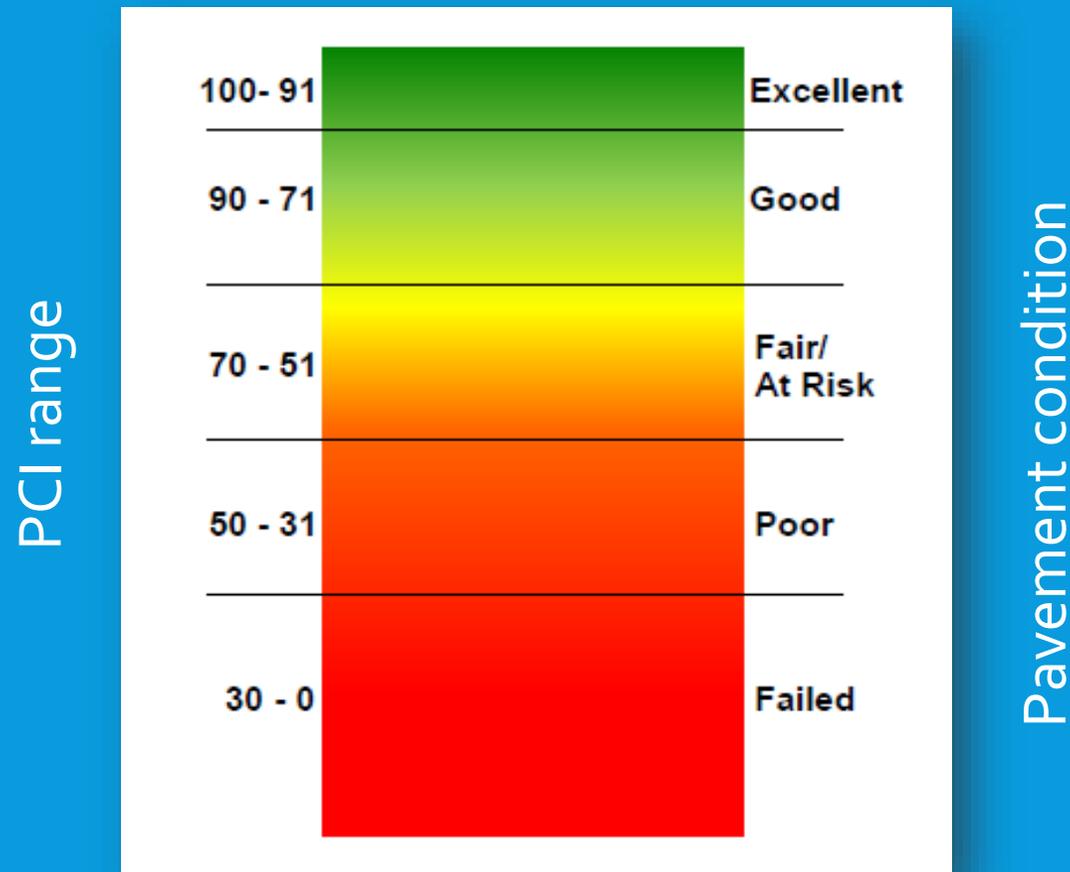
**Block
Cracking**



**Alligator
Cracking**

PAVEMENT CONDITION INDEX (PCI)

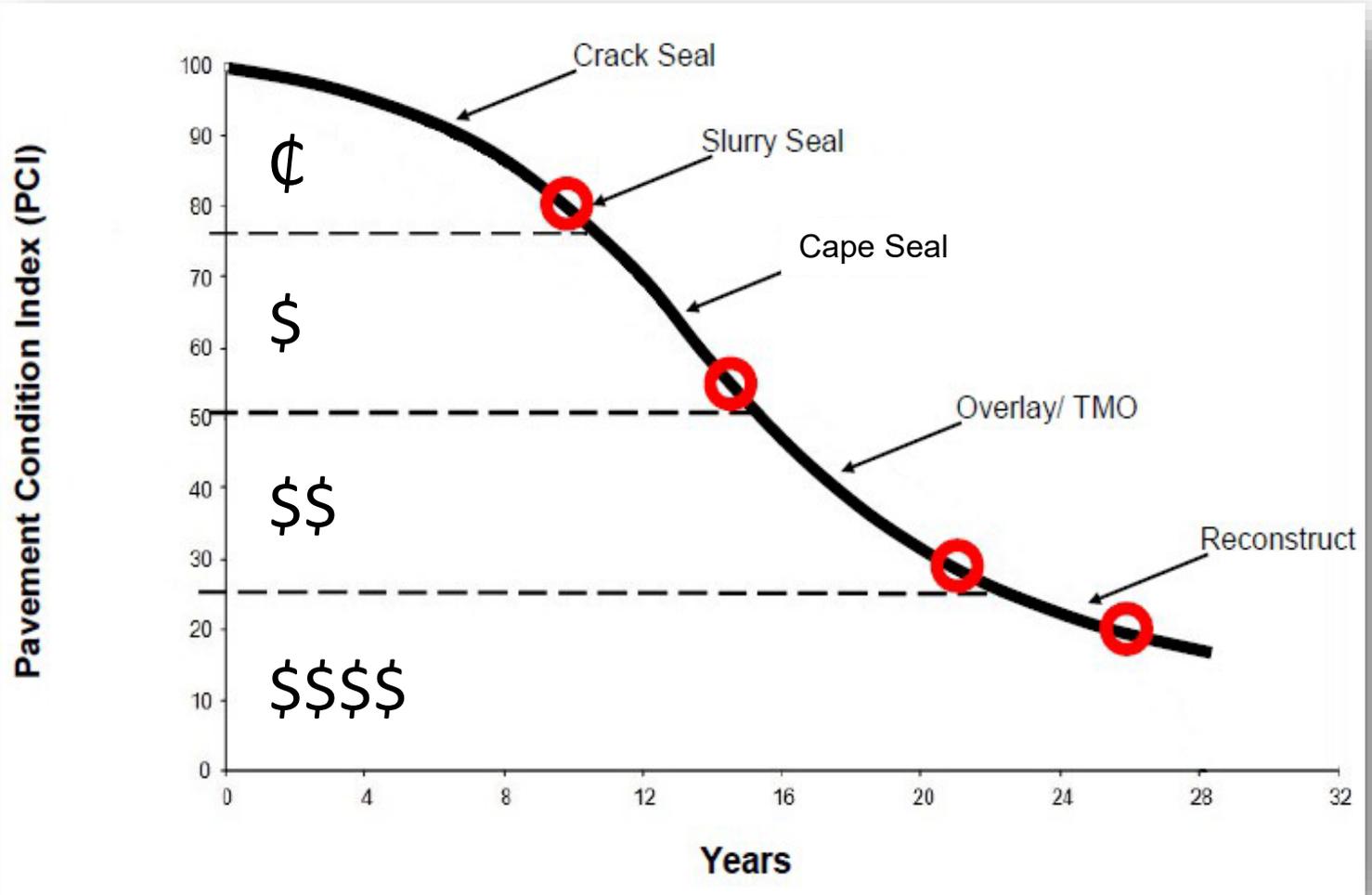
Developed by the U.S. Army Corp of Engineers, the PCI is a rational basis for determining pavement condition and establishing maintenance priorities



PAVEMENT MANAGEMENT: PRINCIPLES

Applying the **RIGHT TREATMENT**
to the **RIGHT PAVEMENT**
at the **RIGHT TIME**
using the **RIGHT MATERIALS**

CRITICAL POINT PAVEMENT MANAGEMENT

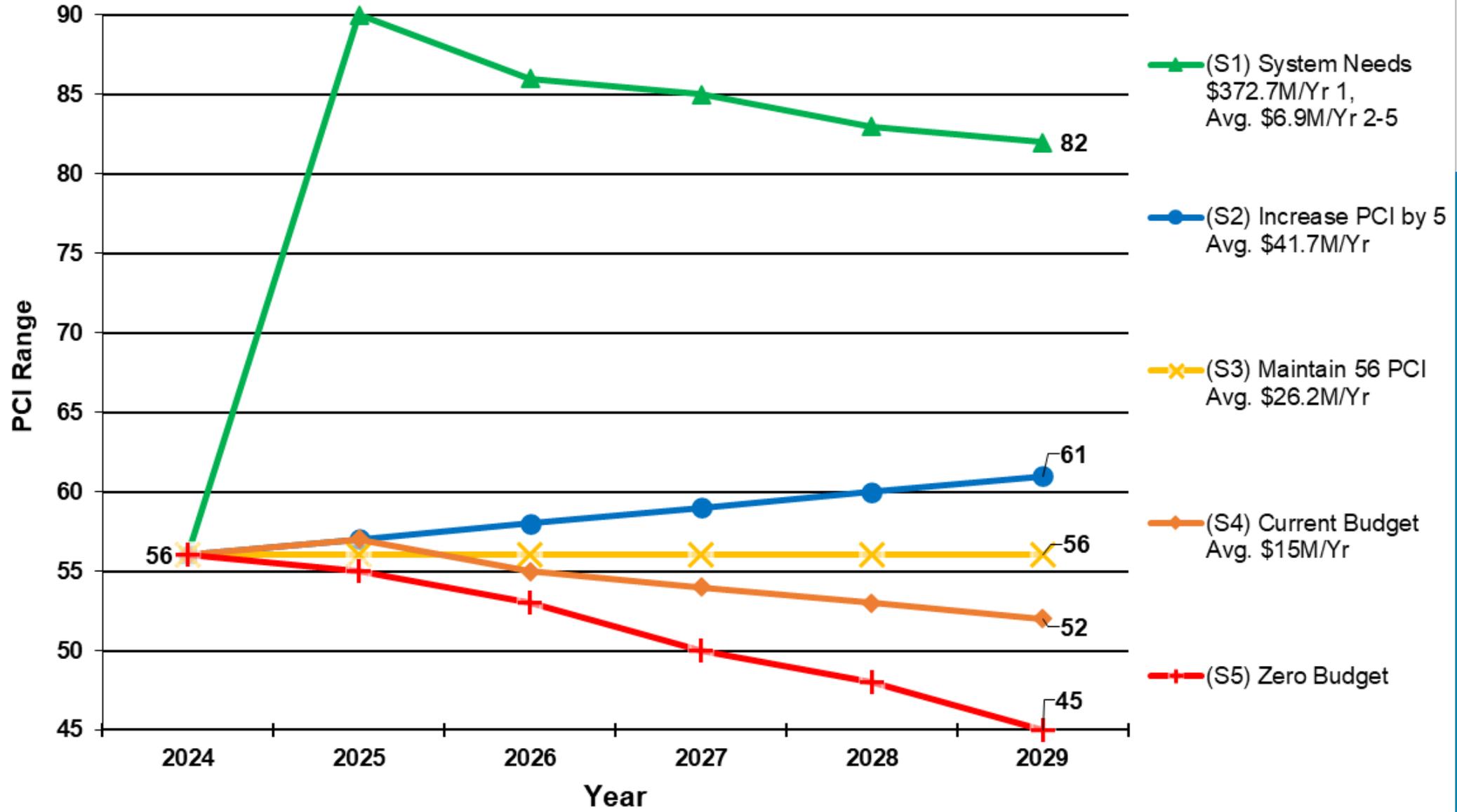


PCI Range	Treatment Category	Cost Range (per SF)
90-71	Light Maintenance	~\$1.00 to ~\$2.00
70-51	Heavy Maintenance	~\$7.00
70-51	Light Rehabilitation	~\$14.00
50-26	Heavy Rehabilitation	~\$18.00
25-0	Reconstruction	~\$30.00 to ~\$38.00

Functional Classification	Centerline Miles	Lane Miles	Area (Sq Ft)	Percent of System	Average PCI
Arterial	21.9	62.3	5,866,756	14.9%	57
Collector	36.7	75.4	7,200,161	18.3%	64
Residential	154.2	308.4	26,296,301	66.8%	53
Totals	212.8	446.1	39,363,218	100%	56

**BERKELEY'S MAINTAINED ROAD SYSTEM
(AS OF FEBRUARY 2025)**

5 Year Projections



(BERKELEY, AS OF FEBRUARY 2025)

PRESSURES AFFECTING STREET PAVING

- Increased traffic volume
- Increased vehicle weights
- Increased construction costs
- Weather
- Unfunded regulations
 - Required ADA updates
 - Post stormwater requirements

3

Transportation and Road Safety

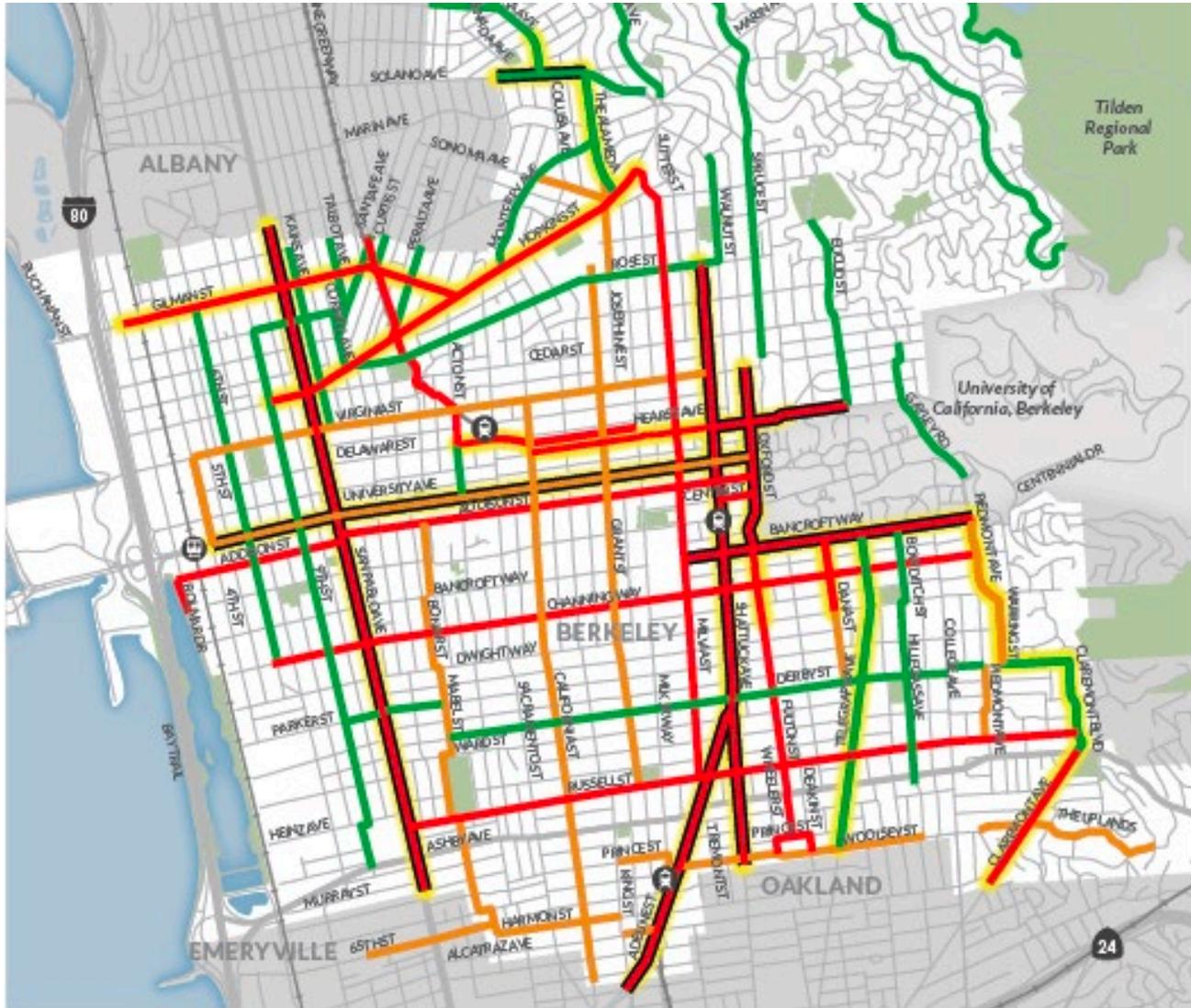


FIGURE 6-2: PROJECT PRIORITIZATION CORRIDORS

█ TIER 1 PRIORITY

█ TIER 2 PRIORITY

█ TIER 3 PRIORITY

BICYCLE PLAN (2017)

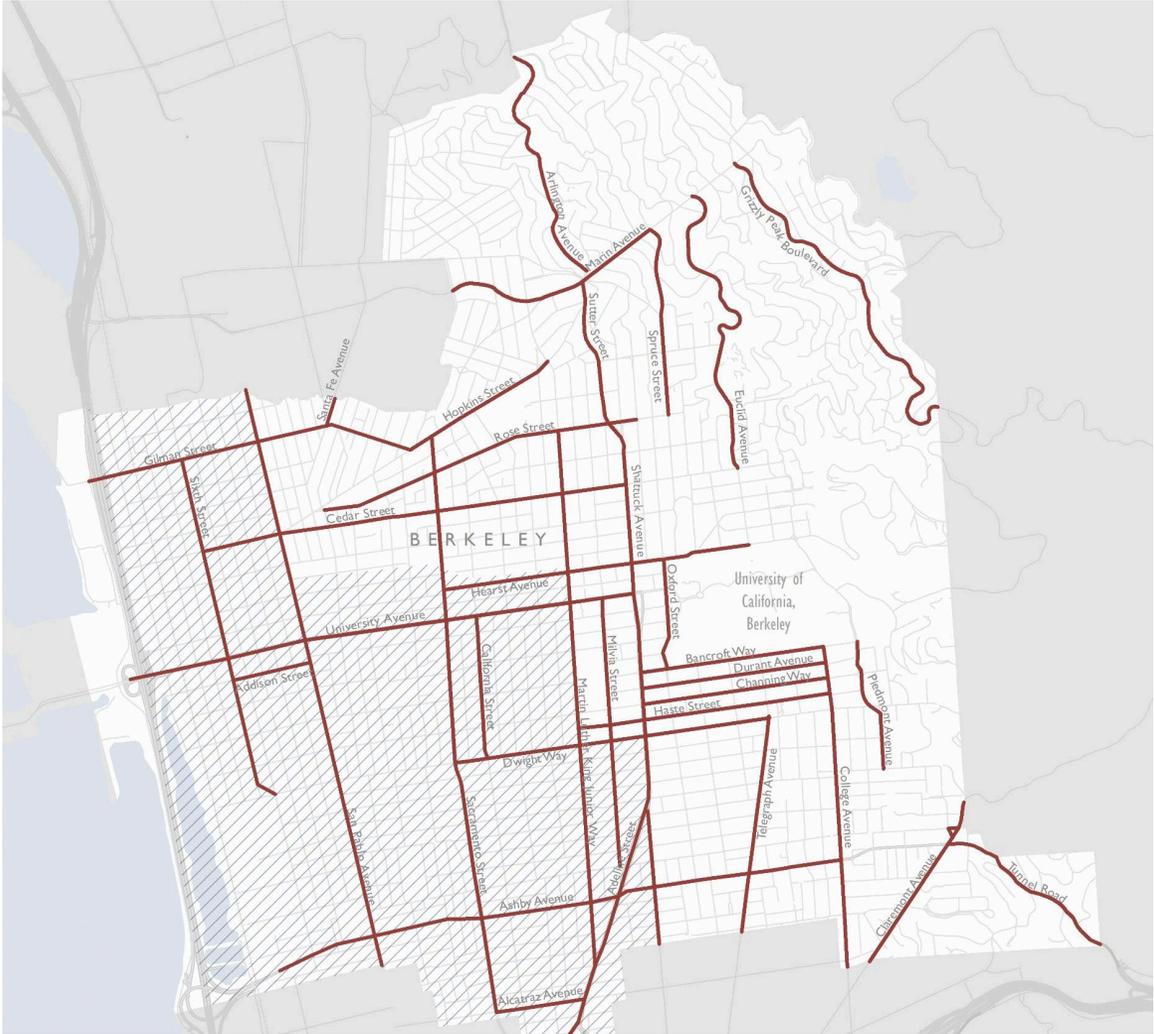
BIKE PLAN (2017): PRIORITIZATION CRITERIA

- Bike Plan prioritization tiers serve as general guidelines
- Implementation priorities will need to be integrated with Measure FF planning efforts
- Changes in bicycling patterns, demand or community support will affect implementation priorities

Safety	Combination of safety, LTS, and demand analysis
Community Support	Projects are scored based on whether the project or area was identified for improvement during the initial community input phase
Equity	Projects are scored based on whether they are located within a MTC designated Community of Concern

BIKE PLAN (2017): PROJECT COST ESTIMATES, BY TIER

TIER	PRELIMINARY ENGINEERING (25%)	CONSTRUCTION MANAGEMENT (15%)	TOTAL "SOFT COSTS"	TOTAL COST ESTIMATE
Tier 1	\$7,237,700	\$4,342,600	\$18,818,000	\$47,768,800
Tier 2	\$1,281,100	\$768,600	\$3,330,800	\$8,455,000
Tier 3	\$960,800	\$576,500	\$2,498,100	\$6,341,300
Totals			\$24,646,900	\$62,565,100

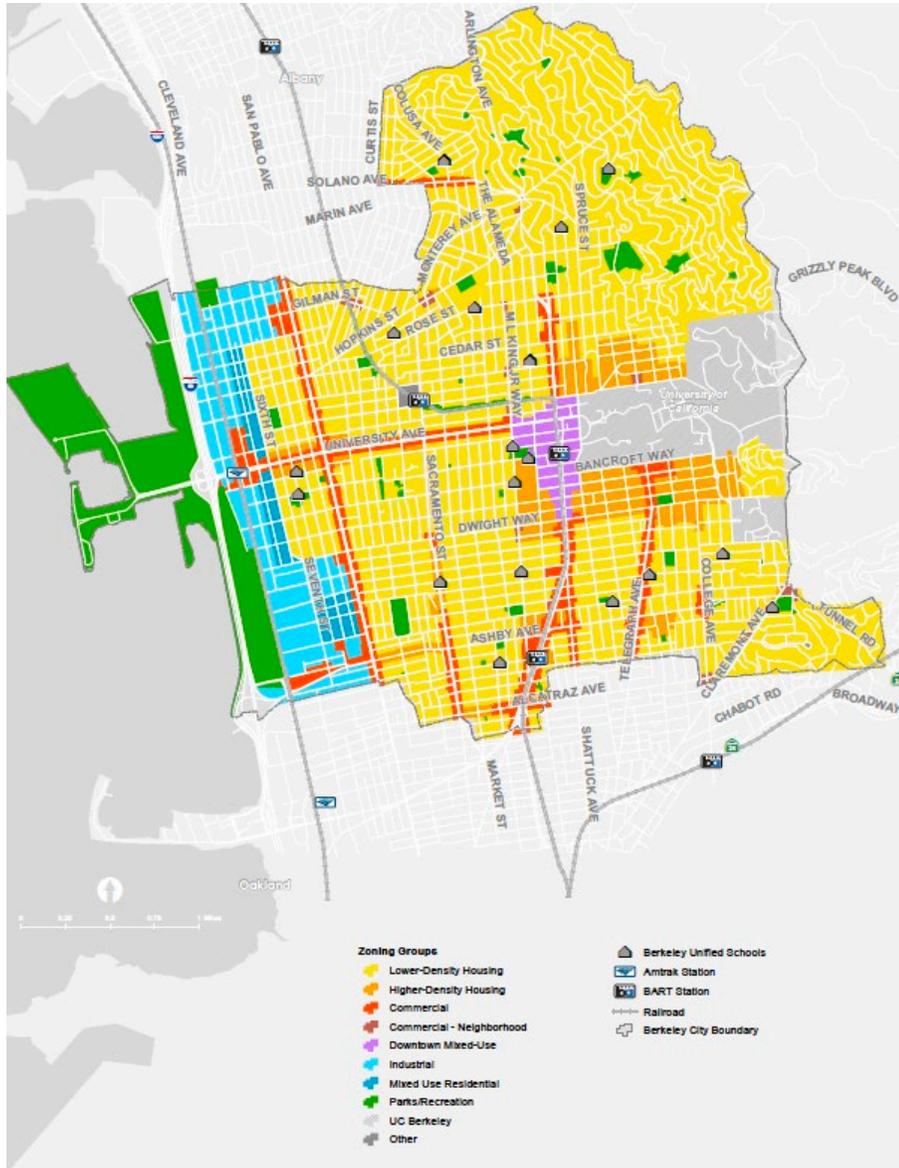


VISION ZERO

2.2 SAFER STREETS FOR EVERYONE: PROJECT DESIGN

Priority	Action	Lead Department	Timeline
	<i>Establish Vision Zero Design Guidelines that consolidate policies and design guidelines from Council-adopted plans such as the Pedestrian Plan, Bicycle Plan, and Complete Streets Policy to guide Berkeley's street design, traffic, and parking procedures in order to prioritize safety and reduce the incidence of severe and fatal collisions. Ensure revisions and updates are reviewed by the Vision Zero Coordinating Committee to maintain accessibility for people of all ages and abilities.</i>	Public Works	
	<i>Develop Curbside Management Guidelines and incorporate them into the Vision Zero Guidelines to ensure Berkeley addresses safety concerns at the curb due to existing and emerging mobility options.</i>	Public Works	
	<i>Update the Berkeley Municipal Code to be consistent with the Vision Zero Design Guidelines.</i>	Public Works	
	<i>Refine the existing traffic calming toolbox to include design guidelines for all street types, utilizing Council-adopted plans where applicable. Ensure the traffic calming toolbox is reviewed by the Vision Zero Coordinating Committee to streamline the implementation of projects.</i>	Public Works	

VISION ZERO: DESIGN GUIDELINES



PEDESTRIAN PLAN (2020)

FACTOR	CRITERIA	WEIGHT	NOTES
Safety	Concentration of fatal and severe collisions	30%	Captures locations with a high concentration of pedestrian fatalities, injuries, and collisions, as noted City priority.
Equity	Locations in historically underserved neighborhoods (shown in Figure 13)	30%	Uses historic redlining maps with adjustments based on most recent (2010) Census data, current property values, and locations of community centers serving historically redlined neighborhoods.
Connectivity	Pedestrian Demand: Land uses attracting most pedestrian trips including BART and Amtrak stations (High Demand Intersections)	13.5%	Uses pedestrian demand estimates to identify where pedestrians are walking. Top 30% of intersections are used, with each top 10% intersection group by demand receiving a different weight.
	Transit Access: Proximity to major bus lines	6.5%	Uses distance of 0.25-mile from major AC Transit routes as defined in the AC Transit Major Corridors Study completed in 2016.
Existing Plan	Unbuilt projects from 2010 Pedestrian Plan	20%	Recognizes existing work from the 2010 Berkeley Pedestrian Plan.

PEDESTRIAN PLAN: PRIORITIZATION FRAMEWORK

SEGMENT	EXTENTS
Adeline Street	Ashby to Southern City Limits
Alcatraz Avenue	Sacramento to Adeline
Ashby Avenue	San Pablo to Shattuck
Cedar Street	Sixth to Stannage
Martin Luther King Jr Way (North)	Hearst to Dwight
Martin Luther King Jr Way (South)	Dwight to Adeline
Sacramento Street	Dwight to Southern City Limits
San Pablo Avenue	University To Dwight
Shattuck Avenue	Adeline to Southern City Limits
University Avenue	San Pablo to Oxford

PEDESTRIAN PLAN: PRIORITY SEGMENTS



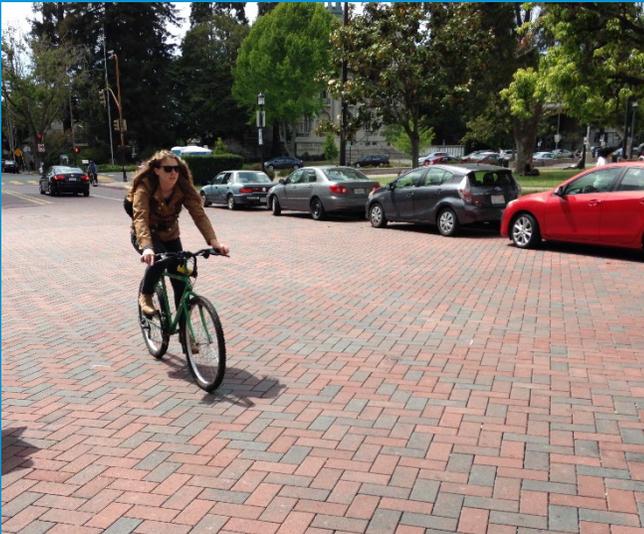
SUSTAINABILITY AND GREEN TECHNOLOGIES

SUSTAINABILITY



- Berkeley has declared a Climate Emergency
- New climate conditions will lead to: severe heatwaves and intense precipitation events; major wildland fires; reduced air quality and biodiversity; and gradual flooding of coastal areas
- Road systems will need to adapt to this changing environment
- Our shared public investments, policies and actions must work to mitigate climate impact and adapt to long-term environmental changes, as well as build our resilience to short-term events

CONSIDER GREEN TECHNOLOGIES



Durable pavers on
Allston Way



Permeable parking area
on Spinnaker Way



Bioswale on Woolsey Street

4

Funding



MEASURE FF: PROGRAM OVERVIEW

Assessment Rates:

- Residential: \$0.17/sq ft
- Non-Residential: \$0.25/sq ft

Projected revenue over 14 years: \$278M - \$302M

- 60% for streets and sidewalks:
 - 45% for streets
 - 15% for sidewalks and pedestrian paths
- 30% for safety improvements
- 10% for environmental enhancements, fees, auditing costs, and public art, subject to certain conditions

01

Raise Pavement
Condition Index
(PCI) to or above 70

02

Eliminate backlog of
damaged sidewalks
and pedestrian
paths

03

Significantly reduce
or eliminate fatal
and severe traffic
crashes throughout
the city

MEASURE FF: PROGRAM GOALS

MEASURE FF: REVENUE ESTIMATES, BY YEAR

YEAR	1	2	3	4	5	6	7
CPI	\$15.6	\$16.2	\$16.8	\$17.4	\$18	\$18.6	\$19.3
PIG	\$15.6	\$16.4	\$17.1	\$18	\$18.8	\$19.7	\$20.7
YEAR	8	9	10	11	12	13	14
CPI	\$20	\$20.7	\$21.4	\$22.2	\$23	\$23.8	\$24.7
PIG	\$21.7	\$22.7	\$23.8	\$24.9	\$26.1	\$27.4	\$28.7

CPI: Consumer Price Index
 PIG: Personal Income Growth Index
 All estimates in Millions

MEASURE FF: ALLOCATION BY CATEGORY

Streets	Safety Improvements	Sidewalks & Pedestrian Paths	Environmental, Public Art, Other
\$7.02M	\$4.68M	\$2.34M	\$1.56M



COMBINED REVENUE PROJECTIONS

Safe Streets Measure FF: \$15.6M/Yr (+ CPI)

- Year 1 Projection

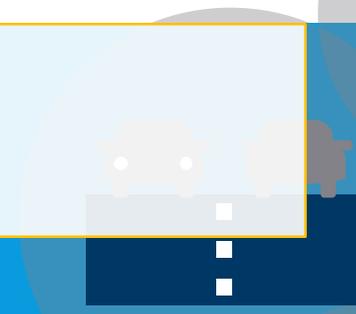
General Fund: \$9.9M/yr

- Baseline annual streets funding

Gas Tax (SB1 and HUTA): \$6-8M/Yr

- Supports existing, ongoing pavement maintenance

Alameda County Measure BB: \$8.2M/Yr



5

Policy Considerations



EXISTING PAVING POLICY

- **January 2022 City Council approved:**
 - Street Maintenance and Rehabilitation Policy
 - First 3 years of 5-Year Paving Plan
- **General Policy Items**
 - Defines priorities for the road surface from curb to curb
 - Conforms with the RWQCB permit
 - Supports other City plans and policies
 - Utilizes the MTC's required pavement management tool (Street Saver)
- Rehabilitation of contiguous sections of roadway when feasible
- Tree removals to be avoided as much as possible
- Goal of achieving a PCI of 70 for arterial, collector, bus routes, bikeway network
- Equity Zone goal to achieve PCI of 70 ahead of other areas of the City
- 5-Year Plan updated biennially timed with City budget

FUTURE PAVING POLICY CONSIDERATIONS

- Evaluate development related and other Impact Fees
- Negotiate investments from Utilities
- Green Infrastructure Funding
- Develop *Dig Once* Policy and advance range of other City plans
- Vehicle Impact Fees/Funding
- Bundling projects in a smaller geographic area to reduce mobilization costs
- Reserve a portion of annual paving funds for coordinated paving with large utility project for paving the full width of the street:
 - Create standard reimbursement agreement with utilities for the City to pay for paving the area outside the trench restoration area for a curb-to-curb paving



6

Next Steps & Action

NEXT STEPS: DATA COLLECTION & PLANNING

Immediate Actions



- Reset expectations about PCI outcomes
- Develop Program Manual and Staffing Plan
- Overlay various infrastructure Plans to prioritize projects
- Develop process for Complete Streets and traffic safety applications
- Public process
- Creation of Oversight Commission

Planning Tools Used



- CIP and various planning documents listed
- MTC Pavement Technical Assistance Program (PTAP)
- Street Saver Software
- Geographic Information System (GIS)

Documentation/Results

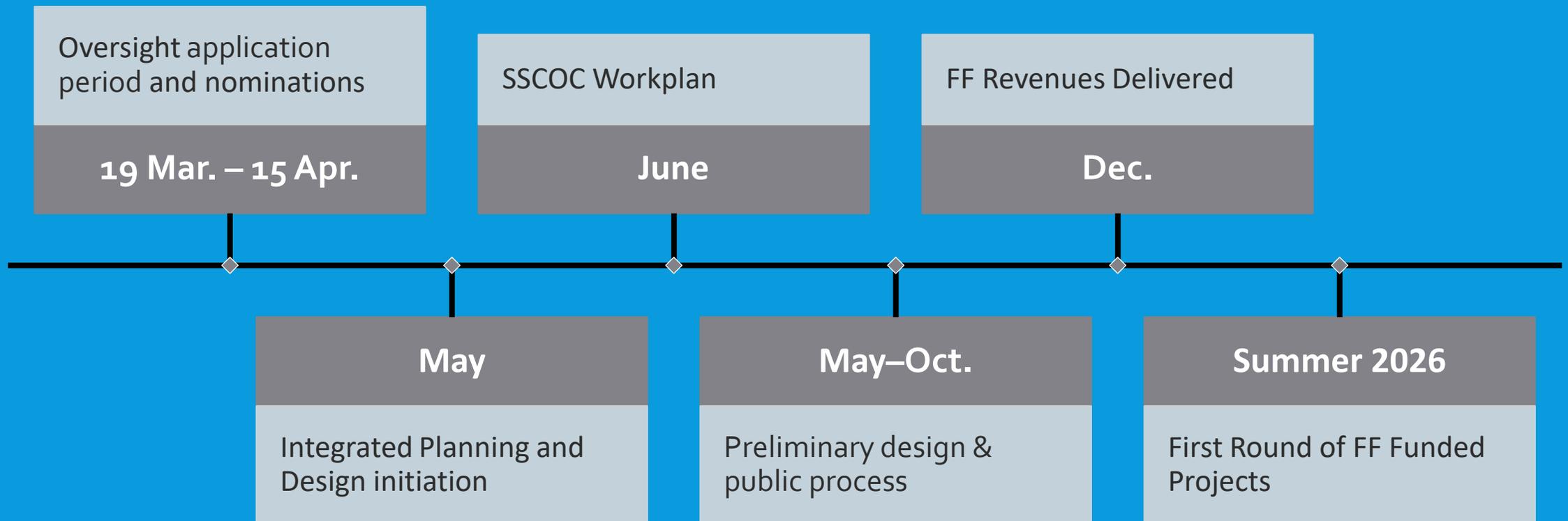


- First Round of Measure FF funded projects, ready to implement (2026)
- Integrated Pavement and Road Safety Plan for Year 2 and beyond
- Oversight Reports

NEXT STEPS: SAFE STREETS CITIZEN OVERSIGHT COMMITTEE (SSCOC)

- Will oversee expenditures and progress reports
- Ensures compliance and evaluates tax impact
- Composed of seven members:
 - 2 from Transportation Infrastructure Commission
 - 1 from Environment and Climate Commission
 - 4 At-Large appointed by Council with expertise
 - Civil Engineering
 - Program Infrastructure
 - Municipal Finance/Bonds

NEXT STEPS: MEASURE FF KEY TIMELINES & MILESTONES



QUESTIONS



Contact:

Terrance Davis

Director of Public Works

TDavis@berkeleyca.gov

More Information:

<https://berkeleyca.gov/your-government/our-work/bond-revenue-measures/measure-ff-sidewalk-and-street-repairs-parcel>