Pavement Management Plan

City Of Burnsville

Pavement management plan

- What we have.
- What condition it is in.
- How we are going to maintain it.

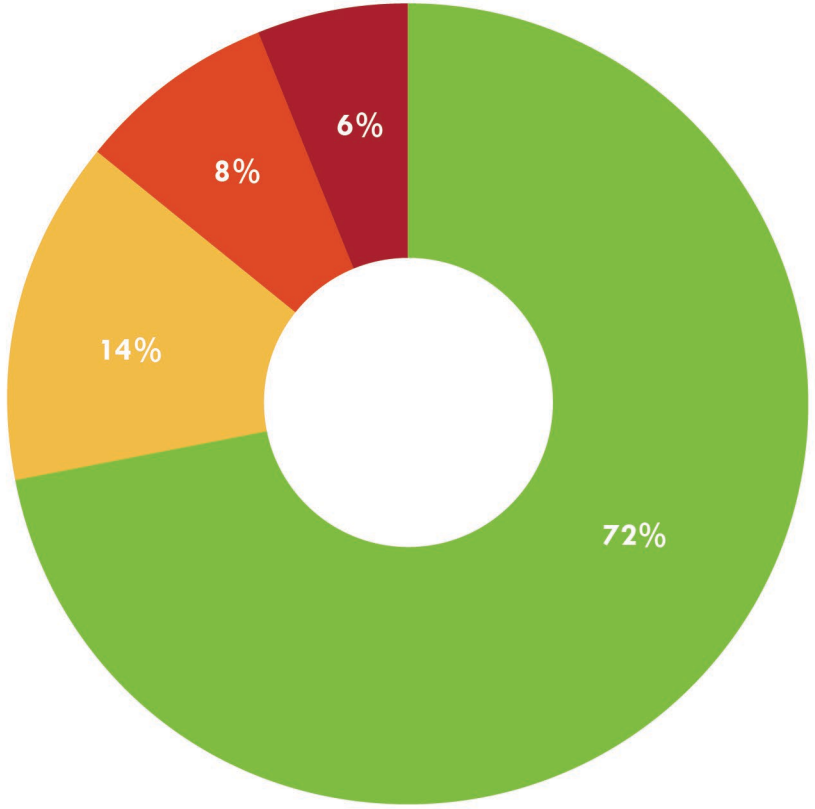
Pavement condition index (PCI)

Rate all streets every three years:

- Good (70-100): minimal distress, preventative maintenance
- Fair (55-69): low to medium distress, future rehabilitation
- Poor (40-54): medium distress, pending rehabilitation
- Critical (0-39): severe distress, reclamation/reconstruction

Mileage by PCI

- Good (70-100) 164 Miles
- Fair (55-69) 31 Miles
- Poor (40-54) 19 Miles
- Critical (0-39) 13 Miles



Deterioration costs

Pavement Condition	Pavement Score Range	Mileage	Cost Per Mile (2024 dollars)	Total Cost (2024 dollars)
Critical	0 to 39	13	$825,000	$10,725,000
Poor	40 to 54	19	$425,000	$8,075,000
Total		**32**		$18,800,000

PCI goal

- Average PCI of all city streets at or above 75
- No more than 11.3 miles (5%) in critical condition

Horizontal infrastructure

- Exist in the same space, generally below the pavement
- Stormwater management
- Wastewater collection
- Water distribution

Methods

- Reconstruction: $1,200,000 per mile
- Reclamation: $825,000 per mile
- Rehabilitation: $425,000 per mile
- Preventative maintenance

Reconstruction

- Complete replacement of a street, including all pavement layers and curbs.
- Typically driven by watermain replacement.

Reclamation

- Existing pavement and gravel base are ground up and reused, new pavement placed on top of reclaim
- Spot curb replacement as needed
- Extensive underground utility work is not necessary

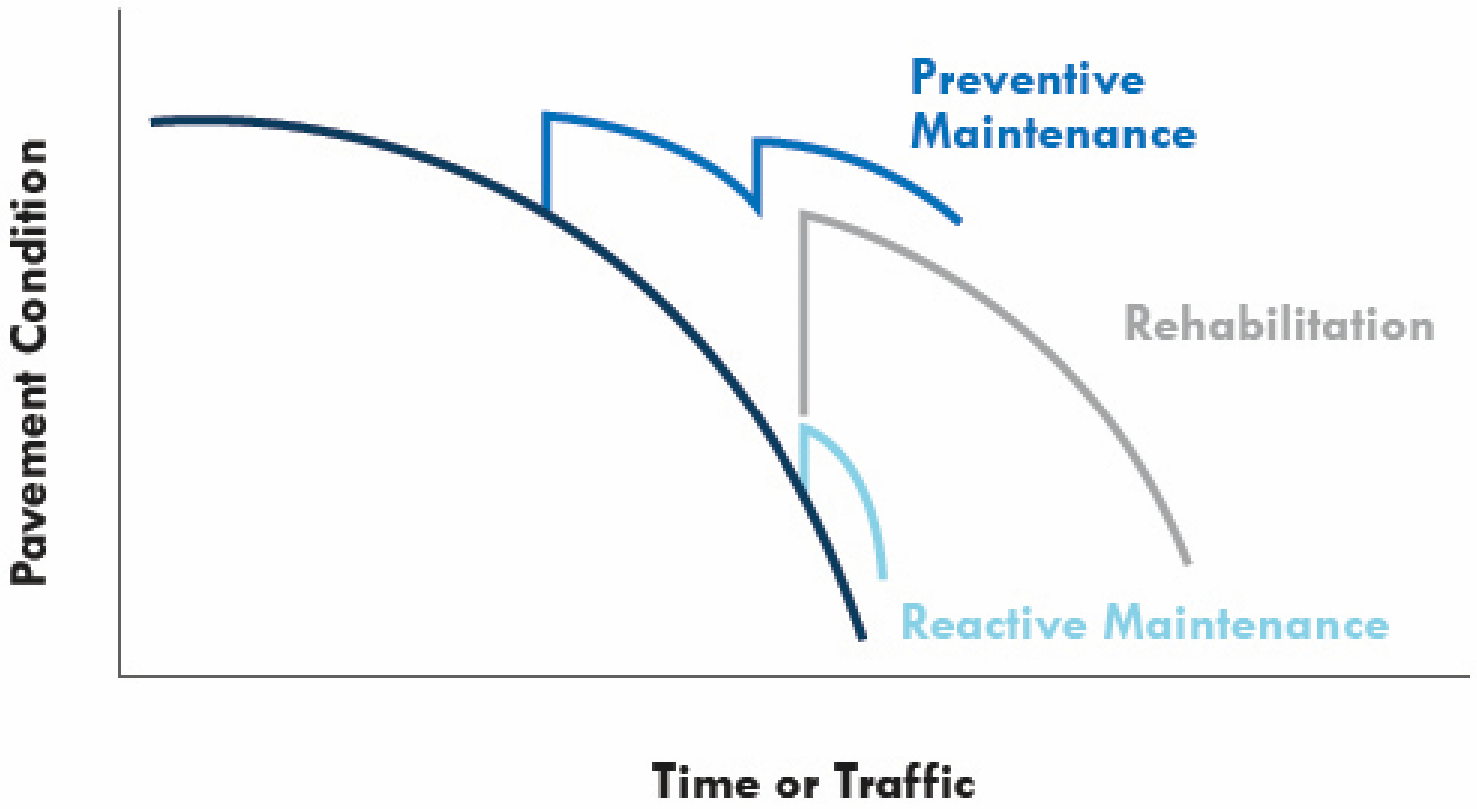
Rehabilitation

- Commonly called mill and overlay
- Removing and replacing the surface layer
- Spot curb replacement is completed as needed
- Extensive underground utility work and full depth replacement of the pavement is not necessary

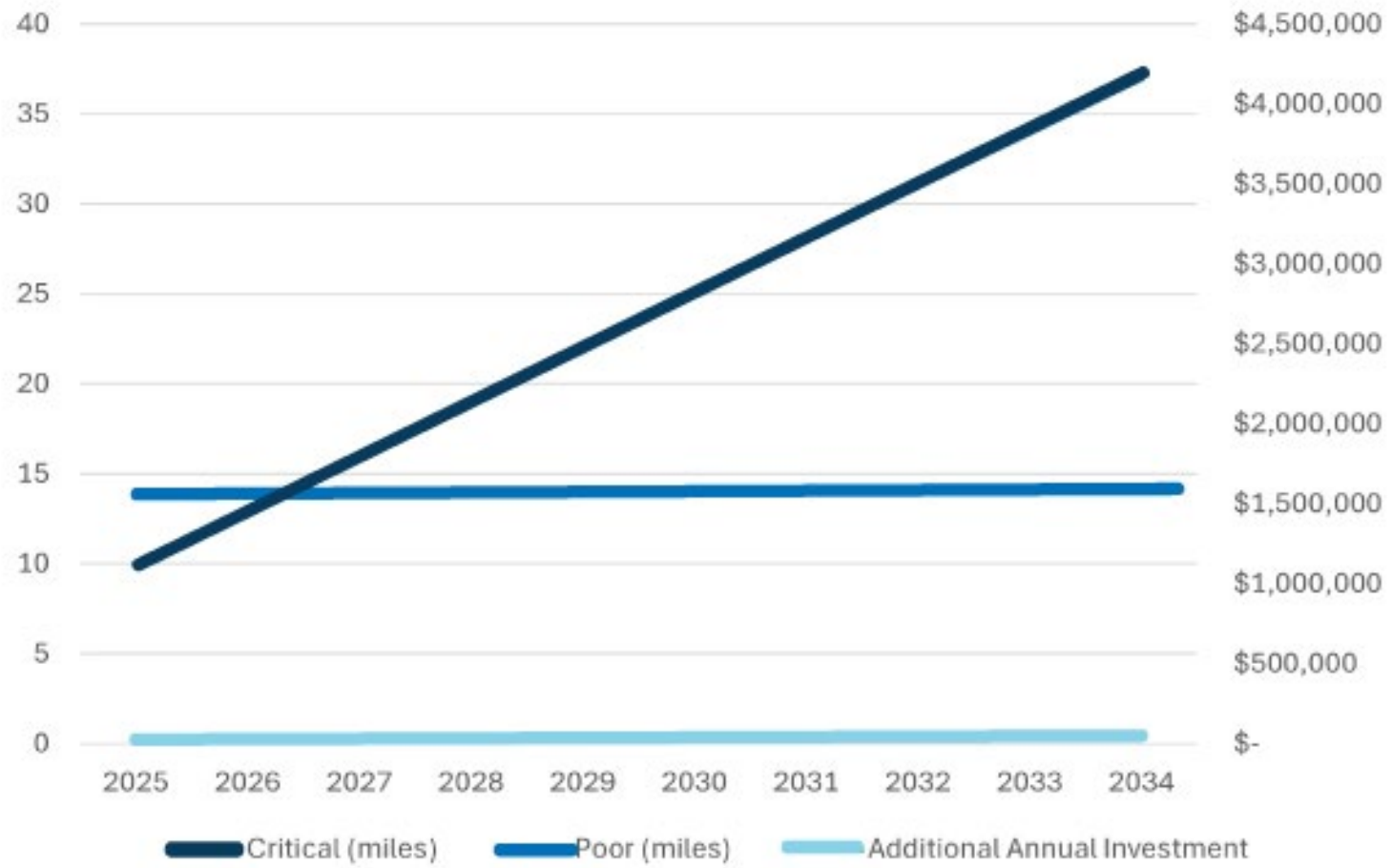
Preventative maintenance

Regular, smaller-scale interventions like crack sealing and pothole patching to extend the life of a pavement or in response to issues.

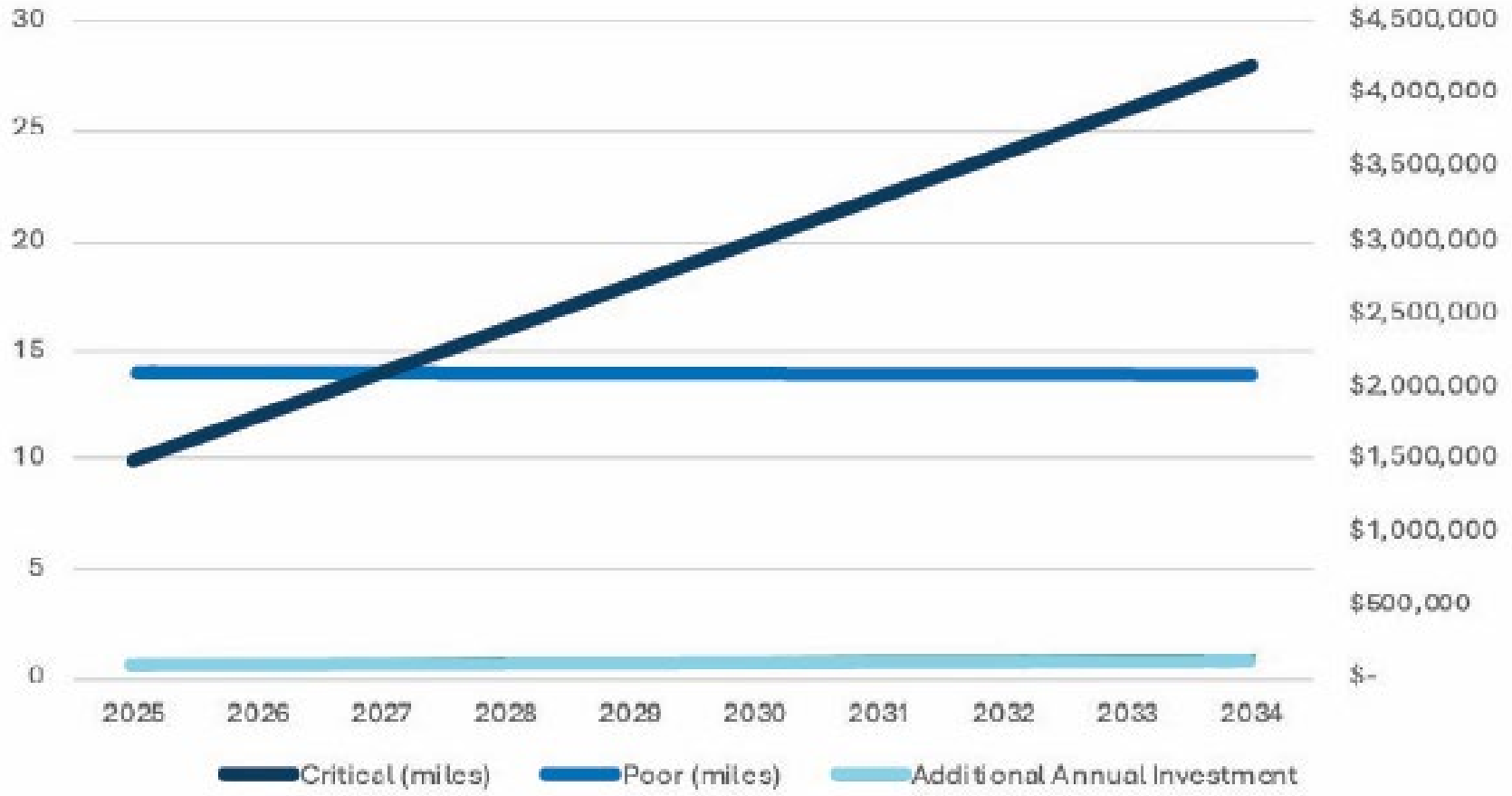
Deterioration



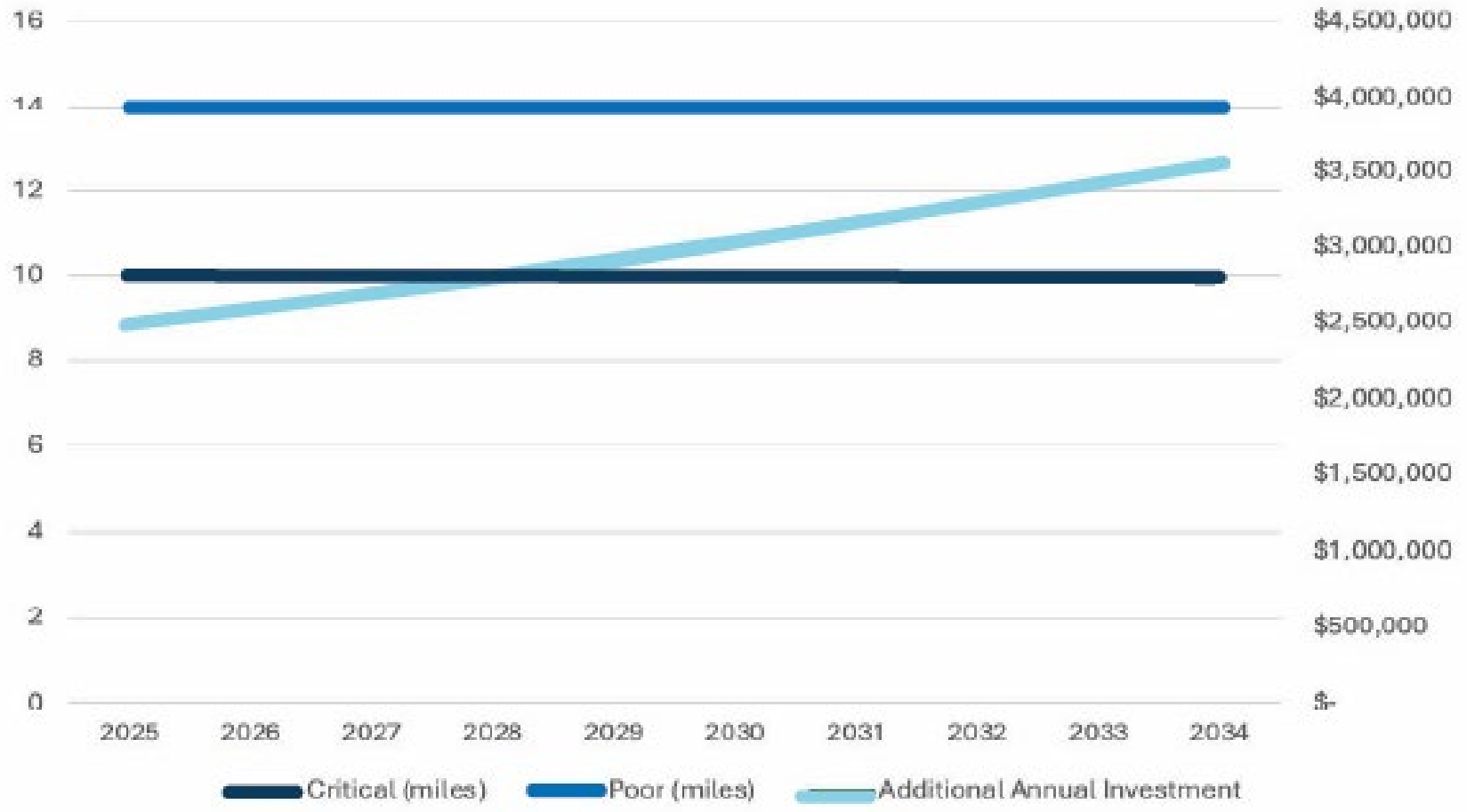
1: Increasing critical miles



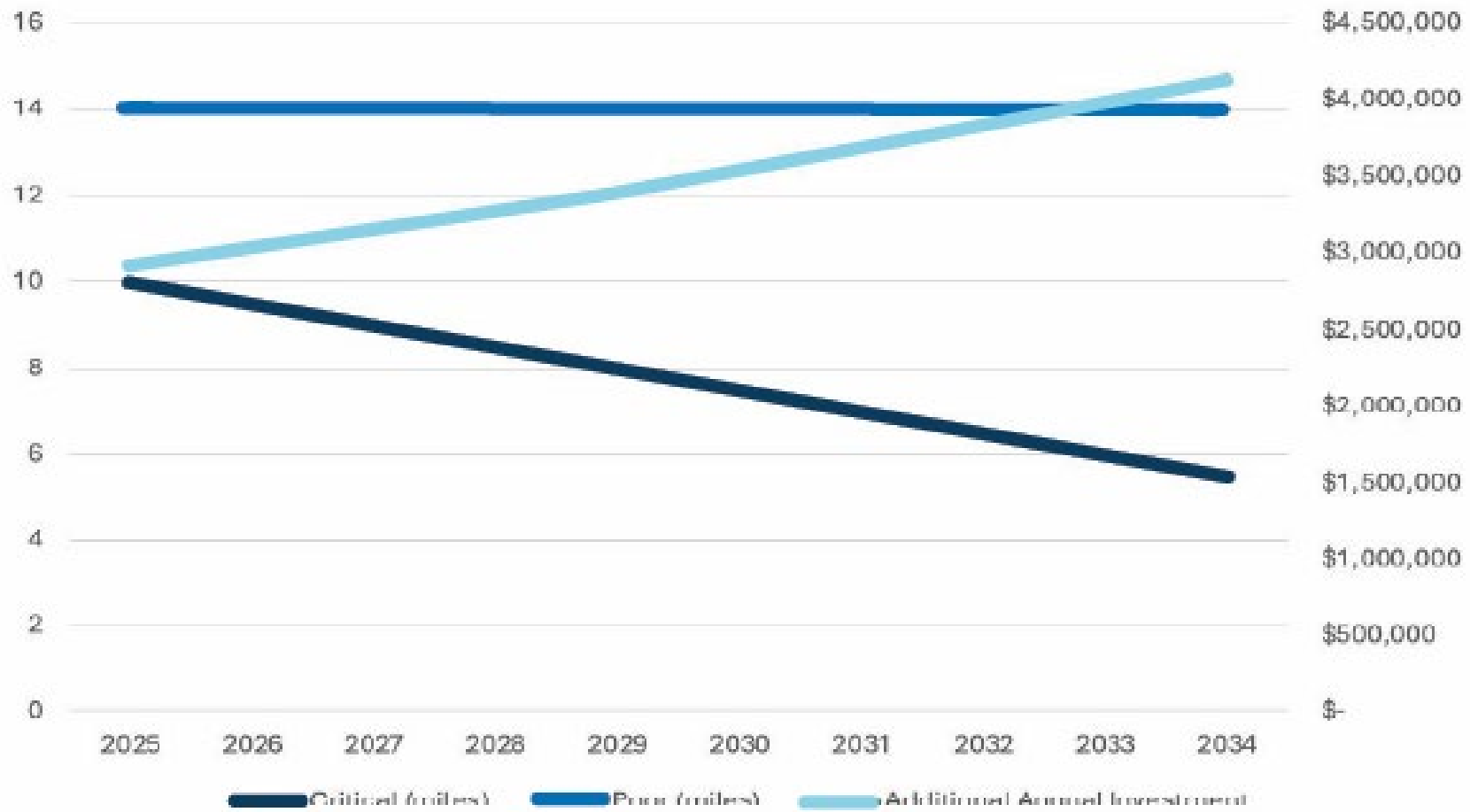
2: One less critical mile



3: Sustain critical miles



4: Decreasing critical miles



Integrated strategy

- Align ITF, MSA, special assessments, stormwater utility, sanitary sewer utility, and water utility funds with project coordination.
- Maximize project benefit and cost ratios.
- Use ITF consistent with established policy.

Best practices

- Plan and program into the CIP streets in fair condition so work occurs in poor condition.

Best practices

- Prioritize infrastructure trust fund resources towards street improvement projects.
- Plan and program all critical condition streets for construction in next five years, all poor condition streets for construction in next 10 years.

Best practices

- Coordinate underground utility replacement such that pavement is scheduled to go to critical condition so that pavement life is fully realized.
- Benchmark is an average PCI of 75 for all city streets (including MSA) and not more than 5% below a PCI of 39.

Next steps

- Infrastructure trust fund study.
- Further utility rate structure analysis.
- Horizontal infrastructure study incorporating vulnerability assessment.