City of Rochester

"Investment Strategies for Better Streets"

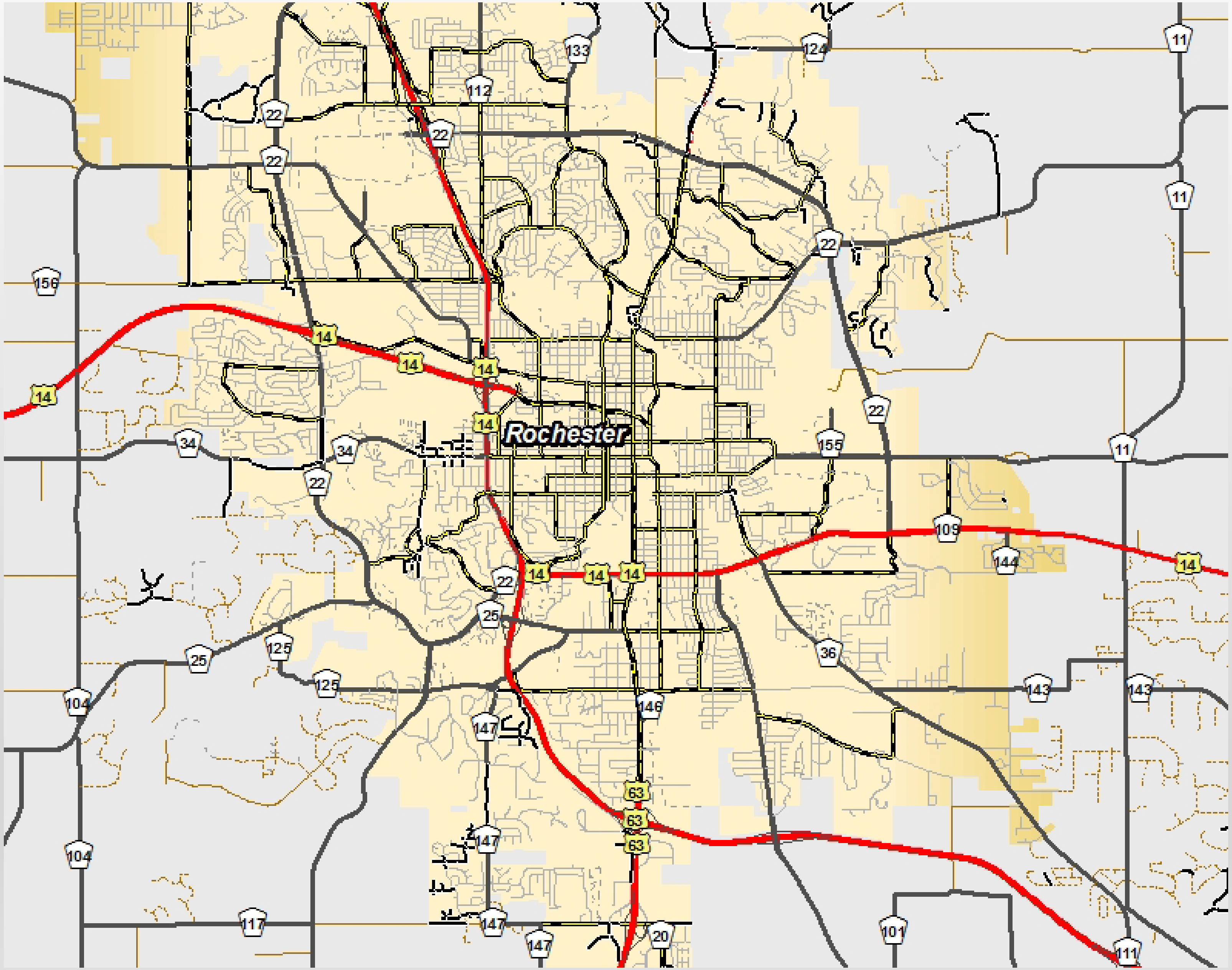
August 2016

Street Investment Strategies

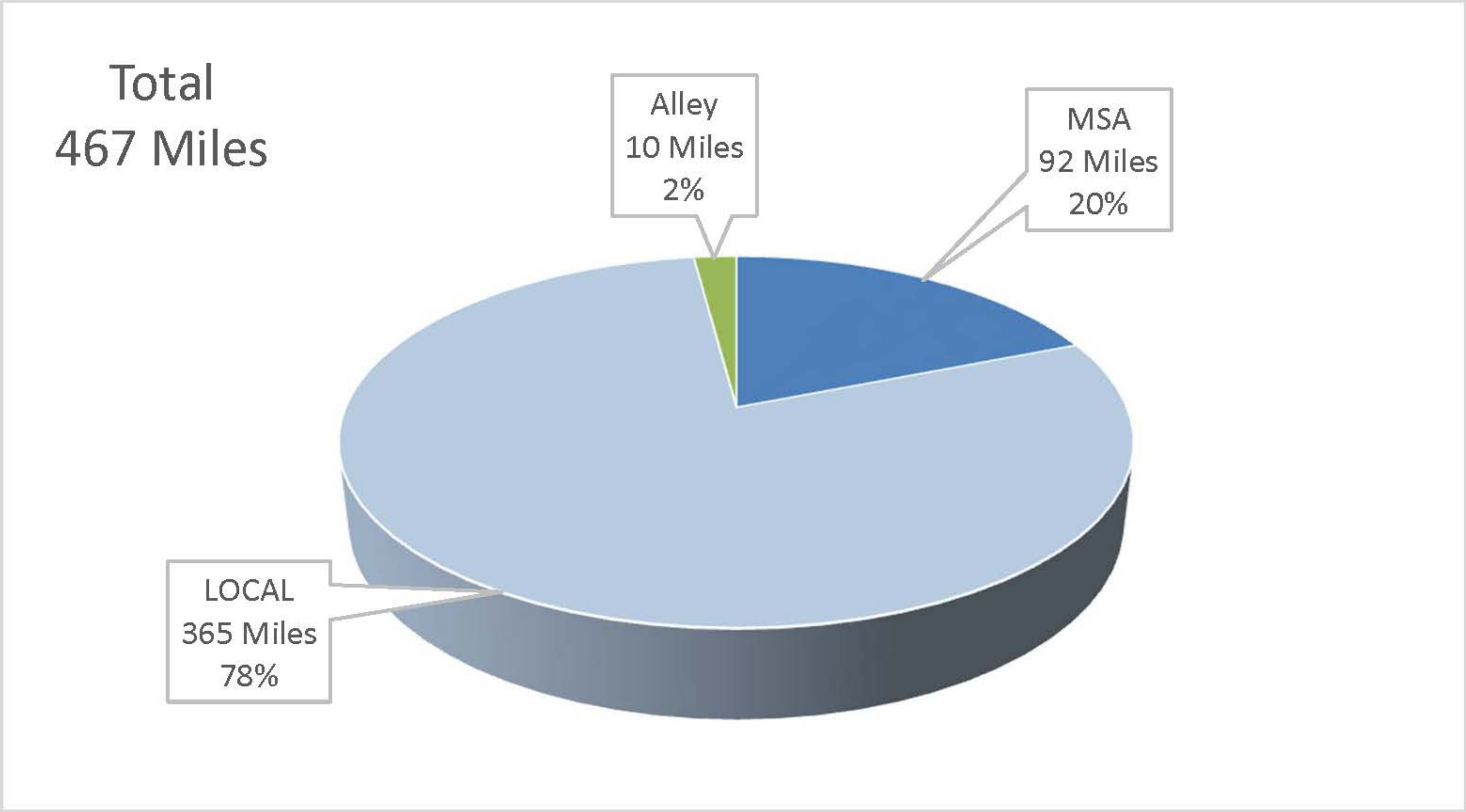
- Background & History
- Pavement Maintenance Strategies
- Investment Strategies

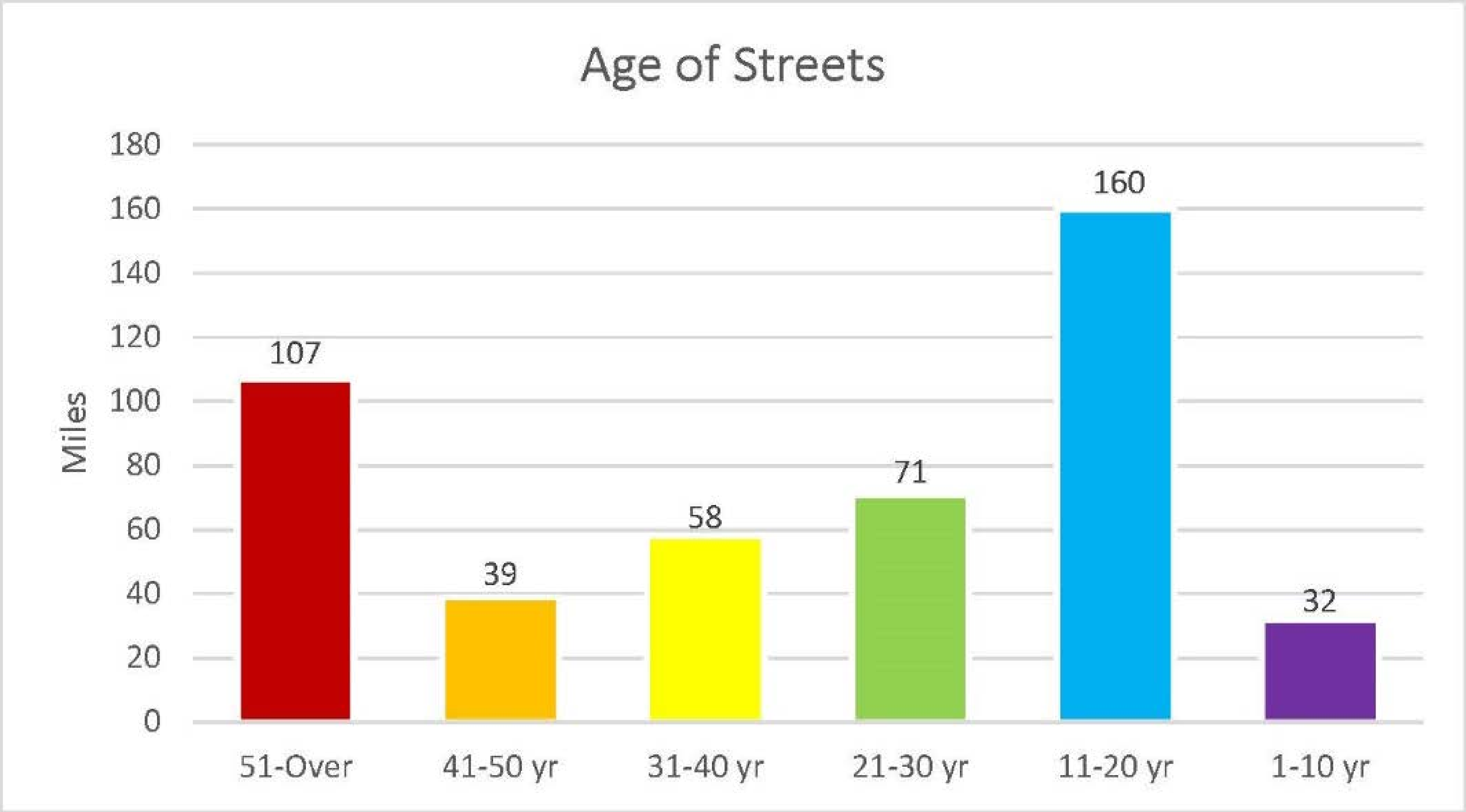
City of Rochester Road Network

TOTAL	**535 miles**
State	**23 miles**
County	**45 miles**
City	**467 miles**

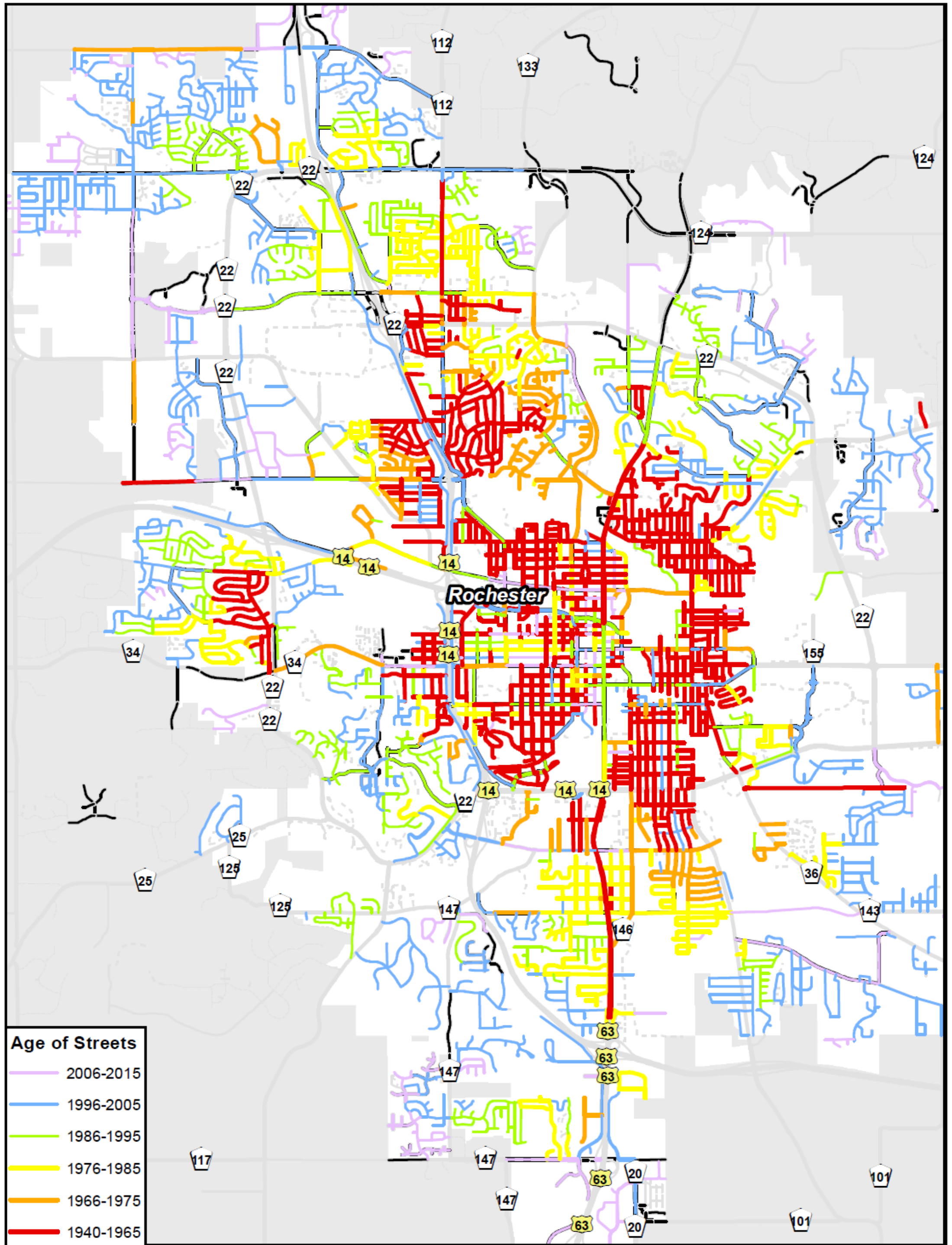


City Street Network




Age of Streets
Miles
180
160
140
120
100
80
60
40
20
0
107
39
58
71
160
32
51-Over
41-50 yr
31-40 yr
21-30 yr
11-20 yr
1-10 yr

Location of Streets by Age



Street Surface Condition Index

Bituminous Streets:

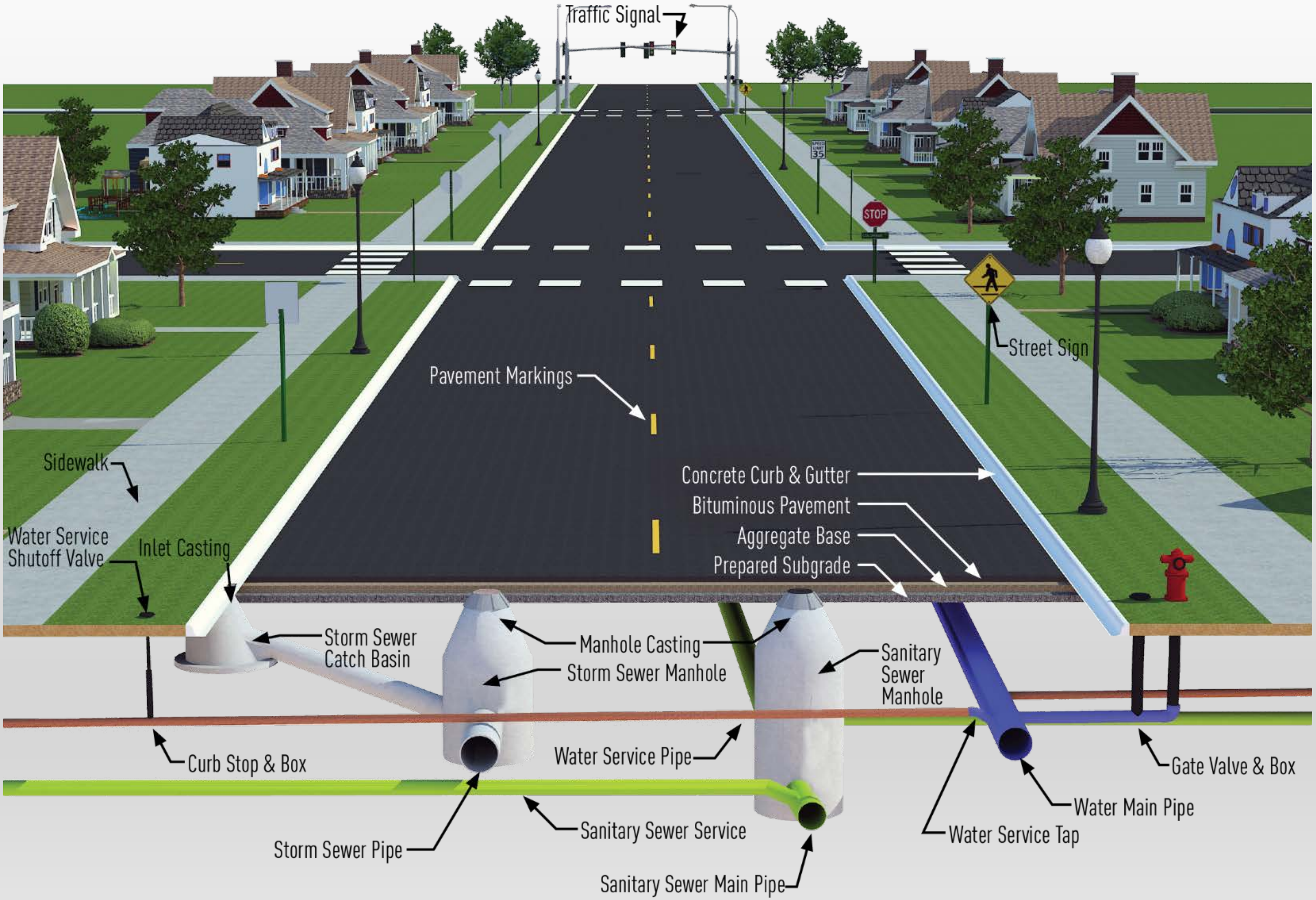
• Very Good	100 – 91	135 miles
• Good	67 – 90	179 miles
• Fair	34 – 66	42 miles
• Poor	0 – 33	26 miles

Concrete Streets:	85 miles
Total:	467 miles

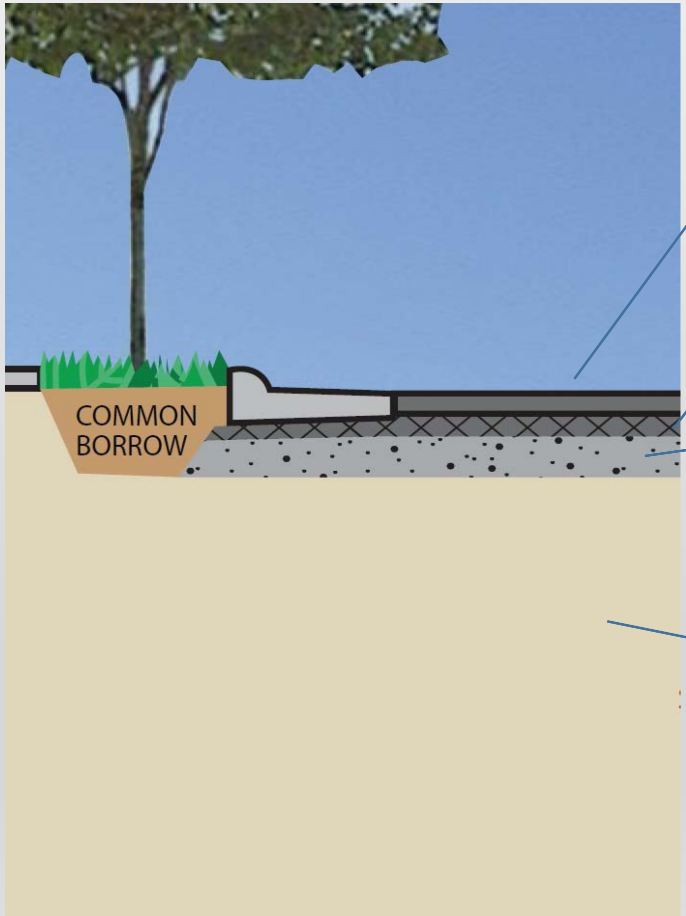
Surface Condition Index = 82 (Good)

Surface Condition Index = 66 (Fair)

Surface Condition Index = 20 (Poor)


Traffic Signal
Street Sign
Pavement Markings
Sidewalk
Concrete Curb & Gutter
Bituminous Pavement
Aggregate Base
Prepared Subgrade
Water Service Shutoff Valve
Inlet Casting
Storm Sewer Catch Basin
Manhole Casting
Storm Sewer Manhole
Sanitary Sewer Manhole
Curb Stop & Box
Water Service Pipe
Gate Valve & Box
Water Main Pipe
Water Service Tap
Sanitary Sewer Service
Storm Sewer Pipe
Sanitary Sewer Main Pipe
STOP

Typical Bituminous Pavement Detail



Bituminous Wear Course
Thickness ranges 1.5 to 3 inches

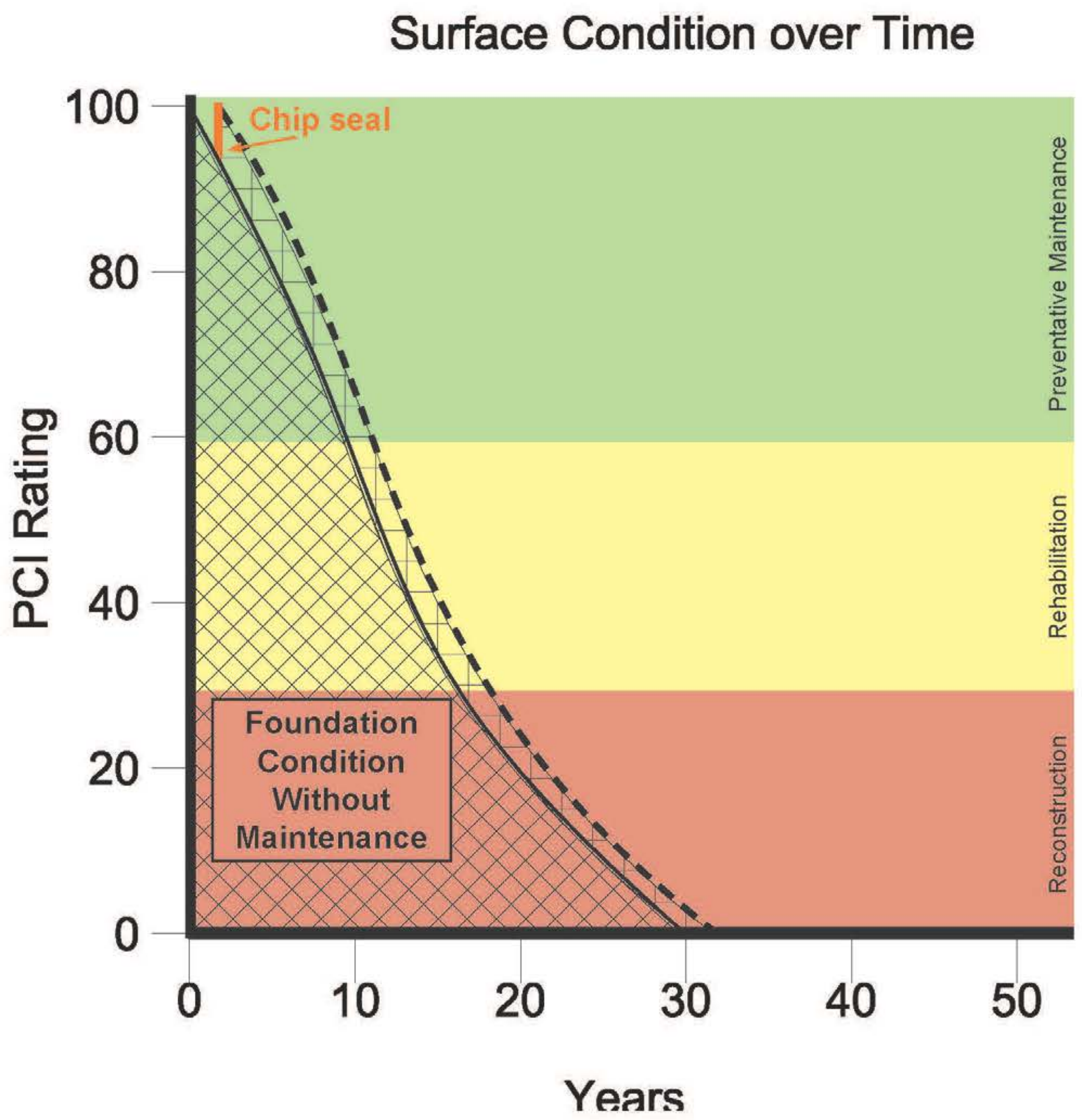
Bituminous Base Course
Thickness ranges 2.5 to 6 inches

Aggregate Base, Class 5
Thickness ranges 8 to 15 inches

Natural soils or subgrade amendment
Thickness ranges 1 to 3 feet

New Streets

Surface Condition = 100


Surface Condition over Time
Chip seal
100
80
60
40
20
0
PCI Rating
Preventative Maintenance
Rehabilitation
Reconstruction
Foundation Condition Without Maintenance
0
10
20
30
40
50
Years

Preventive Maintenance

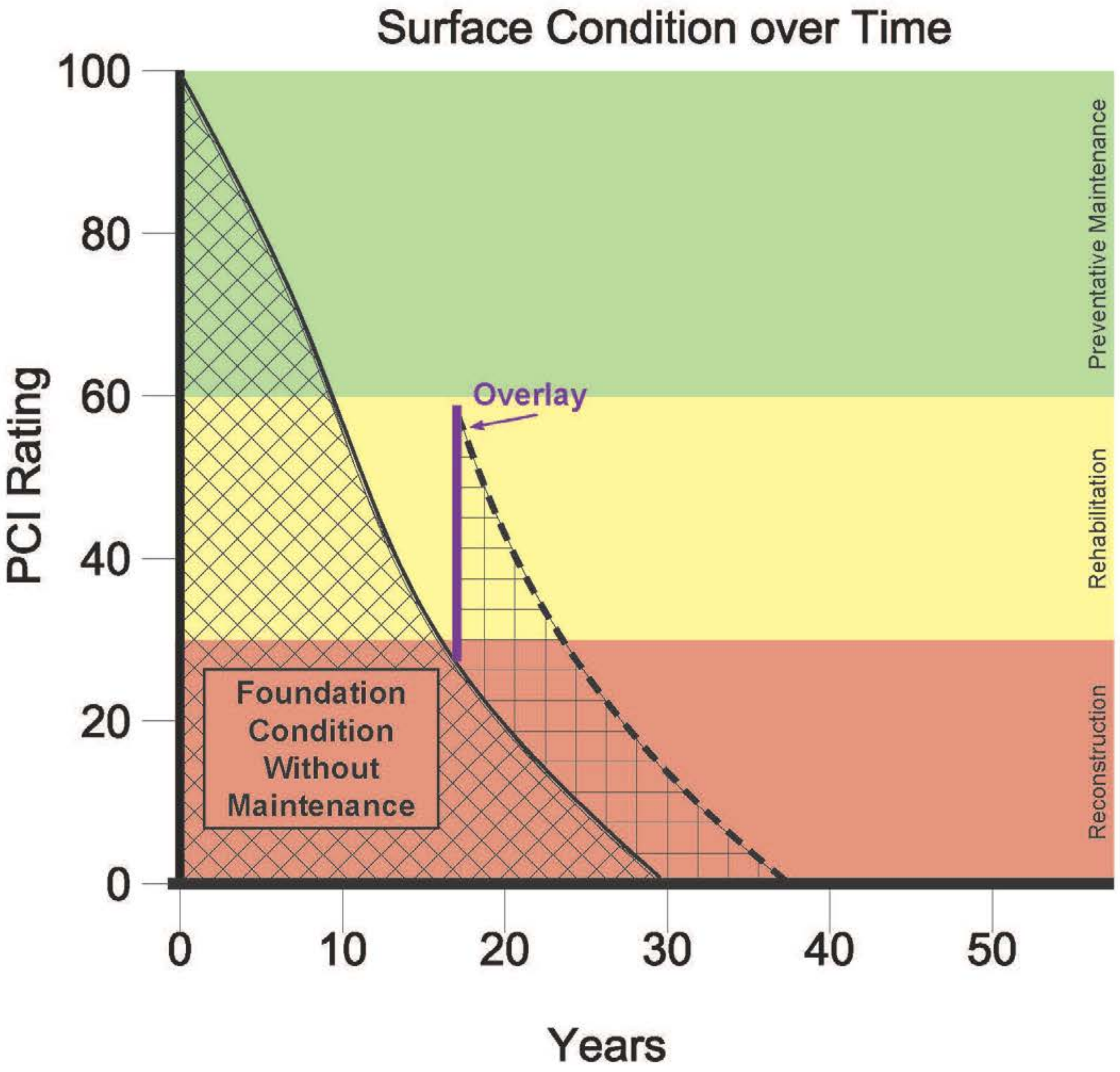
Joint – Crack Sealing

“Spending $1 on pavement Preservation can eliminate / delay spending $6 to $10 on future rehab / reconstruct”

Preventive Maintenance

Seal Coating

Preventive Maintenance – Chip Sealing


Surface Condition over Time
100
80
60
40
20
0
PCI Rating
0
10
20
30
40
50
Years
Overlay
Foundation Condition Without Maintenance
Preventative Maintenance
Rehabilitation
Reconstruction

Preventive Maintenance – Mill & Overlay

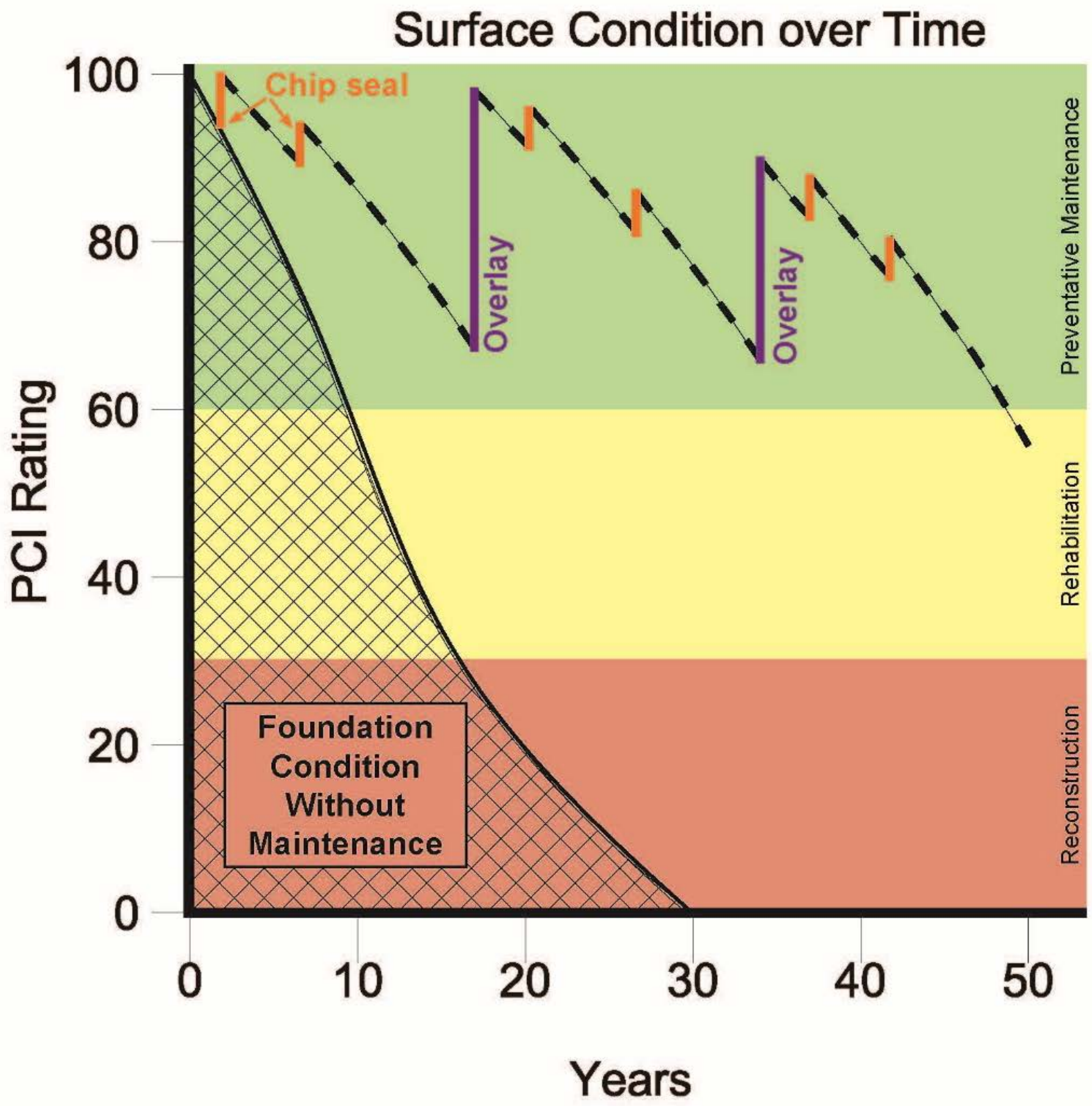
Resurfacing (Mill & Overlay)

Street Reconstruction

Goal – Obtain 50 yr Life

Requires:

- Periodic Joint Sealing and Pothole Patching
- 6 Chip Seals
- 2 Mill / Overlays

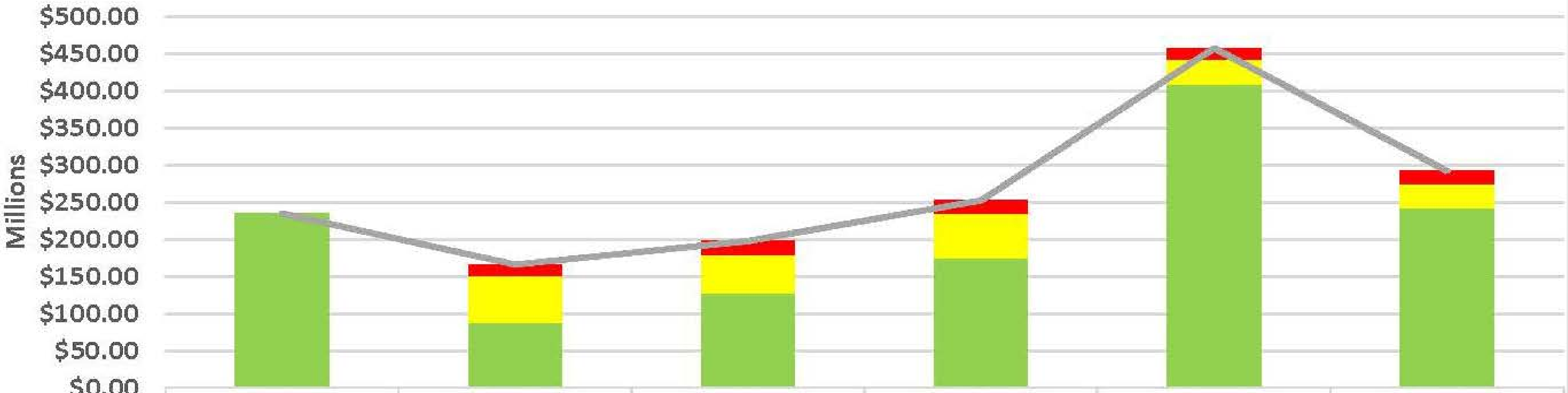


Annual Funding Needs

Category	Current Funding	Funding Need
Preservation (seal coats)	$ 0.2 M	$1.6 M
Rehabilitation (mill / overlay)	$1.8 M	$4.8 M
Construction / Reconstruction	$ 7.0 M	$25.5 M
Totals:	$ 9.0 M	**$31.9 M**

Shortfall $22.9 M

Future Annual Needs

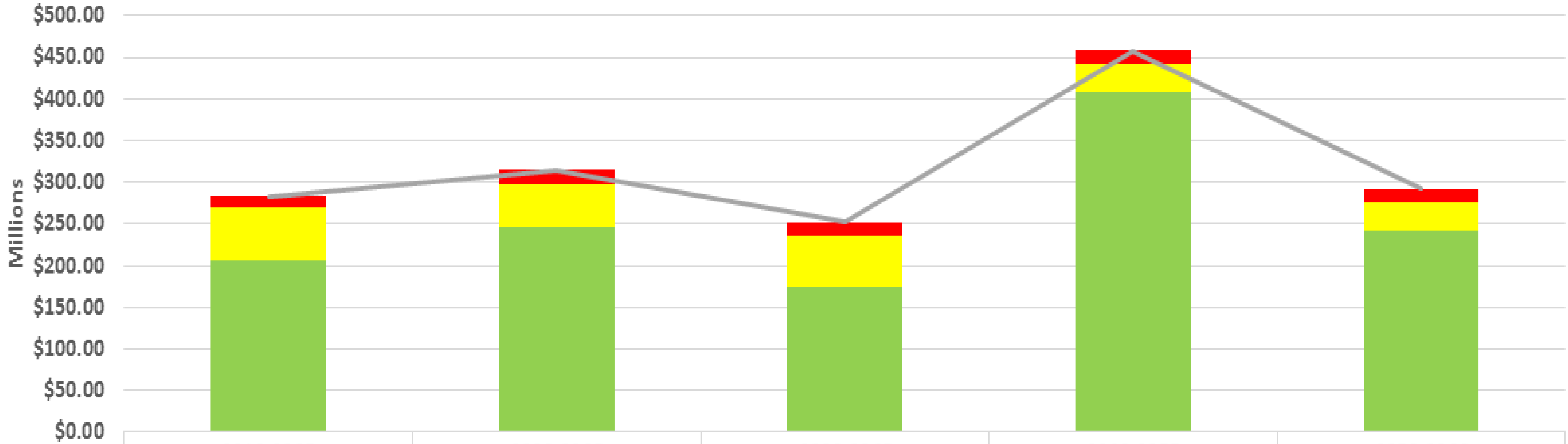


	Back-log	2016-2025	2026-2035	2036-2045	2046-2055	2056-2066
Seal		$14.08	$17.97	$16.68	$15.21	$16.38
Rehab		$63.64	$52.04	$60.74	$32.59	$33.22
Recon	$234.56	$88.17	$127.69	$174.82	$409.30	$242.02
Total	$234.56	$165.90	$197.71	$252.24	$457.10	$291.61

Year

Recon Rehab Seal Total

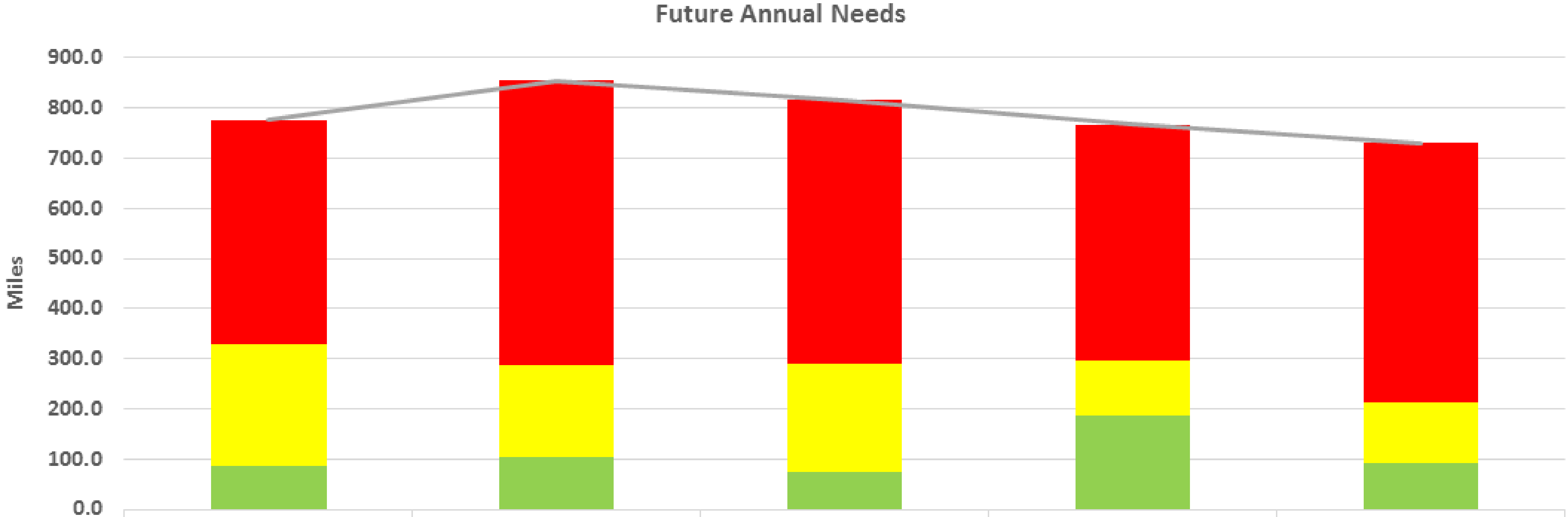
Future Annual Needs



	2016-2025	2026-2035	2036-2045	2046-2055	2056-2066
Seal	$14.08	$17.97	$16.68	$15.21	$16.38
Rehab	$63.64	$52.04	$60.74	$32.59	$33.22
Recon	$205.45	$244.98	$174.82	$409.30	$242.02
Total	$283.18	$314.99	$252.24	$457.10	$291.61

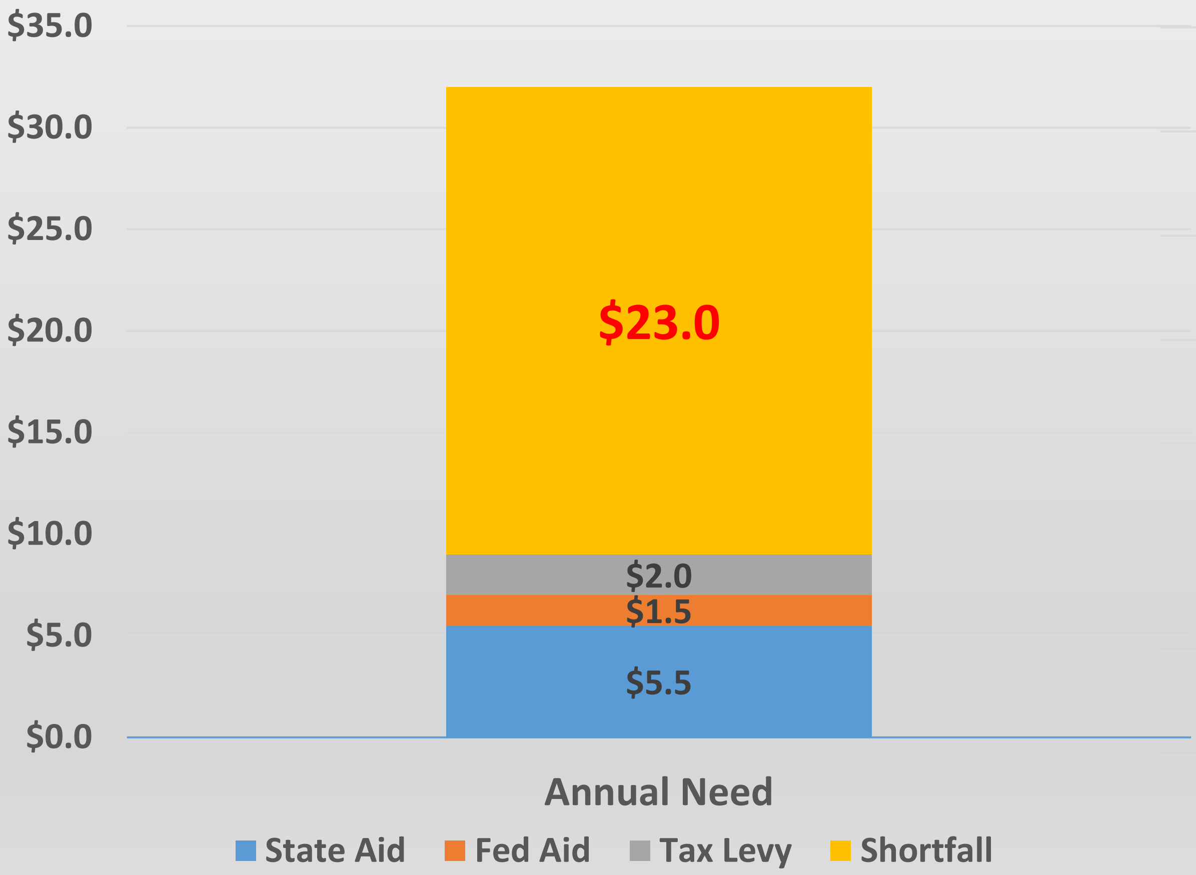
Year

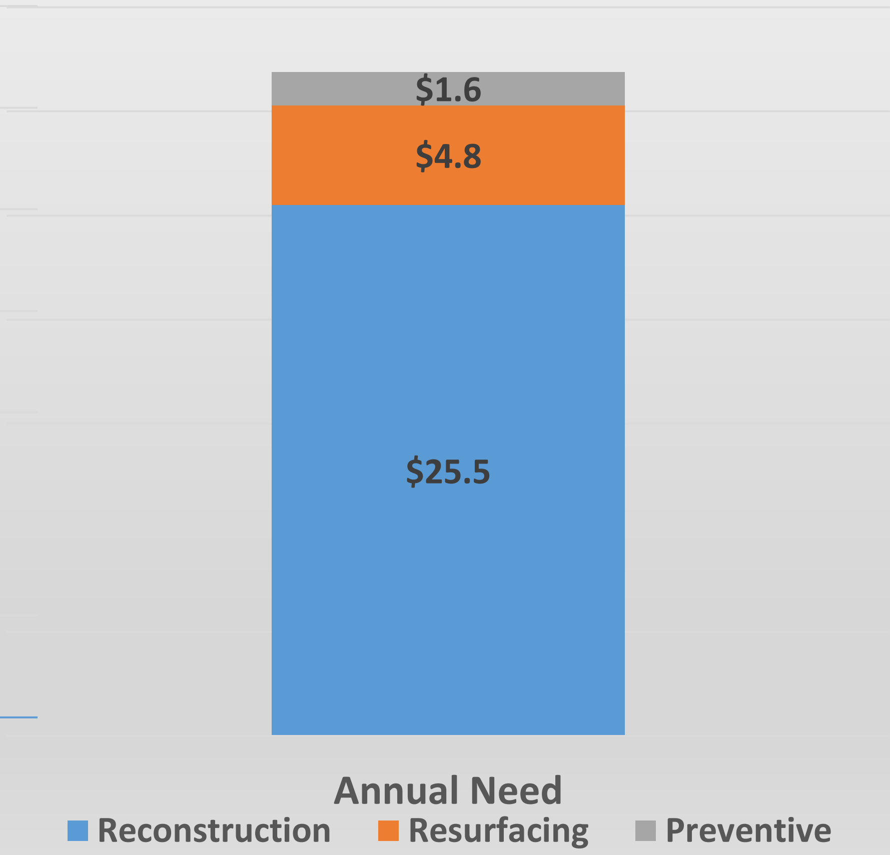
Recon Rehab Seal Total



	2016-2025	2026-2035	2036-2045	2046-2055	2056-2065
Seal	447.1	568.0	526.7	472.4	517.8
Rehab	243.0	182.3	214.3	109.7	120.6
Recon	85.5	104.7	75.1	185.3	91.5
Total	775.5	855.0	816.2	767.5	729.9

Annual Funding Need -- $32 million
Shortfall -- $23 million





Investment Strategies
$23 M/Year Gap

- Special Assessments – Traditional Answer
- Tax Levy
- Street Utility Concept / Franchise
- G.O. Improvement Bonds – (tax or utility supported)
- Other ?
- Some Combination of the Above

Street Assessments

- Traditional method
- Falls Short
  - Follows Mn Statute 429
  - Prove benefit of like amount – does not always translate to market value
  - Ten-year assessment for 20 year improvement
  - Transfers of ownership affect benefit of investment
  - Hearings / petitions / neighbors against neighbors
  - Only done for Reconstructions; not Preventative Maintenance

Tax Levy

- $23 million / $57 million 2016 levy = 40% increase
- Grow to this $23 million / year over time
  - Each additional $1 million in levy
    - Residential
      - = 1.8% increase in City Levy, 0.65% increase in Total Property Tax Bill
      - = $16 / year for a $192,000 (median) home
      - = $27 / year for a $300,000 home
    - Commercial
      - = 1.75% increase in City Levy, 0.5% increase in Total Tax Bill
      - = $42 / year for a $270,000 small business
      - = $175 / year for a $1,000,000 business
      - = $2,266 / year for a $12.5 million large business
  - Income Tax Deductible
  - Does not recover $ from property-tax exempt parcels who benefit
  - Subject to levy limits if / when those return

Street Utility Concept / Franchise Fee

- Elk River, St. Louis Park, and others have used for 13 years +
- Franchise fee on Gas & Electric collected to "maintain the right of way"
- Used for maintenance and repair of existing roadways (not new or expansion of capacity)
- Provides life-cycle funding on a monthly basis
- Using Elk River Pricing Example applied to Rochester Customer Base:
  - Residential - $9 / mo — $5,128,812 / year city-wide
  - Small Business - $ 45 / mo — $1,531,200
  - Large Business - $150 / mo — $ 638,640
    - Total — $ 8,143,452
  - + Cable Franchise (?) — $ 1,400,000
    - **Total — $ 9,543,452**

G.O. Capital Improvement Street Bonds

- Provide some “up-front” funding to meet immediate need or backlog? (+)
- Perhaps in combination with “pay-as-you-go-funding” of franchise or tax levy
- Dedicate a portion of annual funding towards debt service payments
- Each $1 million in annual cash flows dedicated towards debt generates roughly $15 million in “up front” project funding (20 year bond, 3% interest).
- Would not want to tie up all street revenues for debt payments, but perhaps some limited percentage of annual flows?

Other Strategies

- Do nothing
- Combination of the above alternatives?
  - Increase annual tax levy support to Pavement Maintenance Program
  - Provide incremental increases over a defined period of time until NEEDS are met
  - Modify / update Assessment Program

- Other?
  - Petition & Wait for State Legislature to pass a "Street Utility"
  - Solar Roadways Public/Private Partnership? (Missouri Example)
  - Other ideas?

Next Step

- Adopt a Strategy for 2017 and beyond
- Meet August 22nd -- Committee of the Whole
- Desired Outcome – A Funding Strategy
  - i.e. “Develop a 10 year Strategy to increase funding incrementally by $2 million per year for the next 10 years” *or*
  - i.e. “Develop a 5 year Strategy to increase funding incrementally by $4 million per year for the next 5 years” *or*
  - i.e. “Develop a 6 year Strategy to increase funding incrementally by $1 M (2017), $2 M (2018), $3 M (2019), $4 M (2020), $5 M (2021), & $6 M (2022)” *or*
  - i.e. “Develop a multi-yr Strategy to create / dedicate Franchise Fees to pay for Preventive Maintenance and a multi-yr Strategy of tax levy increases to pay for Rehab & Reconstruction Projects”