



Public Works Department

2017 Pavement Preservation Program

City Council Presentation

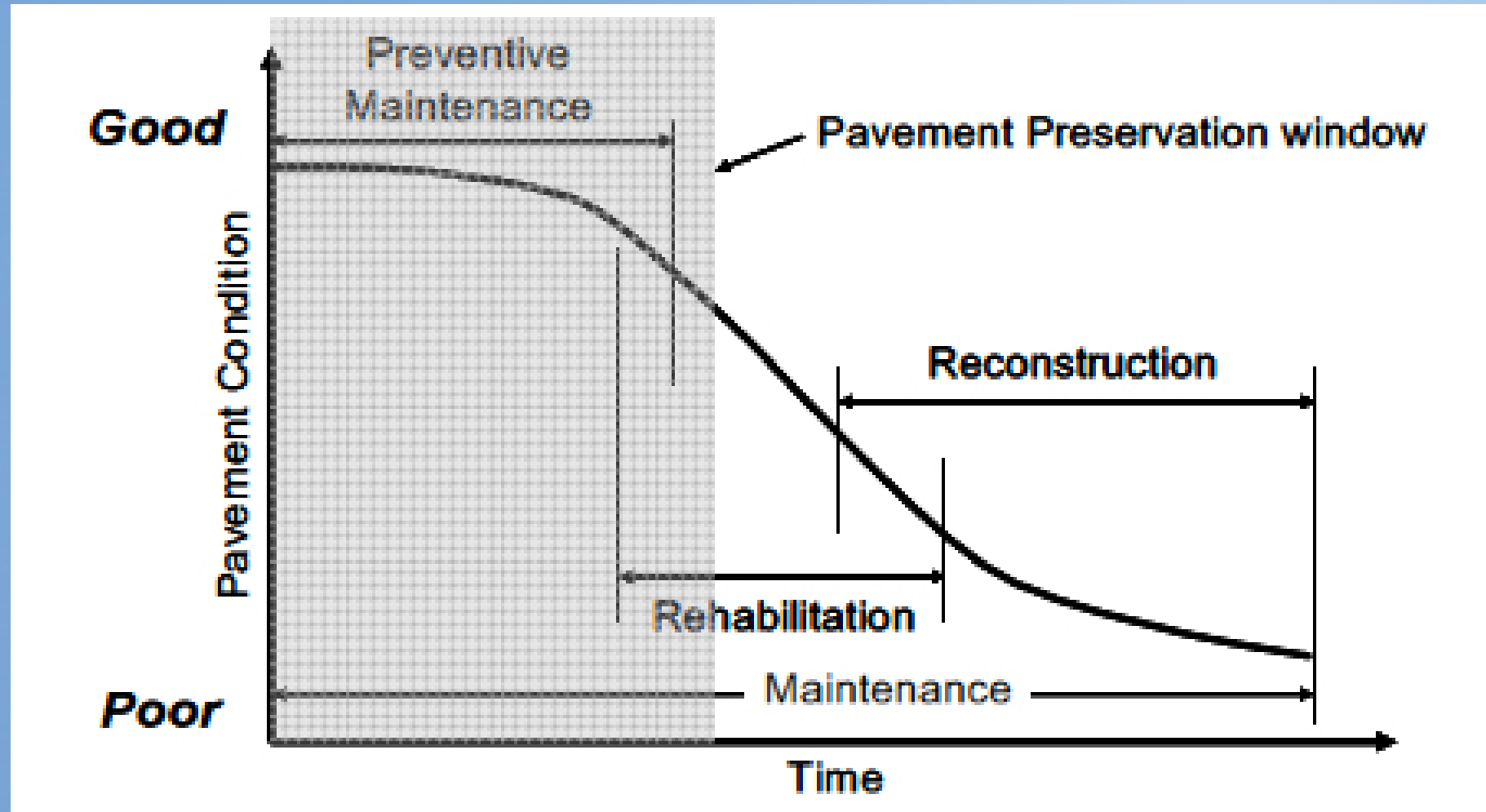
Public Works Update

- Tonight's meeting:
 - Overview of Pavement Management
 - 2016 Completed Projects
 - 2017 Planned Projects
 - 2017 Maintenance Resurfacing Maps
 - 2017 Crack Seal Maps
 - 2017 Seal Coats
 - Tentative Schedule
 - Planned Public Outreach Components
- Future Study Session:
 - Traffic Operations & Capital
 - Sanitary Sewer & Storm Water
 - Misc. issues & projects

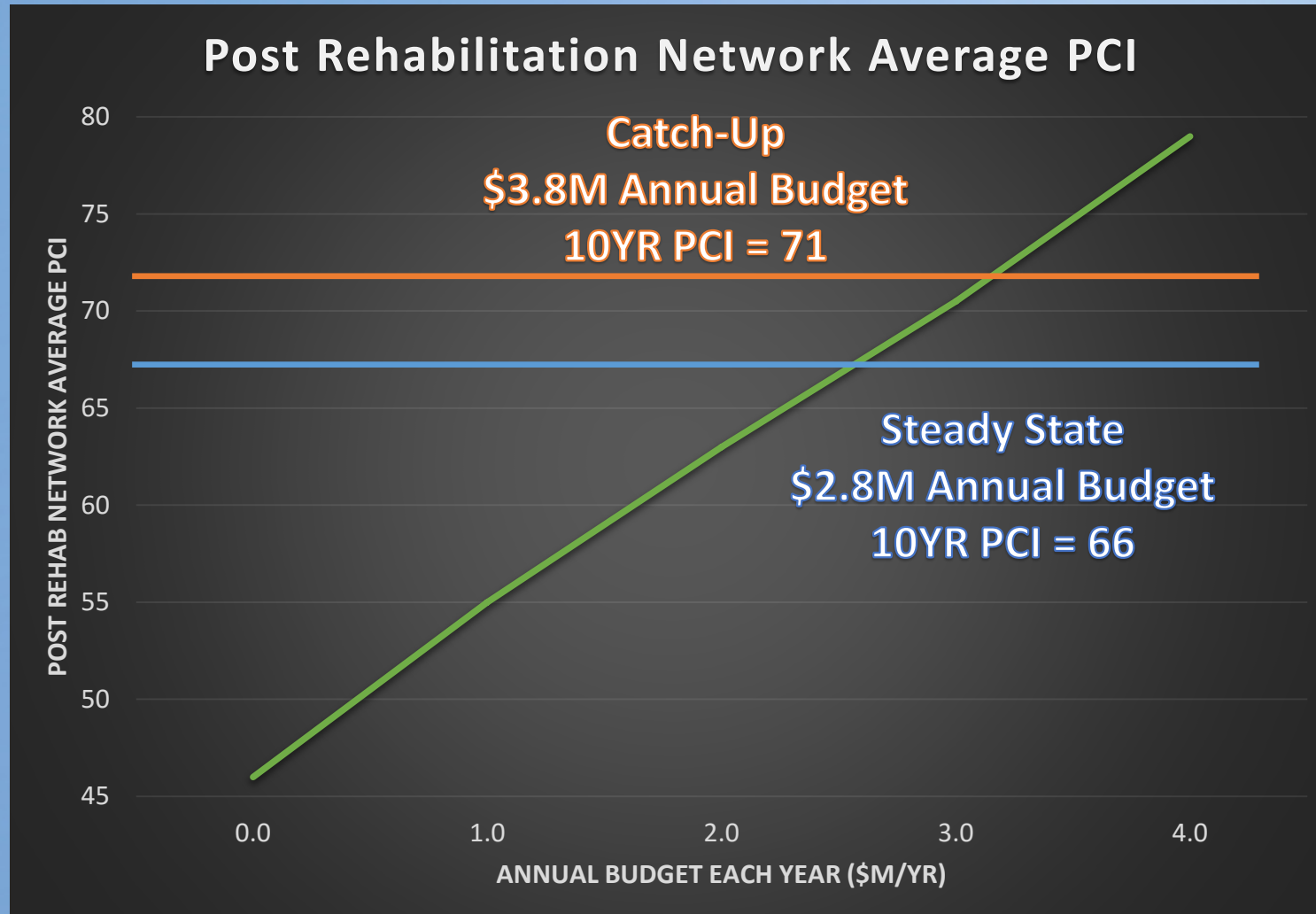
Why a Pavement Preservation Strategy

- Multiple Techniques depending upon pavement condition
- Save maintenance & reconstruction costs
- Systematic method of maintaining network
- Increase longevity of pavement
- Assists with prioritization of maintenance and repair work
- Integrates scheduling and different department efforts
- Assist decision-makers with budgets
- Improve effectiveness of resources spent on network

Preventative Maintenance



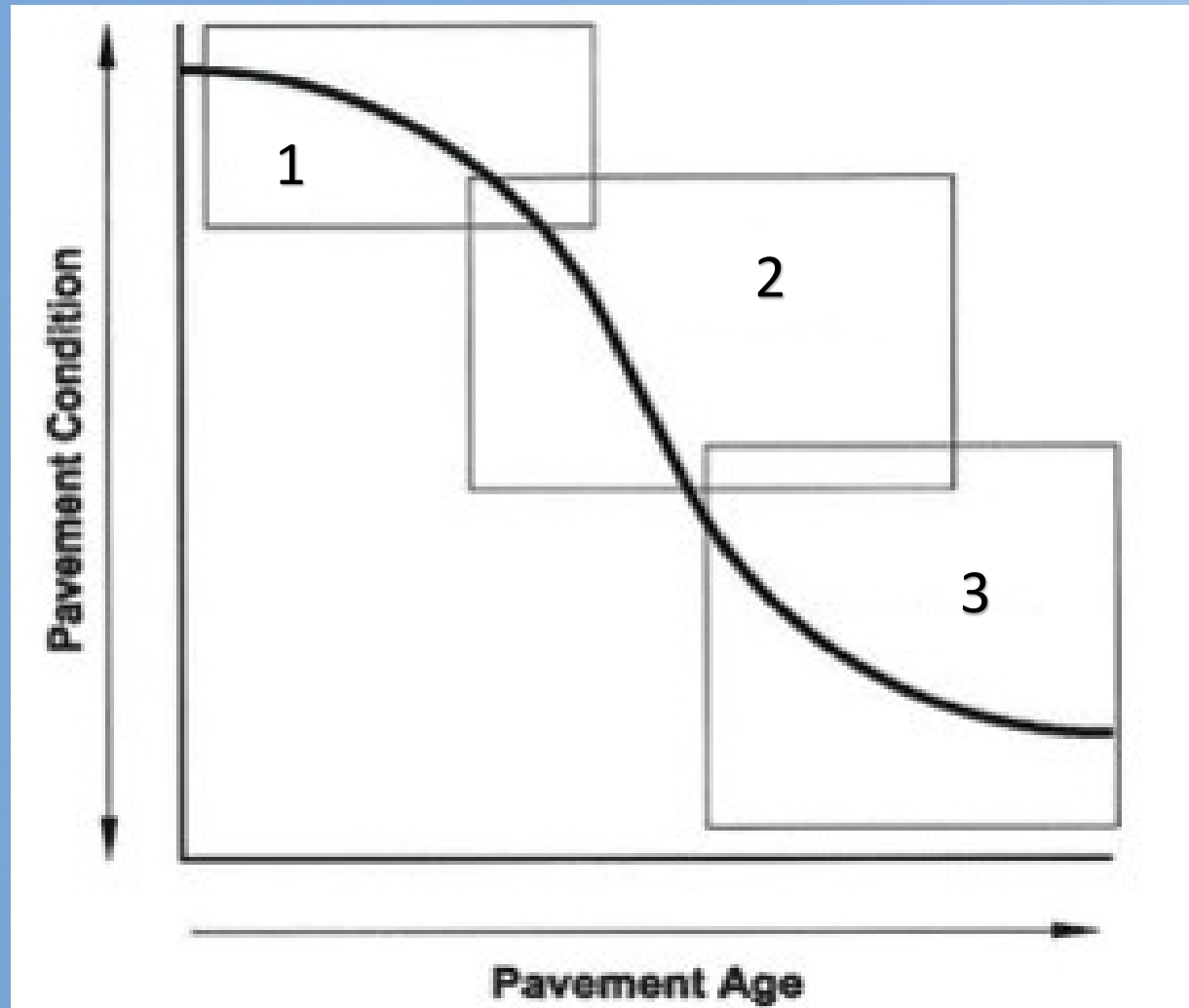
Preventative Maintenance



PCI = Pavement Condition Index

*Denver Area Avg PCI = 70

Ideal Maintenance Practices



1. Routine Maintenance
2. Preventative Maintenance
3. Rehabilitation/Reconstruction

Ideal Maintenance Practices

Routine Maintenance

- Patch Paving
- Crack Sealing

Preventative Maintenance

- Fog Seal
- Slurry Seal
- Microseal
- Asphaltic Surface Seal

Rehabilitation/Reconstruction

- Mill & Overlay
- Reconstruction

Ideal Maintenance Practices

Routine Maintenance

- Patch Paving
- Crack Sealing

Staff

Preventative Maintenance

- Fog Seal
- Slurry Seal
- Microseal
- Asphaltic Surface Seal

Contract

Rehabilitation/Reconstruction

- Mill & Overlay
- Reconstruction

Contract

Ideal Maintenance Practices

Routine Maintenance

- Patch Paving
- Crack Sealing

Staff

Preventative Maintenance

- Fog Seal
- Slurry Seal
- Microseal
- Asphaltic Surface Seal

Contract

Rehabilitation/Reconstruction

- Mill & Overlay
- Reconstruction

Contract

Ideal Maintenance Practices



Ideal Maintenance Practices



Ideal Maintenance Practices

Routine Maintenance

- Patch Paving
- Crack Sealing

Staff

Preventative Maintenance

- Fog Seal
- Slurry Seal
- Microseal
- Asphaltic Surface Seal

Contract

Rehabilitation/Reconstruction

- Mill & Overlay
- Reconstruction

Contract

Ideal Maintenance Practices



Asphaltic Surface Seal

- Resurface
- Roll
- Sweep
- Fog Seal
- Striping
- 3 day operation

Ideal Maintenance Practices



Ideal Maintenance Practices

Routine Maintenance

- Patch Paving
- Crack Sealing

Staff

Preventative Maintenance

- Fog Seal
- Slurry Seal
- Microseal
- Asphaltic Surface Seal

Contract

Rehabilitation/Reconstruction

- Mill & Overlay
- Reconstruction

Contract

Ideal Maintenance Practices



- Mill & Overlay
- Reconstruction

Contract



Ideal Maintenance Practices



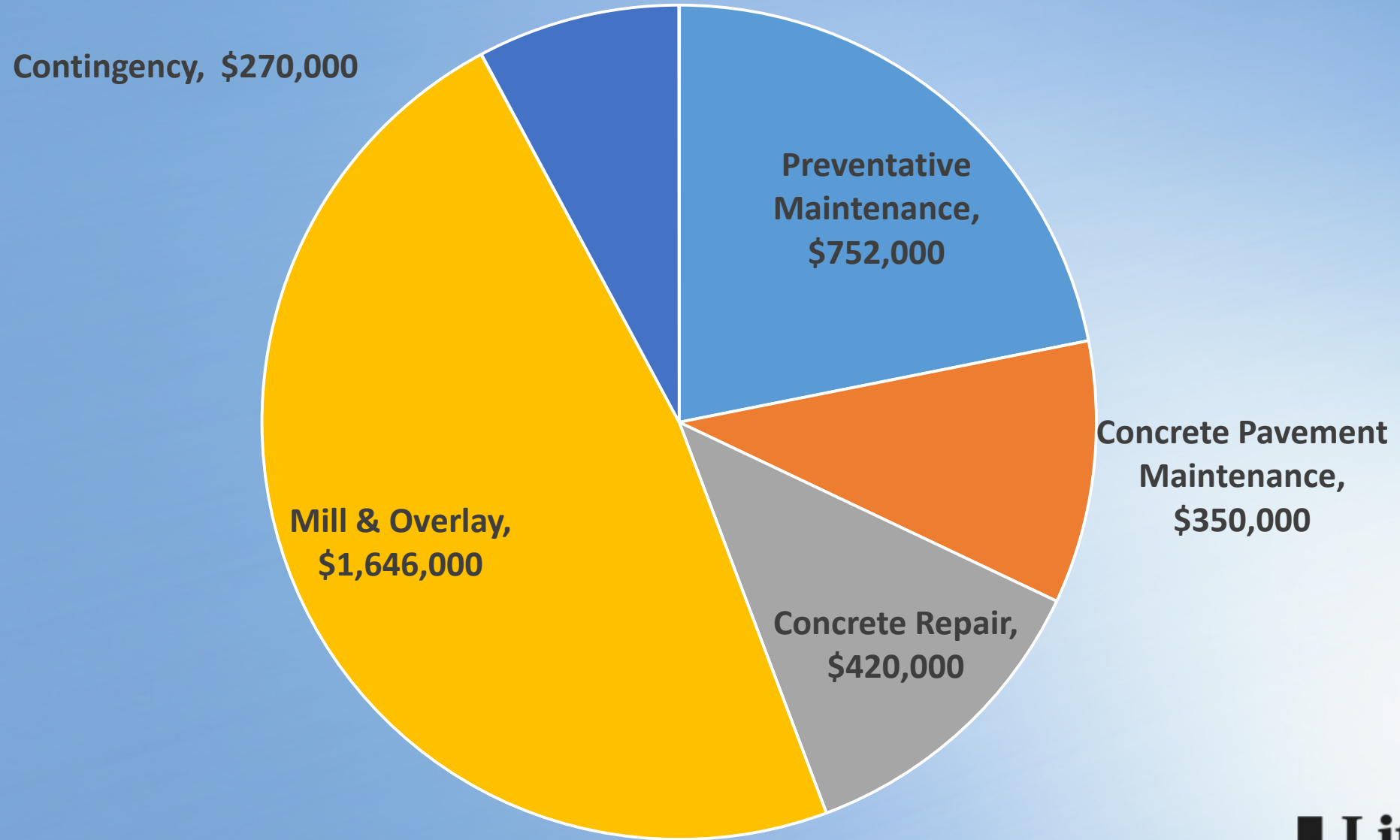
2016 Pavement Management Results

- \$2.6M in 2016
- 9,300 Tons of Asphalt Paved
- 8,334 Square Feet of Existing Concrete Pavement Replaced
- 11,700 Square Feet of New Concrete Pavement Installed
- 5000 Linear Feet of Curb, Gutter & Sidewalk Replaced
- 12.5 Miles of Roadway Surface Crack Sealed
- 37.5 Miles of Bathroom Tissue applied

2017 Pavement Management Budget

	2017 Budget
Capital Budget	
Street Rehabilitation	\$2,500,000
Concrete Pavement Repairs	\$200,000
Concrete Repairs	\$385,000
City of Centennial (Contribution)	\$60,000
Total Capital Budget	\$3,145,000
Maintenance Budget	
Street Rehabilitation	\$300,000
Concrete Repairs	\$35,000
Total Maintenance Budget	\$335,000

2017 Pavement Budget



2017 Pavement Management Budget

	2017 Engineer's Estimates
2017 Crack Seal	\$ 245,000
2017 Surface Seal	\$ 487,000
2017 Concrete Replacement	\$ 349,615
Windermere- Littleton Blvd to Bellevue	\$ 596,000
Mineral- WB, Broadway to Windermere	\$ 393,000
Broadway- Caley to Arapahoe	\$ 341,000
EB Arapahoe Concrete Panel Repl.	\$ 350,000
Middlefield Road - Columbine Valley	\$ 20,000
Total Project Budget	\$ 2,781,615
Total Contingency	\$ 270,000
Projected 2017 Total	\$ 3,051,615



2017 Pavement Treatment Schedule

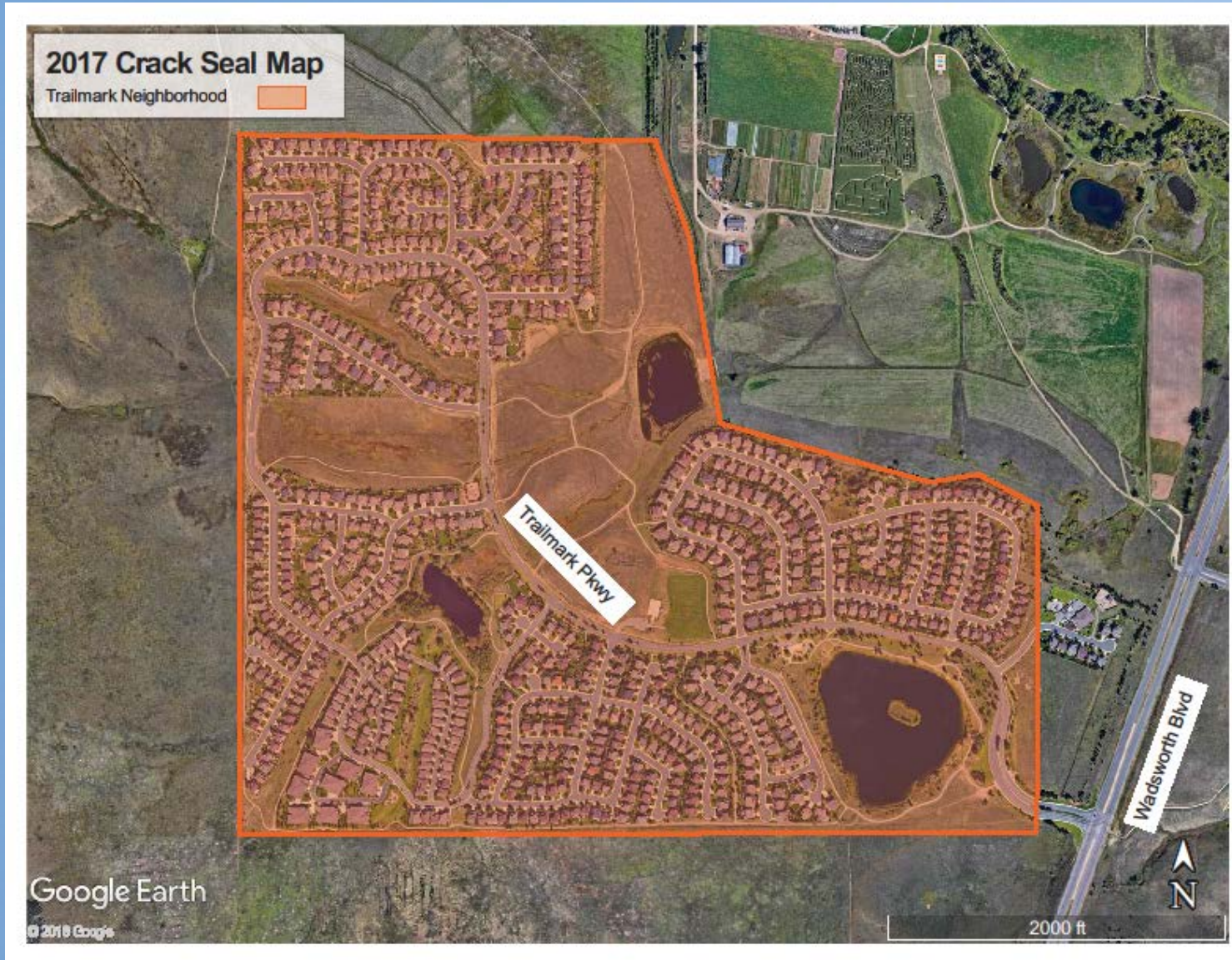
	2017								
	April	May	June	July	August	September	October	November	December
Crack Seal		Bid				Construction*			
Surface Seal		Bid	Construction						
Mill & Overlay		Bid	Construction						
Concrete Panel Repl.		Bid	Construction						

*Crack Sealing should be performed during cooler months.



2017 Crack Seal

- Trailmark Neighborhood



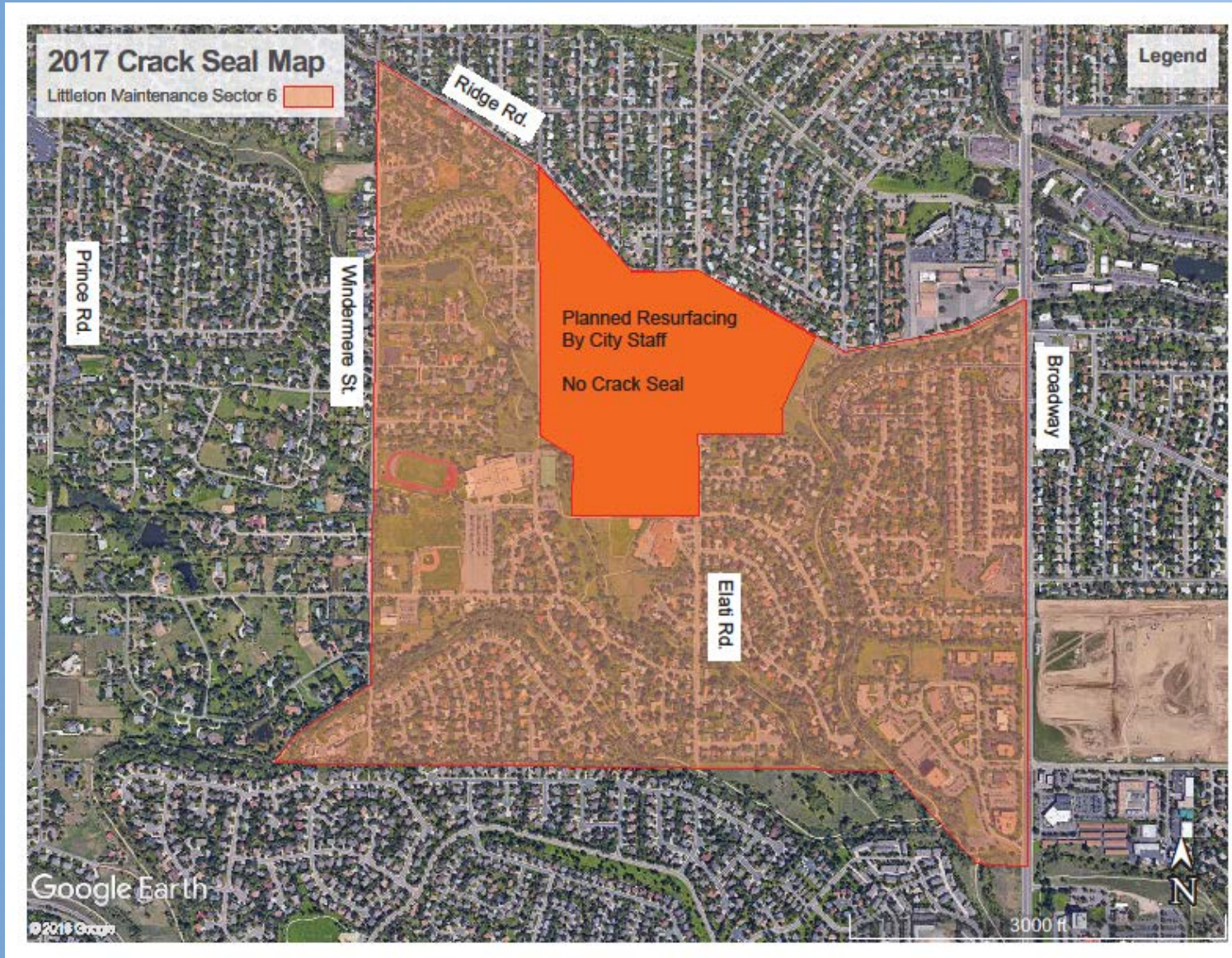
2017 Crack Seal

- Trailmark Neighborhood
- Maintenance Sector 5



2017 Crack Seal

- Trailmark Neighborhood
- Maintenance Sector 5
- Maintenance Sector 6



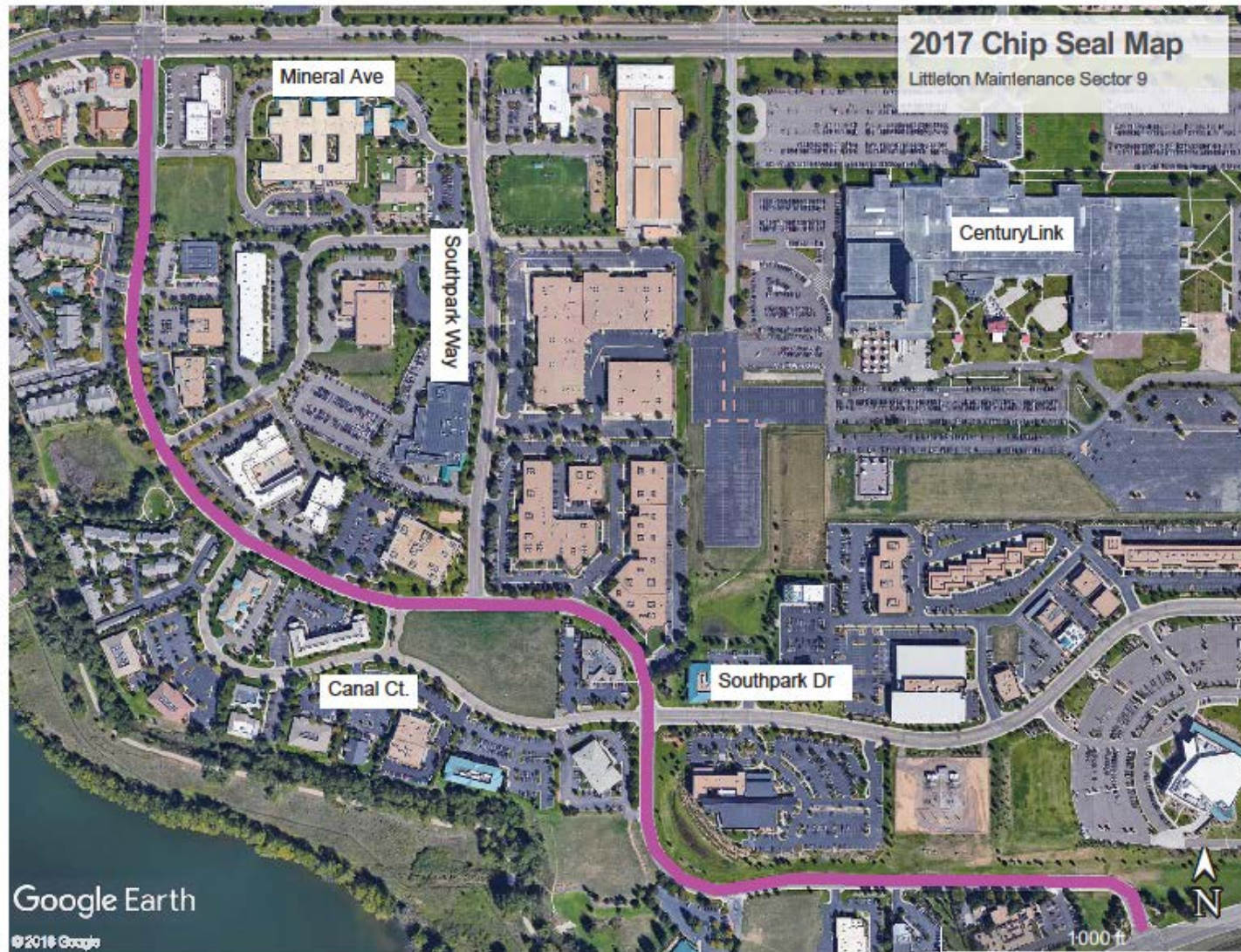
2017 Surface Seal Coats

- Asphaltic Surface Seal
 - Southpark Lane
- Slurry Seal
 - Southbridge Neighborhood



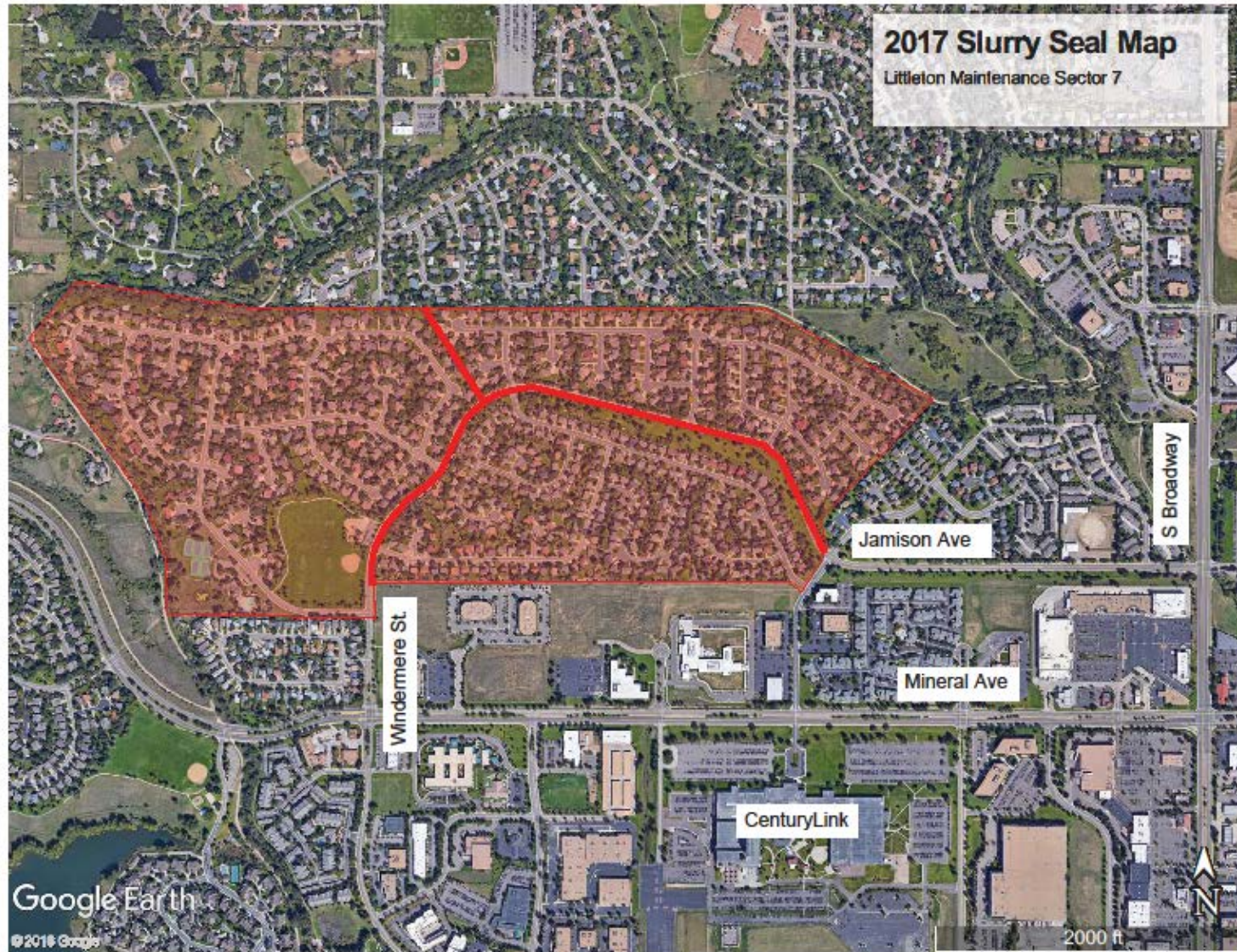
2017 Asphaltic Surface Seal

- Southpark Lane



2017 Slurry Seal

- Southbridge Neighborhood



2017 – Street Rehab - Mill & Overlay

- Windermere – Littleton to Bellevue
- Mineral – Westbound, Broadway to Windermere
- Broadway – Caley to Arapahoe



2017 – Street Rehab - Mill & Overlay

- Windermere – Littleton Blvd to Bellevue



2017 – Street Rehab - Mill & Overlay

- Windermere – Littleton Blvd to Bellevue
- Westbound Mineral – Windermere to Broadway



2017 - Street Rehab - Mill & Overlay



- Windermere – Littleton Blvd to Bellevue
- Westbound Mineral – Windermere to Broadway
- Broadway – Caley to Arapahoe
 - Shared cost with Centennial

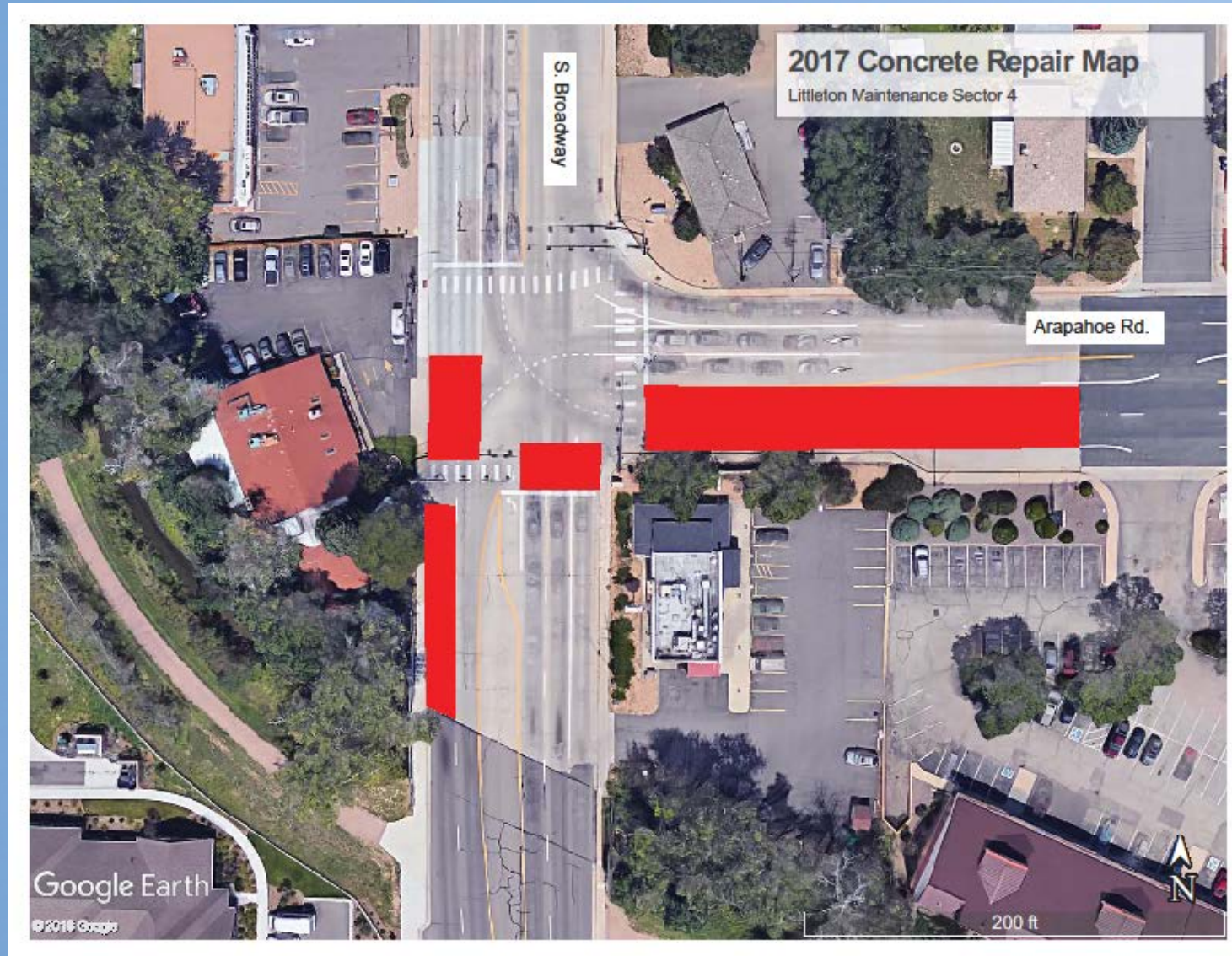
2017 Concrete Pavement Rehabilitation

- Arapahoe – Eastbound, East of Broadway



2017 Concrete Pavement Rehabilitation

- Arapahoe & Broadway
 - Eastbound Lanes
 - Southbound Lanes



Public Involvement

- Direct Contact

- Door Hangers
- Newsletters
- Surveys
- Homeowners/Business Associations

- Indirect Contact

- Hotline
- Website
- Social Media



LittletonReport



Q & A