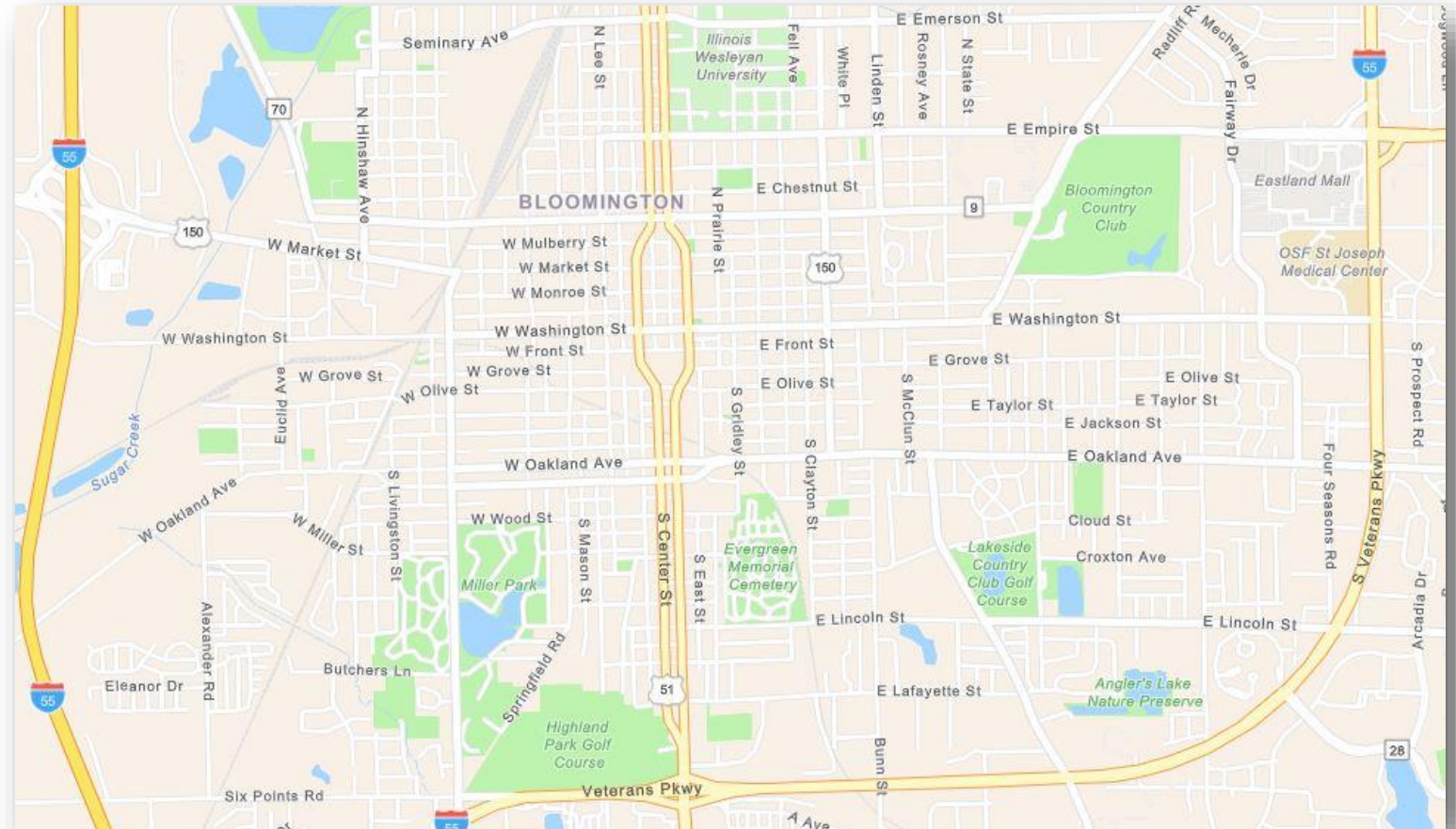


CITY OF BLOOMINGTON STREET & SIDEWALK NETWORK

Kevin Kothe, P.E.
Director of Public Works

Craig Shonkwiler, P.E.
Assistant Director of Public Works/
City Engineer

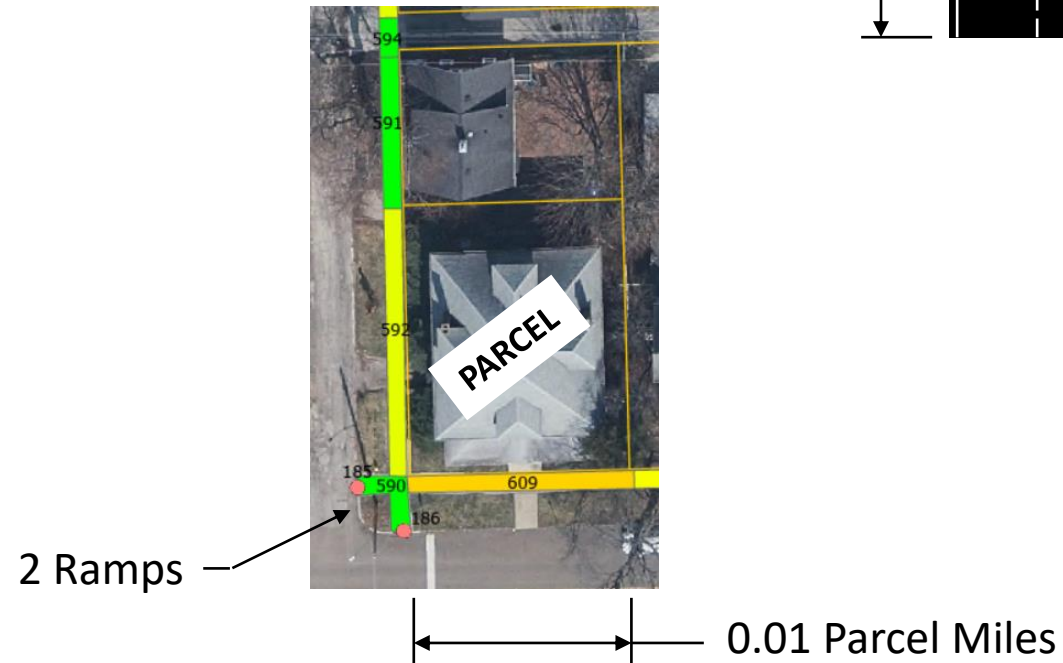
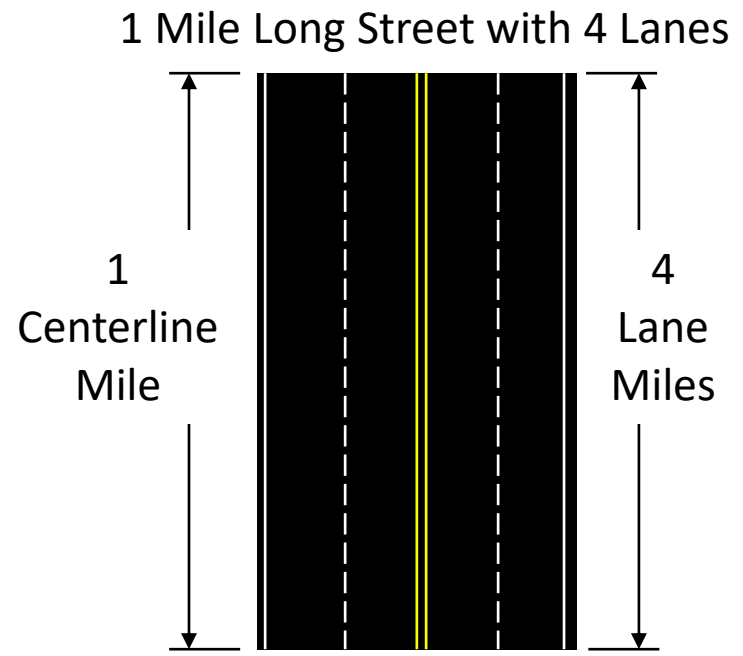


Street Network

- 322 Centerline Miles (842 Lane Miles)

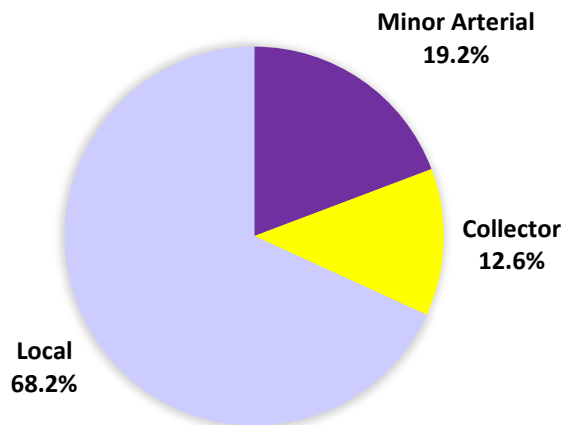
Sidewalk Network

- 458 Parcel Miles
- 8546 Ramps



Current Information

Functional Class

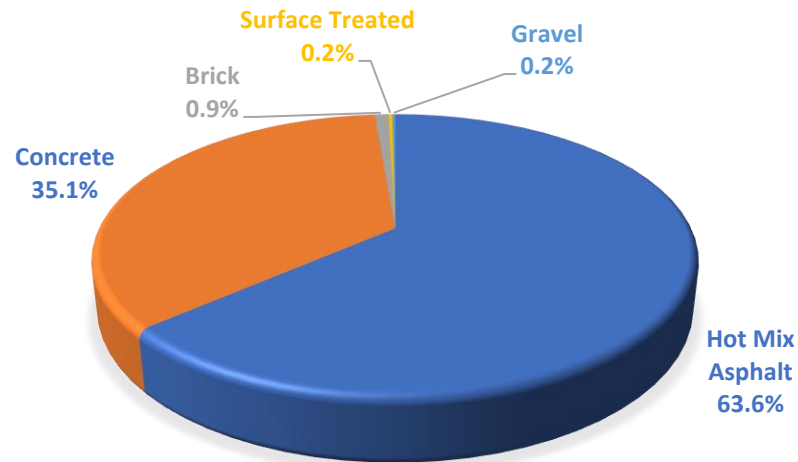


Example

Minor Arterial: Washington St.

Collector: Colton Ave.

Local: Jefferson St., Monroe St.



Surface Type

Surface Type By Functional Class

Surface Type	Functional Class					
	Minor Arterial		Collector		Local	
	Lane Miles	%	Lane Miles	%	Lane Miles	%
Hot Mix Asphalt	95.2	58.7%	74.7	70.6%	368.0	64.1%
Concrete	66.9	41.3%	31.2	29.4%	195.0	33.9%
Brick	0	0.0%	0	0.0%	7.8	1.4%
Surface Treated	0	0.0%	0	0.0%	2.1	0.4%
Gravel	0	0.0%	0	0.0%	1.6	0.3%
Total	162.2	100.0%	105.9	100.0%	574.4	100.0%

Street Network

Paser Rating System

SURFACE RATING	GENERAL CONDITION
<p style="text-align: center;">10 NEW</p>	<p>NEW CONSTRUCTION</p>
<p style="text-align: center;">9 EXCELLENT</p>	<p>RECENT OVERLAY. LIKE NEW.</p>
<p style="text-align: center;">8 VERY GOOD</p>	<p>MINIMAL SURFACE CRACKING.</p>
<p style="text-align: center;">7 GOOD +</p>	<p>FIRST SIGNS OF AGING. SOME TRAFFIC WEAR WITH 1/4" SURFACE CRACKS. NO PATCHING.</p>
<p style="text-align: center;">6 GOOD -</p>	<p>SHOWS SIGNS OF AGING. OCCASIONAL PATCHING.</p>
<p style="text-align: center;">5 FAIR +</p>	<p>1/2" OPEN SURFACE CRACKS. SURFACE AGING. SOME PATCHING.</p>
<p style="text-align: center;">4 FAIR -</p>	<p>SIGNIFICANT AGING. PATCHING IN FAIR CONDITION. SLIGHT RUTTING.</p>
<p style="text-align: center;">3 POOR</p>	<p>CLOSELY SPACED SURFACE CRACKING. PATCHES IN FAIR TO POOR CONDITION. OCCASIONAL POTHOLES.</p>
<p style="text-align: center;">2 VERY POOR</p>	<p>SEVERE DETERIORATION. EXCESSIVE PATCHING IN POOR CONDITION. NEEDS MAJOR REHABILITATION OR RECONSTRUCTION</p>
<p style="text-align: center;">1 FAILED</p>	<p>NEEDS TOTAL RECONSTRUCTION.</p>

Street Network

Paser Rating System



Street Network



Current – Windshield Survey

Data collection

Use a series of high-resolution cameras to capture videos in top-down view



a)



b)



c)

a) Insta 360 Camera, b) Zed Stereo Camera, and c) GPS Unit



Future - Automated

Street Network

Current Condition

Street Network

Surface Rating		Functional Class					
		Minor Arterial		Collector		Local	
		Lane Miles	%	Lane Miles	%	Lane Miles	%
10	New	2.1	1.3%	0.0	0.0%	7.4	1.3%
9	Excellent	41.7	25.7%	26.9	25.4%	109.9	19.1%
8	Very Good	12.2	7.5%	7.1	6.7%	60.6	10.6%
7	Good +	11.9	7.3%	13.7	13.0%	68.8	12.0%
6	Good -	31.0	19.1%	13.7	13.0%	90.4	15.7%
5	Fair -	37.9	23.4%	21.1	19.9%	96.8	16.9%
4	Fair -	23.5	14.5%	20.3	19.2%	94.3	16.4%
3	Poor	1.7	1.0%	3.1	2.9%	44.5	7.7%
2	Very Poor	0.0	0.0%	0.0	0.0%	1.6	0.3%
1	Failed	0.0	0.0%	0.0	0.0%	0.0	0.0%

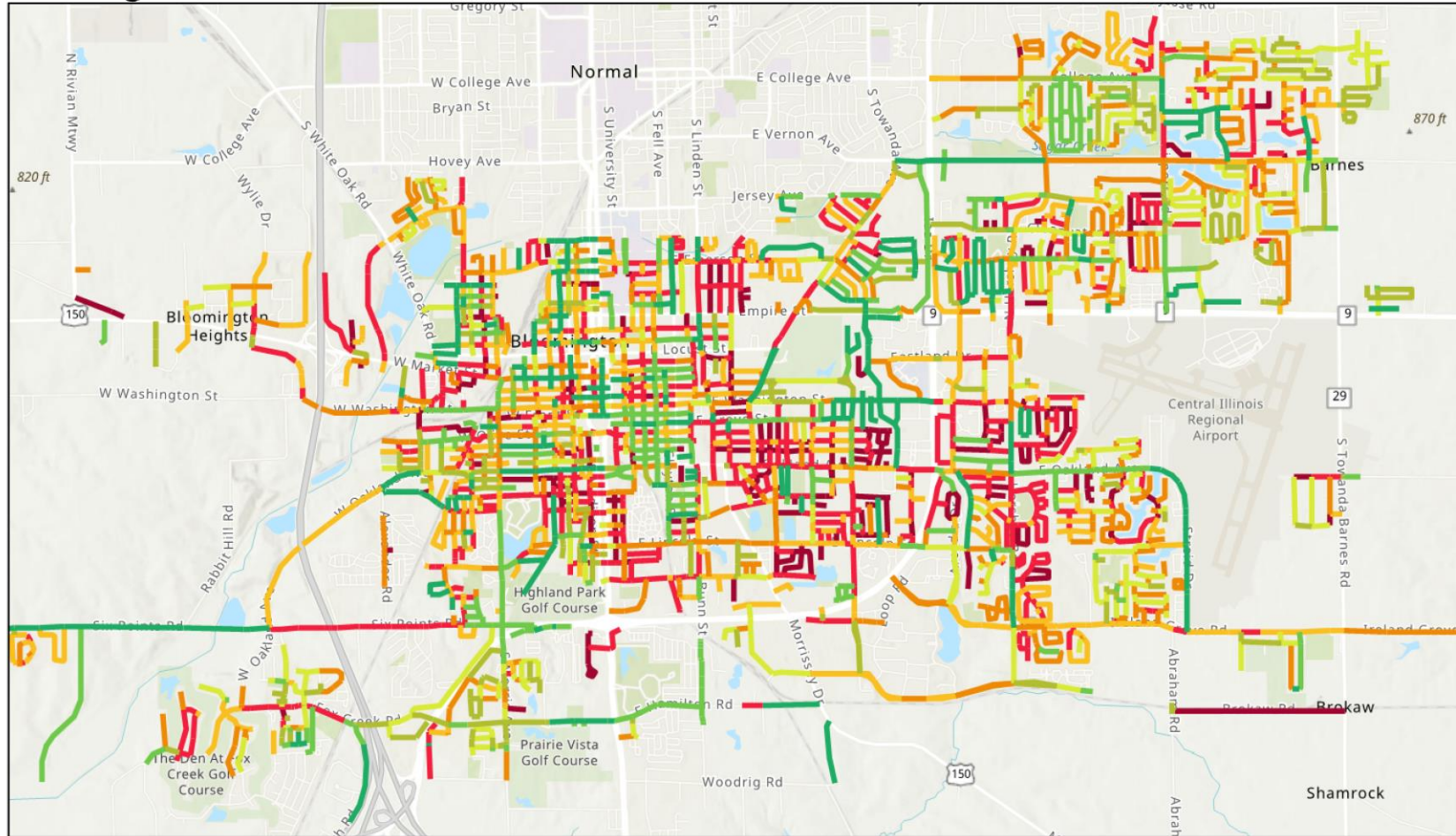
Sidewalk Network

Rating		Parcel Miles	%
10	New	17.3	3.8%
9	Excellent	25.4	5.5%
8	Very Good	103.4	22.6%
7	Good +	113	24.7%
6	Good -	105.6	23.0%
5	Fair +	48.3	10.5%
4	Fair -	26.9	5.9%
3	Poor	14.7	3.2%
2	Very Poor	2.8	0.6%
1	Failed	1.0	0.2%

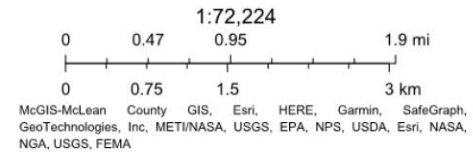
Functional Class	PASER
Minor Arterial	6.5
Collector	6.4
Local	6.2
Entire Network	6.3

Entire Network	6.7
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Map: GIS View - Condition



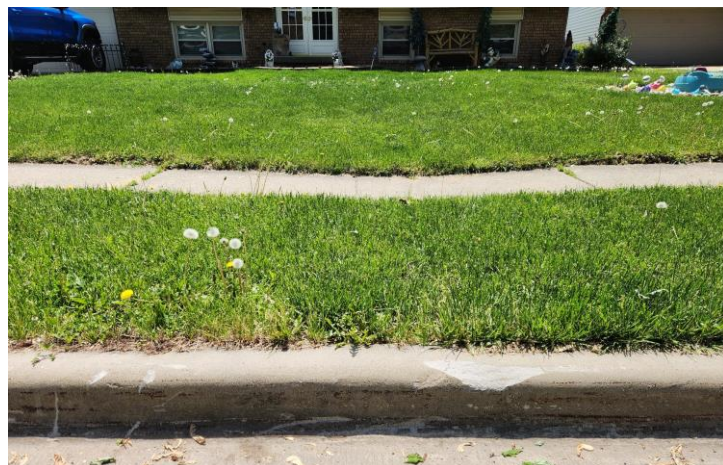
May 11, 2023



DOT (Decision Optimization Technology) | © Infrastructure Solutions Inc.

Current Condition

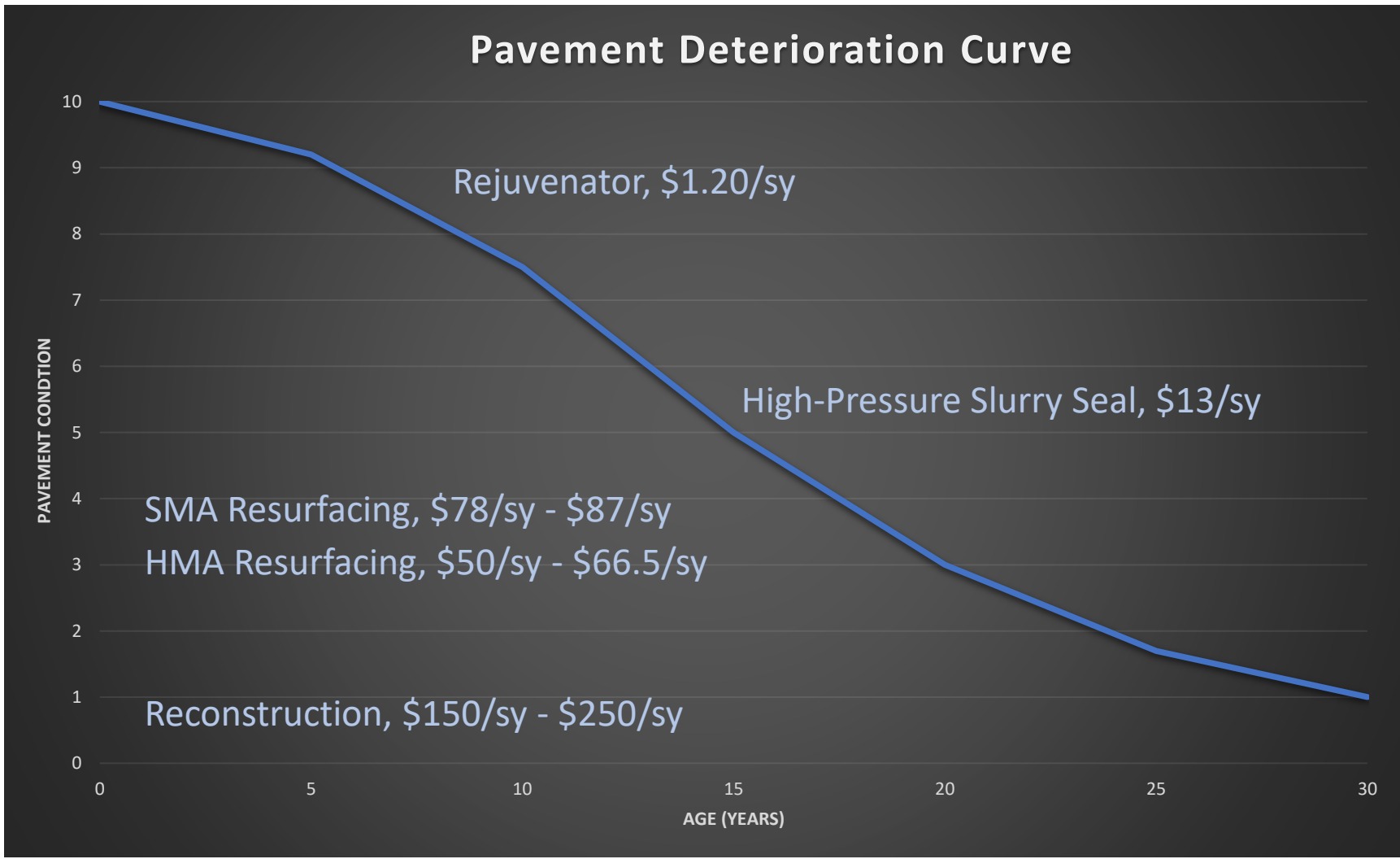
Street Network



Sidewalk Network

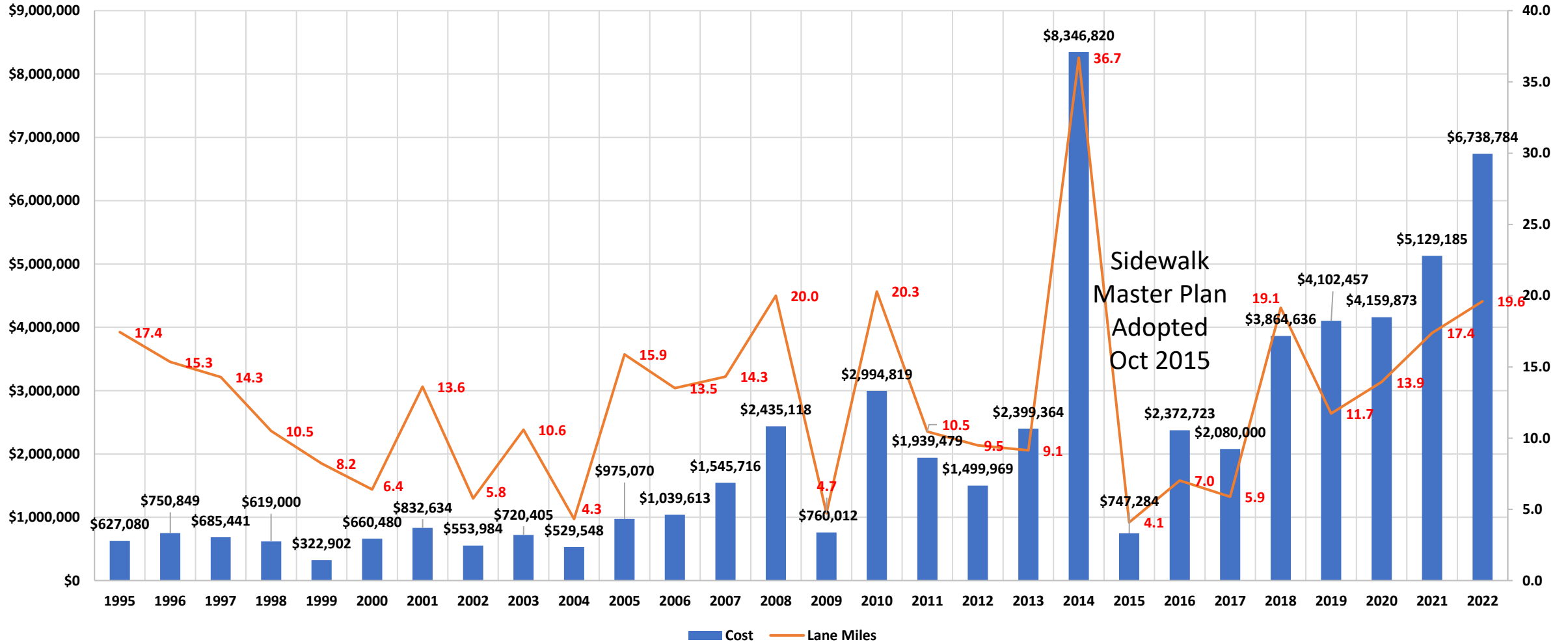


Sidewalk Network



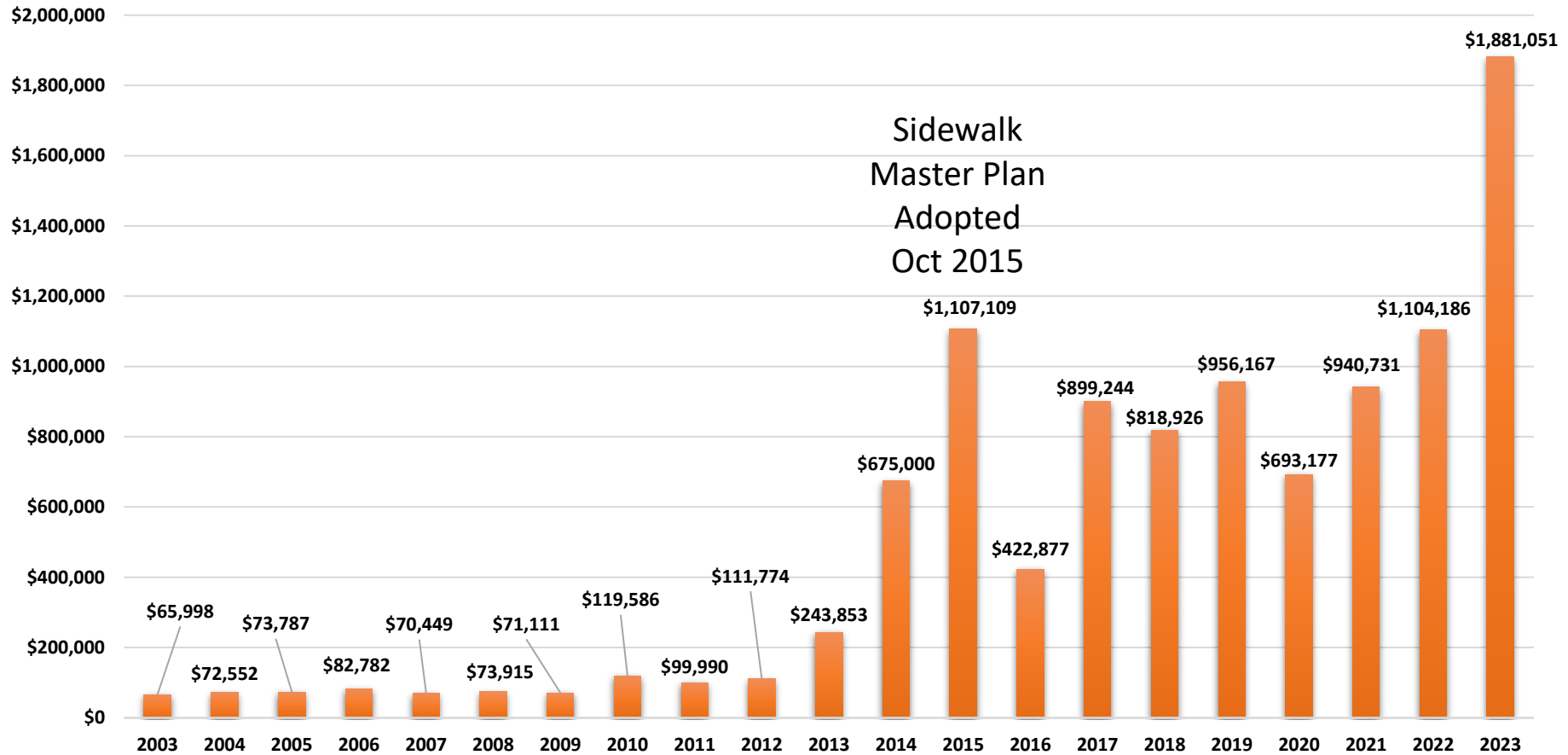
SMA = Stone Matrix Asphalt, HMA = Hot-Mix Asphalt

Historical Resurfacing Cost & Lane Miles 1995 To 2022

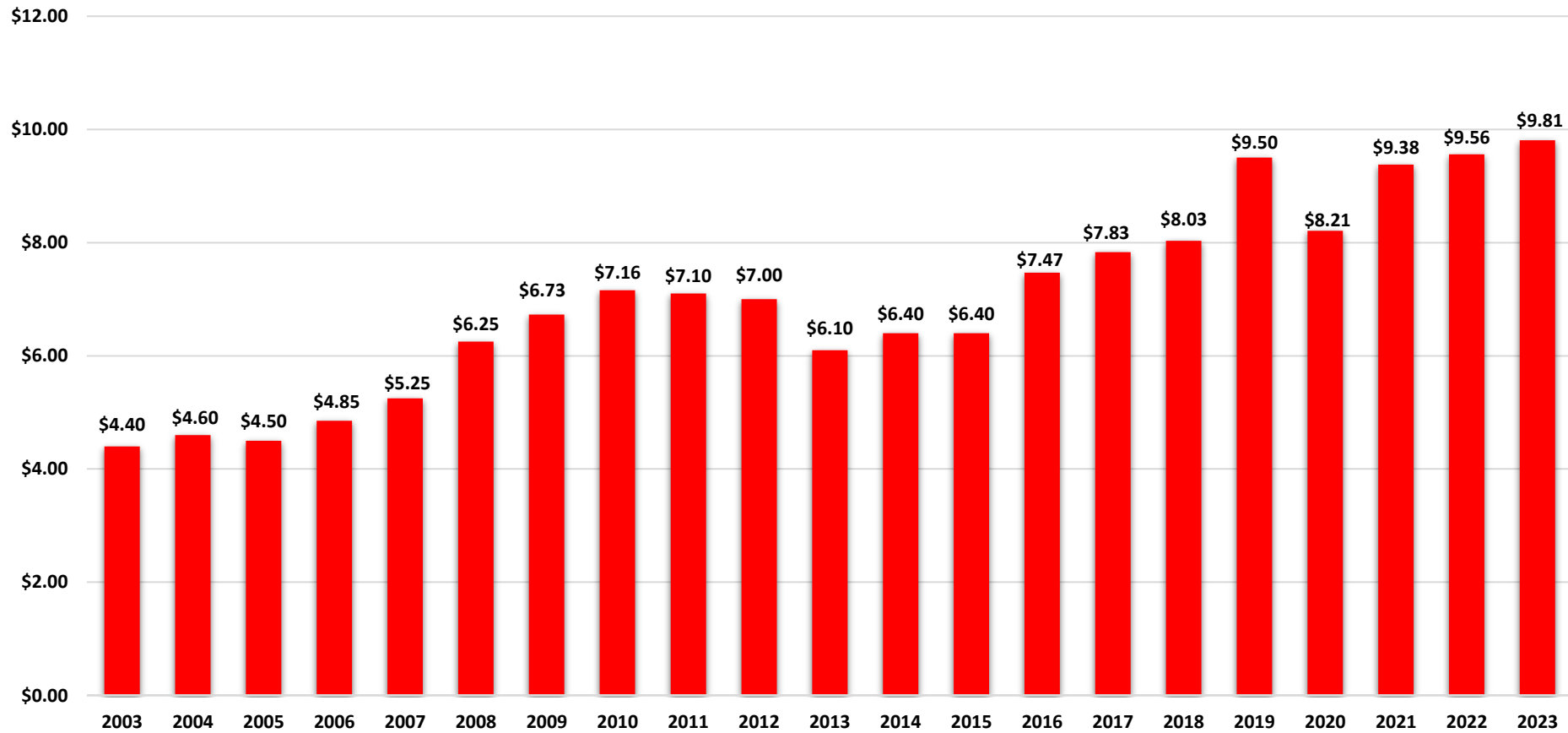


Sidewalk
Master Plan
Adopted
Oct 2015

Sidewalk Program Historical Expenses 2003 To 2023



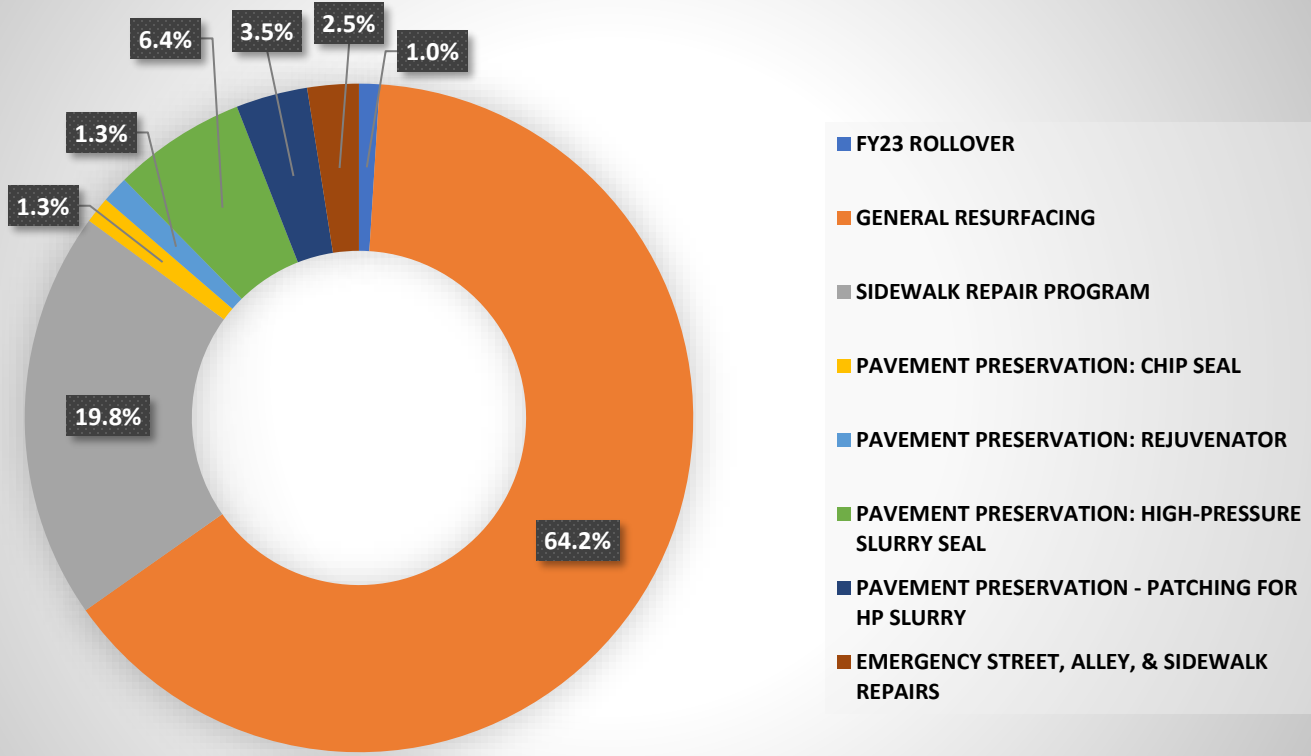
Sidewalk Cost Per Square Foot 2003 To 2023





**Decision
Optimization
Technology**

FY24 Program Allocations



FY24 Program

FY24 Program	Allocation
FY23 ROLLOVER	\$100,000
GENERAL RESURFACING	\$6,489,300
SIDEWALK REPAIR PROGRAM	\$2,000,000
PAVEMENT PRESERVATION: CHIP SEAL	\$130,000
PAVEMENT PRESERVATION: REJUVENATOR	\$130,000
PAVEMENT PRESERVATION: HIGH-PRESSURE SLURRY SEAL	\$650,000
PAVEMENT PRESERVATION - PATCHING FOR HP SLURRY	\$350,000
EMERGENCY STREET, ALLEY, & SIDEWALK REPAIRS	\$250,700
TOTAL FY2024 PROGRAM =	\$10,100,000

FY24 Program

General Resurfacing – Lane Miles

Treatment	Functional Class		
	Minor Arterial	Collector	Local
	Lane Miles	Lane Miles	Lane Miles
Hot Mix Asphalt	0.0	0.0	10.6
Stone Matrix Asphalt	0.6	1.9	0.2
Subtotal	0.6	1.9	10.8
Total	13.3		

Pavement Preservation – Lane Miles

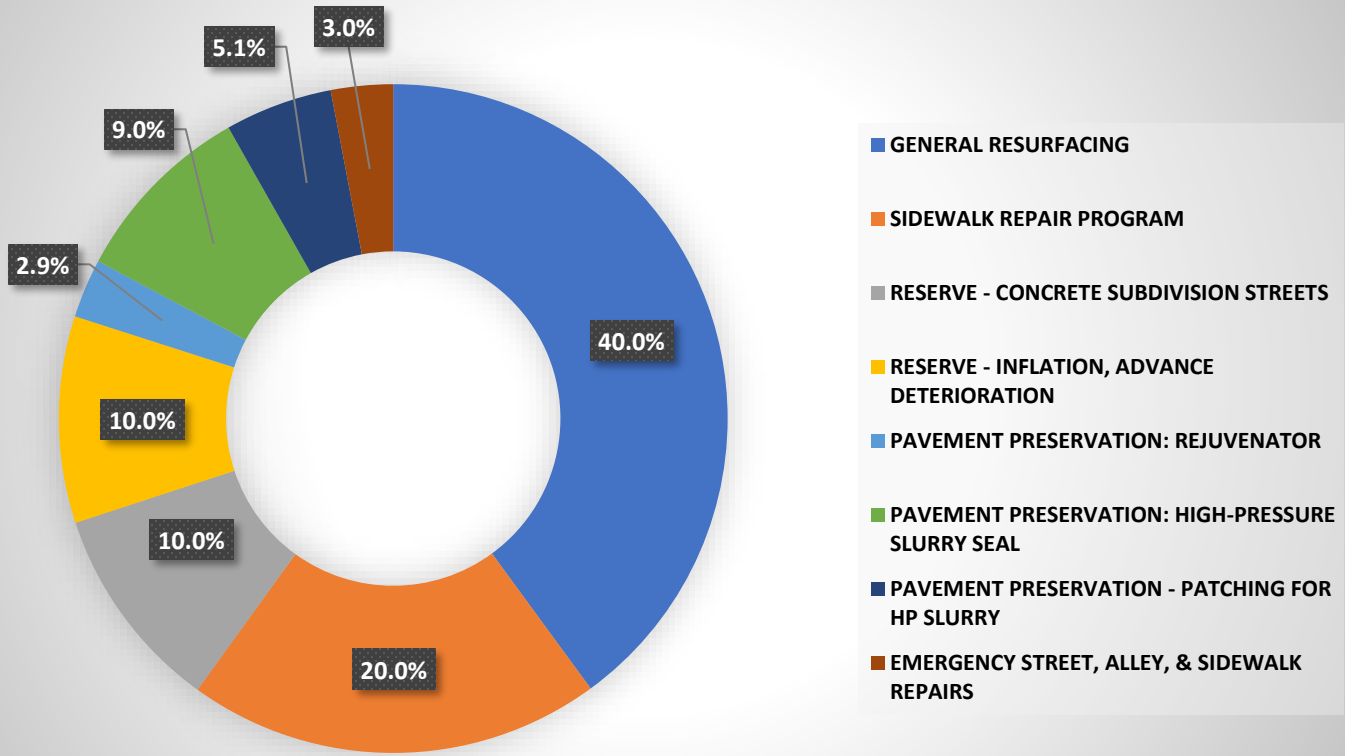
Treatment	Functional Class		
	Minor Arterial	Collector	Local
	Lane Miles	Lane Miles	Lane Miles
High-Pressure Slurry	0.0	0.0	7.1
Rejuvenator	0.0	0.9	14.2
Chip Seal	0.0	0.0	2.8
Subtotal	0.0	0.9	24.1
Total	25.0		

FY 2024 Program – Lane Miles

Subtotal	0.6	2.8	34.9
Total Program	38.3		

FY24 Program

FY25 Program Allocations



FY25 Program

FY25 Program	Allocation
GENERAL RESURFACING	\$3,995,000
SIDEWALK REPAIR PROGRAM	\$2,000,000
RESERVE - CONCRETE SUBDIVISION STREETS	\$1,000,000
RESERVE - INFLATION, ADVANCE DETERIORATION	\$1,000,000
PAVEMENT PRESERVATION: REJUVENATOR	\$285,000
PAVEMENT PRESERVATION: HIGH-PRESSURE SLURRY SEAL	\$900,000
PAVEMENT PRESERVATION - PATCHING FOR HP SLURRY	\$520,000
EMERGENCY STREET, ALLEY, & SIDEWALK REPAIRS	\$300,000
TOTAL FY2025 PROGRAM =	\$10,000,000

FY25 Program



Rejuvenator

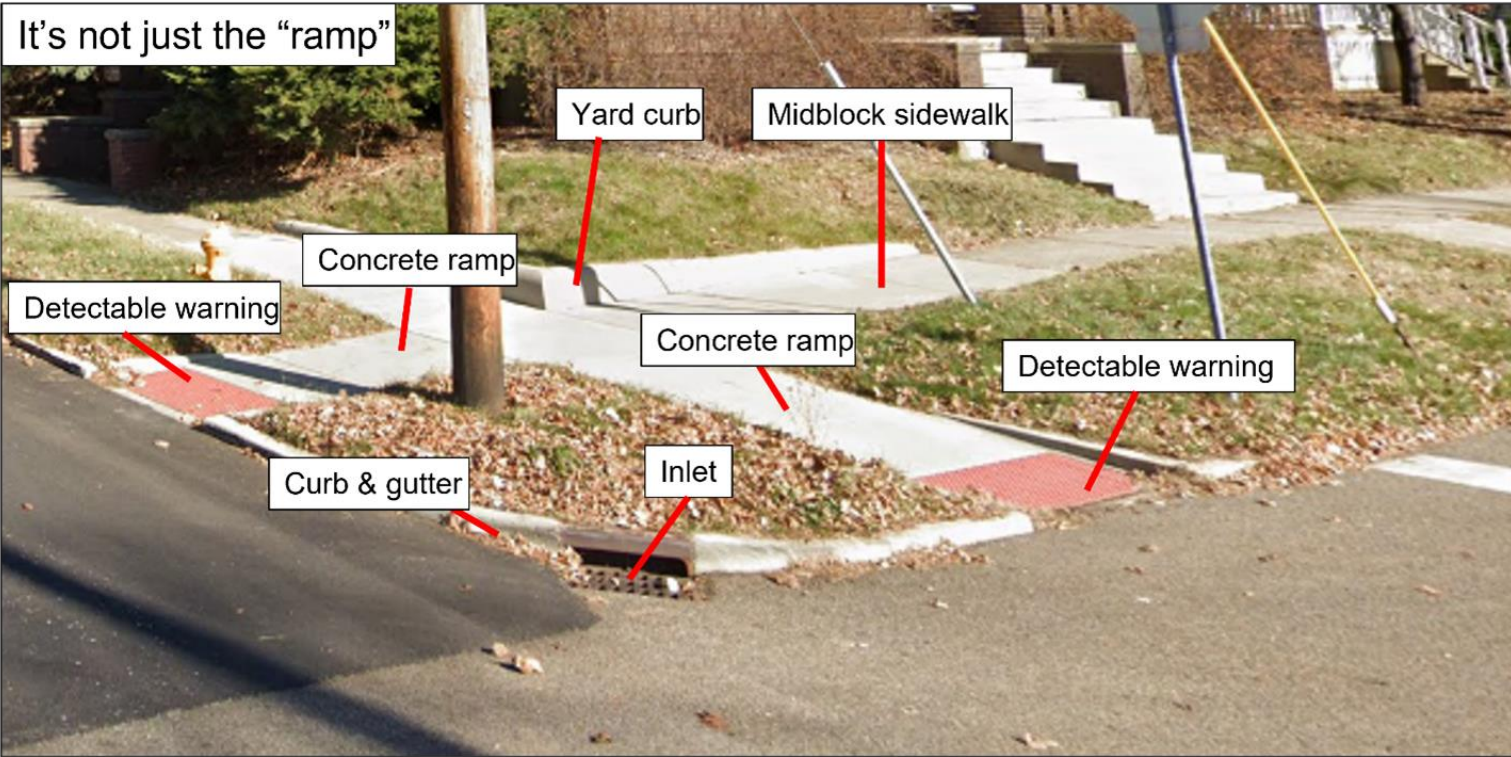


**High Pressure
Slurry Seal**



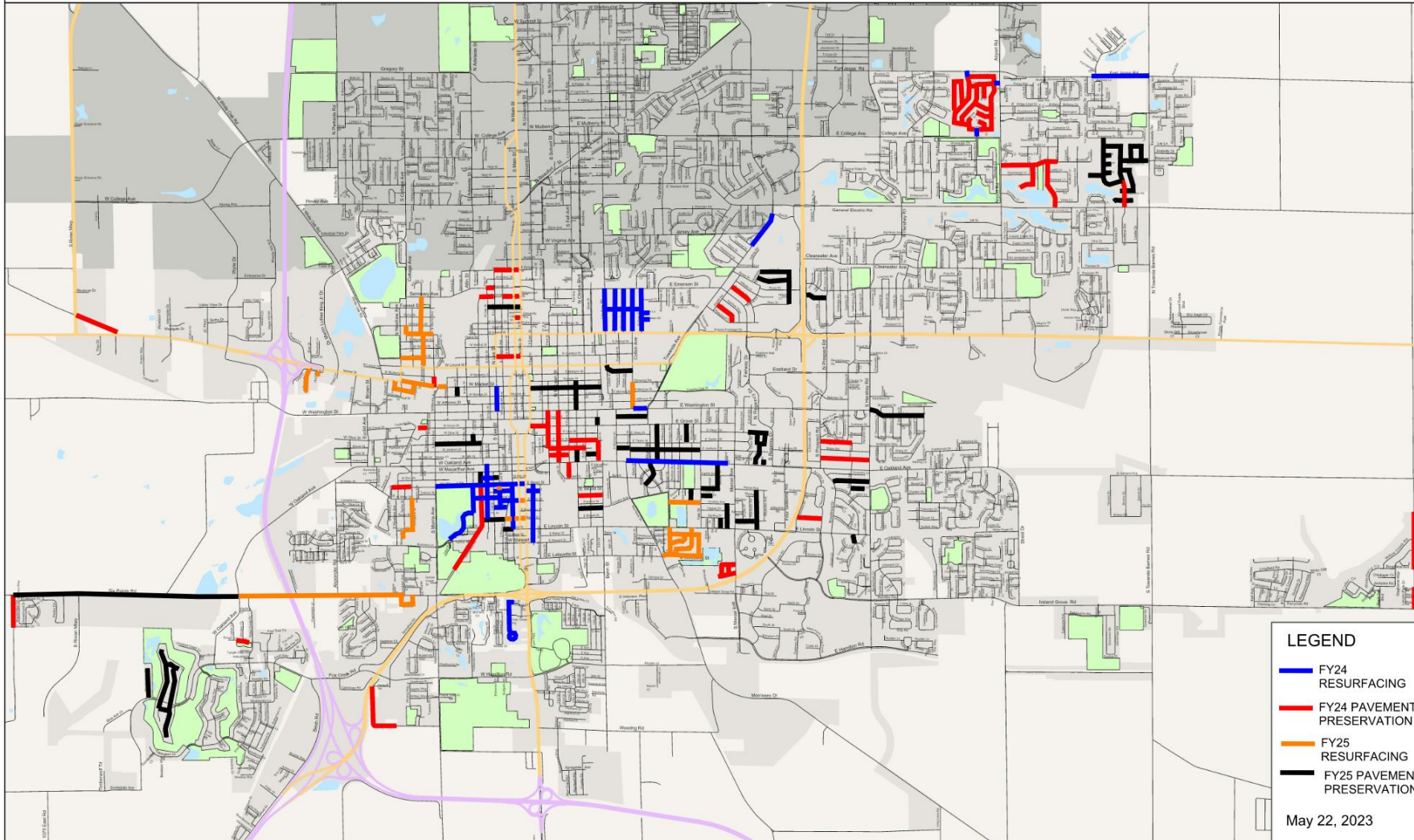
Resurfacing

**Example FY24
Street Program
Treatments**

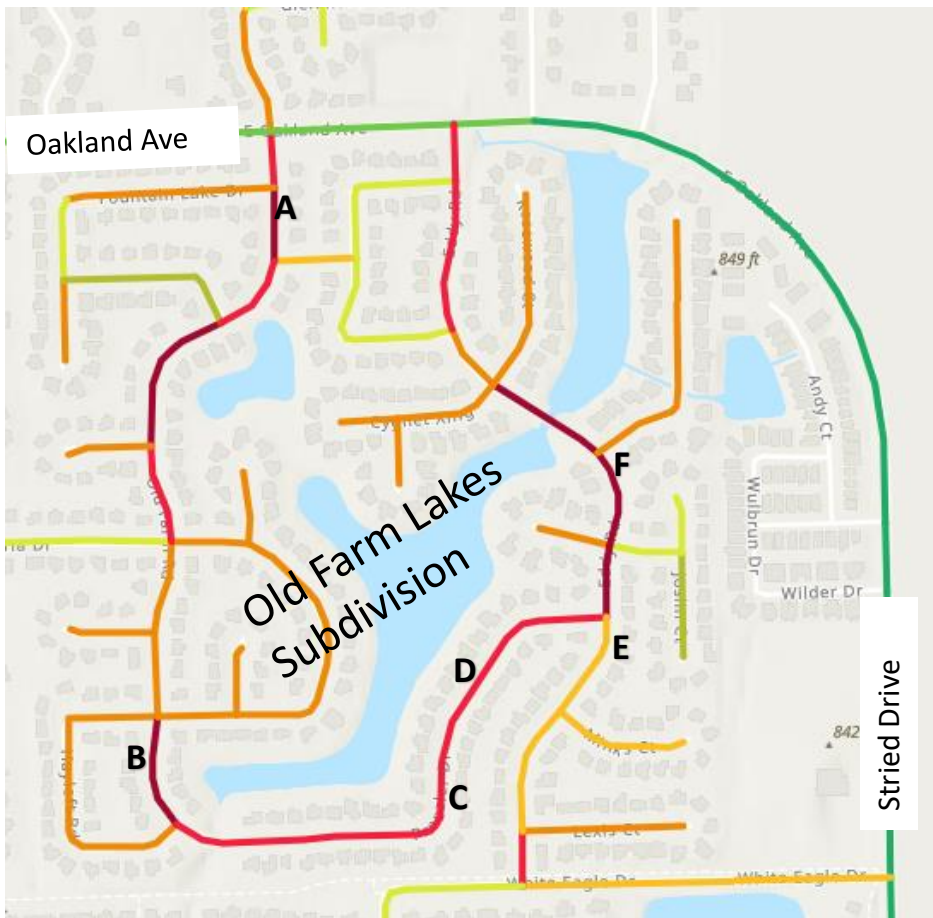


**Example Sidewalk
Corner Treatment**

FY2024 AND FY2025
GENERAL RESURFACING & PAVEMENT PRESERVATION OVERALL MAP

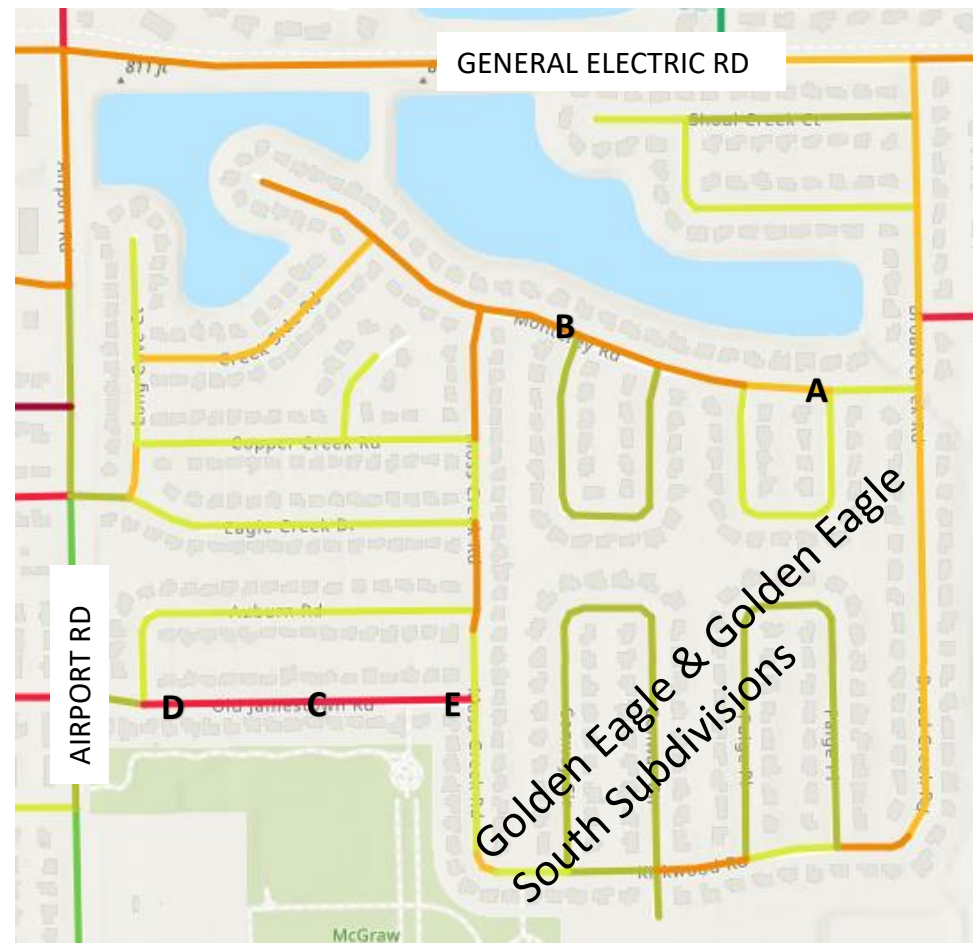


FY25 Concrete Subdivision Streets





FY25 Concrete Subdivision Streets



FY 2024 Program Schedule

- General Resurfacing & Sidewalk Projects – 2 Phases
 - Phase 1 – Summer 2023, Phase 2 – Late Summer/Early Fall 2023
- Pavement Preservation
 - Chip Seal – Summer 2023
 - High-Pressure Slurry Seal – Summer 2023
 - Rejuvenator – Summer 2023

Public Works Recommendations

1. Switch to automated collection of pavement condition
2. Take advantage of DOT software pavement deterioration learning feature
3. Expand pavement preservation method use
4. Develop pavement rehab plan for Old Farm Lakes and Golden Eagle Subdivision concrete streets
5. Continually assess budgetary needs going forward

Thank You

Please visit www.bloomingtonstreets.com for more info.