

# Department of Public Works

## *City Council Informal Meeting*



Presented by Bobby Vincent, Director  
*March 11, 2019*

# Mission, Vision & Values



## MISSION

To provide a clean, safe and healthy environment

## VISION

To become the organizational leader in customer satisfaction by improving communication, assuring organizational alignment and affecting positive change while preserving our national accreditation

## VALUES

- Accountability
- Teamwork
- Respect
- Training
- Communication
- Consistency
- Professional/Organizational Growth



## CUSTOMER VALUE PROPOSITION

The Department of Public Works strives for excellence while providing safe, quality and efficient services in a fiscally responsible manner

# Proposed Ordinance 2018-289



- To amend ch. 24 art. I of the City Code by adding therein a new § 24-4 for the purpose of requiring the Department of Public Works to conduct a study of the conditions of all streets, roads and bridges in the city and to provide a report to City Council by no later than February 1, 2019, and by no later than February 1 each year thereafter.
- Patron: Councilwoman Larson

# Proposed Ordinance 2018-289

## *Ordinance Resolution Summary*

### **(1) An assessment of the condition of the City's streets in comparison with state and national standards.**

- State Code § 33.2-275 -The Department (VDOT) shall determine a quantitative rating on pavement condition for primary and secondary state highway system at least **once every five years**.
  - City of Richmond's practice is to collect all streets for a Condition Assessment every 4 years which is in line with State Code.
- DPW, an accredited APWA Agency, has performed its' Road Condition Assessment in 2010, 2014, and 2018.
- Full report of City Road Condition Assessment is located within the COR Micro Paver Pavement Management System.
  - Average cost to perform Street Condition Assessment \$300,000.00



# Street Condition Rating and Goals



- City Goal is to have **80%** of our Streets to be Good or Better
- The Paving Condition Rating system is as follows
  - 100 to 71 Good or Better
  - 70 to 55 Fair
  - 54 to 0 Poor
- Pavement Condition Index Historical Data
  - **2010** Conditions Rating **34%** good & better
    - 66% fair to poor
  - **2014** Condition Rating **53%** good & better
    - 47% fair to poor
  - **2018** Condition Rating **35%** good & better
    - 65% fair to poor



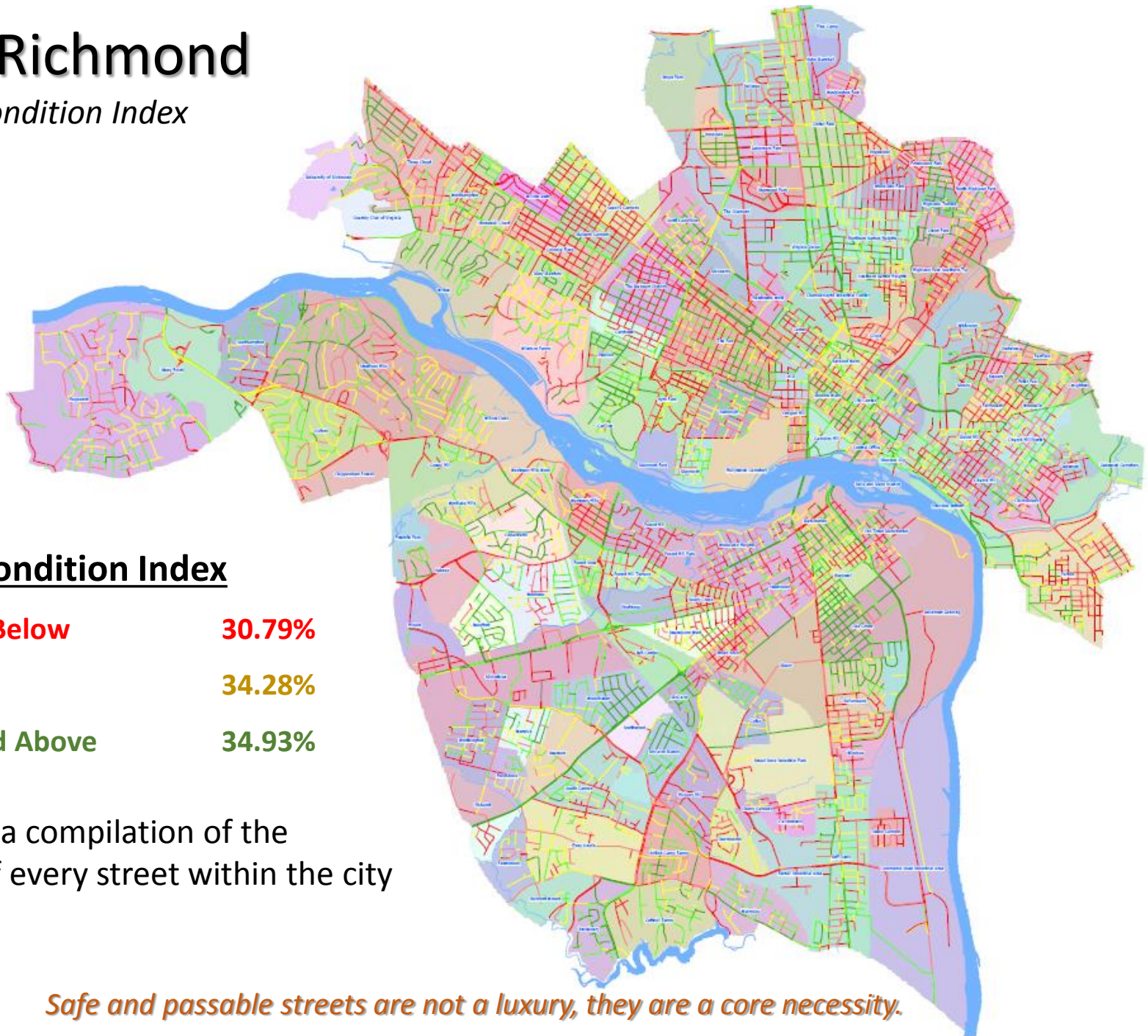
*In August and September of 2018, we administered a citizen survey for the City of Richmond. Out of the questions related to the maintenance of the city, **73 percent** of Richmonder's were dissatisfied with the maintenance of our neighborhood streets and sidewalks.*



# City of Richmond

## Pavement Condition Index

May 2018



## Pavement Condition Index

**Very Poor and Below** 30.79%

**Fair to Poor** 34.28%

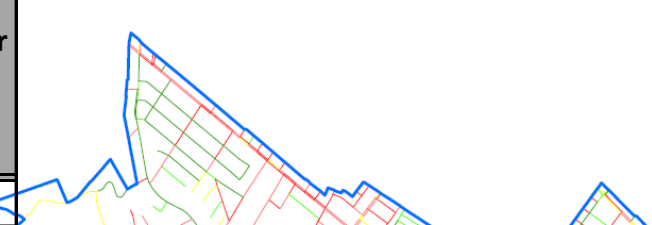
**Satisfactory and Above** 34.93%

**NOTE:** This is a compilation of the assessment of every street within the city of Richmond.

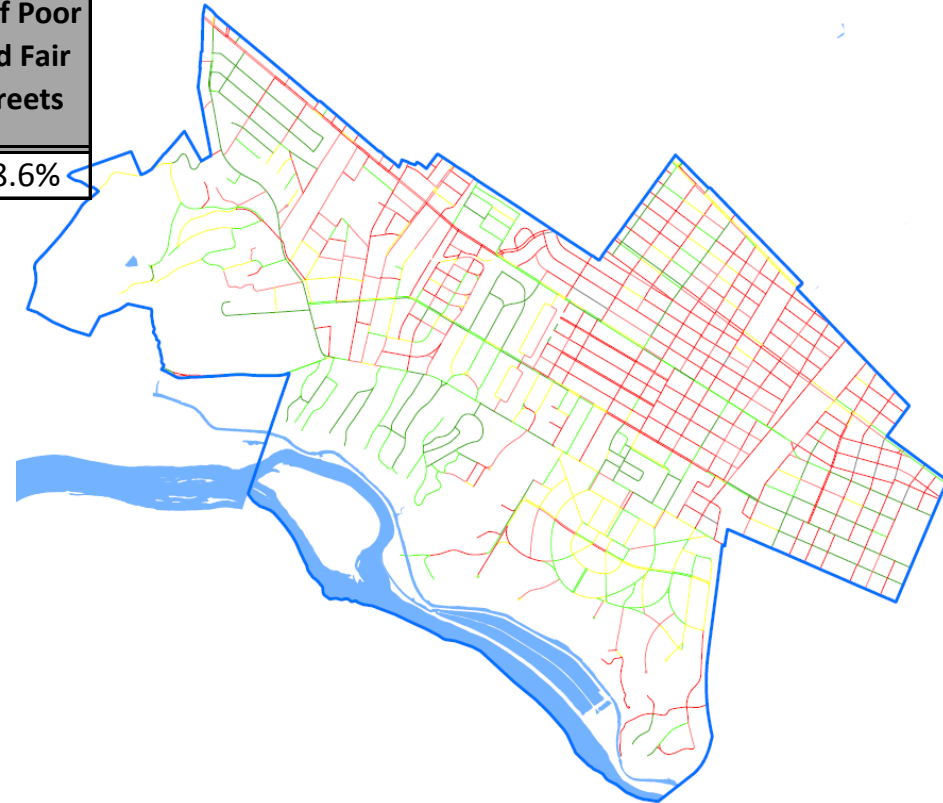
*Safe and passable streets are not a luxury, they are a core necessity.*

# Pavement Condition Report 2018

## Council District #1

Council District	Council District #1 - Far West End								
		Poor			Fair			Good	
Local	194.9	45%	87.16	\$ 5,061,782.53	28%	53.76	\$ 3,122,168.12	28%	53.93
Collector	19.7	60%	11.80	\$ 913,435.06	10%	1.88	\$ 145,236.17	30%	5.90
Major	26.0	19%	5.03	\$ 454,745.49	44%	11.50	\$ 1,038,914.93	36%	9.47
Minor	46.9	25%	11.67	\$ 1,054,599.21	31%	14.30	\$ 1,292,297.14	45%	20.92
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets				
1	287.41	12.3%	197.10	\$ 13,083,178.65	68.6%				

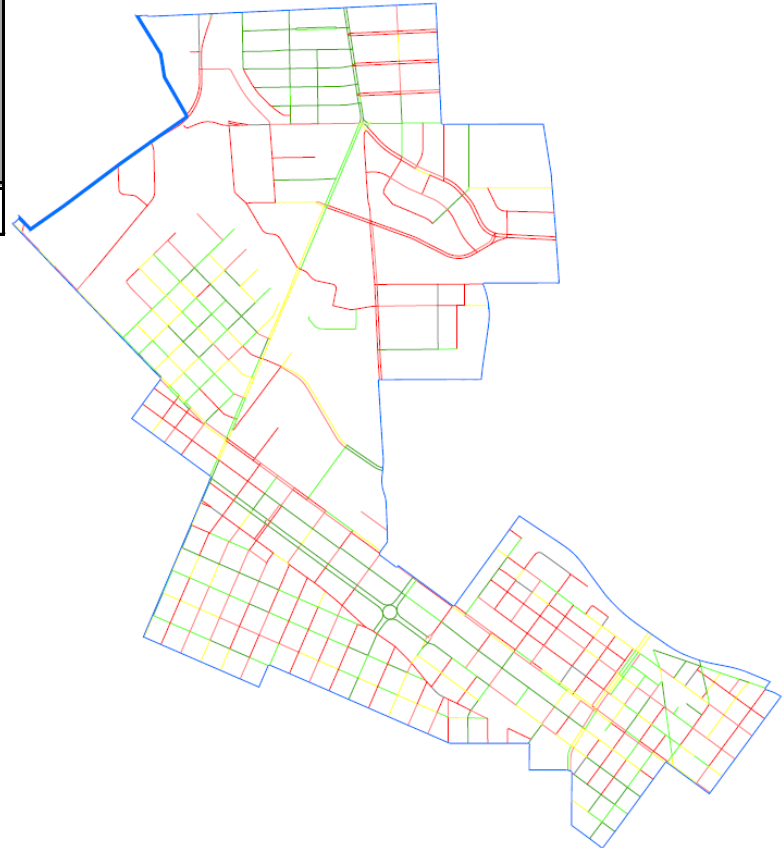
Condition Category	MLM	% of Condition of City	
Failed	2.05	0.71%	40.24%
Serious	56.76	19.75%	
Very Poor	56.85	19.78%	
Poor	42.35	14.74%	28.33%
Fair	39.08	13.60%	
Satisfactory	44.22	15.39%	31.42%
Good	46.09	16.04%	
Total Area	287.41		



# Pavement Condition Report 2018

## Council District #2

Council District	Council District #2 - North Central									
		Poor			Fair			Good		
Local	114.1	37%	42.70	\$ 2,479,678.88	26%	30.14	\$ 1,750,283.62	36%		41.24
Collector	20.1	25%	5.00	\$ 386,943.51	33%	6.52	\$ 504,844.00	43%		8.55
Major	38.8	19%	7.20	\$ 650,546.96	51%	19.72	\$ 1,781,109.15	31%		11.92
Minor	47.5	37%	17.39	\$ 1,571,256.97	29%	13.57	\$ 1,226,095.61	35%		16.56
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets					
2	220.49	9.5%	142.23	\$ 10,350,758.71	64.5%					




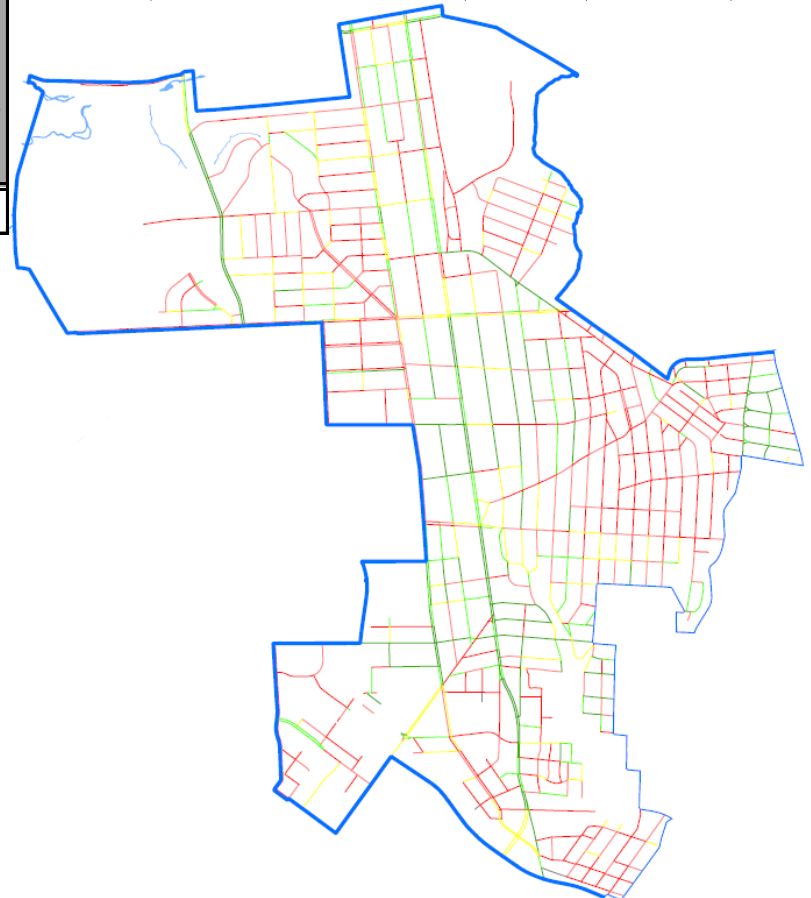
Condition Category	MLM	% of Condition of City	
Failed	3.43	1.56%	32.78%
Serious	30.25	13.72%	
Very Poor	38.60	17.51%	
Poor	35.22	15.97%	31.72%
Fair	34.73	15.75%	
Satisfactory	38.66	17.53%	35.49%
Good	39.59	17.96%	
Total Area	220.49		



# Pavement Condition Report 2018

## Council District #3

Council District	Council District #3 - Northside										
		Poor				Fair			Good		
Local	149.1	41%	60.93	\$	3,538,726.86	37%	55.40	\$	3,217,575.28	22%	32.72
Collector	27.3	39%	10.77	\$	833,950.41	30%	8.27	\$	640,165.89	30%	8.28
Major	44.0	11%	4.90	\$	442,322.29	43%	18.74	\$	1,693,383.01	46%	20.35
Minor	15.6	19%	2.98	\$	269,387.02	38%	5.90	\$	532,988.35	43%	6.74
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets		% of Poor and Fair Streets					
3	235.98	10.1%	167.89	\$	11,168,499.09	71.1%					



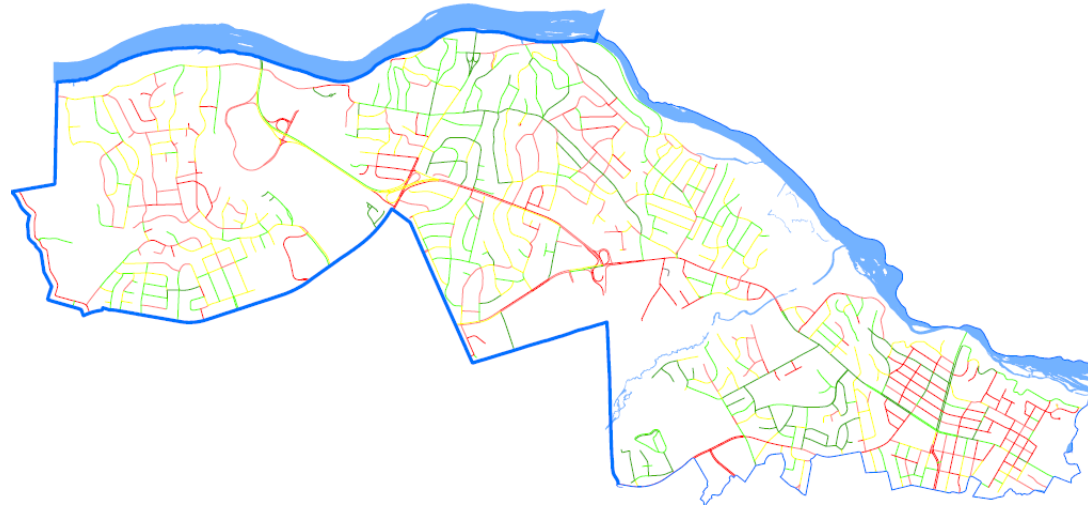
Condition Category	MLM	% of Condition of City	
Failed	0.41	0.17%	33.72%
Serious	28.94	12.26%	
Very Poor	50.23	21.29%	
Poor	52.93	22.43%	37.42%
Fair	35.38	14.99%	
Satisfactory	29.35	12.44%	28.86%
Good	38.75	16.42%	
Total Area	235.98		

# Pavement Condition Report 2018

## Council District #4

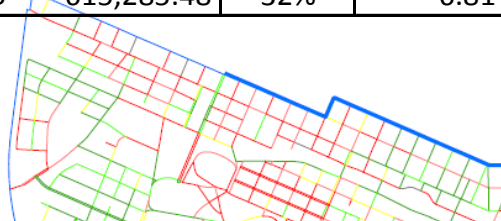
Council District	Council District #4 - Southwest									
		Poor			Fair			Good		
Local	196.7	18%	34.48	\$ 2,002,277.23	46%	89.72	\$ 5,210,718.04	37%	72.49	
Collector	38.9	13%	5.15	\$ 398,714.09	47%	18.23	\$ 1,411,297.43	40%	15.49	
Major	31.1	29%	8.95	\$ 808,154.81	47%	14.51	\$ 1,310,832.16	24%	7.59	
Minor	41.2	46%	19.10	\$ 1,725,235.34	24%	9.91	\$ 895,007.71	30%	12.21	
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets					
4	307.79	13.2%	200.03	\$ 13,762,236.81	65.0%					

Condition Category	MLM	% of Condition of City	
Failed	0.15	0.05%	21.98%
Serious	29.40	9.55%	
Very Poor	38.11	12.38%	
Poor	57.19	18.58%	43.00%
Fair	75.17	24.42%	
Satisfactory	69.30	22.51%	35.02%
Good	38.48	12.50%	
Total Area	307.79		

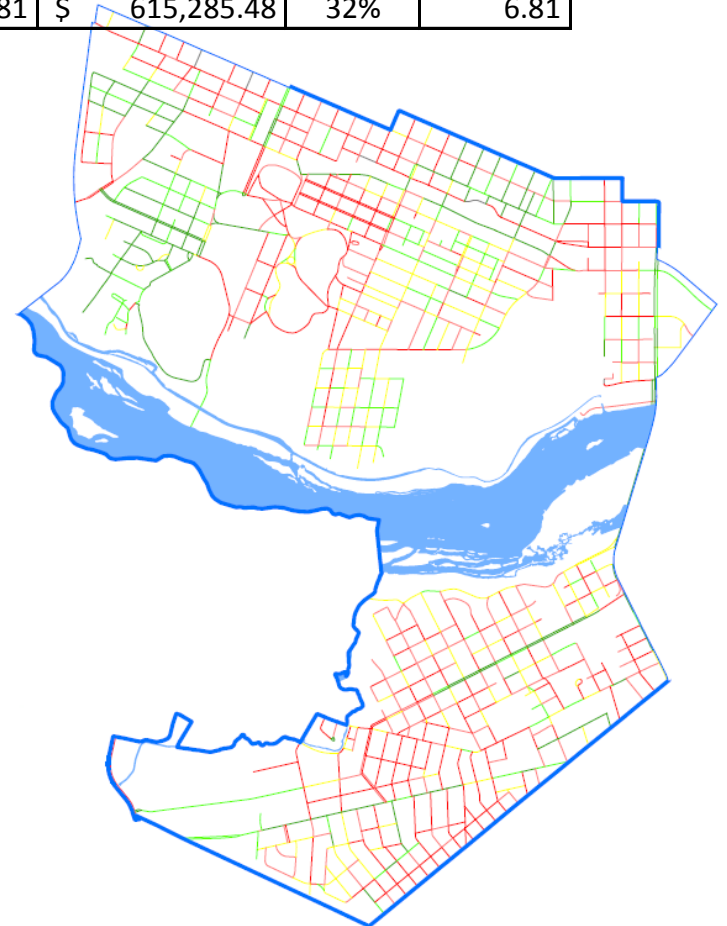


# Pavement Condition Report 2018

## Council District #5

Council District	Council District #5 - Central and South Central								
		Poor			Fair			Good	
Local	155.8	32%	50.27	\$ 2,919,762.17	38%	59.56	\$ 3,459,185.06	30%	46.00
Collector	18.1	37%	6.77	\$ 524,493.85	48%	8.68	\$ 672,525.16	15%	2.66
Major	3.7	24%	0.87	\$ 78,728.17	10%	0.35	\$ 31,511.11	67%	2.44
Minor	21.3	36%	7.63	\$ 689,196.53	32%	6.81	\$ 615,285.48	32%	6.81
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets				
5	198.87	8.5%	140.95	\$ 8,990,687.54	70.9%				

Condition Category	MLM	% of Condition of City	
Failed	0.88	0.38%	31.66%
Serious	25.92	11.18%	
Very Poor	46.58	20.09%	
Poor	43.31	18.69%	33.88%
Fair	35.23	15.20%	
Satisfactory	38.92	16.79%	34.46%
Good	40.95	17.67%	
Area total	231.80		

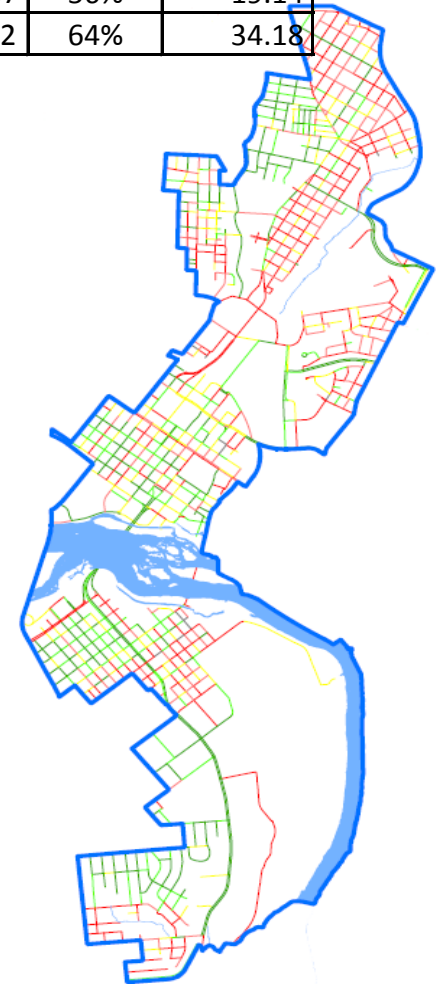


# Pavement Condition Report 2018

## Council District #6

Council District	Council District #6 - Northeast, Central and Southeast									
		Poor				Fair			Good	
Local	156.9	31%	49.26	\$ 2,860,709.24	33%	51.59	\$ 2,996,456.27	36%	56.00	
Collector	44.6	32%	14.12	\$ 1,093,478.71	31%	13.61	\$ 1,054,142.46	38%	16.83	
Major	33.9	22%	7.51	\$ 678,164.42	21%	7.24	\$ 653,977.07	56%	19.14	
Minor	53.8	12%	6.20	\$ 559,709.89	25%	13.40	\$ 1,210,761.32	64%	34.18	
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets					
6	289.10	12.4%	162.93	\$ 11,107,399.38	56.4%					

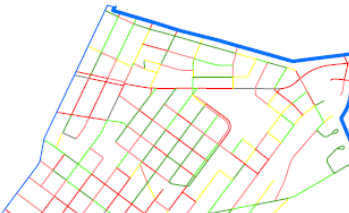
Condition Category	MLM	% of Condition of City	
Failed	1.62	0.56%	26.66%
Serious	26.10	9.03%	
Very Poor	49.38	17.08%	
Poor	42.07	14.55%	29.69%
Fair	43.78	15.14%	
Satisfactory	50.06	17.31%	43.64%
Good	76.11	26.33%	
Total Area	289.11		



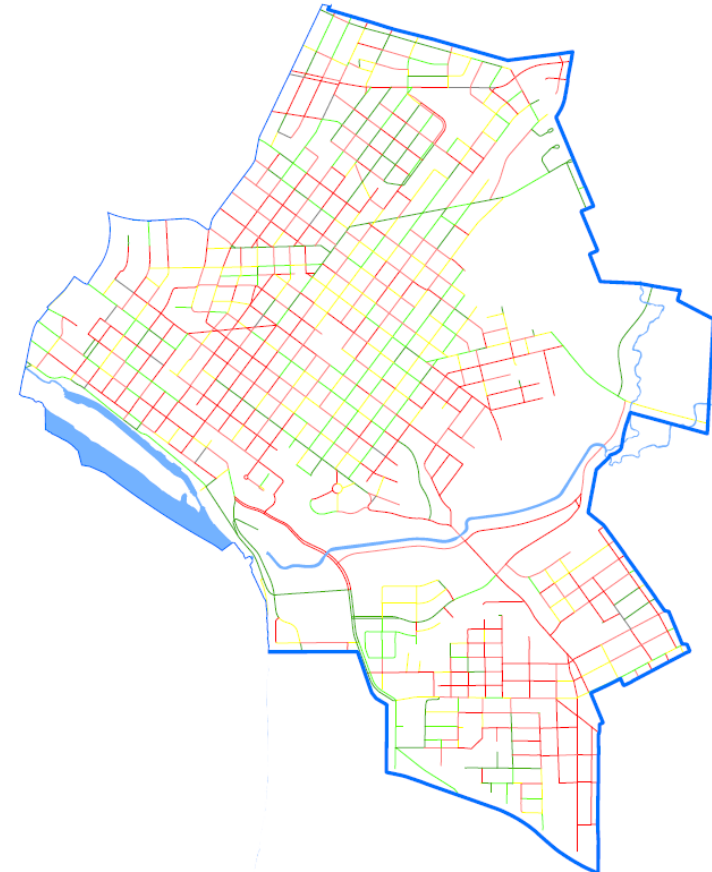


# Pavement Condition Report 2018

## Council District #7

Council District	Council District #7 - East End								
		Poor			Fair			Good	
Local	173.9	38%	66.89	\$ 3,884,642.12	40%	69.22	\$ 4,019,953.28	22%	37.76
Collector	28.8	18%	5.29	\$ 409,822.05	25%	7.25	\$ 561,748.47	56%	16.26
Major	8.7	32%	2.77	\$ 249,861.58	37%	3.23	\$ 291,844.59	31%	2.67
Minor	40.3	36%	14.58	\$ 1,317,418.99	28%	11.38	\$ 1,027,972.26	36%	14.29
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets				
7	251.60	10.8%	180.61	\$ 11,763,263.35	71.8%				

Condition Category	MLM	% of Condition of City	
Failed	3.06	1.22%	35.58%
Serious	38.03	15.11%	
Very Poor	48.43	19.25%	
Poor	50.56	20.10%	36.20%
Fair	40.52	16.10%	
Satisfactory	39.34	15.64%	28.22%
Good	31.65	12.58%	
Total Area	251.59		

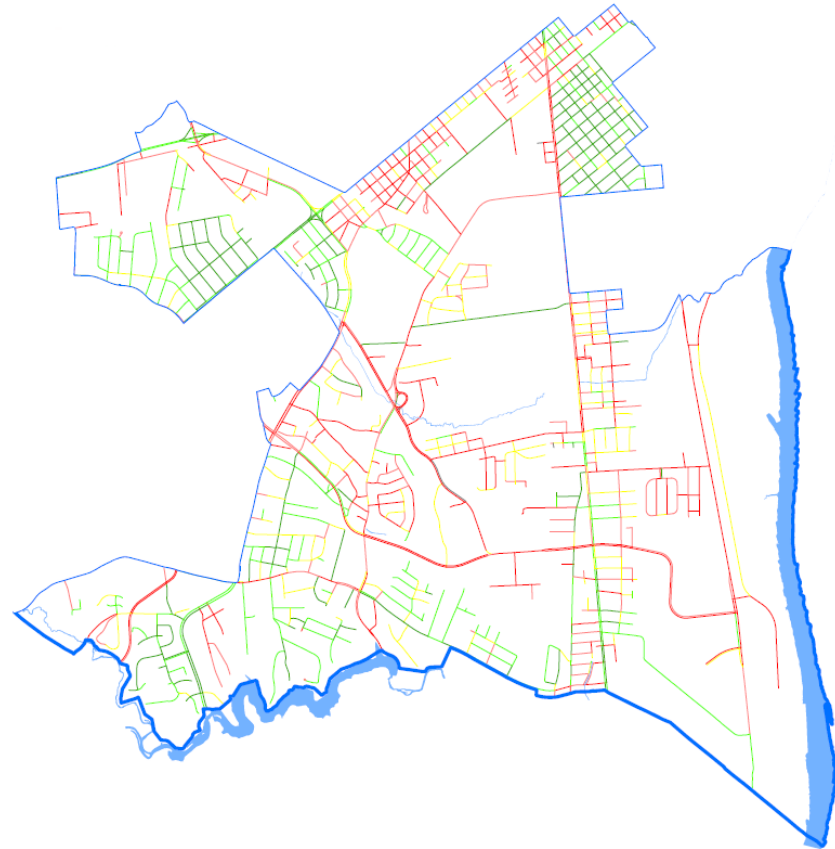


# Pavement Condition Report 2018

## Council District #8

Council District	Council District #8 - Southeast									
		Poor			Fair			Good		
Local	198.0	23%	45.87	\$ 2,664,240.73	34%	66.41	\$ 3,856,652.32	43%	85.71	
Collector	26.1	39%	10.16	\$ 786,802.42	19%	5.08	\$ 393,401.21	42%	10.88	
Major	69.4	25%	17.40	\$ 1,571,543.18	33%	22.72	\$ 2,052,154.67	42%	29.25	
Minor	77.7	49%	38.36	\$ 3,465,563.39	34%	26.79	\$ 2,420,348.91	16%	12.56	
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets					
8	371.17	15.9%	232.78	\$ 17,210,706.82	62.7%					

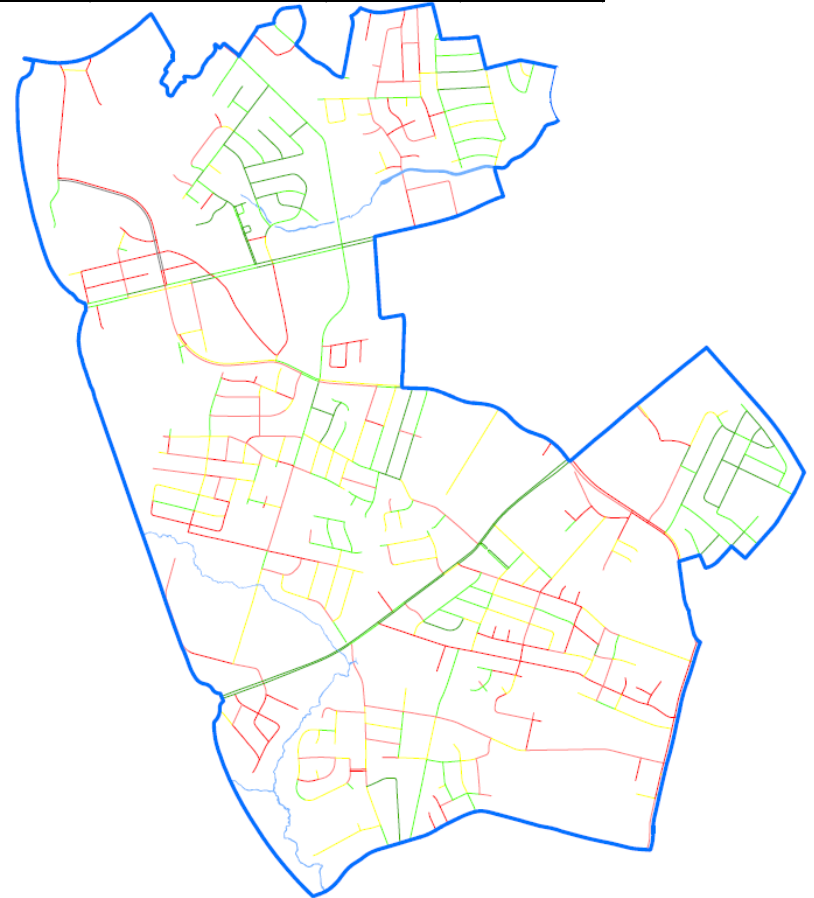
Condition Category	MLM	% of Condition of City	
Failed	1.82	0.49%	30.12%
Serious	40.37	10.88%	
Very Poor	69.59	18.75%	
Poor	65.10	17.54%	32.60%
Fair	55.89	15.06%	
Satisfactory	70.73	19.05%	37.29%
Good	67.67	18.23%	
Total Area	371.18		



# Pavement Condition Report 2018

## Council District #9

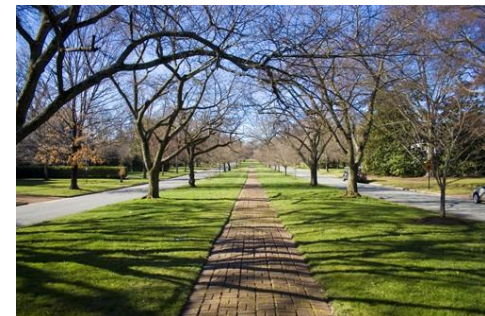
Council District	Council District #9 - Southwest								
		Poor			Fair			Good	
Local	107.1	24%	25.98	\$ 1,508,900.57	43%	46.03	\$ 2,673,371.43	33%	35.04
Collector	12.4	23%	2.84	\$ 219,861.32	57%	7.00	\$ 542,337.35	20%	2.51
Major	24.4	14%	3.52	\$ 318,387.61	8%	2.02	\$ 182,156.57	77%	18.90
Minor	23.1	36%	8.26	\$ 745,858.13	25%	5.85	\$ 528,611.82	39%	9.00
Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets				
9	166.94	7.2%	101.50	\$ 6,719,484.81	60.8%				



Condition Category	MLM	% of Condition of City	
Failed	1.64	0.98%	24.32%
Serious	18.40	11.02%	
Very Poor	20.56	12.31%	
Poor	29.50	17.67%	36.48%
Fair	31.41	18.81%	
Satisfactory	38.17	22.86%	39.20%
Good	27.27	16.34%	
Total Area	166.95		

# Investment into RVA Neighborhoods

Council District	Total Lane Miles	% Lane Miles of City	Lane Miles of Poor and Fair	Cost to Repair Poor and Fair Streets	% of Poor and Fair Streets
1	287.41	12.3%	197.10	\$ 13,083,178.65	68.6%
2	220.49	9.5%	142.23	\$ 10,350,758.71	64.5%
3	235.98	10.1%	167.89	\$ 11,168,499.09	71.1%
4	307.79	13.2%	200.03	\$ 13,762,236.81	65.0%
5	198.87	8.5%	140.95	\$ 8,990,687.54	70.9%
6	289.10	12.4%	162.93	\$ 11,107,399.38	56.4%
7	251.60	10.8%	180.61	\$ 11,763,263.35	71.8%
8	371.17	15.9%	232.78	\$ 17,210,706.82	62.7%
9	166.94	7.2%	101.50	\$ 6,719,484.81	60.8%
<b>Total</b>	<b>2,329.35</b>	<b>100.0%</b>	<b>1,526.03</b>	<b>\$ 104,156,215.15</b>	







# Richmond Street Maintenance Priorities

The Streets within the Paving Program are selected utilizing the following criteria:

- **Street Condition Rating**

- PCI Rating from Street Pavement Assessment

- **The above criteria is adjusted by the following:**

- **Major Utility Project**

- Resulting in multiple cuts/patches both lateral and longitudinal

- **Economic Development Projects**

- Major New Building or Renovation
- Neighborhood Enhancement Project

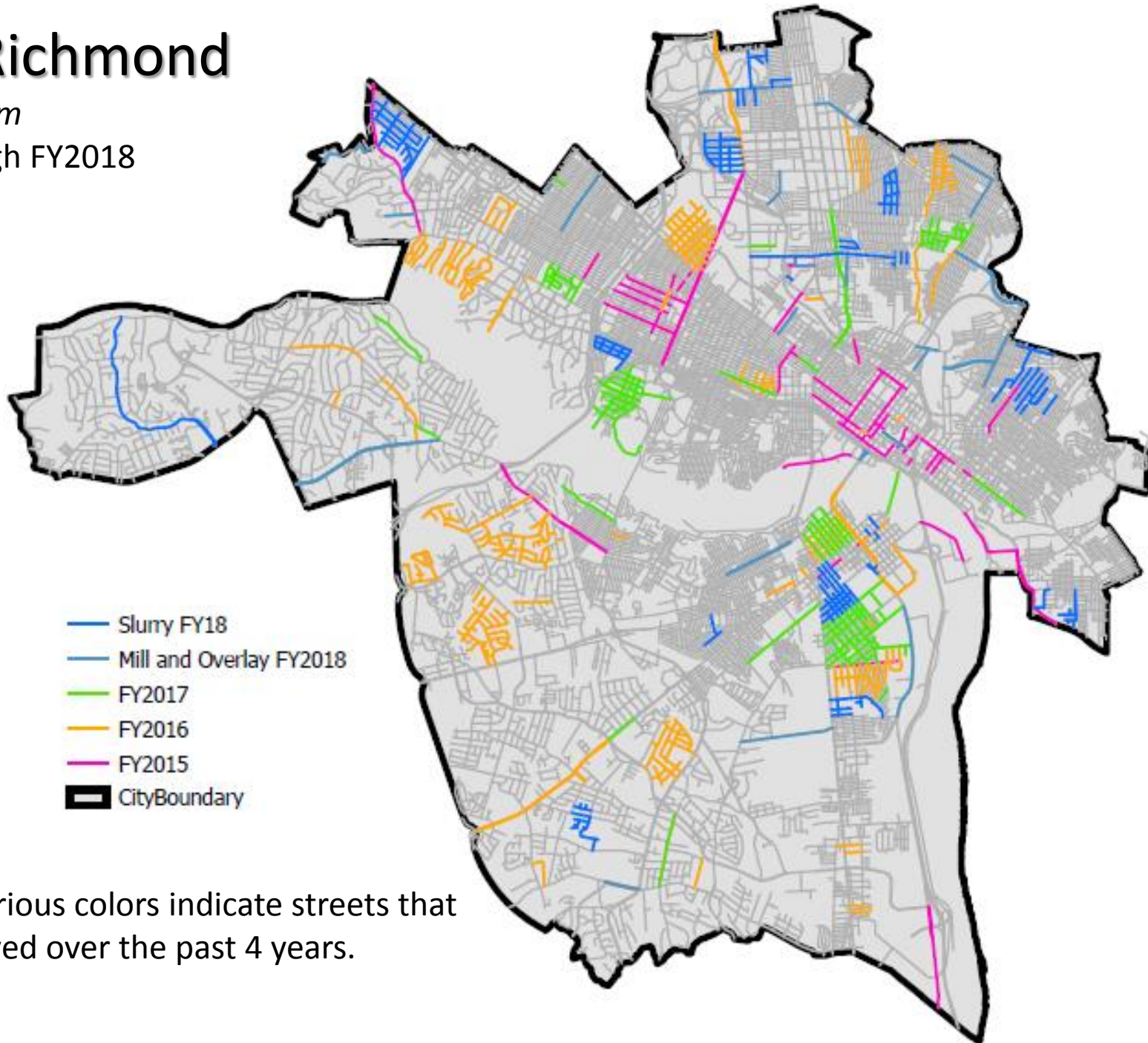
- **Major Events** within the public right of way



# City of Richmond

## *Paving Program*

FY2015 through FY2018



**NOTE:** The various colors indicate streets that have been paved over the past 4 years.



# Proposed Ordinance 2018-289

## *Ordinance Resolution Summary*

**(2) An assessment of the adequacy of the City's streets to handle the current and projected volume of traffic in comparison with state and national standards.**

The 2013 Richmond **Strategic Multimodal Transportation Plan** describes actions and plans that Richmond will take over the next twenty years to improve transportation within the City. Some guiding principles include all modes of travel (vehicle, pedestrian and bicycle), safety and operations, system preservation, complete streets and sustainable transportation. The Plan also defines the strategies that the City will use to support the guiding principles. **Twenty (20) year cycle is the typical standard. Some cities have 10 year cycles.** Either way, the City of Richmond's SMTP is well within these guidelines.

**(3) A prioritized list of paving needs and repairs and the projected costs there of arranged by Council District.**

\$21.8M annual need and we have been receiving \$1.5 – 6.0 M

*(Also indicated in previous slides, the paving needs, per district, per neighborhood, per street)*

Street Classification	Square Yards of Asphalt	Maintenance Interval Years	Square yards	%	Cost to Maintain Per square yard	
Local	9,792,352.50	5	1,958,470.50	20%	\$7.00	\$13,709,293.50
Collector	1,443,246.90	7	206,178.10	14%	\$9.00	\$1,855,602.90
Arterial	4,519,339.70	10	451,934.00	10%	\$14.00	\$6,327,076.00
Totals	15,754,939.10	SqYds	2,616,582.60	Lane Miles	405.5	\$21,891,972.40

# Proposed Ordinance 2018-289

## Ordinance Resolution Summary

**(4) An estimate of the cost of remediation for any identified deficiencies.**  
**\$277M in accordance to City Audit and DPW report**

### Funding

The roadway maintenance function is not adequately funded to maintain and preserve the roadway infrastructure and address the pavements that need to be rehabilitated or reconstructed as depicted in the following table:

*A total of at least \$277 million is needed to bring the Richmond roads to good conditions.*

Pavement Condition	Rating Scale	Treatment	# of Lane Miles	Total Funding Needed
Excellent	100-91	-	121	-
Good	90-71	Slurry seal	497	\$ 12,828,564
Fair	70-51	Milling/Overlay	657	\$ 46,635,831
Poor	50-21	Reconstruction	492	\$ 190,492,560
Very Poor	20-0	Reconstruction	69	\$ 26,715,420
Total			1836	\$ 276,672,375

Source: DPW and the 2010 pavement assessment





# Proposed Ordinance 2018-289

## Ordinance Resolution Summary

**(5) A plan of action for addressing such deficiencies including estimates of funding required from City, state, federal, and other sources, and recommendations for policy changes as Appropriate.**



Cost of Maintenance		% of City	
<b>Arterials</b>		4,519,339.70	
\$	14.00	\$ per SY	29%
	30,536.1	Est. SY	\$ 427,505.11
<b>Collectors</b>		1,443,246.90	
\$	9.00	\$ per SY	9%
	9,751.7	Est. SY	\$ 87,765.01
<b>Locals</b>		9,792,352.50	
\$	7.00	\$ per SY	62%
	66,164.5	Est. SY	\$ 463,151.81

Description	Quantity
Total City SY	15,754,939.10
Total City Neighborhoods	148
Est. SY per Neighborhood	106,452.29

Total est/neighborhood \$ 978,421.93

Total Cost to Pave Today \$ 144,806,445.64

### **NOTE:**

**At a rate of \$10M per year, it would take 14 years to pave the city once.**

### **Industry Standards**

**After 5-7 years, you would need to redo the local streets**

**After 7-10 years the collector streets.**

**After 10 years, the arterials.**

# City of Richmond

*Paving Program Pothole Correlation*

**Calendar Year 2017 – 24,930**

## Recent Pothole History Citywide

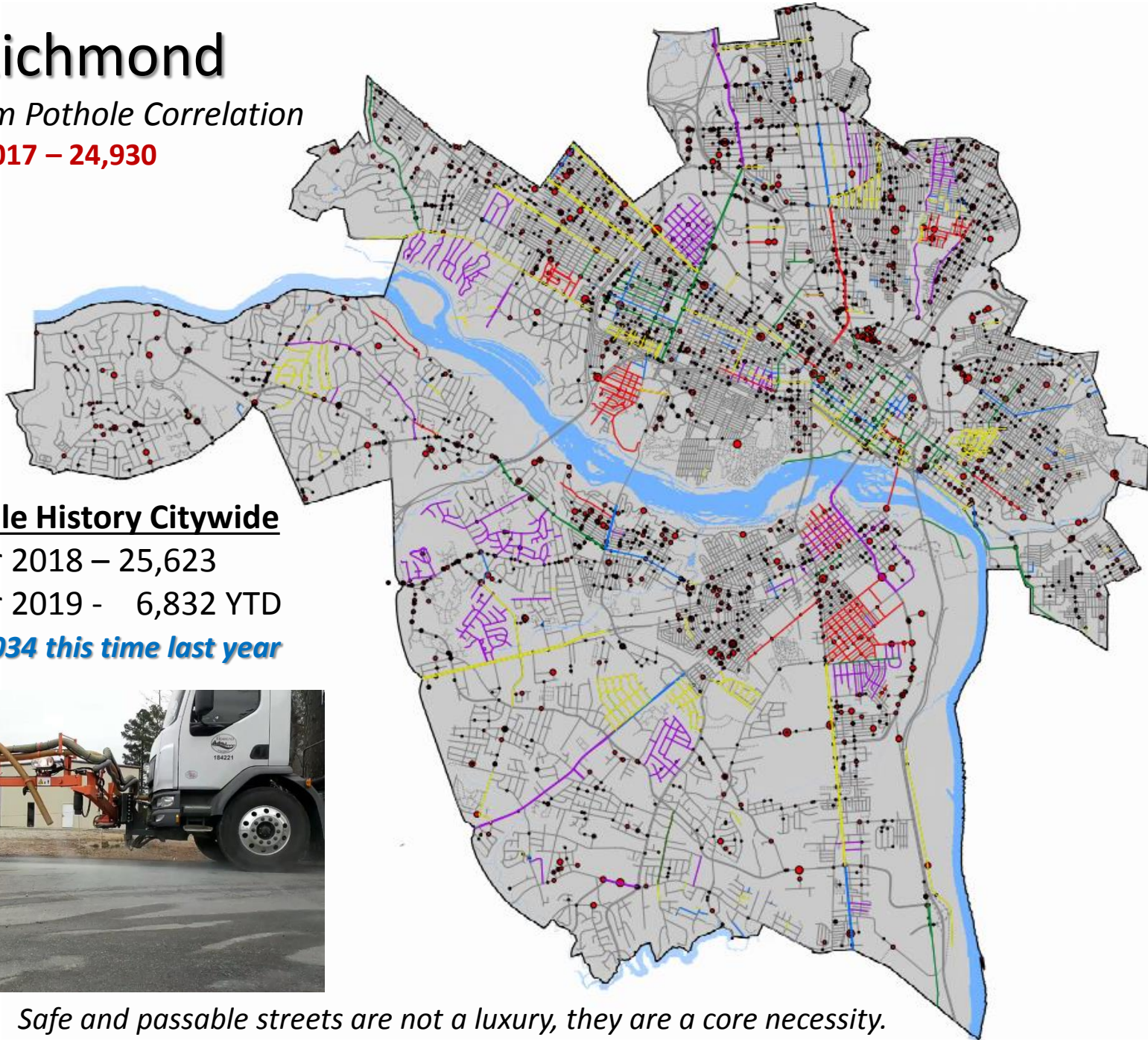
Calendar Year 2018 – 25,623

Calendar Year 2019 - 6,832 YTD

**- 5,034 this time last year**



*Safe and passable streets are not a luxury, they are a core necessity.*



# In Summary...

- ✓ No need for an Ordinance of this nature.
- ✓ As indicated within this presentation, the City of Richmond is aware of the deficiencies of its' infrastructure.
- ✓ Funding is required to **PAVE.**
- ✓ Funding is required to **REMEDiate THE PROBLEMS** within our public right of way.
- ✓ Funding is required to **IMPROVE THE SAFETY** of our roadway network.



