

# ***City of Mission***

## **CITY COUNCIL WORK SESSION**

**October 28, 2020**

**6:00 p.m.**

**Virtual Meeting via Zoom**

### **AGENDA**

1. Street Preservation Program

A continued discussion of criteria and funding scenarios criteria to assist in the development of a multi-year street maintenance program.

3. Adjournment

Mission City Hall  
6090 Woodson, Mission, Kansas  
913-676-8350

<b>City of Mission</b>	Item Number:	1.
<b>DISCUSSION ITEM SUMMARY</b>	Date:	October 28, 2020
<b>PUBLIC WORKS</b>	From:	Celia Duran and Laura Smith

Discussion items allow the committee the opportunity to freely discuss the issue at hand.

**RE:** Street Preservation Program

**DETAILS:** At the August 5, 2020 and September 20, 2020 Community Development Committee (CDC) meetings, information related to development of a proposed street preservation program was provided and discussed with the City Council. General topics of discussion at the August 5, 2020 meeting included:

- An overall approach and steps involved in developing a street preservation program.
- Review of pavement condition index (PCI) data collected by Stantec in 2017.
- Geotechnical data collected by Olsson over the last 7 years.
- Proposed street treatments and estimated costs for each street.

As a result of the evaluation of the geotechnical borings, we have known that a majority of city streets had insufficient asphalt pavement and would require full depth reconstruction to support traffic loads. The associated costs have and will continue to present some of the greatest challenges to designing and implementing a street maintenance program.

At the September 20, 2020 meeting, the following general information was discussed: other factors influencing the street program (i.e., sidewalks, street lights, ADA considerations, stormwater etc.); an evaluation of stormwater and various options for incorporating stormwater improvements with street preservation projects; and a potential annual \$2 million dollar scenario for local streets with corresponding network performance data (PCI) over the next 10 years (2021-2030).

Following the September discussions, there was general consensus from the Governing Body to approach the development of the street program with the following considerations or parameters:

1. Build the residential street maintenance program using the general philosophy of fixing the “worst first.”
2. Develop and maintain a separate program for arterial streets.
3. Repair/replace existing sidewalks as part of each street project and develop a stand alone sidewalk plan for new sidewalks.
4. Develop a street light plan including type of lighting, location and funding source for street light replacement.

Related Statute/City Ordinance:	N/A
Line Item Code/Description:	N/A
Available Budget:	N/A

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5. Evaluate and incorporate ADA considerations (i.e., utility pole replacement, driveway approaches, etc.) for each street project as feasible and appropriate.
6. In retrofit areas, evaluate stormwater improvements with each project and incorporate minimal improvements as necessary to address existing conditions while leveraging County funds for eligible infrastructure. Minimal refers to improvements designed to address existing issues or concerns but not requiring upgrade of the system to conform with more stringent APWA criteria.

For the work session on October 28, we will continue to move toward a final recommended 10 year program and funding strategy. Topics for discussion will include:

- Street preservation projects and costs for work performed from 2011 to date (map attached).
- A revised potential \$2 million dollar scenario for local streets for 2021-2030. Following our discussion at the end of September, Public Works staff performed another visual observation of each street to inform any changes. (map attached)
- A potential 10-year CARS program, which incorporates the existing 2021-2025 program and includes proposed street projects for 2026-2030 (spreadsheet attached).
- Stormwater costs for proposed street projects in 2021 and 2022. (Information not yet completed)

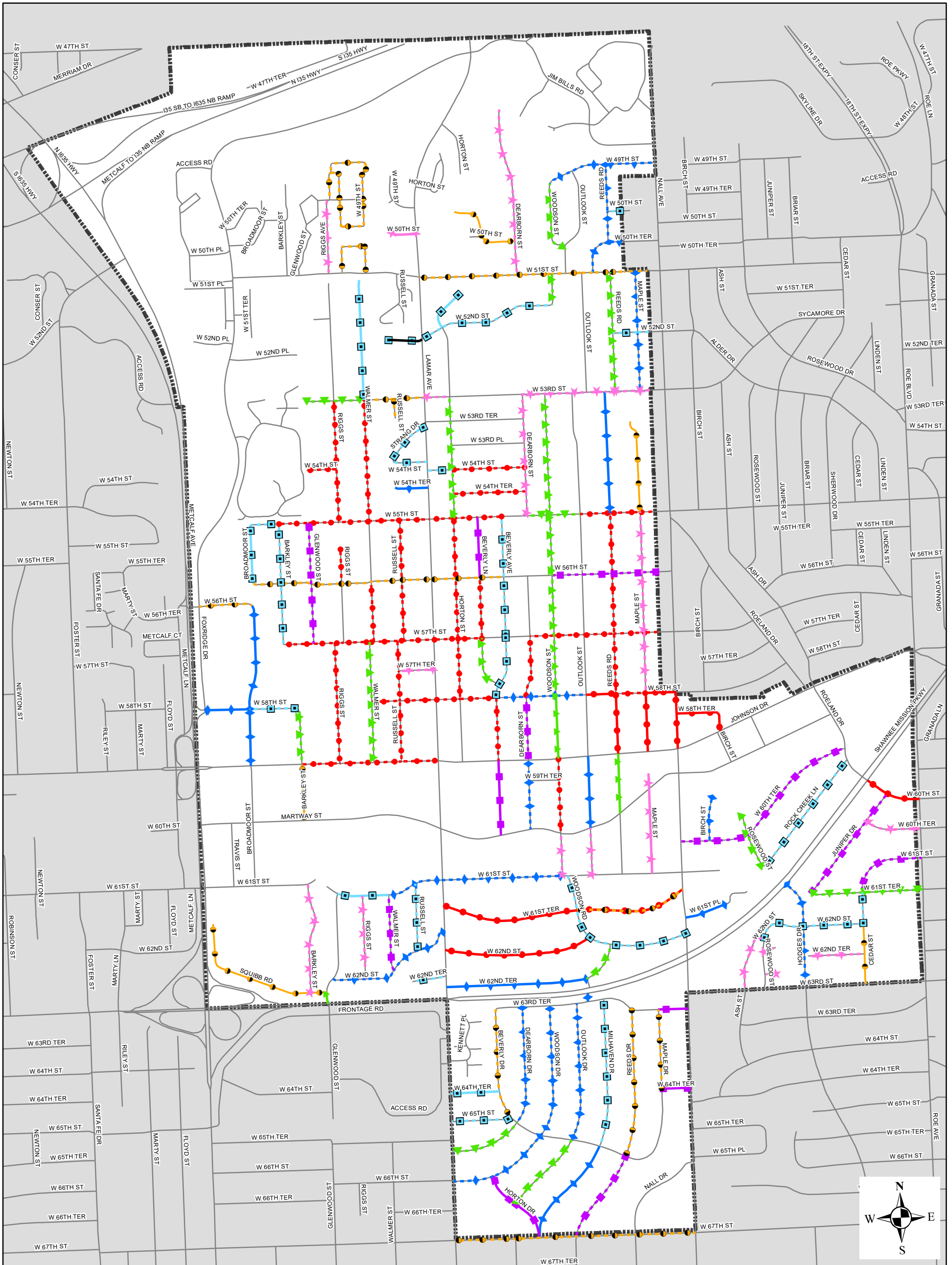
Based on this data, staff will discuss potential budget scenarios needed to incorporate costs for the proposed components of the street preservation program listed above. We will also begin to discuss timing and approach for potential renewal of dedicated sales taxes. Council might be interested to see information on two recent campaigns for neighboring cities:

[City of Merriam Special Streets and Stormwater Sales Tax](#)  
[City of Roeland Park Public Infrastructure Sales Tax](#)

This is provided to highlight different communication approaches and styles as we evaluate our options.

**CFAA CONSIDERATIONS/IMPACTS: NA**

Related Statute/City Ordinance:	N/A
Line Item Code/Description:	N/A
Available Budget:	N/A



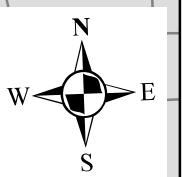
**Legend**

- |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| ●—● 2011, Mill & Overlay | ■—■ 2013, Mill & Overlay | ▲—▲ 2015, Mill & Overlay | ★—★ 2017, Mill & Overlay |
| ●-●-● 2011, Seal         | ■-■-■ 2013, Seal         | ▲-▲-▲ 2015, Chip Seal    | ★-★-★ 2017, Chip Seal    |
| ◆—◆ 2012, Mill & Overlay | ●—● 2014, Mill & Overlay | ■—■ 2016, Mill & Overlay | — 2018, Mill & Overlay   |
| ◆-◆-◆ 2012, Seal         | ●-●-● 2014, Chip Seal    | ■-■-■ 2016, Chip Seal    |                          |

1,000 500 0 1,000 Feet



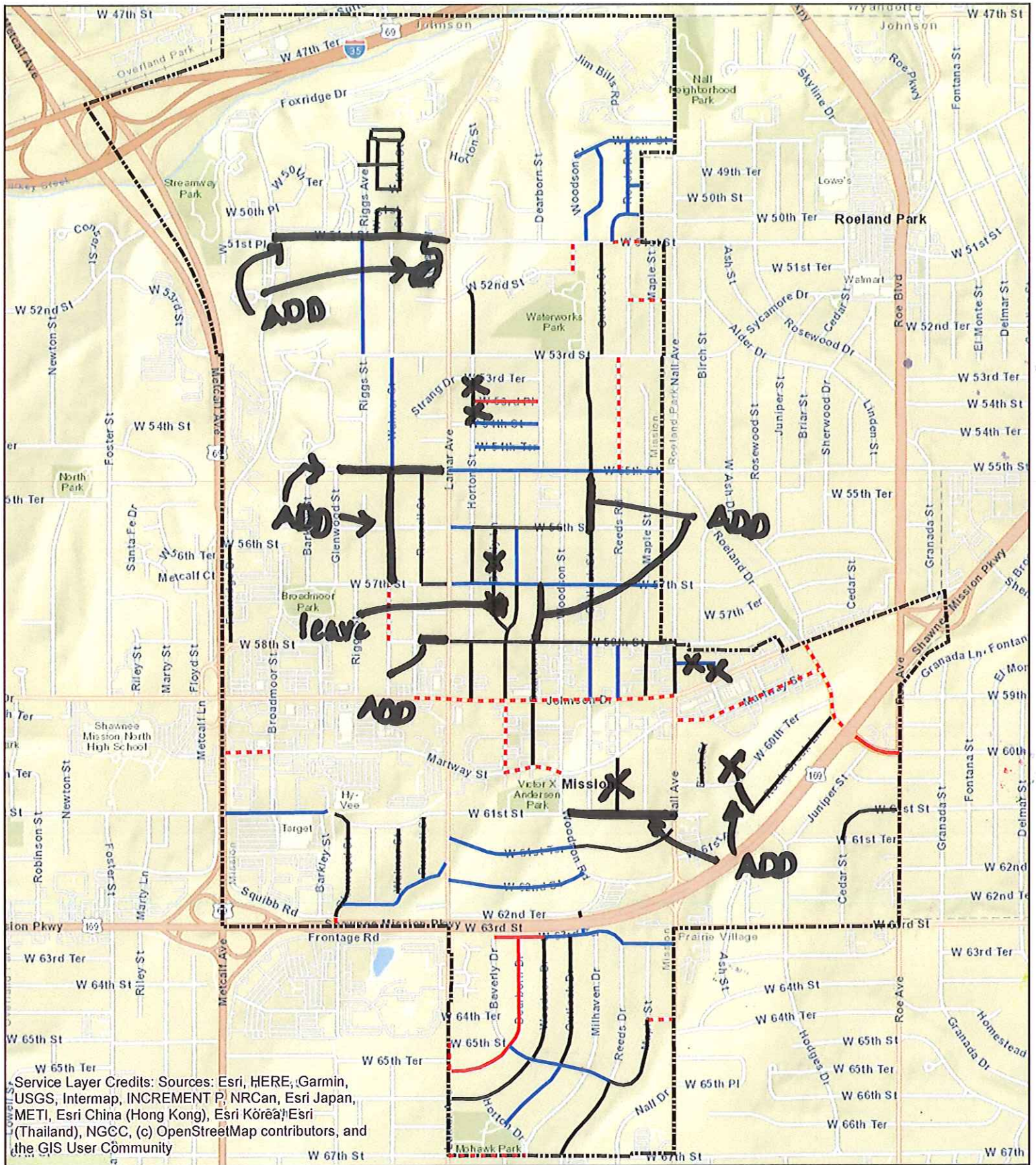
1 inch = 1,000 feet



**Street Program  
Work Completed 2011 - 2018  
Mission, Kansas**



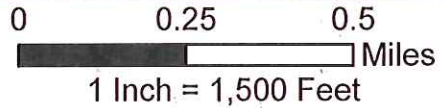




### Legend

- Mission City Boundary
- 2021 Street Reconstruction
- 2021 Crack Seal
- 2022-2025 Street Reconstruction
- 2026-2030 Street Reconstruction

### Mission, Kansas 2021-2030 Street Maintenance Program (DRAFT)





**County Assistance Road System  
Proposed 2021-2030 Program  
Participating City: Mission**

Priority	Project Location	Proposed Start/ Finish	Project Description	CARS Program Funding Request	CARS Participation Eligible		Comprehensive Project Budget Total	Mission Total
					Yes	No		
2021	None							
2022	Johnson Drive (Lamar Ave. to Roe Ave.)	3/21-10/22	The project includes a UBAS surface treatment, spot curb/gutter and ADA ramp repairs and new pavement markings.	\$319,000	\$638,000	\$40,000	\$678,000	285630*
2023	Foxridge Phase II (51st St. to Lamar Ave)	3/23-12/23	Full reconstruction, including new curb/gutter, catch basins, storm sewer, sidewalks, ADA ramps, pavement markings, street signs, installation of a 1,000-1,500 ft. under-drain to catch downhill runoff, and relocation and replacement of the existing signal at Foxridge and Lamar intersection.	\$2,617,500	\$5,235,000	\$835,000	\$6,070,000	\$3,452,500
2024	Roe Ave. (Johnson Dr. to 59th St.)	4/24-10/24	The project includes mill and overlay with 2-inch asphalt concrete surface and pavement markings. Spot replacement of curb and sidewalks and full depth asphalt replacement where necessary.	\$212,000	\$424,000	\$40,000	\$464,000	\$252,000
2024 (NEW)	Roe Ave. (59th St. to 63rd St.)	4/24-10/24	The project includes mill and overlay with 2-inch asphalt concrete surface and pavement markings. Spot replacement of curb and sidewalks and full depth asphalt replacement where necessary. <b>This is a joint project that Fairway will submit as their 2024 CARS project (NEW).</b>				\$113,480	\$113,480
2025	Nall Ave. (Martway St. to 63rd St.)	5/25-10/25	The project includes a UBAS surface treatment, pavement repairs, spot curb, sidewalk, ADA ramp repairs, and new pavement markings.	\$123,500	\$247,000	\$20,000	\$267,000	\$143,500
2025	Nall Ave. (63rd St. to 67th St.)	5/25-10/25	The project includes a UBAS surface treatment, pavement repairs, spot curb, sidewalk, ADA ramp repairs, and new pavement markings. <b>This is a joint project that Prairie Village will submit as their 2025 CARS project (NEW).</b>				\$73,750	\$73,750
2025 (NEW)	63rd St. (Nall Ave. to Roe Ave.)	5/25-10/25	The project includes a UBAS surface treatment, pavement repairs, spot curb, sidewalk, and ADA ramp repairs, new pavement markings, and asphalt base repair as necessary. <b>This is a joint project that Prairie Village will submit as their 2025 CARS project (NEW).</b>	\$329,329	\$658,657	\$44,000	\$702,657	\$373,329

2026 (NEW)	<b>Johnson Dr. (Metcalf St. to Lamar)</b>	3/26-12/26	The project includes full depth pavement replacement and spot replacement of curbs, sidewalks, and ADA ramps. Stormwater infrastructure will be replaced and includes the continuance of the stormwater interceptor completed with the Johnson Dr., Lamar Ave. to Nall Ave. Phase I project. Street lights will also be replaced with this project. (STP funds may be available for this project depending upon eligibility).	\$2,500,000**	\$9,547,742	\$2,043,124	\$11,590,866	\$9,090,866
2027 (NEW)	<b>Martway St. (Woodson St. to Reeds Rd.)</b>	4/27-10/27	The project includes mill and overlay with 2-inch asphalt concrete surface and pavement markings. Spot replacement of curb and sidewalks, stormwater infrastructure, and full depth asphalt replacement where necessary.	\$235,000	\$470,000	\$45,000	\$515,000	\$280,000
2028 (NEW)	<b>51st St. (Lamar Ave. to E. City Limits)</b>	3/28-12/28	The project includes mill and overlay with 2-inch asphalt concrete surface and pavement markings. Spot replacement of curb, sidewalks, driveway aprons, utility pole relocations to meet ADA, tree removal, retaining walls, stormwater infrastructure, traffic signal replacement, and full depth asphalt replacement where necessary.	\$940,018	\$1,880,035	\$165,265	\$2,045,300	\$1,105,283
2029 (NEW)	<b>Roeland Dr. (Shawnee Mission Pkwy. To Johnson Dr.)</b>	4/29-10/29	The project includes mill and overlay with 2-inch asphalt concrete surface and pavement markings. Spot replacement of curb and sidewalks, stormwater infrastructure, and full depth asphalt replacement where necessary.	\$375,688	\$751,375	\$45,000	\$796,375	\$420,688
2030 (NEW)	<b>Lamar Ave. (Shawnee Mission Pkwy. to 67th St.)</b>	4/30-11/30	The project includes a chip seal and pavement markings. Spot replacement of curb and sidewalks, stormwater infrastructure, and full depth asphalt replacement where necessary. This is a joint project with Overland Park.	\$175,020	\$350,040	\$30,000	\$380,040	\$205,020
<b>TOTALS:</b>				<b>\$7,827,055</b>	<b>\$20,201,849</b>	<b>\$3,307,389</b>	<b>\$23,696,468</b>	<b>\$15,796,046</b>
Note:								

\*=This cost may be revised depending upon Johnson Dr. reconfiguration.

\*\*=This is an estimate. Johnson County CARS may provide more funding than estimated.

# Street Preservation Program Update Mission, Kansas

**Celia J. Duran, P.E.**  
**Public Works Director**

**Laura Smith**  
**City Administrator**

**October 28, 2020**





# October 28, 2020 – Work Session Agenda

- Recap of September presentation
- Revised 10-Year Scenario and Stormwater Development
- 10 Year CARS (arterial) Program
- Planning for 2021-2022 Projects
- Financing Considerations
- Next Steps/Next Work Session





# Recap of Current Street Network and Street Conditions

- City Maintained Streets:

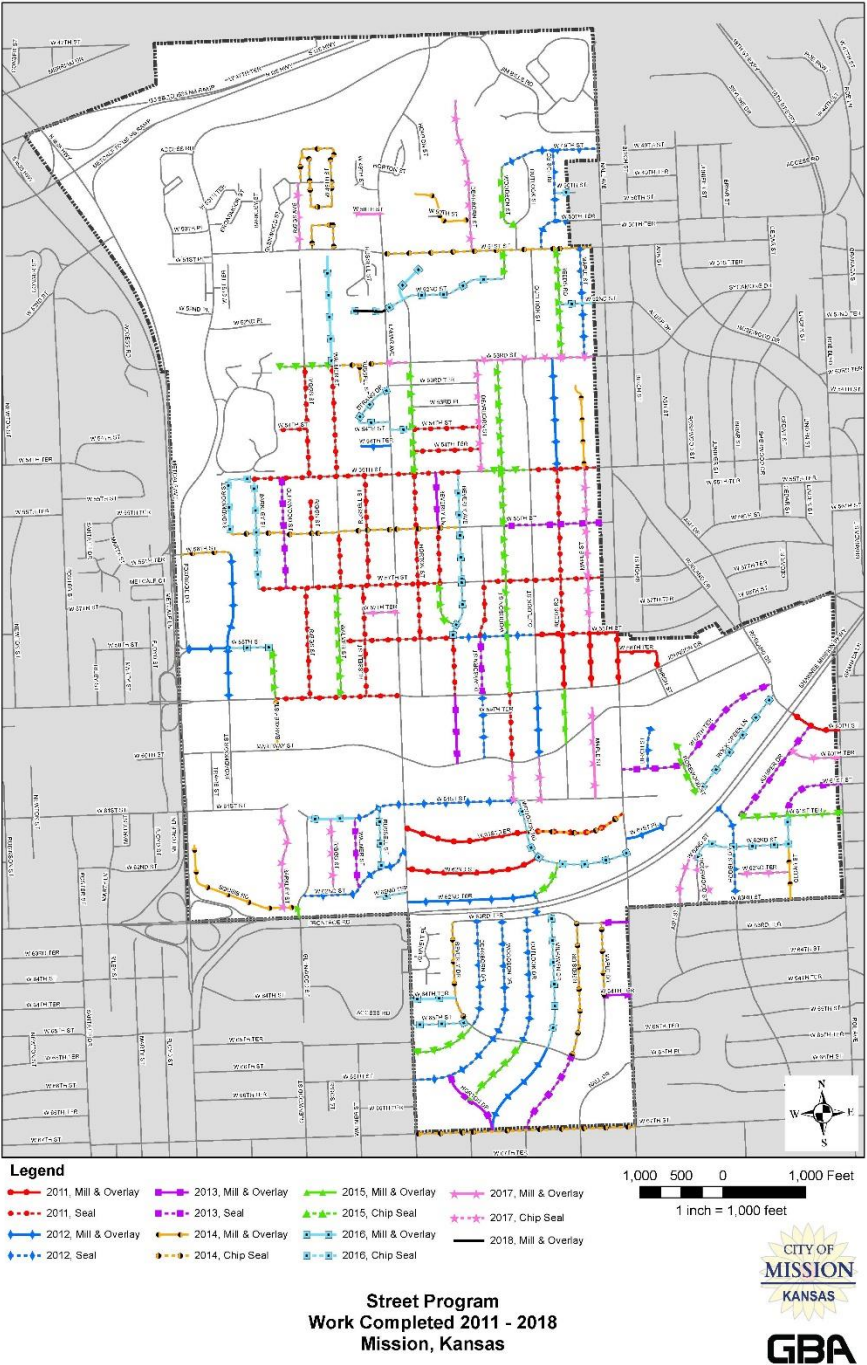
- Approx. 89.3 lane miles
- Arterials= 19.9 lane miles
- Collectors=12.1 lane miles
- Local= 57.3 lane miles





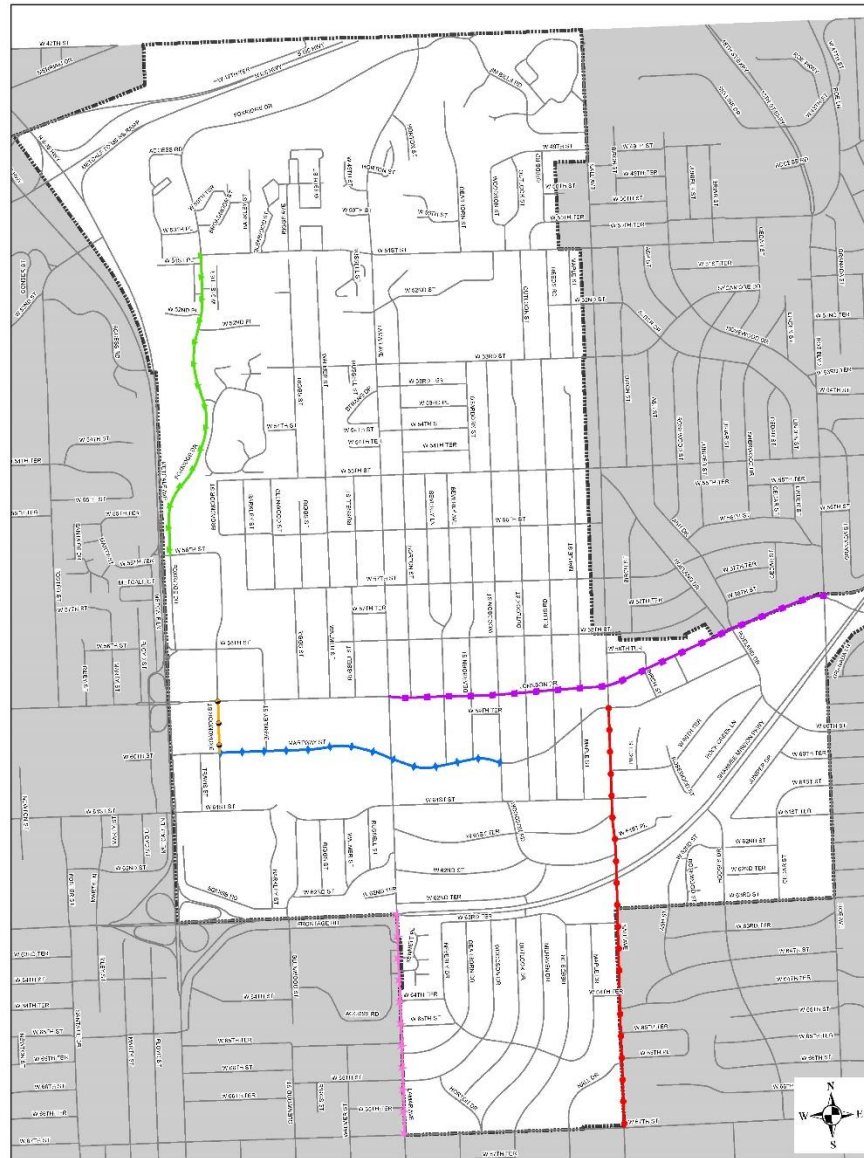
# Residential Streets Maintenance 2011-2018

- Goal was to touch the majority of residential streets throughout the City.
- Focused on seal treatments to prevent water infiltration and extend pavement life.
- Completed mill and overlay which improved structural integrity.
- Core sampling identified approximately ¾ of streets required full depth reconstruction



# CARS Projects 2011-2020

- Johnson Drive Project totaled more than \$10.6 million dollars
- Replaced/added stormwater
- Added or upgraded street lights



CARS Program 2011 - 2020  
Mission, Kansas

1,000 500 0 1,000 Feet  
1 inch = 1,000 feet

**Legend**

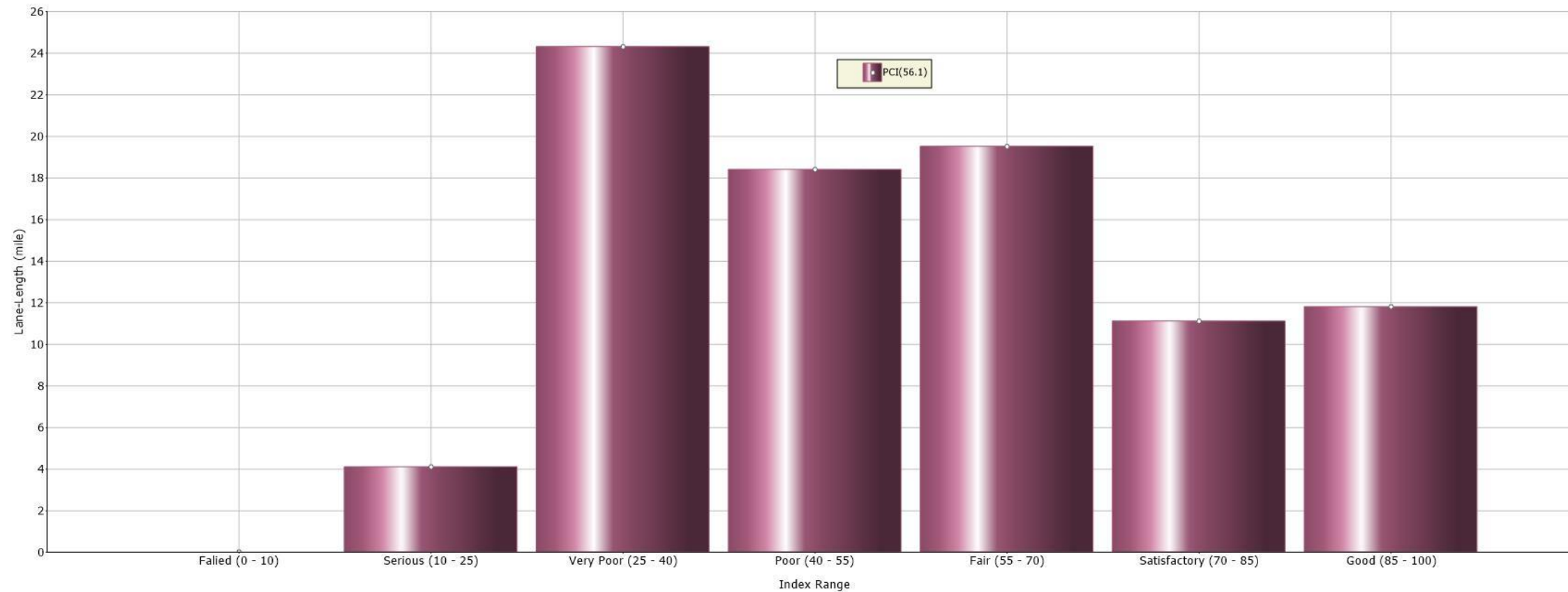
- Nall Ave - Martway St. to 67th St. (Joint Project with Prairie Village) (2011)
- Martway St - Broadmoor St. to Woodson St. (2013)
- Johnson Dr. - Lamar Ave. to Roe Ave. (2014)
- Foxridge Dr. - 51st St. to 56th St. (2017)
- Lamar Ave. - Shawnee Mission Pkwy to 67th St. (Joint Project with Overland Park) (2018)
- Broadmoor St. - Johnson Dr. to Martway St. (2019)





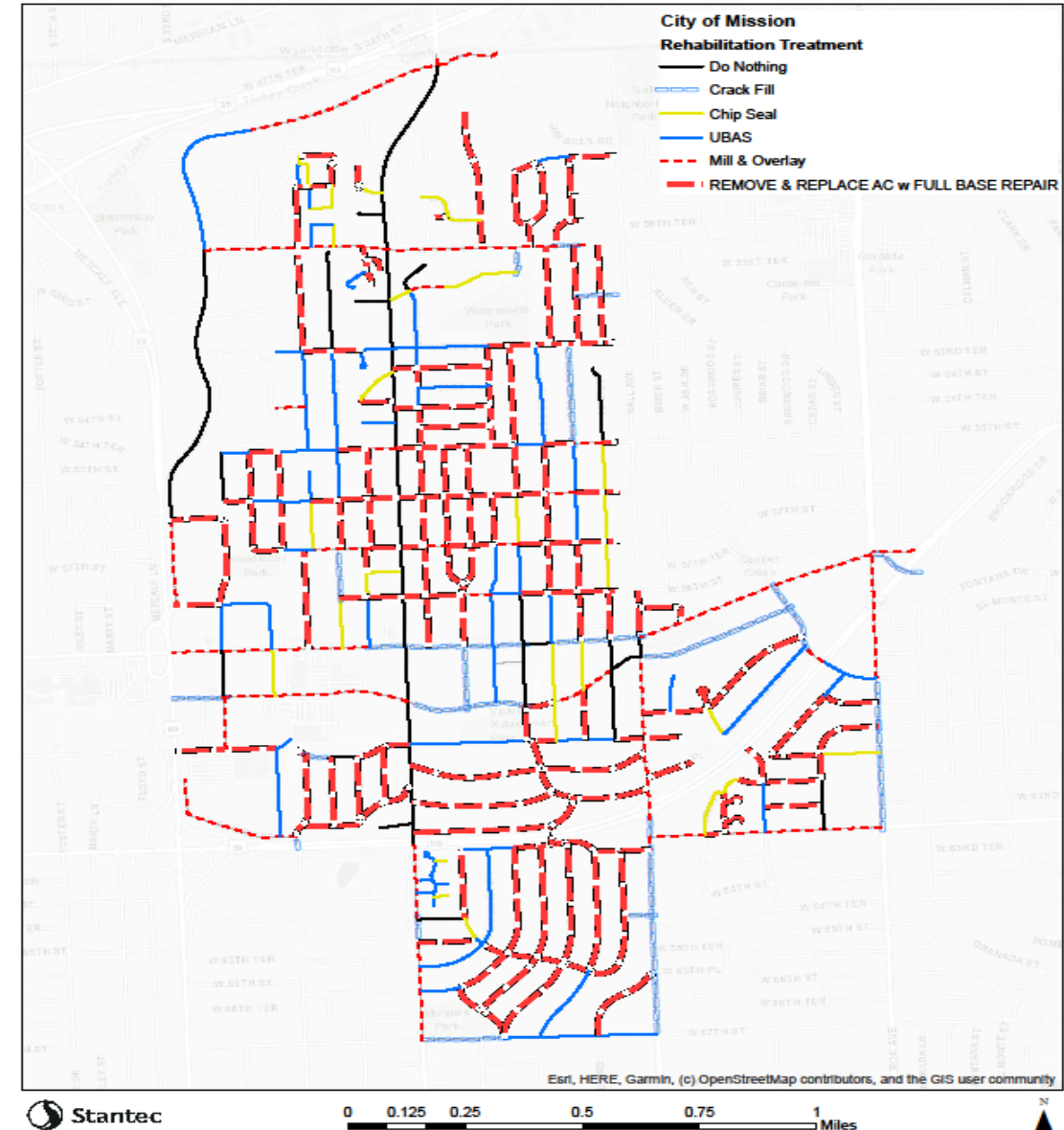
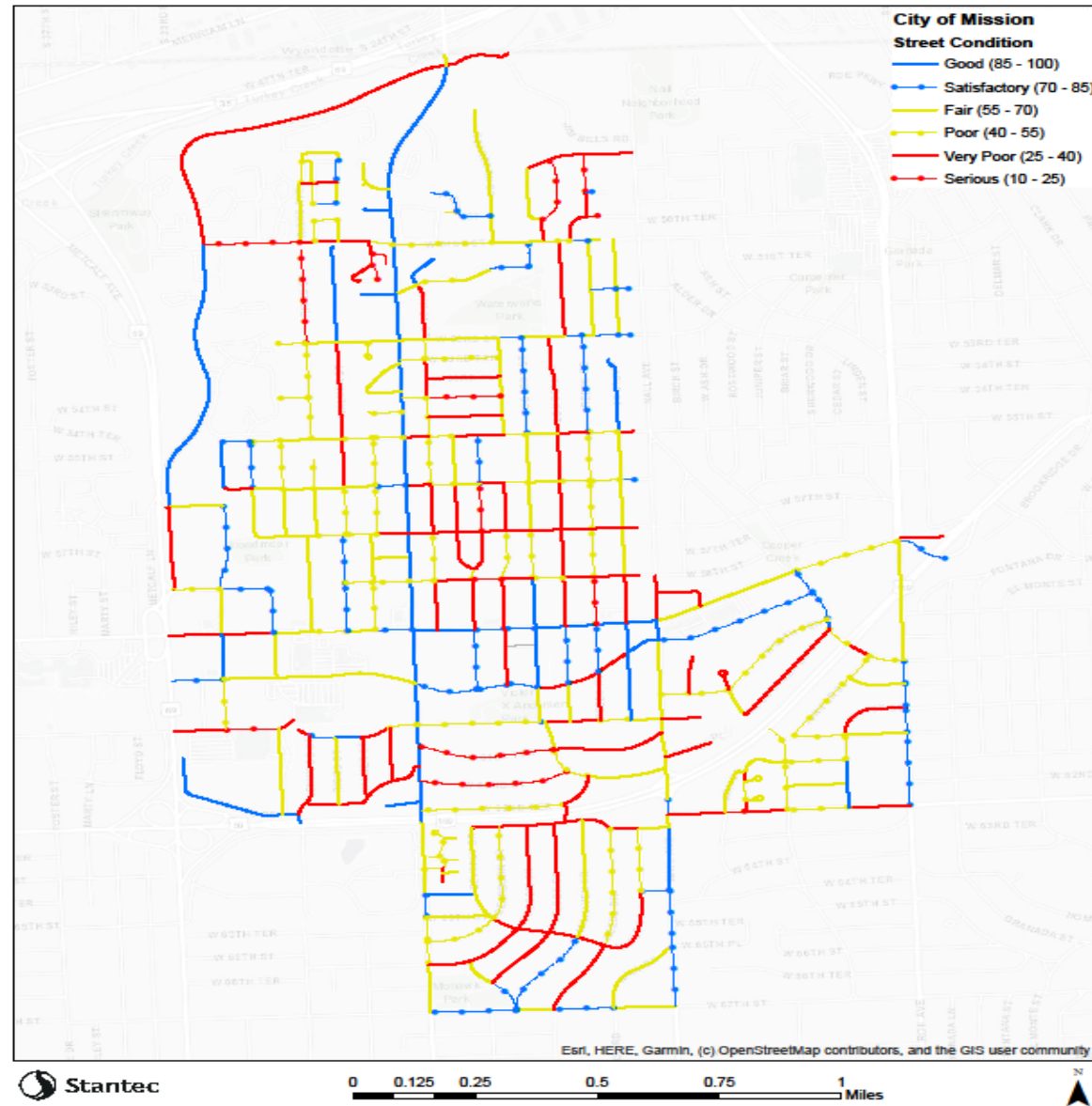
# What Condition Is Our Network In? (Overall PCI=56.1)

Network Present Status Distribution – 2020  
Mission Streets



PCI Range	Failed (0 - 10)	Serious (10 - 25)	Very Poor (25 - 40)	Poor (40 - 55)	Fair (55 - 70)	Satisfactory (70 - 85)	Good (85 - 100)	Total
Sections	0	16	125	94	102	54	54	445
Lane-Length (mile)	0	4.1	24.3	18.4	19.5	11.1	11.8	89.2
Lane-Length %	0	4.6	27.2	20.6	21.9	12.4	13.2	100
Area (yd^2)	0	27127.2	174121.8	127495.7	154213.4	88491.9	99430.3	670880.3
Area %	0	4	26	19	23	13.2	14.8	100

# PCI Condition and Recommended Treatments



# CURRENT ESTIMATED STREET REPAIR COSTS CITY-WIDE

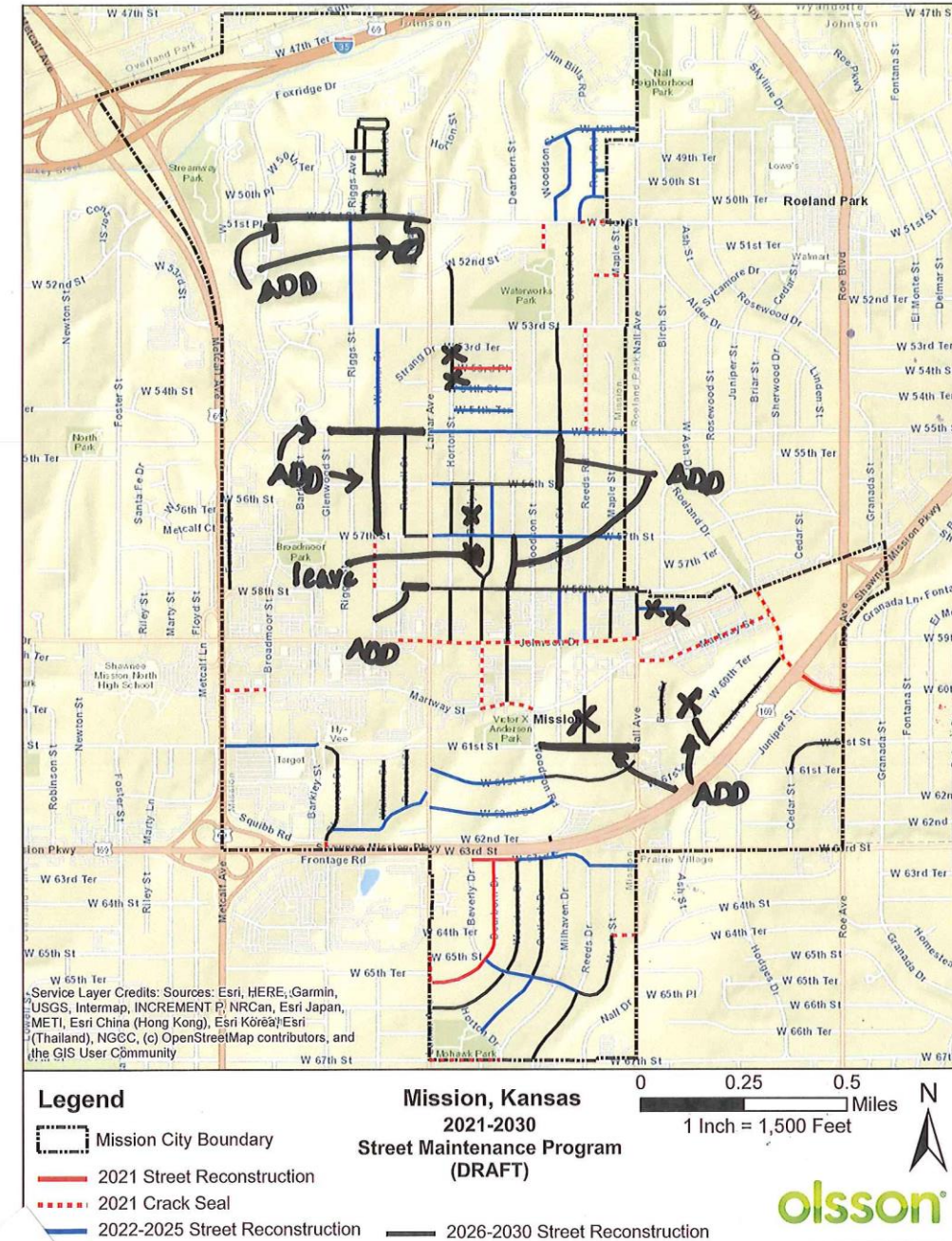
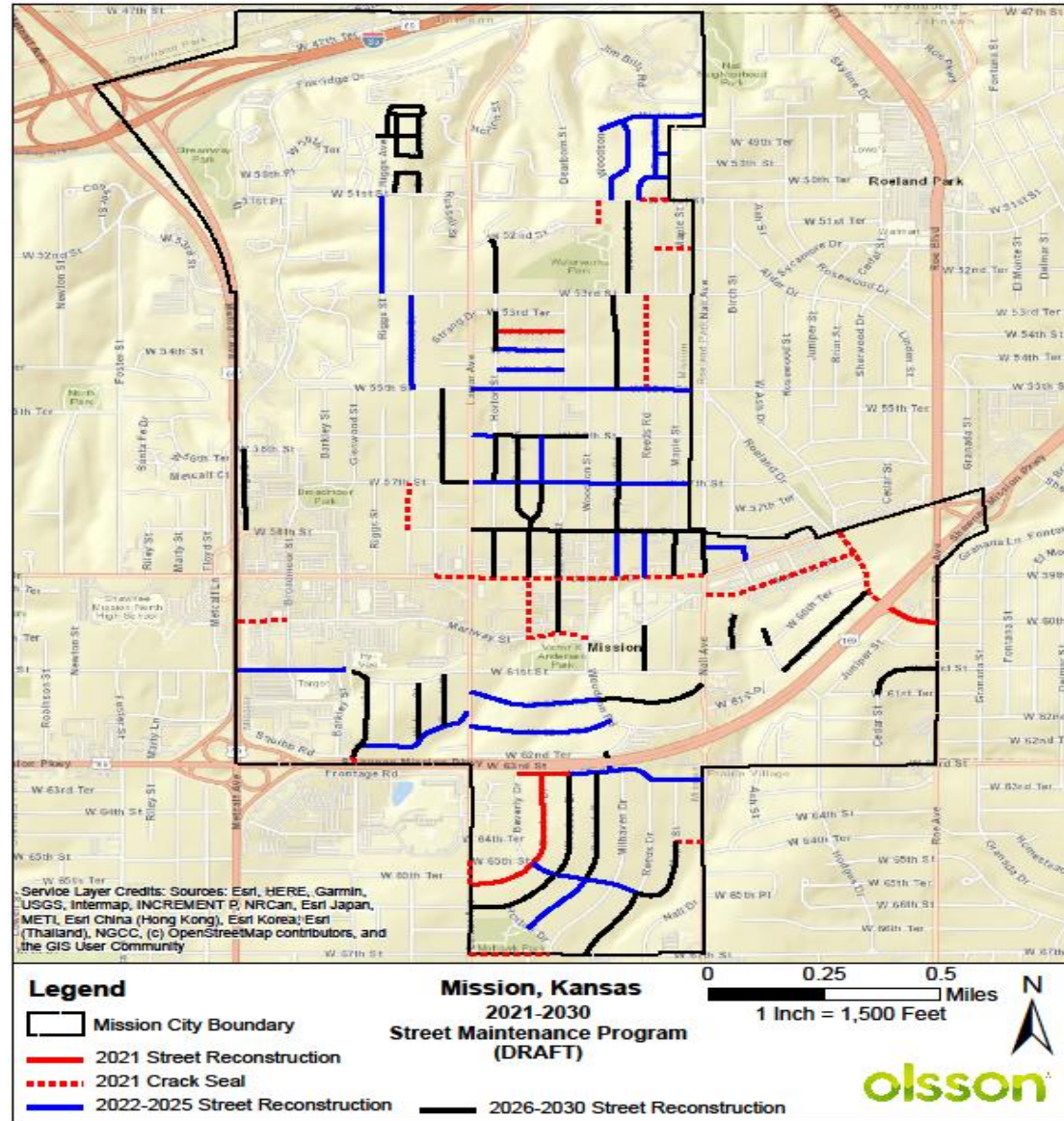
Treatment	Treatment Costs	Curb Repair Cost	Sidewalk Repair Cost	Ramp Replacement Cost
Do Nothing	\$ - )	\$ 683,300.00	\$ 13,380.00	\$ 148,500.00
Crack Fill	\$ - )	\$ 452,650.00	\$ 15,498.00	\$ 276,000.00
Chip Seal	\$ 28,507.00	\$ 90,250.00	\$ 2,544.00	\$ 19,500.00
Chip Seal w up to 5% Base Repair	\$ 26,438.00	\$ 37,150.00	\$ 486.00	\$ 9,000.00
Chip Seal w up to 10% Base Repair	\$ 174,943.00	\$ 200,950.00	\$ 978.00	\$ 15,000.00
Chip Seal w up to 33% Base Repair	\$ 113,468.00	\$ 46,900.00	\$ 681.00	\$ 4,500.00
Chip Seal Subtotal	\$ 343,356.00			
UBAS	\$ 53,086.00	\$ 38,550.00	\$ 933.00	\$ 15,000.00
UBAS w up to 5% Base Repair	\$ 72,316.00	\$ 88,000.00	\$ 1,641.00	\$ 15,000.00
UBAS w up to 10% Base Repair	\$ 404,864.00	\$ 302,450.00	\$ 4,830.00	\$ 40,500.00
UBAS w up to 20% Base Repair	\$ 545,542.00	\$ 291,000.00	\$ 2,658.00	\$ 16,500.00
UBAS w up to 33% Base Repair	\$ 1,011,835.00	\$ 471,150.00	\$ 2,547.00	\$ 10,500.00
UBAS w up to 50% Base Repair	\$ 322,942.00	\$ 98,150.00	\$ 852.00	\$ 28,500.00
UBAS Subtotal	\$ 2,410,585.00			
MILL 2 in. & 2 in. OVERLAY	\$ 1,231,051.00	\$ 424,450.00	\$ 8,673.00	\$ 183,000.00
MILL 2 in. & 2 in. OL w up to 5% Base Repair	\$ 564,603.00	\$ 152,300.00	\$ 2,568.00	\$ 28,500.00
MILL 2 in. & 2 in. OL w up to 10% Base Repair	\$ 568,202.00	\$ 144,350.00	\$ 4,647.00	\$ 33,000.00
MILL 2 in. & 2 in. OL w up to 20% Base Repair	\$ 297,833.00	\$ 80,000.00	\$ 1,725.00	\$ 25,500.00
MILL 2 in. & 2 in. OL w up to 33% Base Repair	\$ 437,725.00	\$ 73,550.00	\$ 1,638.00	\$ 34,500.00
MILL 2 in & 2 in OL w up to 50% Base Repair	\$ 265,890.00	\$ 78,800.00	\$ 1,038.00	\$ 10,500.00
Mill and Overlay Subtotal	\$ 3,365,304.00			
REMOVE & REPLACE AC w FULL BASE REPAIR	\$ 21,559,156.00	\$ 6,615,755.00	\$ 13,698.00	\$ 151,500.00
TOTAL	\$ 27,678,401.00	\$ 10,369,705.00	\$ 81,015.00	\$ 1,065,000.00
<b>GRAND TOTAL</b>	<b>\$ 39,194,121</b>			

# Potential 10-Year Scenarios

- “Cost/Benefit” Program-Generated Scenario
  - Program selects streets based on cost/benefit analysis resulting in higher overall network PCI
  - Selects longer road segments, higher traffic volume roads, less expensive treatments
  - If arterials completed first, Mission can’t take advantage of annual CARs funding
- \$2 MIL Local Street Scenario
  - Approximately  $\frac{3}{4}$  of Mission streets have insufficient asphalt depth and require base repair (need to bring back up to baseline)
  - Focuses on repair of local streets with low PCIs for first 10 years
  - Less streets touched at first, but “fixes it right” so less costly maintenance over time
  - Results in lower increase in overall network PCI over 10 years vs. “cost/benefit” approach, but begins to address backlog
  - Potentially aligns with resident perceptions/expectations
  - Arterials funded separately

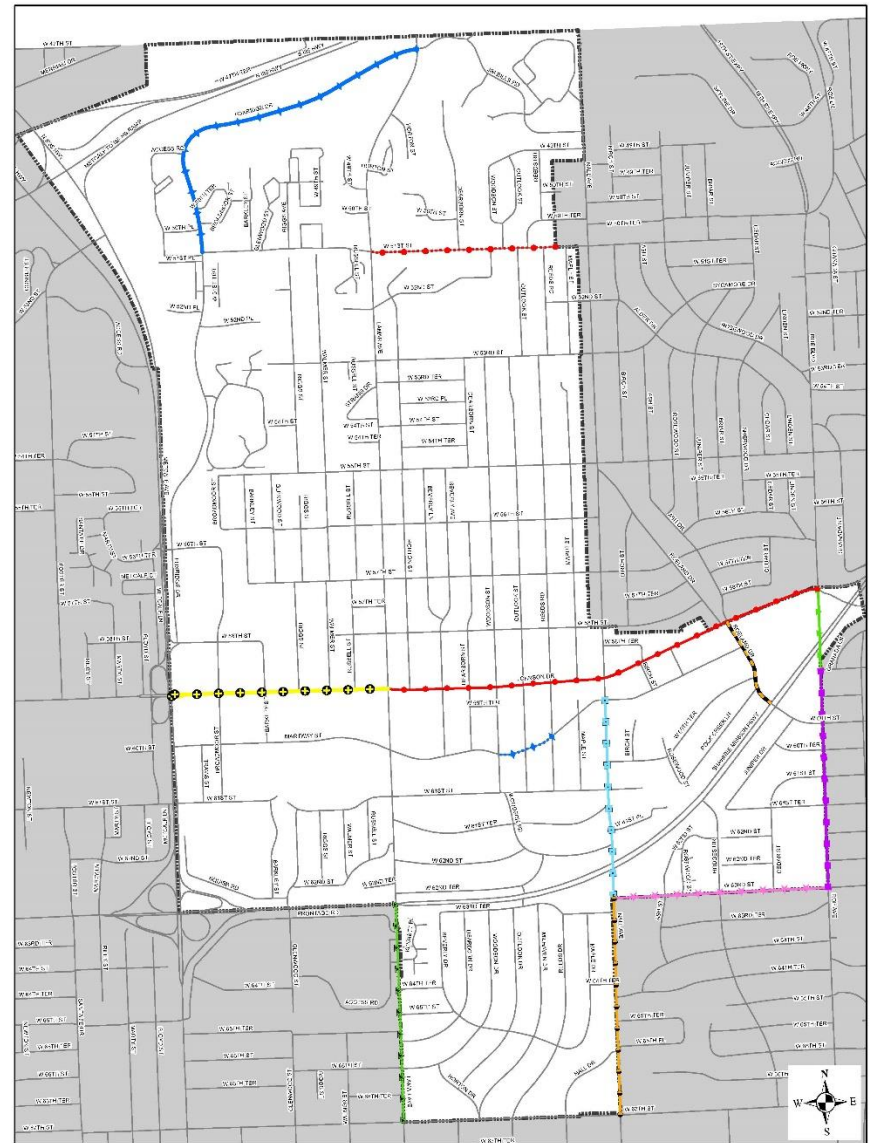


# Recommended 10 Year Residential Program





# Recommended 10 Year CARS Program



Proposed CARS Program 2021 - 2030  
Mission, Kansas  
1,000 500 0 1,000 Feet  
1 inch = 1,000 feet

- Legend**
- Johnson Dr. - Lamar Ave. to Roe Ave. (2022)
  - Foxridge Dr. Phase II - 51st St. to Lamar Ave. (2023)
  - Roe Ave. - 59th St. to 63rd St. (Joint Project with Fairway) (2024)
  - Roe Ave. - Johnson Dr. to 59th St. (2024)
  - 63rd St. - Nail Ave. to Roe Ave. (Joint Project with Prairie Village) (2025)
  - Nail Ave. - 63rd St. to 67th St. (Joint Project with Prairie Village) (2025)
  - Nail Ave. - Martway St. to 63rd St. (2025)
  - Johnson Dr. - Metcalf Ave. to Lamar Ave. (2026)
  - Martway St. - Woodson St. to Reeds Rd. (2027)
  - 51st St. - Lamar Ave. to E. City Limits (2028)
  - Roeland Dr. - Shawnee Mission Pkwy. to Johnson Dr. (2029)
  - Lamar Ave. - Shawnee Mission Pkwy. to 67th St. (Joint Project with Overland Park) (2030)



# Storm Sewer Cost Analysis 2021 – 2022 Projects



### Summary of Costs Street Repair Program - Storm Sewer Analysis Mission, KS



Street Repair Year	Opinion of Probable Cost				Year Total
	Replace 5-rated (Immediate Repair)	Replace 4-rated (Poor)	Replace 3-rated (Fair)	Add Proposed (Minimal Improvement)	
2021	\$11,675	\$79,200	\$93,955	\$0	\$184,830
2022	\$14,700	\$84,500	\$224,195	\$275,810	\$599,205
<b>Totals</b>	<b>\$26,375</b>	<b>\$163,700</b>	<b>\$318,150</b>	<b>\$275,810</b>	<b>\$784,035</b>

**Notes:**

- 1 Estimates are for construction costs only and do not include a contingency.
- 2 Estimates include costs for "Hard Surface Restoration" including street repair and replacement of driveways and curbs. Other surface restoration such as sod/seed is not included.

# Budget and Financing

- Create separate funding/program for arterials
  - \$20 million in residential (10 yrs)
  - \$20 million in CARS (10 yrs)
  - Doesn't account for major reconstruction of Jo Drive (Lamar to Metcalf)
- Evaluate funding scenarios – revenue generation and debt financing options to accomplish goals and objectives





# Budget and Financing

• Current Revenues Available for Streets	
• 7 GF mills dedicated to streets	\$1,100,000
• ¼-cent sales tax dedicated to streets	\$ 580,000
• Special Highway Allocation (gas tax)	<u>\$ 225,000</u>
Total Available	\$1,905,000

What can we accomplish with current revenues?

# Budget and Financing

Current Sales Tax rate in Mission	(%)
State of Kansas	6.5
Johnson County	1.475
City of Mission	
General	1.00
Streets (3/31/22)	0.25
Parks & Recreation (3/31/23)	<u>0.375</u>
<b>Total</b>	<b>9.6%*</b>

\*In the Mission Crossing, Cornerstone Commons and Gateway Projects an additional 1% is levied through Community Improvement Districts (CIDs)

# Budget and Financing

## Sales Tax Considerations

Statutory Capacity (3%) – KSA 12-187 *et seq.* and 12-189

- Up to 2% for “general purposes”
- Up to 1% for “special” purposes

Sales Taxes are paid by both Mission residents and those purchasing goods and services in our City. The current estimated “pull factor” or the amount of sales tax generated by non-residents is 43%.

# Budget and Financing

## Sales Tax Renewal Options

- Mail ballot
- Timed with other scheduled election

## General steps to put a question on the ballot include

- Adopting a resolution calling the election
- Publishing notice of the election
- Voter approval on election date
- Passing an ordinance levying the sales tax
- Sending proceedings to KDOR to begin levying the sales tax (quarter before effective)



Last date to renew street sales tax to have no lapse in collection would be December 2021

Can increase or decrease current rate for either sales tax (remaining capacity is 3/8-cent)

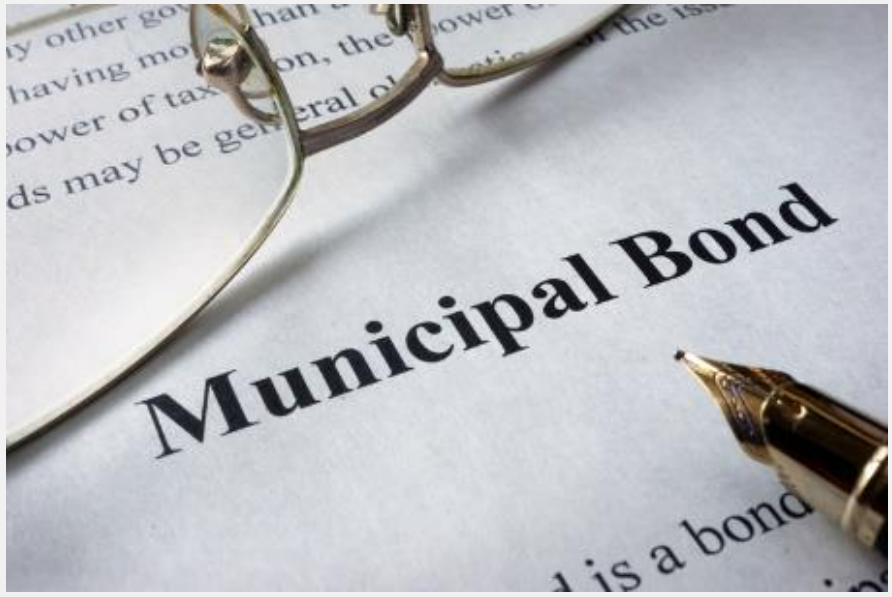


# Budget and Financing - Bonding Scenarios

**City of Mission, Kansas**  
**Preliminary Estimates of Street Program Funding Capacity**  
**Prepared by Ehlers - October 27, 2020**

Annual Sales Tax Revenue Available for Debt Service	Bond Term		
	20 Years	15 Years	10 Years
1,000,000	15,700,000	12,700,000	9,100,000
750,000	11,775,000	9,525,000	6,825,000
500,000	7,850,000	6,350,000	4,550,000

Figures in green portion are estimated proceeds of GO Bonds structured with the corresponding sales tax revenue (yellow) and bond term (blue) parameters.



Debt issued for streets would count toward the City's statutory debt limit.

# Next Steps

- Continue to refine and develop street priorities for 10-year program
- Refine and develop budget and financing options and scenarios
- Discuss and develop public education and input process, including questions to be tested through DirectionFinder Survey
- Develop specific timeline and preferred method for renewal of sales tax(es)
- Next work session/presentation in December

Questions/Disscussion?

