

# KCStat

[kcstat.kcmo.org](http://kcstat.kcmo.org)

March 6, 2018

#KCStat

## Transportation and Infrastructure



# Transportation and Infrastructure

To improve the City's physical infrastructure with special attention to streets, curbs, sidewalks, and water/sewer systems, and strengthen the multi-modal transportation system in ways that enhance connectivity among neighborhoods, business centers, and cultural/health/recreational destinations. 2

# How To Get There: City Objectives and Strategies For Transportation and Infrastructure

1. Enhance the City's connectivity through a safe, efficient, convenient, and sustainable multi-modal transportation system.
  - a) Seek and implement Smart City opportunities and operationalize technologies. (Office of Innovation)
  - b) Optimize the City's transit investment, through existing and new transit service such as the streetcar, RideKC activities, MAX bus services, and others through routes, north-south and east-west. (Public Works)
  - c) Develop a plan to enhance pedestrian connectivity through sidewalk repair, replacement, and gap removal, in conjunction with GO KC bond funding. (Public Works)
  - d) Update and implement the Bike KC Trails Plan. (Office of the City Manager)

# How To Get There: City Objectives and Strategies For Transportation and Infrastructure

2. Develop environmentally sound and sustainable infrastructure strategies.
  - a) Develop a citywide climate and man-made resiliency plan to safeguard and restore critical City buildings and infrastructure. (Office of Environmental Quality)
  - b) Update and implement the City's Climate Protection Plan to include Envision Sustainable practices, the Envision Sustainable Infrastructure Rating System, and other measures. (Office of Environmental Quality)
  - c) Identify and invest in greenfield areas that capitalize on natural features, promote unique development patterns, build civic space, and promote sustainable design and construction. (City Planning and Development)
  - d) Reduce financial impacts of the City's Smart Sewer Program by proactively working with EPA to adjust the timeline for project completion and proposing additional green infrastructure solutions. (Office of the City Manager)
  - e) Implement the City's Smart Sewer Program to meet the City's federal consent decree requirements. (Office of the City Manager)

# How To Get There: City Objectives and Strategies For Transportation and Infrastructure

3. Engage in efforts to strategically invest in the City's infrastructure.
  - a) Develop an infrastructure asset management plan that maximizes the useful life of all assets and meets federal requirements. (Public Works)
  - b) Implement a plan to expand the public art program to a broader category of assets, with the inclusion of the maintenance of those efforts. (General Services)
  - c) Implement the City's Americans with Disabilities Act (ADA) plan to meet the Department of Justice's settlement agreement and ensure that all projects meet ADA standards. (Office of the City Manager)

# How To Get There: City Objectives and Strategies For Transportation and Infrastructure

4. Increase and support local workforce development and minority, women, and locally-owned businesses.
  - a) Utilize advertisements, the Annual Capital Improvement Overview, and City-sponsored learning opportunities to increase awareness and response to City-issued Requests for Qualifications/Proposals (RFQ/Ps). (Human Relations)
  - b) Update and implement Workforce Strategic Plans on all City and statutory agencies' projects. (Human Relations)
  - c) Develop and implement Community Benefit Agreements and local preference plans for use in City and statutory agency projects. (Human Relations)

# Transportation and Infrastructure Metrics

Measures of Success	FY16 Actual	FY17 Target	FY17 Actual	FY18 Target
Percent of curbs ramped to street surface	--	--	90%	92%
Percent of bridges rated good or excellent (Bridge Condition Rating)	80%	70%	80%	80%
Percent of payments for construction contracts that the City awards annually to minority and/or women-owned (MWBE) businesses	25%	22%	30%	22%
Percent of payments for professional services contracts that the City awards annually to minority and/or women-owned (MWBE) businesses	26%	21%	28%	21%
Greenhouse gas emissions from municipal operations (Thousand MT CO <sub>2</sub> e) per calendar year	287	292	TBD	286

# Transportation and Infrastructure Resident Satisfaction Metrics

Measures of Success	FY16 Actual	FY17 Target	FY17 Actual	FY18 Target
Percent of residents satisfied with condition of sidewalks in YOUR neighborhood	33%	--	33%	35%
Percent of residents satisfied with overall quality of public transportation	39%	43%	44%	43%
Percent of residents satisfied with on-street bicycle infrastructure	28%	--	28%	30%
Percent of residents satisfied with the City's stormwater runoff/stormwater management system	39%	--	39%	41%
Percent of citizens satisfied with the maintenance of city streets, sidewalks, and infrastructure	26%	32%	25%	32%

# Objective 1:

Enhance the City's connectivity through a safe, efficient, convenient, and sustainable multi-modal transportation system.

# Strategy A

Seek and implement Smart City opportunities and operationalize technologies.  
(Office of Innovation)

# National Recognition for Phase I

- 2018 “Smart 50 Award” at Smart City Connect
- 2017 Edison Awards: Gold Award (Collective Disruption)
- 2017 American Public Works Association : Technical Innovation Award
- Amazon Web Services: City on a Cloud Challenge
- 2017/2018 NIST Supercluster (City Platform) Selection
- 2016 US Ignite Flame Award
- 2017 Envision America Selection
- 2016/2017 Harvard Smart City Accelerator Selection

# Smart City RFP

- **Public/Private Partnership Opportunity**
  - 10-30 Year Partnership
  - City provided access / connectivity
- **Expand Smart City Infrastructure**
  - Prospect MAX Support
  - Streetcar Expansion Support
  - Water Mesh Connectivity
- **Long-term analytics support**
- **IDC Selected to support RFP process**
- **Spring 2018**

# Data Analytics Use Cases Schedule

## March

- New Data Interface Release
- Refinement to Crime Prediction
- Update to City Directors

## April

- Public Health
- Economic Analysis

## May

- Education Analysis

# The Avis Mobility Lab

## **Public/Private Partnership Opportunity**

- Proposed by Avis, Nov 2017
- Occurring with/without KCMO

## **Data / Content Exchange**

- Traffic/Parking/Construction
- Local Media / Ad Content
- Existent Agreements

## **March Highlights**

# Parks Smart Benches Pilot with Soofa

Parks will be piloting benches that are solar powered phone charging, pedestrian activity monitoring, cloud-connected outdoor furniture. Bench features:

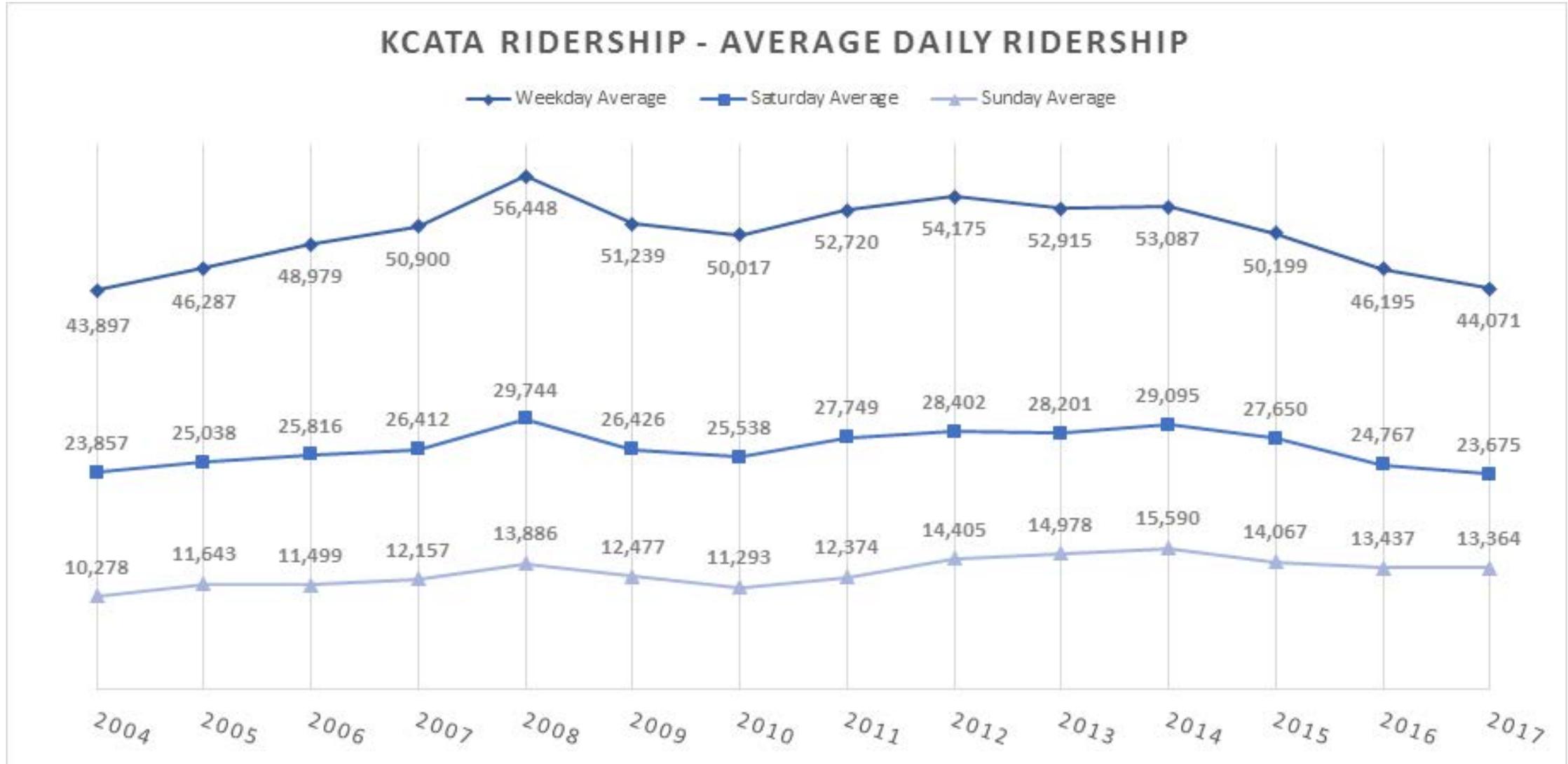
- Promote events and community happenings on the signs, particularly relevant for seniors who may not follow social media announcements or email blasts.
- Measure amenity use with sensors and compare across periods of time, seasons, and across special events.
- Measure “connectedness” of the park, i.e. do people come for a singular purpose or do we see the same people utilize multiple locations in during each trip?
- Analyze pedestrian activity in the form of hourly + daily people counts, dwell times, routes of pedestrian travel, and repeat visitors versus new visitors.



# Strategy B

Optimize the City's transit investment, through existing and new transit service such as the streetcar, RideKC activities, MAX bus services, and others through routes, north-south and east-west.  
(Public Works)

# RideKC Ridership





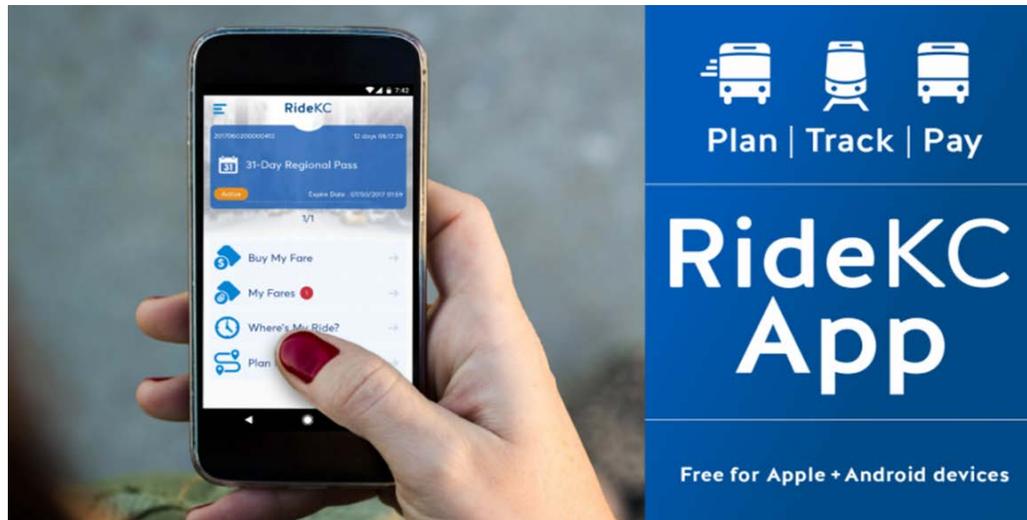
# Integrating services to foster mobility.....

## RideKC FREEDOM



- On-Demand Service Option
- 30,000 + Trips in first 6 months
- Paratransit and General Public
- Approx. 30% savings per trip

# Innovations



- More than 10,000 downloads since July
- More than 100,000 boardings
- More than \$100,000 passes purchased

# Veterans Transportation



- Free bus passes
- Partnership with Veterans Community Project and Greater Kansas City Labor Unions/AFL-CIO
- More than 600,000 free trips to veterans since March 2017

# MAX Projects

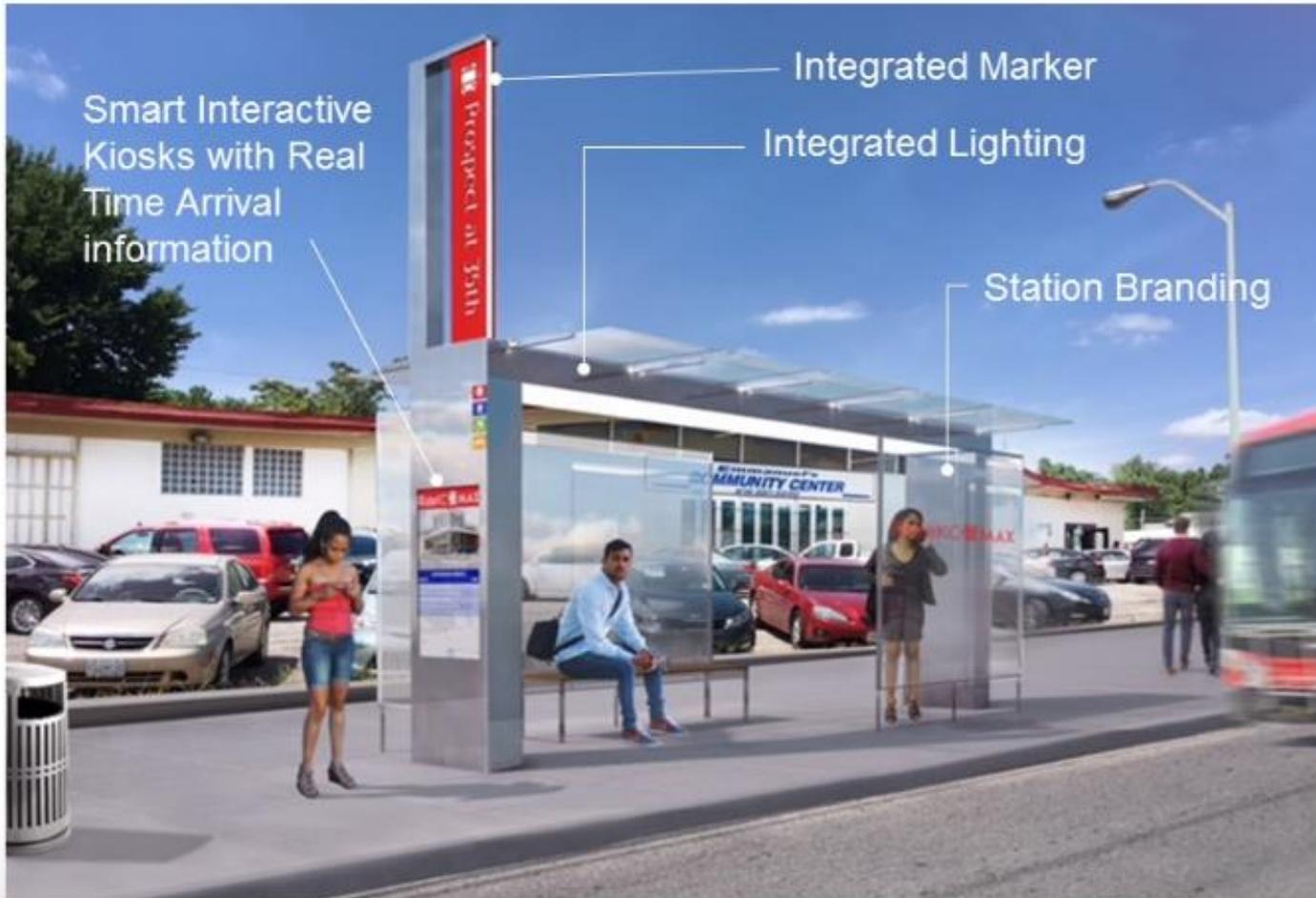
## Main Street MAX

- Shift to Grand Through Downtown (October 1)
- Improve On-Time Performance
- Complement Streetcar on Main Street
- Grand Blvd. Restriping
- Two-year community review process



# MAX Projects

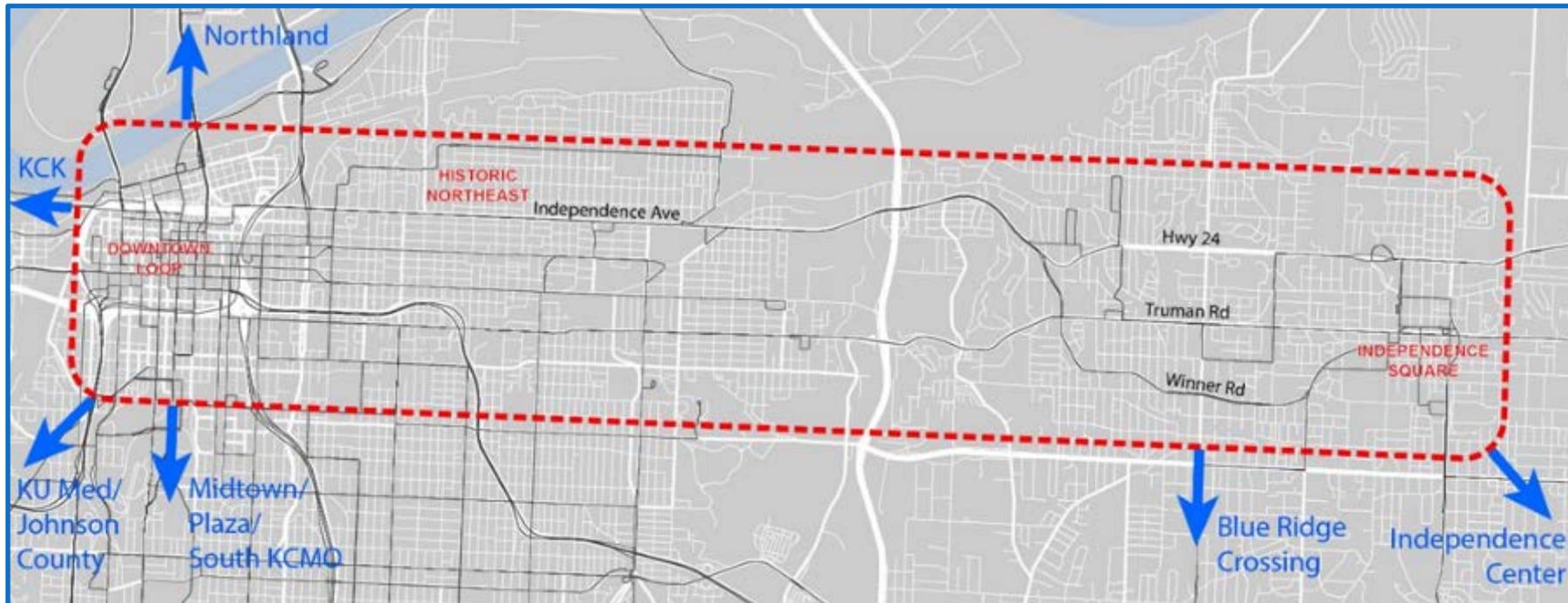
## Prospect MAX



# MAX Projects – Future Corridors

## Independence Ave. and North Oak Corridors

- Independence Ave BRT Study began in January 2018
- North Oak Corridor: Transit Improvement Plan, RFP in Spring 2018



# 3-Trails Transit Center (Bannister & Blue Ridge)



# Other RideKC Initiatives

- 11 Northeast-Westside extension to KU Med (January 2018)
- New Stadiums bus stop (Fall 2017)
- SmartMoves 3.0 Plan Adoption
- Connecting Swope Study
- KCATA involvement in Planning Sustainable Places projects
- Waldo to Martin City service extension, Route 57 (Fall 2017)
- Job Access service to Amazon in KCK, Route 114 (Summer 2017)
- Job Access service from KCMO to Gardner-Edgerton employment center (April 2018)
- New interactive system map
- Bus Stop branding





# KC STREETCAR RIDERSHIP SURVEY

- Conducted by ETC August - October 2017
- In-person surveys conducted on board the Main Street MAX and the KC Streetcar
- The purpose was to understand travel patterns, trip purpose, access modes and general demographics of transit passengers in order to assist with ridership forecasting

**Conclusion:** Each district feeds riders to other districts, connecting key employment and entertainment areas on the route

# WHO IS RIDING THE KC STREETCAR?



**76%**  
**KC METRO  
RESIDENTS**



**24%**  
**VISITORS**

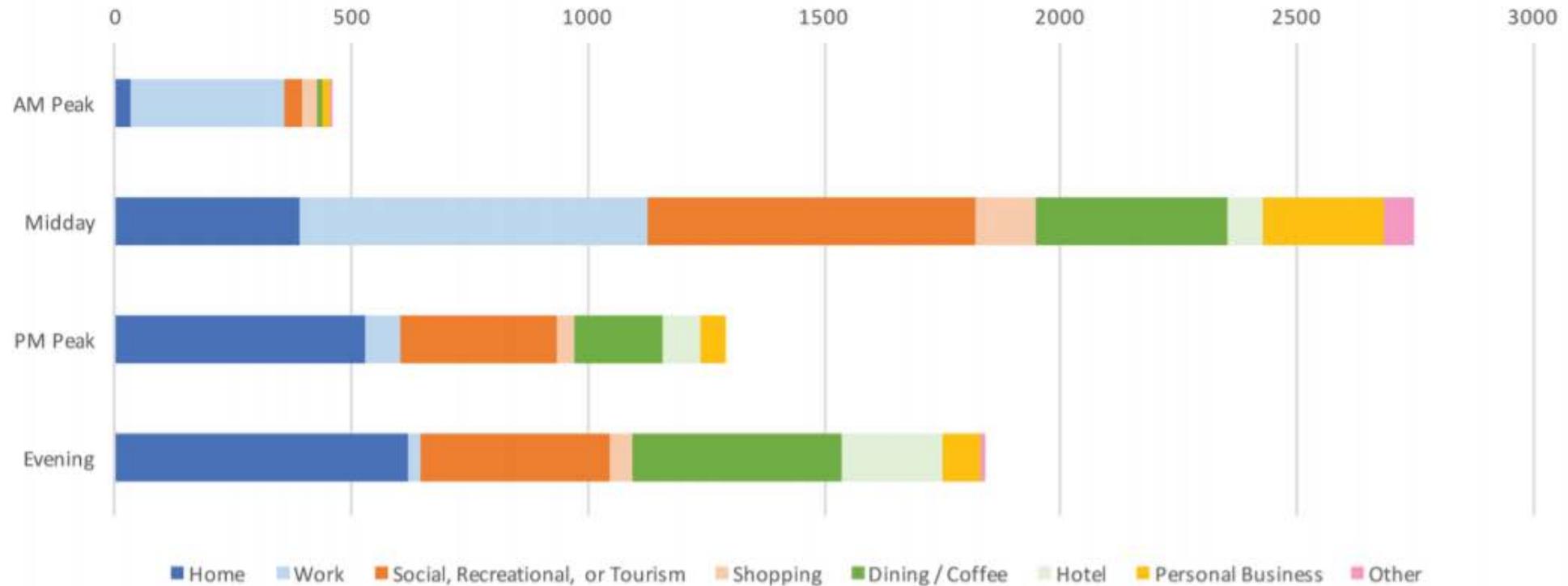
\*According to an in-person survey conducted on-board the KC Streetcar in fall 2017.

- 76% KC metro residents / 24% Visitors
- Streetcar riders are living and working Downtown
- 38% of riders live Downtown. Of these riders, 43% are getting to work
- 95% of these riders walk to access the streetcar
- Streetcar riders: 56% Male, 44% Female



# WHEN + WHY ARE RIDERS TAKING THE KC STREETCAR?

## Weekday Destinations



\*According to an in-person survey conducted on-board the KC Streetcar in fall 2017.

# WHAT ARE KC STREETCAR RIDERS DOING DOWNTOWN?



**RIDERS** are using the streetcar to  
**CIRCULATE DOWNTOWN**  
(streetcar is connecting districts)

More than  
**90%**

**ARE RIDING TO A DESTINATION**

(Joy-riding is at 3% on weekdays, 8% on weekends)



**50%**  
of weekday riders are  
**SPENDING MONEY**  
(tourism, shopping,  
entertainment & dining)



**38%**  
of streetcar riders are  
**ACCESSING EMPLOYMENT**

\*According to an in-person survey conducted on-board the KC Streetcar in fall 2017.

\*According to an in-person survey conducted on-board the KC Streetcar in fall 2017.

# New Arrival Tracker

RideKC  STREETCAR™

Arrivals

NORTHBOUND

Metro Center

ARRIVING  
SOON

**11** min  
9:15 am

**21** min  
9:25 am

SOUTHBOUND

Metro Center

**4** min  
9:07 am

**13** min  
9:17 am

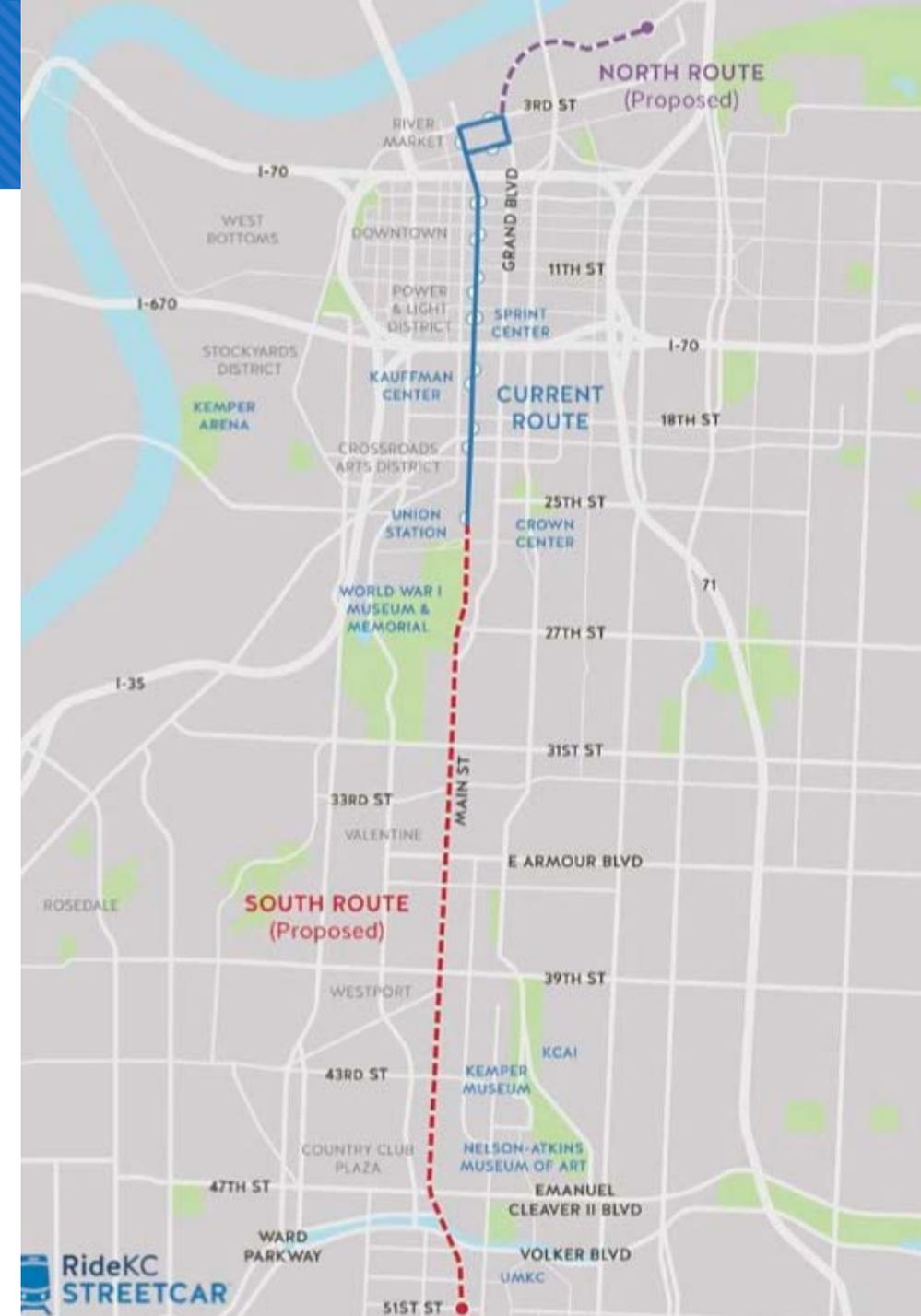
**23** min  
9:27 am

**9:03** AM

February 27, 2018

# KC Streetcar Extension Planning

- Two extensions of the KC Streetcar route are in a planning phase:
  - North to Berkley Park
  - South to 51<sup>st</sup> Street
- North extension funding is based on value capture and proposed federal funding
- South extension funding is through the Transportation Development District (TDD) and proposed federal funding
  - Voters in the TDD (State Line to Campbell, Missouri River to 53<sup>rd</sup> Street) can apply for ballots online or at the Jackson County Courthouse from now until April 3
  - Ballots will be mailed May 1 and are due back June 12



# Strategy C

Develop a plan to enhance pedestrian connectivity through sidewalk repair, replacement, and gap removal, in conjunction with GO KC bond funding.  
(Public Works)

# Sidewalk Project Plan and Progress

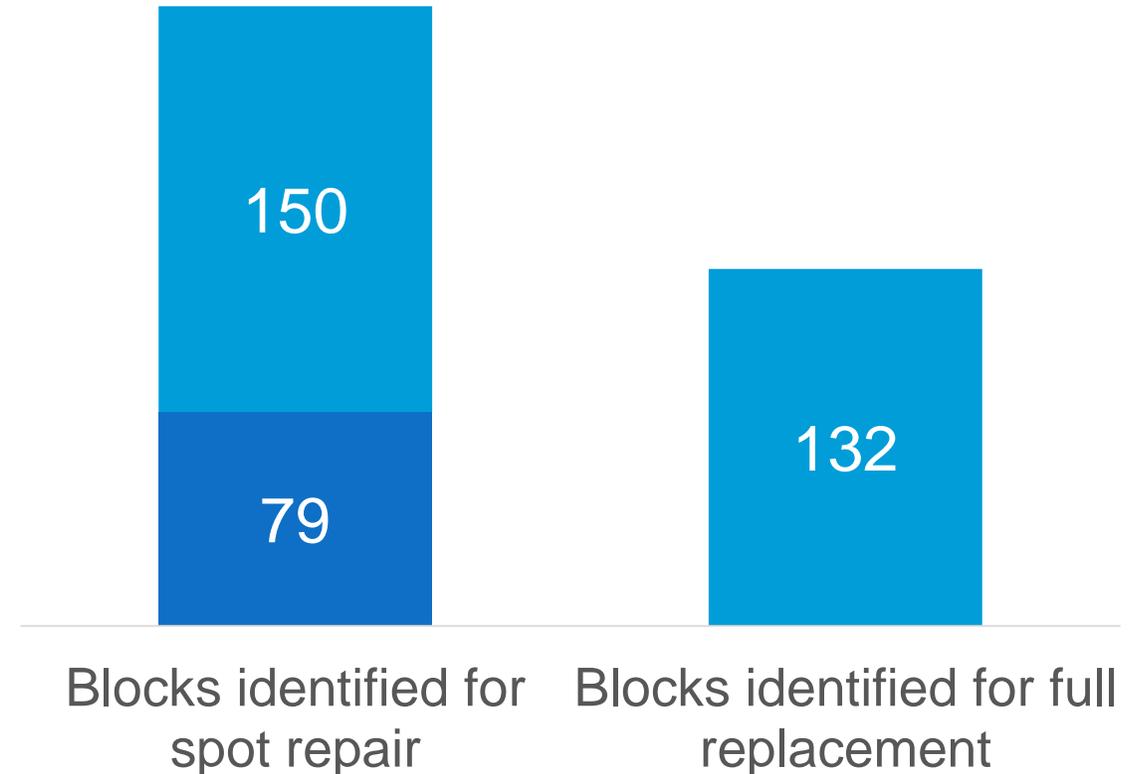
- Began with 1,471 locations from 311 request backlog (received prior to December 31, 2016).
- Full block inspections have been done for approximately half the locations, and identified two types of conditions:
  - Blocks where spot repair would be pursued for the full block due to overall good or fair conditions
    - \$2.5 million in block spot repair begins construction in March; another \$1.8 million in block spot repair has a bid opening in March
  - Blocks where full replacement is recommended in the future due to overall poor condition
- The City is pursuing an RFP for inspections to assist in prioritizing repairs after the backlog of spot repairs is completed.



CITY OF  
KANSAS CITY,  
MISSOURI

Blocks identified for sidewalk repair through 311 request backlog

■ Project underway ■ Future projects



# Curb Ramps

Projects Underway

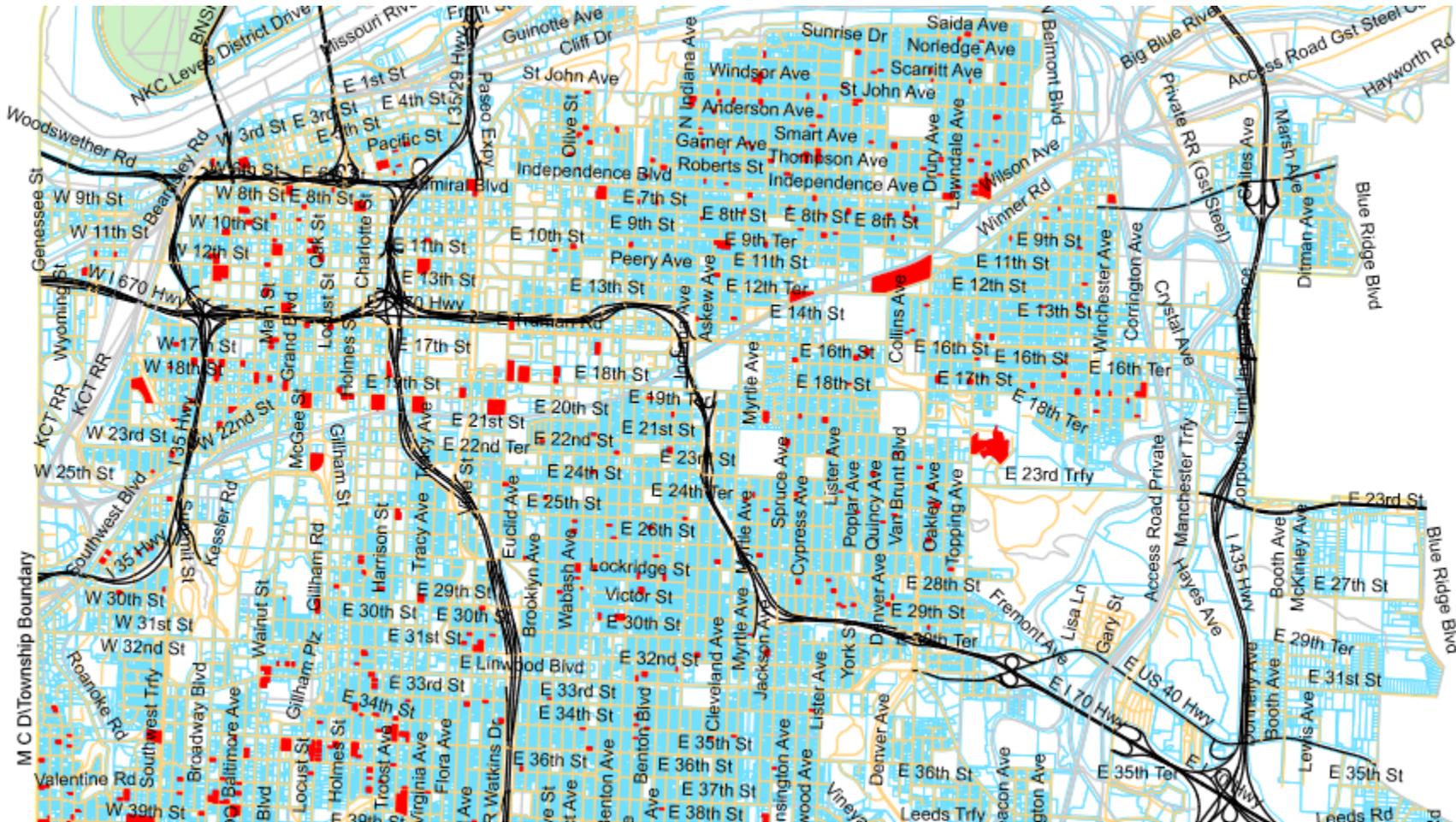
- **117 corners** will be completed by March 2018
- **100 corners** will begin in April 2018

Remaining Volume

- **1,950 unramped corners** remain to be reconstructed
- Estimated timeframe for completion is 5 years

# Sidewalk Repair Requests: River to 39th

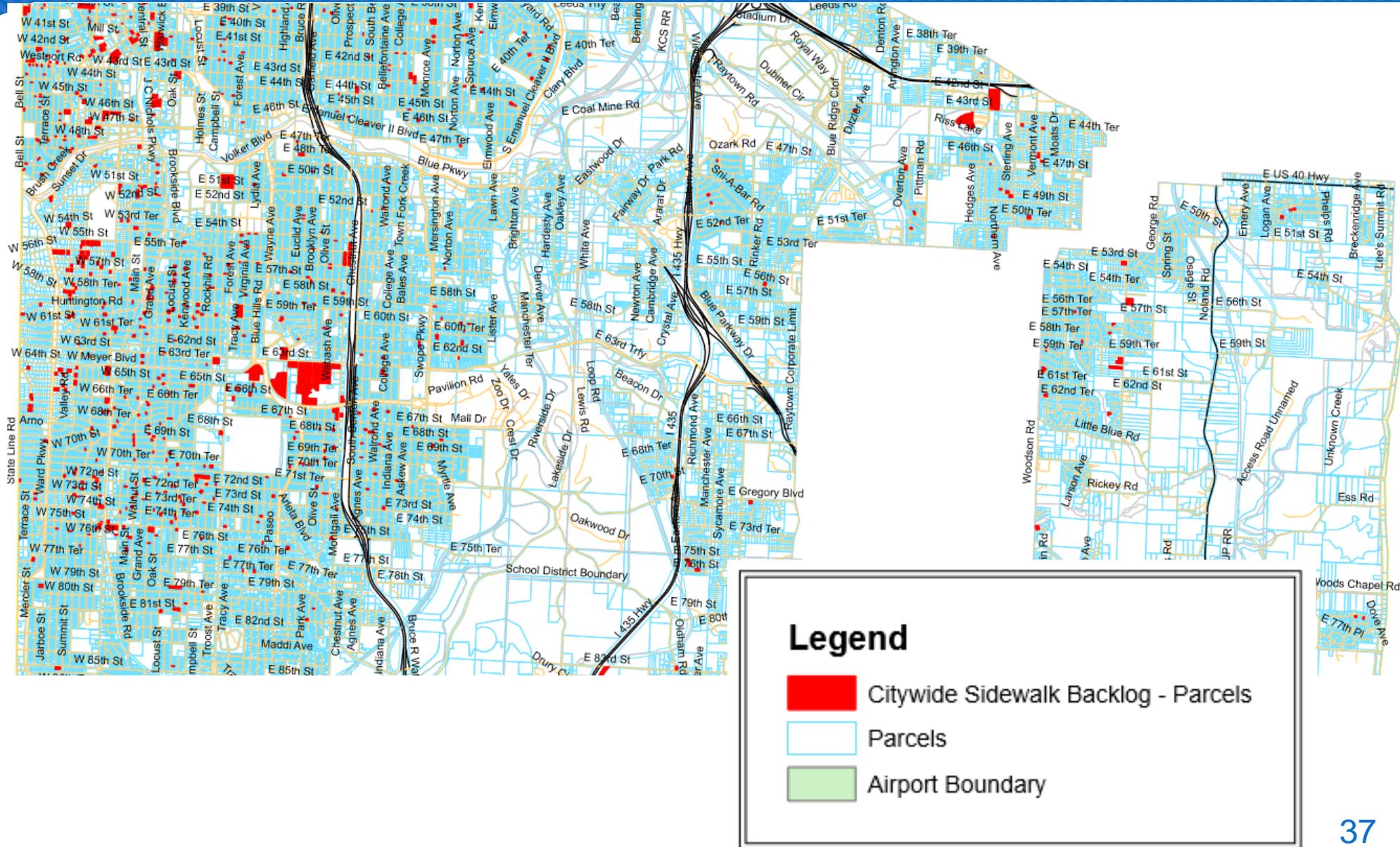
- 502 backlog requests (prior to 12/31/16)
- 32 blocks underway for full block spot repair
- Blocks identified for total replacement in the future



Source: Public Works

# Sidewalk Repair Requests: 39<sup>th</sup> to 85<sup>th</sup>

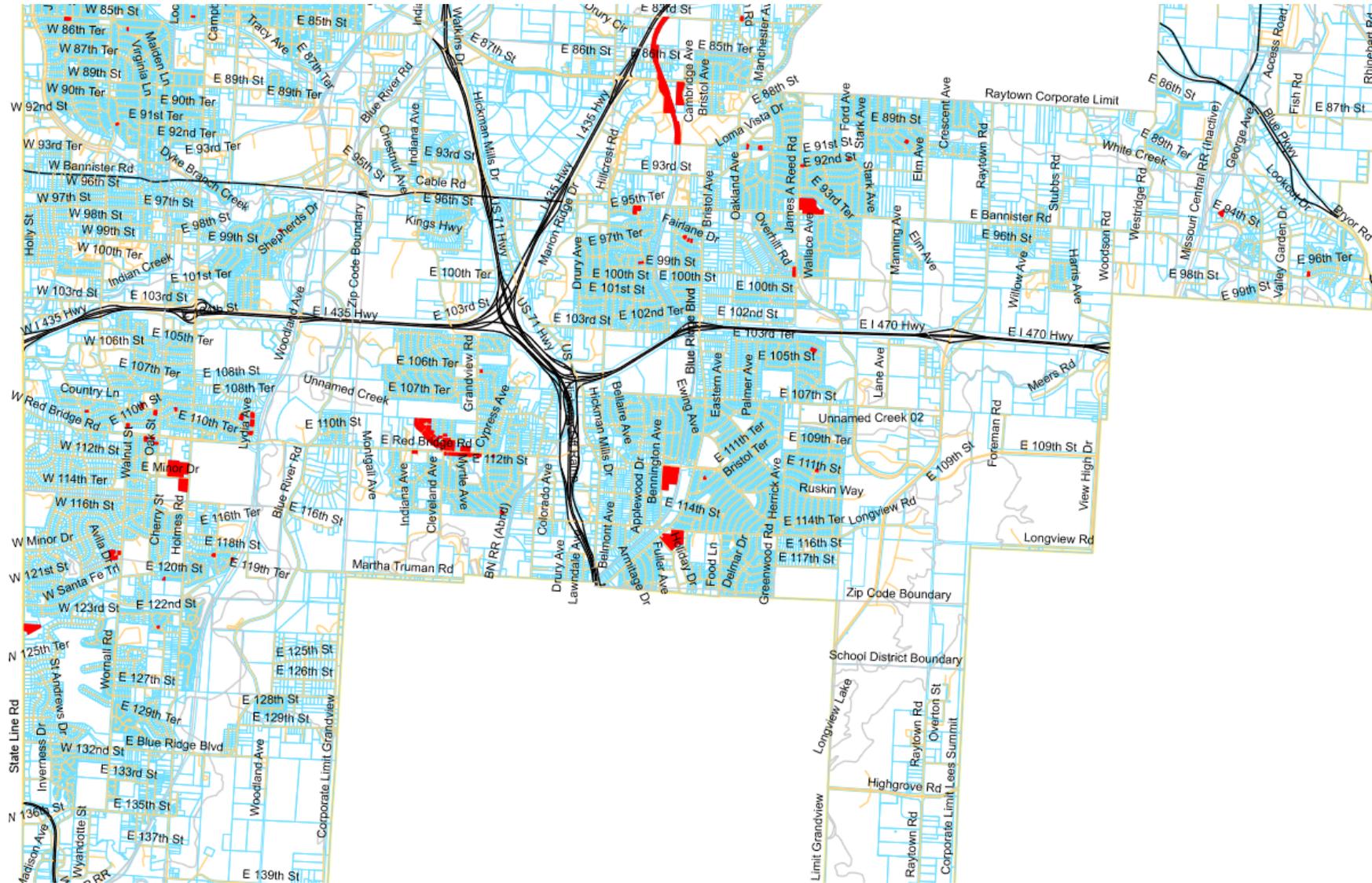
- 653 backlog requests (prior to 12/31/16)
- 47 blocks underway for full block spot repair
- Blocks identified for total replacement in the future



Source: Public Works

# Sidewalk Repair Requests: South of 85<sup>th</sup>

- 84 backlog requests (prior to 12/31/16)
- Blocks identified for full block spot repair or total replacement in the future

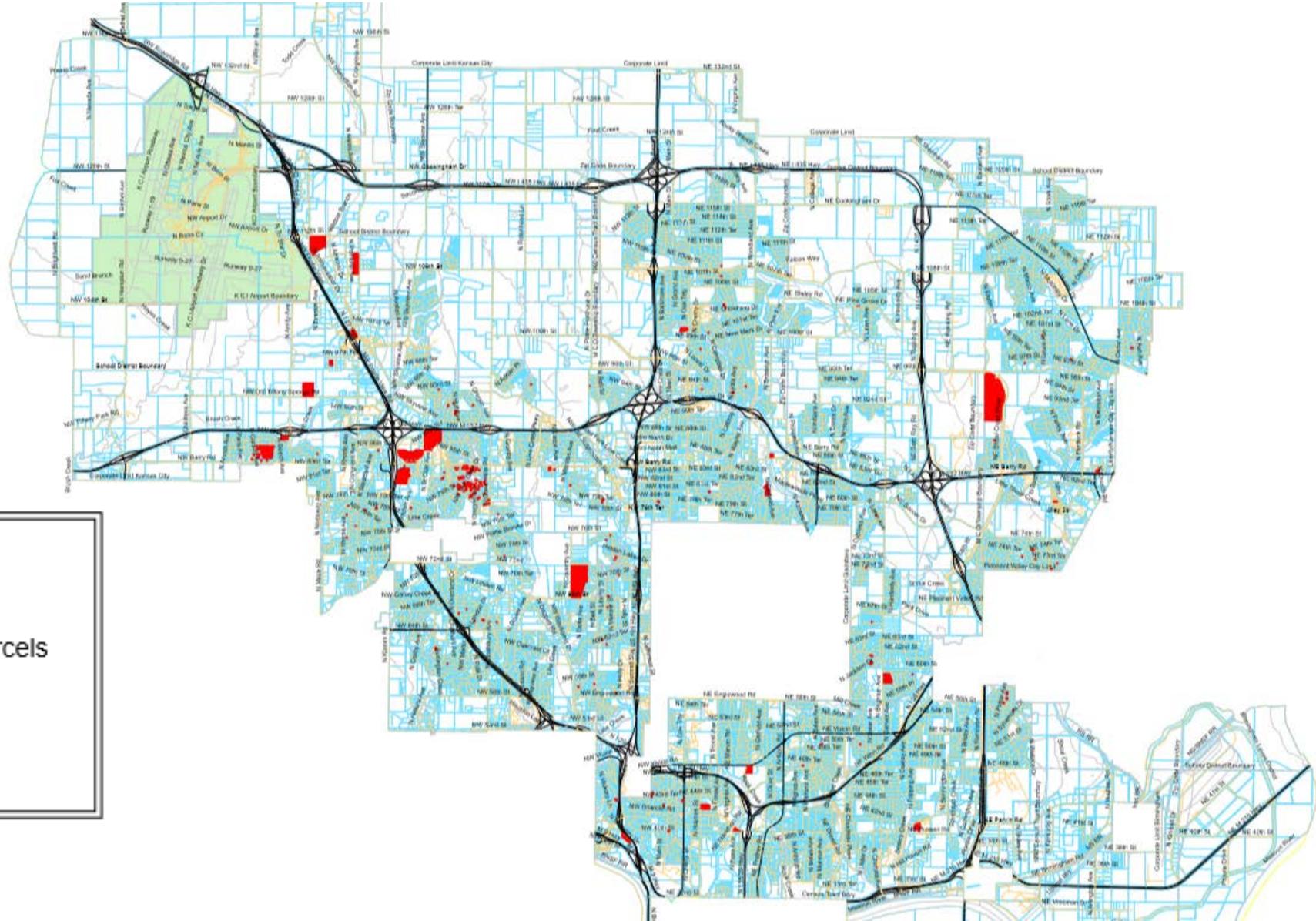


**Legend**

- Citywide Sidewalk Backlog - Parcels
- Parcels
- Airport Boundary

# Sidewalk Repair Requests: North

- 232 backlog requests (prior to 12/31/16)
- Blocks identified for full block spot repair or total replacement in the future



# PIAC Sidewalk Projects

- In addition to GO KC funding, capital sales tax dollars (PIAC funding) continues to be allocated for sidewalk projects
- FY19 funding from Public Improvements Advisory Committee includes 30 sidewalk projects. Projects include:
  - Whole block projects for at least one side of the block
  - Connections to bus stops
  - Sidewalks adjoining ADA ramps
  - Spot repair (single addresses)

# Strategy D

Update and implement the  
Bike KC Trails Plan.  
(Office of the City Manager)

# Bicycle Master Plan

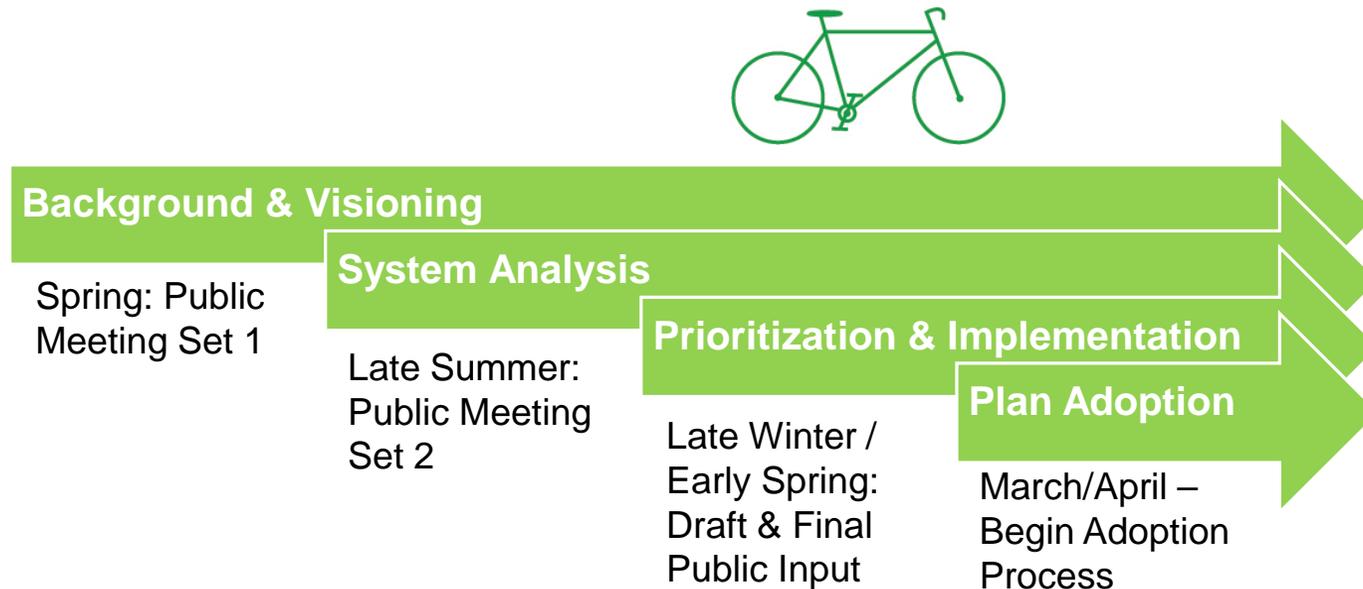
## ○ Plan Vision Statement:

Kansas City is a vibrant community where all modes of transportation, including the bicycle, are valid, equalizing, and supported. All users are safely accommodated on well-connected networks to destinations which facilitate a culture of cycling and access to economic development opportunities.



# Bicycle Master Plan

- The Bike KC Plan update is continuing as scheduled
- Currently writing draft document
- Recommendations focus on “interested but concerned” rider & promote protected bike facilities (major separation)
- Approval process to begin in March (Internal staff review, Parks DRC, Steering Committee, BPAC, City Plan Commission, Council committee – PZED, T&I)



# Bicycle Master Plan

MAJOR Separation:

Greater physical separation from motor vehicle traffic preferred by public who provided input

Below: Parking & planter protected 2-way cycletrack – Memphis, TN

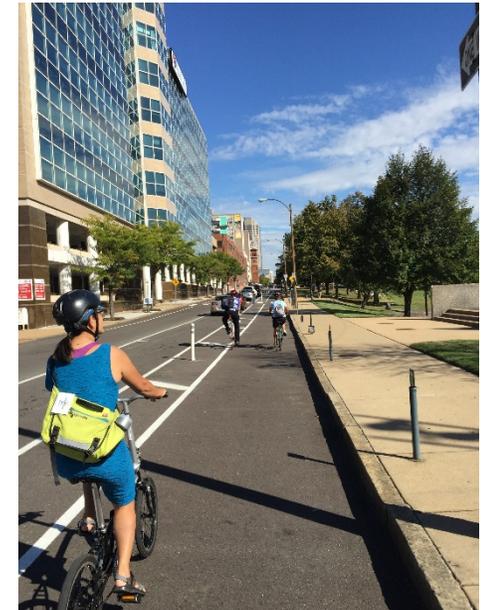


Left: 1-way parking protected bike lane – Memphis, TN

Below: Off-street trail/side path – Vivion Rd, Kansas City, MO



Below: Plastic bollard protected bike lane – St. Louis, MO



# Bicycle Master Plan

## MINOR Separation & Shared Streets:

Minor separation (painted bike lanes) are generally preferred on collector level streets, on arterials with lower traffic levels, or as interim solutions during resurfacing program



Left: Buffered bike lane – 20<sup>th</sup> Street  
Kansas City, MO



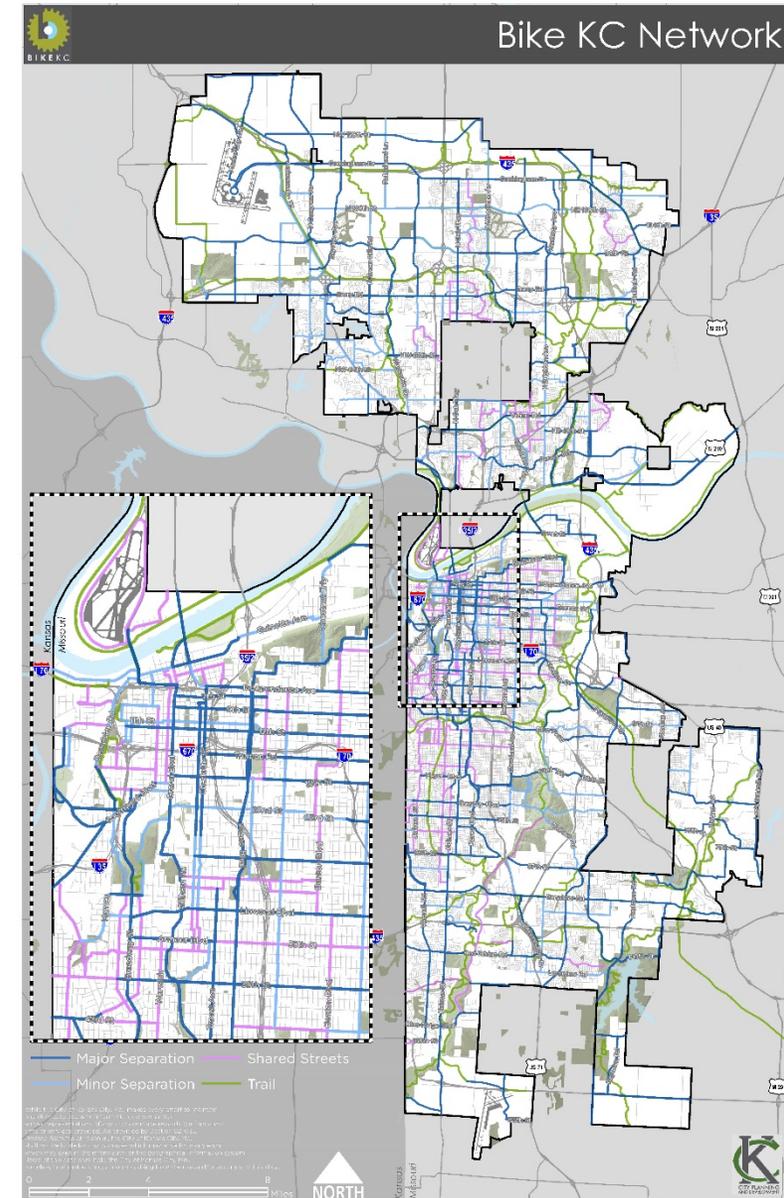
Above: Students of Whittier  
Elementary on Bike To School Day  
May 2015 in Northeast Kansas  
City

Shared Streets are streets that are quiet and safe to ride on without dedicated bike lanes. Traffic calming is ideal on these streets.

# Bicycle Master Plan

Draft updated Bike KC network:

- **Nearly 670** total centerline miles in three categories of bike facilities
  - Based on analysis, public feedback, & project goals
- **Major Separation – 389** centerline miles
  - Physical barrier separating bicyclists from moving vehicles
- **Minor Separation – 160** centerline miles
  - Conventional or painted buffered bike lanes
- **Shared Streets – 117** centerline miles
  - Calm local streets or bike boulevard candidates



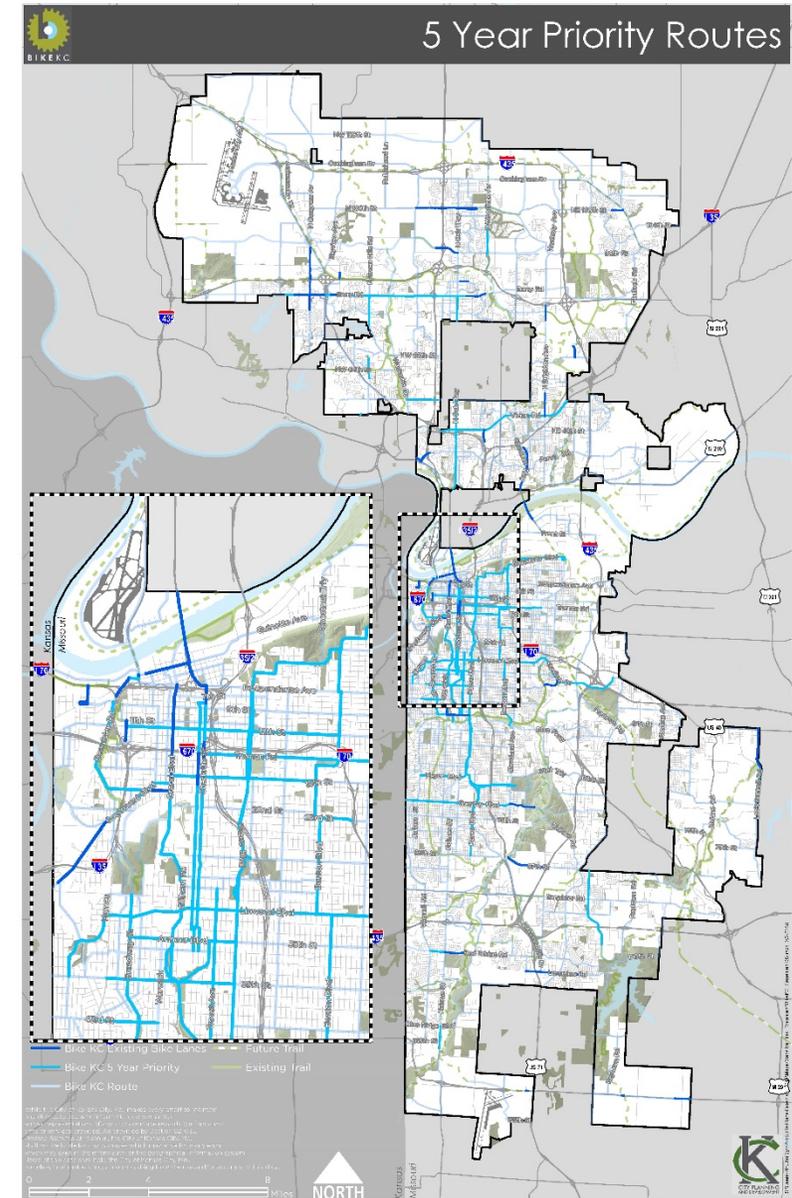
DRAFT Bike  
KC Network

# Bicycle Master Plan

Draft updated Bike KC network:

## Implementation Plan

- Re-evaluate & update Bike KC plan every 5 years
- Focus on a **5-year project priority plan**
- Approximately **100 centerline miles** of system to prioritize analysis and implementation identified
  - Includes projects currently under study or planned (PSP projects, GO Bond projects, etc.)
  - Includes key linkages in the system
  - Builds out key core system
- Capitalize on opportunity
  - Coordinate resurfacing program & other opportunities as they arise
  - Look for easy implementation streets (Ex: West Pennway, Meyer Blvd, etc.)



DRAFT  
Implementation  
Plan

# Public Works Bike Projects: Completed and Upcoming

Projects  
completed  
in 2017:

- Bike lanes: 1.65 miles
- Trails: 2.9 miles

Projects  
to be  
started in  
2018:

- Protected bike lanes: 1.25 miles
- Bike lanes: 6.7 miles
- Shared use path: 3.7 miles
- Street resurfacing road diets:  
TBD

# Parks & Recreation Bike Trails

## Multi-Use Trails

2008

- 30 trails (21 miles)

2018

- 52 trails (40 miles)
- 90% increase in mileage



## Shared-Use Trails

2008

- 8 trails (9.5 miles)

2018

- 30 trails (64 miles)
- 574% increase in mileage



# Objective 2:

Develop environmentally sound and sustainable infrastructure strategies.

# Strategy A

Develop a citywide climate and man-made resiliency plan to safeguard and restore critical City buildings and infrastructure.  
(Office of Environmental Quality)

# KCMO Climate Resilience Plan Development

- Funding for development of a citywide climate resilience plan is potentially available through [The Funders' Network](#), a partnership between the Urban Sustainability Director's Network and several national foundations who are interested in supporting local government sustainability work
- To receive this funding, [a dollar-for-dollar match](#) must be made by a local community-based foundation.
- Efforts to date have not identified a viable local foundation partner, but we will work to develop a partnership in time for a 2019 application for a local climate resilience plan
- Focus of our plan will be [municipal operations & how the City can support neighborhood-level work in those parts of our community that will be disproportionately impacted by climate change.](#)

# Strategy B

Update and implement the City's Climate Protection Plan to include Envision Sustainable practices, the Envision Sustainable Infrastructure Rating System, and other measures.  
(Office of Environmental Quality)

# Greenhouse Gas Inventory

What

- OEQ is working on an update to our greenhouse gas emissions inventories for municipal operations & citywide for the calendar year 2017

Who

- Partners include our local utilities, MARC, City departments, the Brendle Group (our 2013 consultant), and other local stakeholders

When

- Completion is anticipated by by late summer/early fall 2018

Why

- Updated GHG emissions data will be crucial in our update to the City's Climate Protection Plan

# Update: Clean Energy Initiatives Feasibility

Resolution No. 170586, adopted on a 12 – 0 vote Aug 17, 2017, called for feasibility evaluation of 10 clean energy initiatives. A summary of progress is as follows:

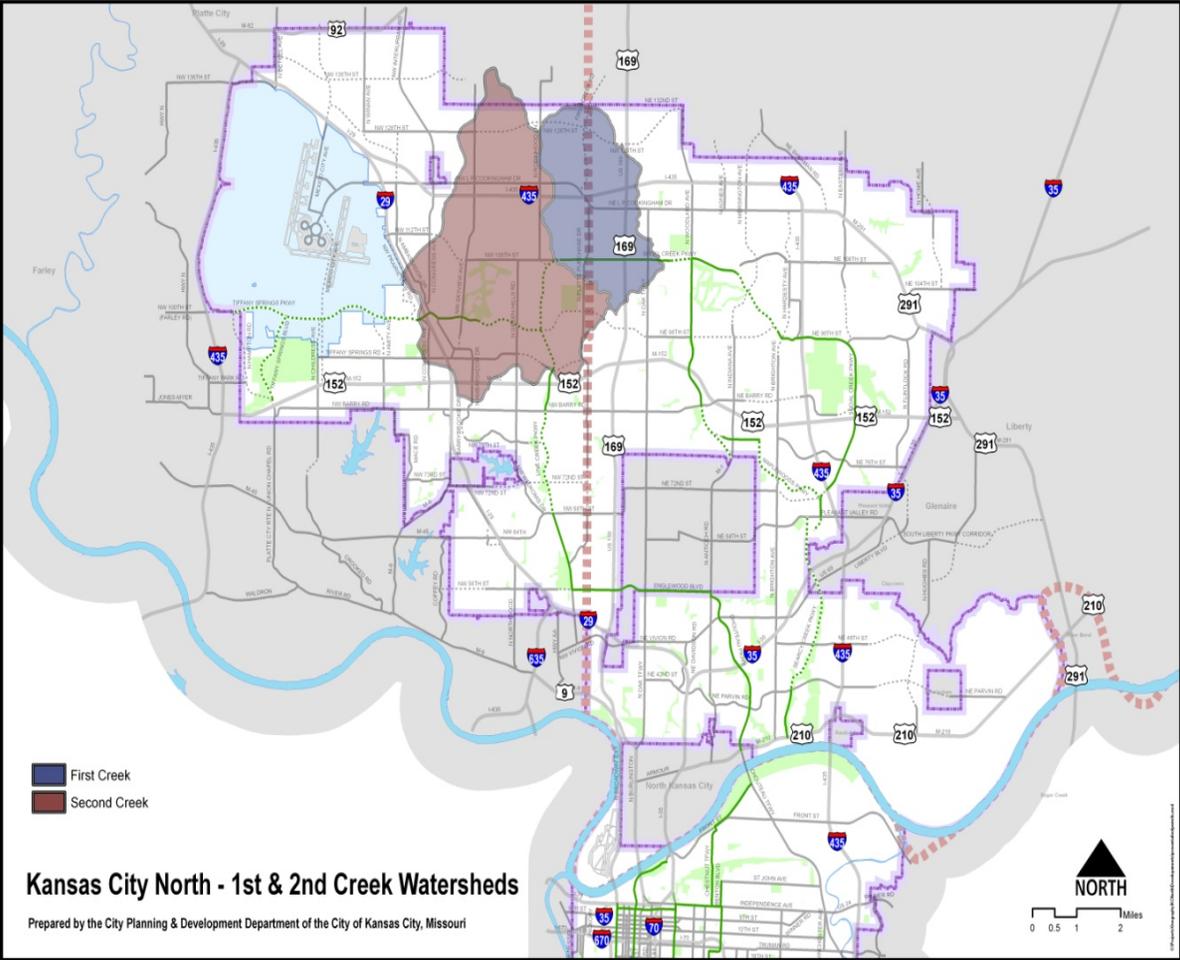
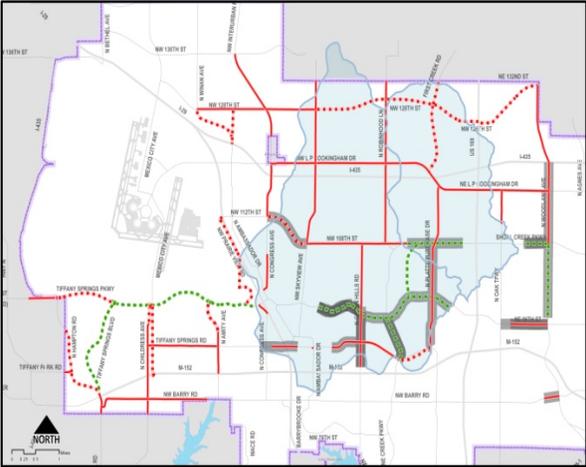
- Regarding **City purchase of 100% of electricity from renewal sources AND development of community solar facilities**:
  - In January 2018, KCP&L submitted documents to the Missouri Public Service Commission requesting approval for a “Renewable Energy Rider” that would enable them to provide the City (and other large energy users in their Missouri service area) to purchase up to 100% of their electricity from renewable energy generation facilities.
  - KCP&L also submitted a “Solar Subscription Pilot Rider” that would provide a limited number of customers the opportunity to voluntarily subscribe to the electricity produced from a community solar installation.
  - A decision from the PSC is anticipated by the end of 2018.
- Regarding **citywide traffic synchronization**:
  - The City’s Public Works Department has prepared an analysis of the work & cost required for a City-wide Traffic Signal Synchronization initiative.
- Regarding the **other 7 initiatives**:
  - We expect to provide the report on the feasibility of all 10 initiatives in the Renewable Energy Now resolution by the end of March.
  - We believe all 10 initiatives are feasible, but some are dependent upon identifying a viable funding source and/or a favorable decision by the PSC.

# Strategy C

Identify and invest in greenfield areas that capitalize on natural features, promote unique development patterns, build civic space, and promote sustainable design and construction.

(City Planning and Development)

# 1<sup>st</sup> and 2<sup>nd</sup> Creek Watershed – Twin Creeks KC Update



# Twin Creeks Implementation Strategy



City of Kansas City, Missouri

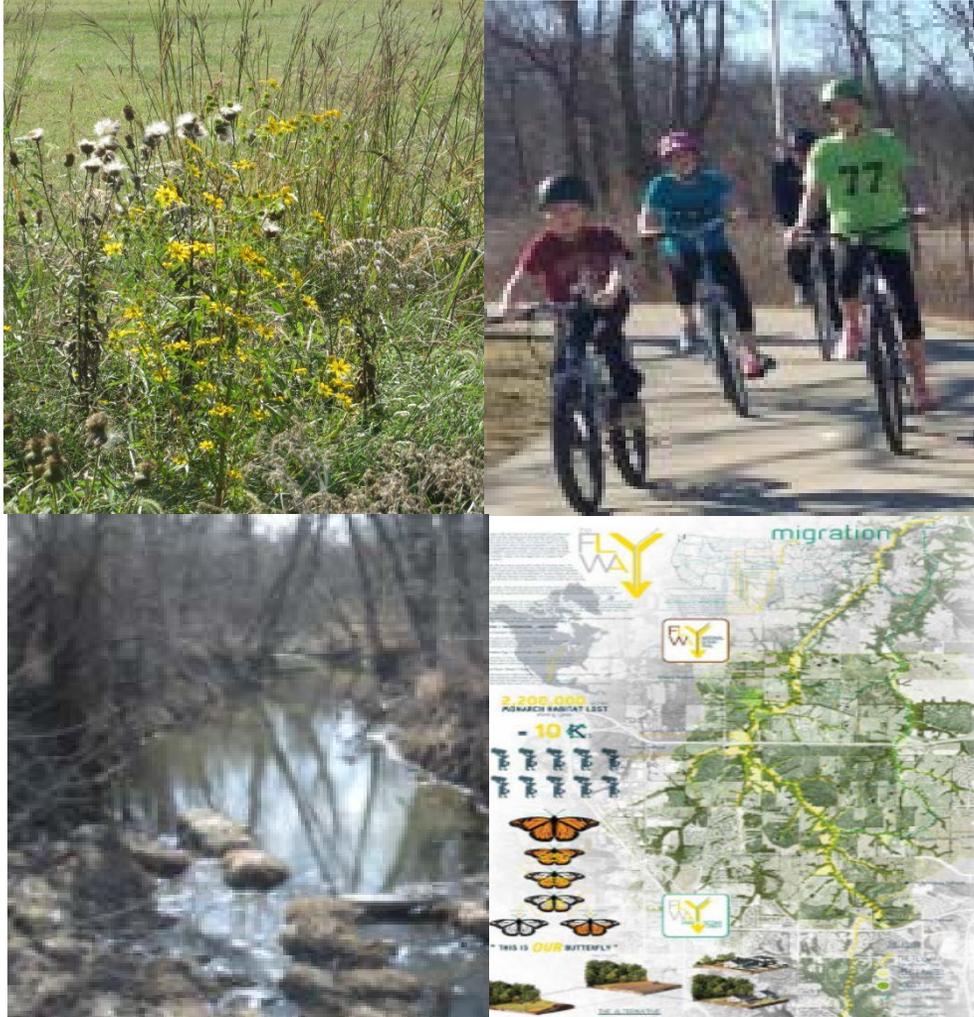


## Twin Creeks Development Task Force Report (2014) Primary Implementation Measures

- Twin Creeks Design Competition – Creation of a Linear Park
- Geomorphological Study
- Land Use Recommendations
- Roadway Prioritization
- Develop Regional Attraction



# Twin Creeks Implementation Update



## Linear Park Development

- ✓ City Manager's Office & Parks & Recreation Department working to secure ROW for linear park & trail connections.
- ✓ PIAC Request for Linear Park Study and to work with partners to implement Design Competition Concepts.

## Geomorphological Study

- ✓ Water Services is working to complete Phase I of the Study and will Share with Platte County EDC in March 2018.

## Land Use Recommendations

- ✓ City will work to create urban village as envisioned in the Twin Creeks Development Task Force Plan, working with the private sector on future catalyst project in the area.

# Twin Creeks Implementation Update



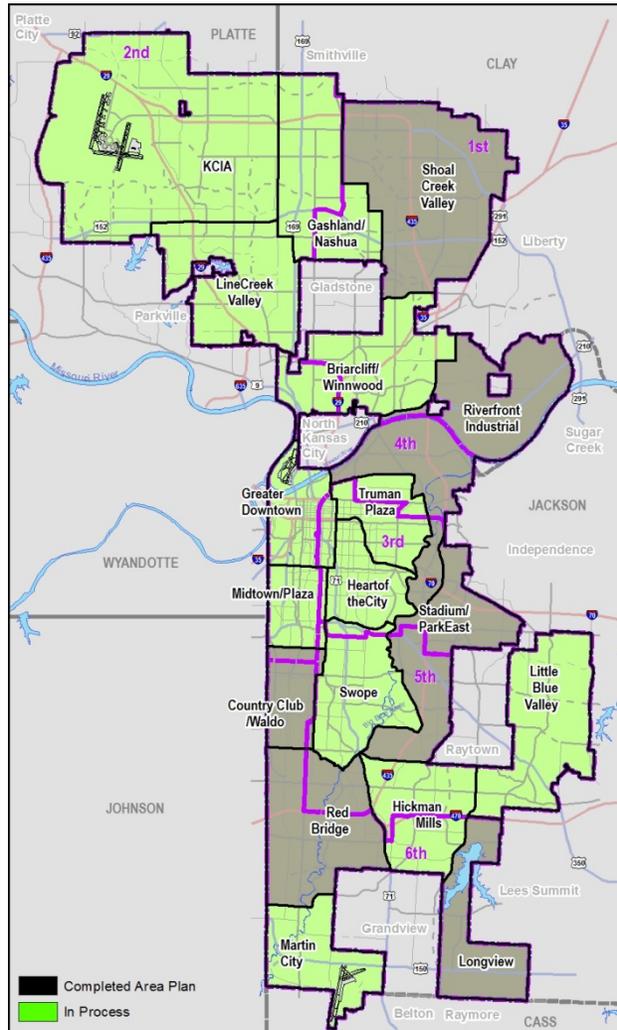
## Roadway Prioritization

- ✓ Staff is working to prioritize its recommendations for future roadway improvements based upon the location of the Platte R3 School improvements & planned development pattern for the area.
- ✓ Staff will share this information with community as part of strategic transportation funding effort.

## Develop Regional Attraction

- ✓ City is supporting a multi-jurisdictional public/private effort led by Platte County EDC to locate and fund a soccer facility within the Twin Creeks Area.

# Application within Recent Area Plans



Consideration of similar recommendations have been applied at the “area plan level” with the 6 completed since 2015.

- ✓ Red Bridge Area Plan
- ✓ Blue Ridge Area Plan
- ✓ Shoal Creek Area plan
- ✓ Longview Area Plan
- ✓ Riverfront Industrial Area Plan
- ✓ Country Club Waldo Area Plan

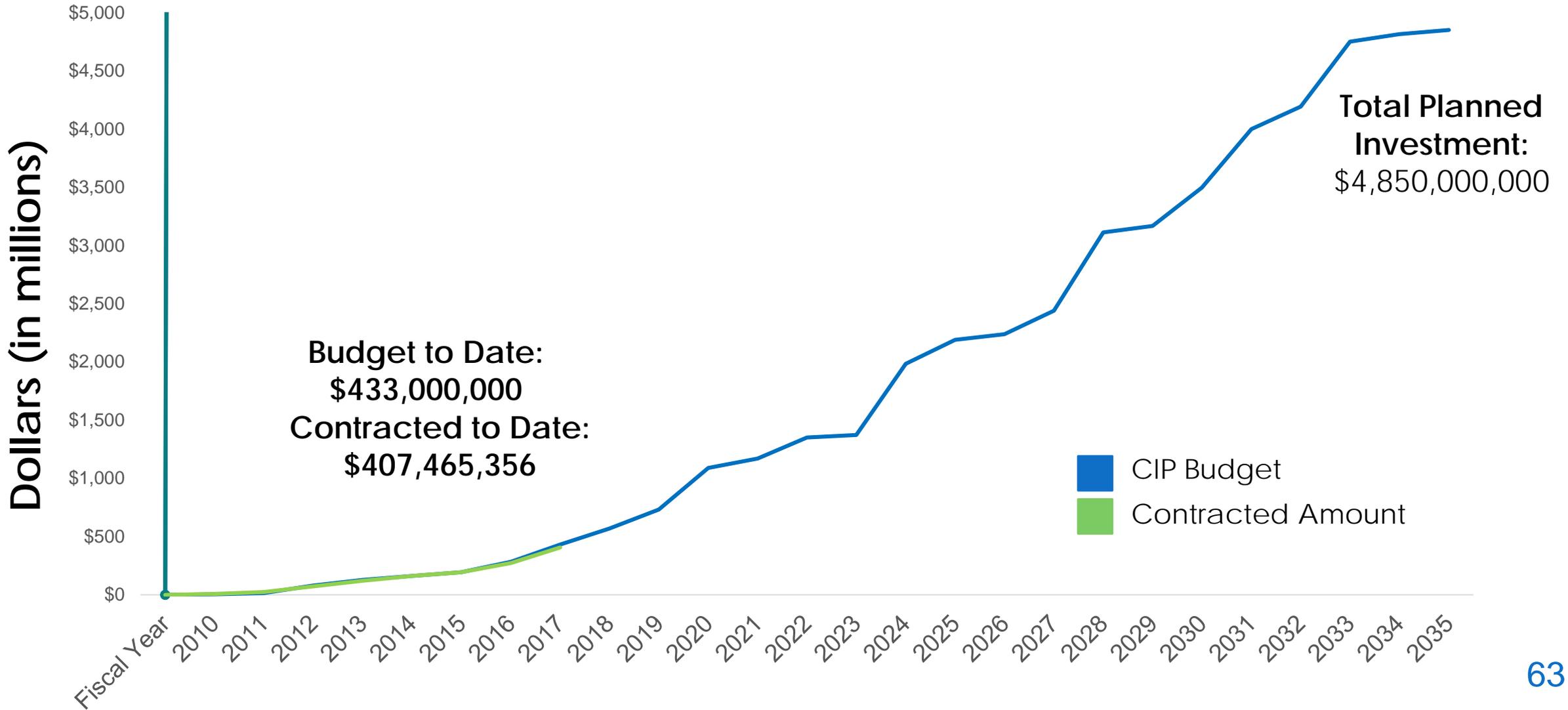


Area Plans Completed Since 2015

# Strategy E

Implement the City's Smart Sewer Program to meet the City's federal consent decree requirements.  
(Office of the City Manager)

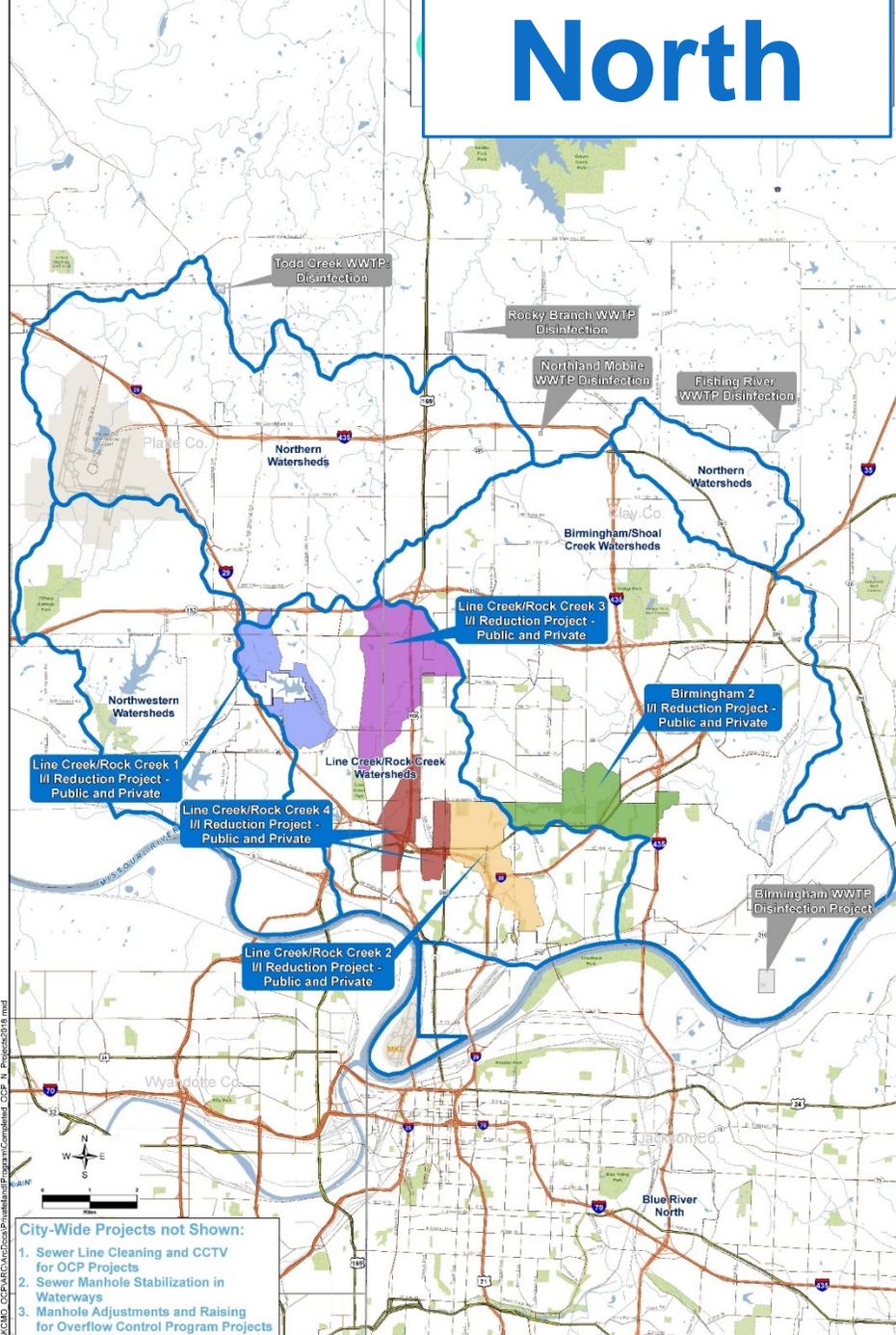
# Progress: Sept. 27, 2010- Dec. 30, 2017



# Investment: September 27, 2010- Dec 30, 2017

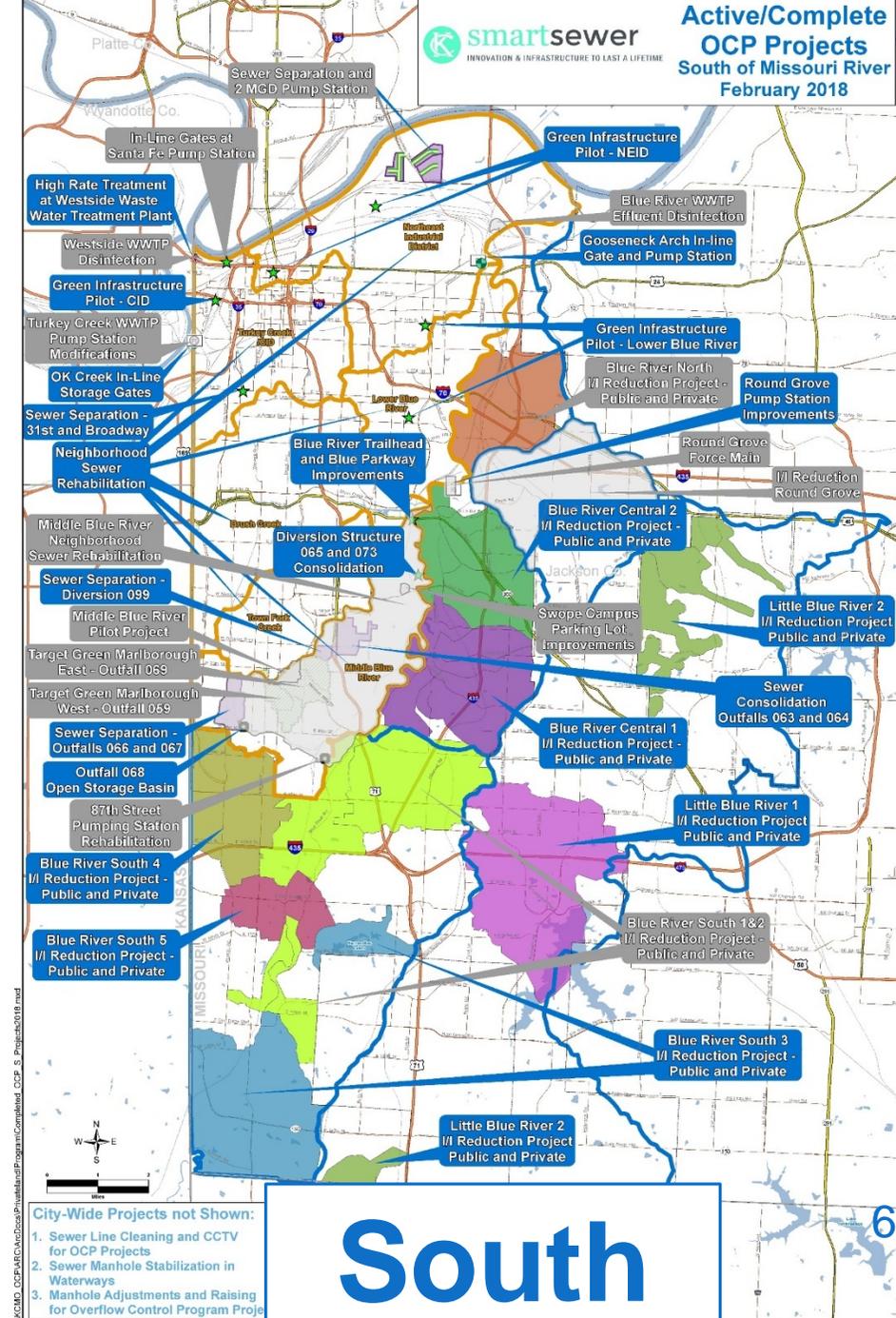
Programmatic Element	Contracts	Value
Diversion Structure & Pipe Consolidation	4	\$19,136,263
Green Infrastructure	24	\$45,586,685
Inflow & Infiltration	48	\$72,288,882
Neighborhood Sewer Rehabilitation	12	\$59,051,670
Pumping & Conveyance	10	\$43,022,410
Sewer Separation	6	\$15,278,435
Storage & Conveyance	11	\$19,385,727
Treatment Facilities	21	\$74,354,087
Supplemental Environmental Projects	3	\$1,608,118
Programmatic Services	11	\$57,753,079
<b>TOTAL</b>	<b>150</b>	<b>\$407,465,356</b>

# North



- City-Wide Projects not Shown:
1. Sewer Line Cleaning and CCTV for OCP Projects
  2. Sewer Manhole Stabilization in Waterways
  3. Manhole Adjustments and Raising for Overflow Control Program Projects

Active Projects  
 Complete Projects

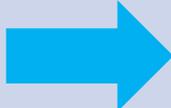


- City-Wide Projects not Shown:
1. Sewer Line Cleaning and CCTV for OCP Projects
  2. Sewer Manhole Stabilization in Waterways
  3. Manhole Adjustments and Raising for Overflow Control Program Projects

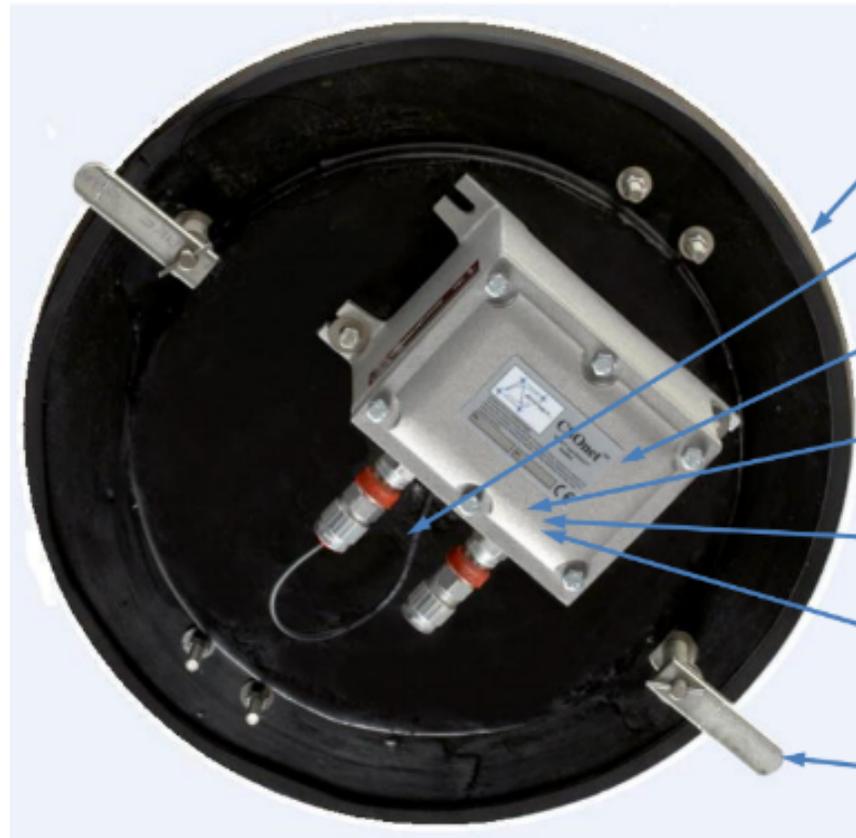
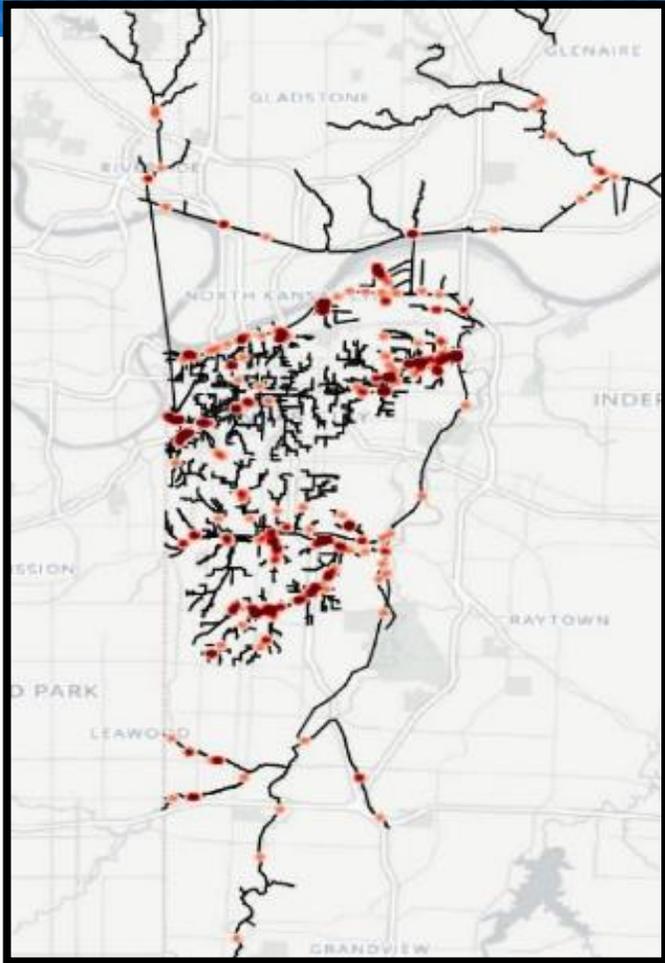
# South

# Keep Out the Rain Data & Results

## April 2016 – January 2018

Measurement	Result	Trend
Customer Satisfaction	99%	
Cost Effectiveness	\$.66/gallon	
Full Interior/Exterior Participation	59%	
Exterior Participation Only	36%	
Refusals	5%	

# Coming 2018: The World's Largest Smart Sewer Sensor Network



**Composite Manhole Cover**  
HS20 rated, corrosion resistant

**Embedded Antenna**  
Radiate signal out of manhole cover

**Explosion Proof Box**  
Class 1 Div 1 Safe, corrosion resistant

**Chasqui Processor**  
Mica2-based, rugged IO, 2ppm RTC

**4 D-size Lithium Battery**  
1 Yr Life, Temperature Resistant

**Max Stream Radio**  
1 Watt, 900MHz SS, 115kbps

**Cam Lock Mechanism**  
Prevent cover from popping out

# Cross-Department Collaboration = Community-Based Benefits in Marlborough (2012-2017)



**25** acres  
of green space including a  
playground & outdoor classroom



**400** trees planted



extended stormwater  
detention & improved  
water quality



**20,000** LF



**15,000** LF  
water mains replaced



**500** tons of trash  
collected from neighborhood



over  
**3,000** tires  
collected from  
neighborhood  
cleanups



**2,282**  
trash carts & recycling bins



over **40** tons of  
brush collected from neighborhood cleanups



**10** lane miles  
street resurfacing

# Strategy D

Reduce financial impacts of the City's Smart Sewer Program by proactively working with EPA to adjust the timeline for project completion and proposing additional green infrastructure solutions.

(Office of the City Manager)

# Second Consent Decree Modification:

***Submitted a request for modification on November 14, 2016***

***Entered by the Court: January 9, 2018***

- This modification is a focused, technical amendment to the implementation schedule
- 6 project completion dates extended in order to:
  - Coordinate construction sequencing of projects
  - Integrate other public infrastructure improvements
  - Select preferred project sites
  - Adjust scope of projects to optimize public benefits

# Future Consent Decree Modification(s)

- Incorporate Cost of Service Task Force recommendations and direction from management to ensure sustainability of the Smart Sewers Program by:
  - Reducing size of future utility rate increases while meeting the decree's objectives
  - Maximizing community benefits of by expanding use of Green Infrastructure City-wide
  - Integrating planned public infrastructure improvements
  - Optimizing overflow control performance criteria
  - Ensuring the ability to meet future compliance needs

# Objective 3:

Engage in efforts to strategically invest in the City's infrastructure.

# Strategy A

Develop an infrastructure asset management plan that maximizes the useful life of all assets and meets federal requirements.  
(Public Works)

# Capital Improvements Sales Tax Renewal

Election date

- Question 1 on the ballot for election on **April 3, 2018**

Summary of ballot item

- 20-year renewal of **1 cent sales tax** for capital improvements (first approved 35 years ago)

Proposed uses for capital improvements sales tax

- **35%** for neighborhood conservation projects (determined via PIAC)
- **25%** for street resurfacing, repair, and construction of complete street facilities
- **40%** for capital improvements and maintenance, including City's portion of funding to replace Buck O'Neil Bridge

# GO KC Project Explorer

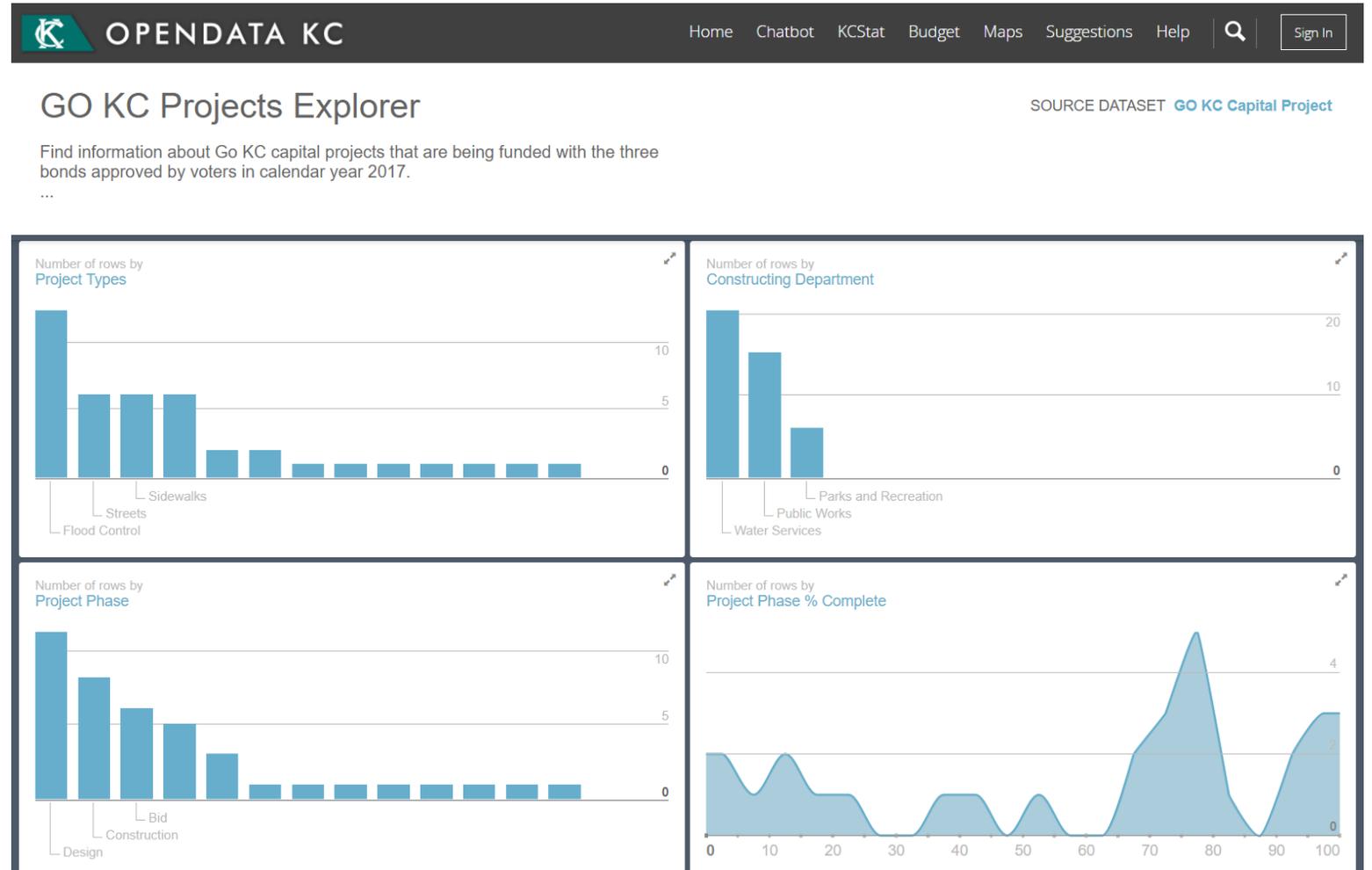
Find information about Go KC capital projects that are being funded with the three bonds approved by voters in calendar year 2017.

**Website:**

<http://kcmo.gov/gokc/>



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# Road Asset Management: Data Gathering and Analysis

## Data gathering (Stantec)

- We have received data for 4 of 7 zones as well as the Ground Penetrating Radar and Falling Weight Deflectometer and will receive remaining Zones by April 30<sup>th</sup>
- An RFP is in process for another round of pavement ratings and asset data (if needed) and hope to have selected a contractor by April. Drive-thru will be required by the end of September so we can capture all the trees with leaves so P&R can determine the tree type thru video.
- 2018 Pavement rating data will be ready April 2018 at the latest

## Work Management (Cartegraph)

- Training is complete and still on schedule to be ready to go live with OMS this spring for streetlights, bridges, signs, striping, attachments, standards and maintenance districts
- Will wait until early May to ensure we have all asset data from Stantec in the system and ready to go for all user groups
- Still waiting on upgrade to Energov and in need of real time AVI from 311 to move past manual updates

# Roads Needs Assessment Study

## Summary of recommendations:

- Invest to avoid further deterioration of Good/Fair road to Poor/Fail condition and increased cost of deferred maintenance
- Fix it first approach: focus on repairing, maintaining, rehabilitating, reconstructing, and enhancing existing roads
- Dedicate funds to preventative maintenance to make more cost-effective repairs
- Use asset management/best management practices to ensure that the right treatments are applied to the right roadways at the right time

	Maintenance	Capital
Type of work	Road resurfacing, crack sealing, slurry sealing	Road reconstruction to address failed/failing streets
Current allocation	\$10 million annually	\$450 million in 20 year GO Bond for streets and bridges (not all reconstruction projects)
Need	\$45 million annually to maintain current road conditions (not improve)	~\$765 million backlog

# Street Resurfacing and Microsurfacing: 2018

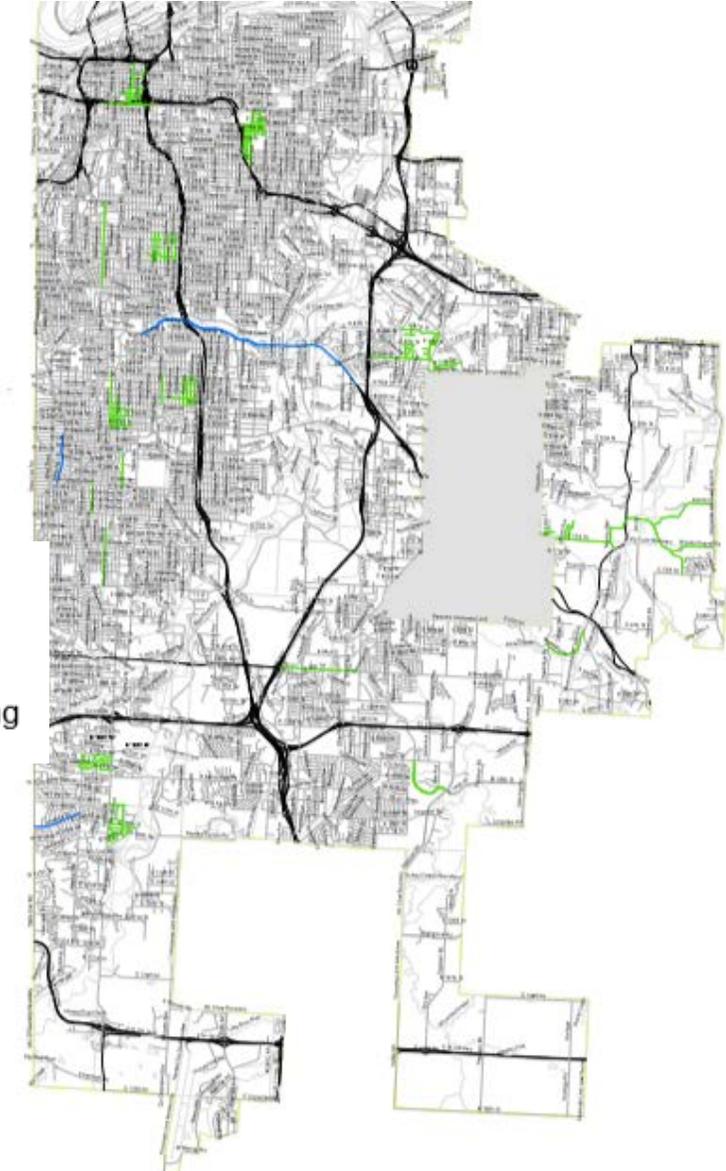
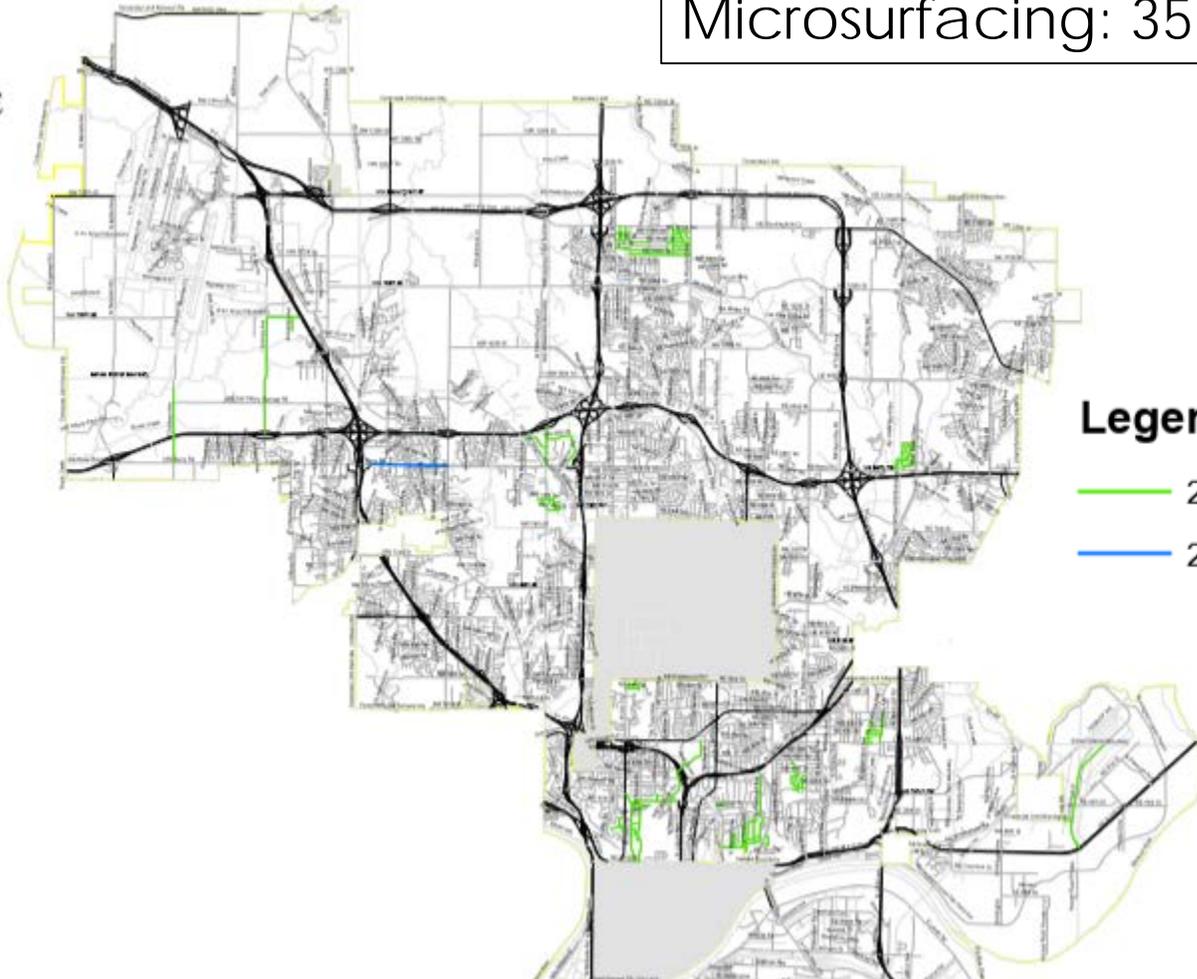
North

**2018 Street Preservation**  
Resurfacing: 174 Lane Miles  
Microsurfacing: 35 Lane Miles

South

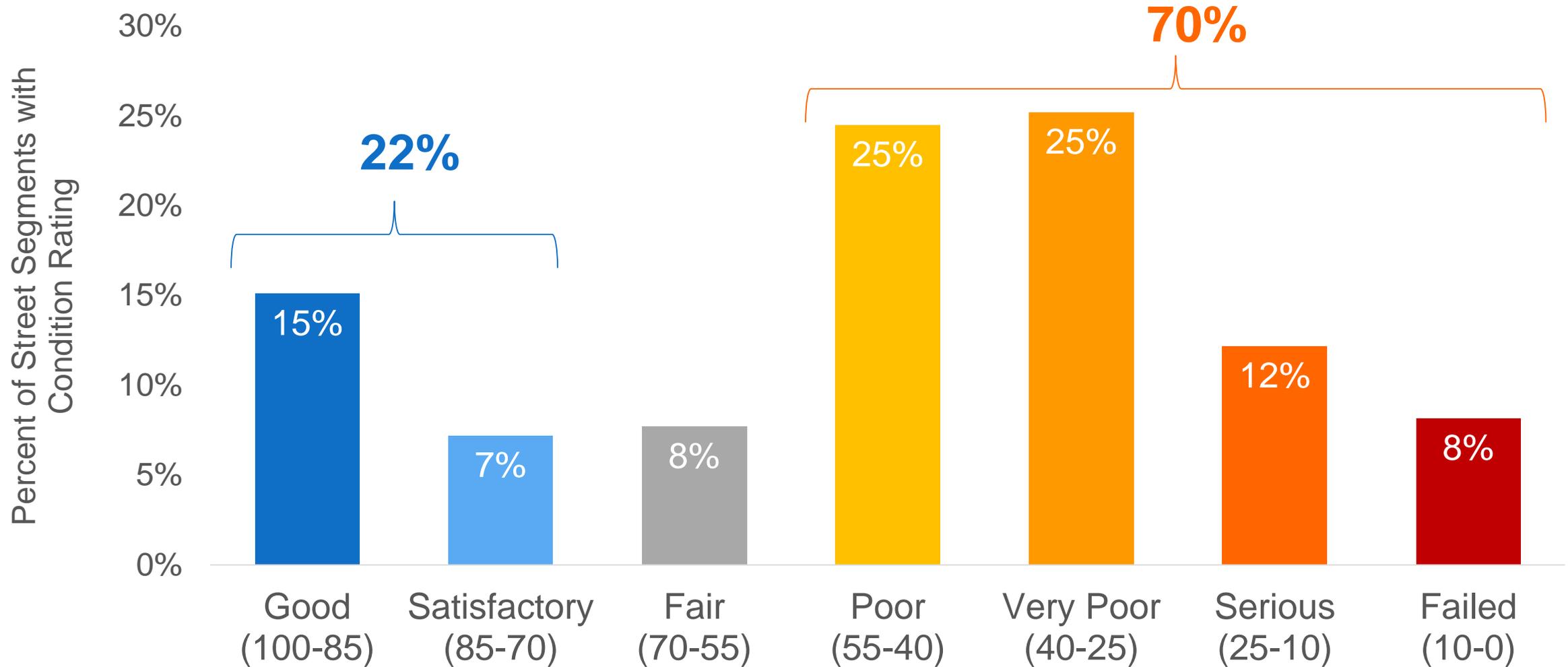
## Legend

- 2018 Proposed Resurfacing
- 2018 Proposed Microsurfacing

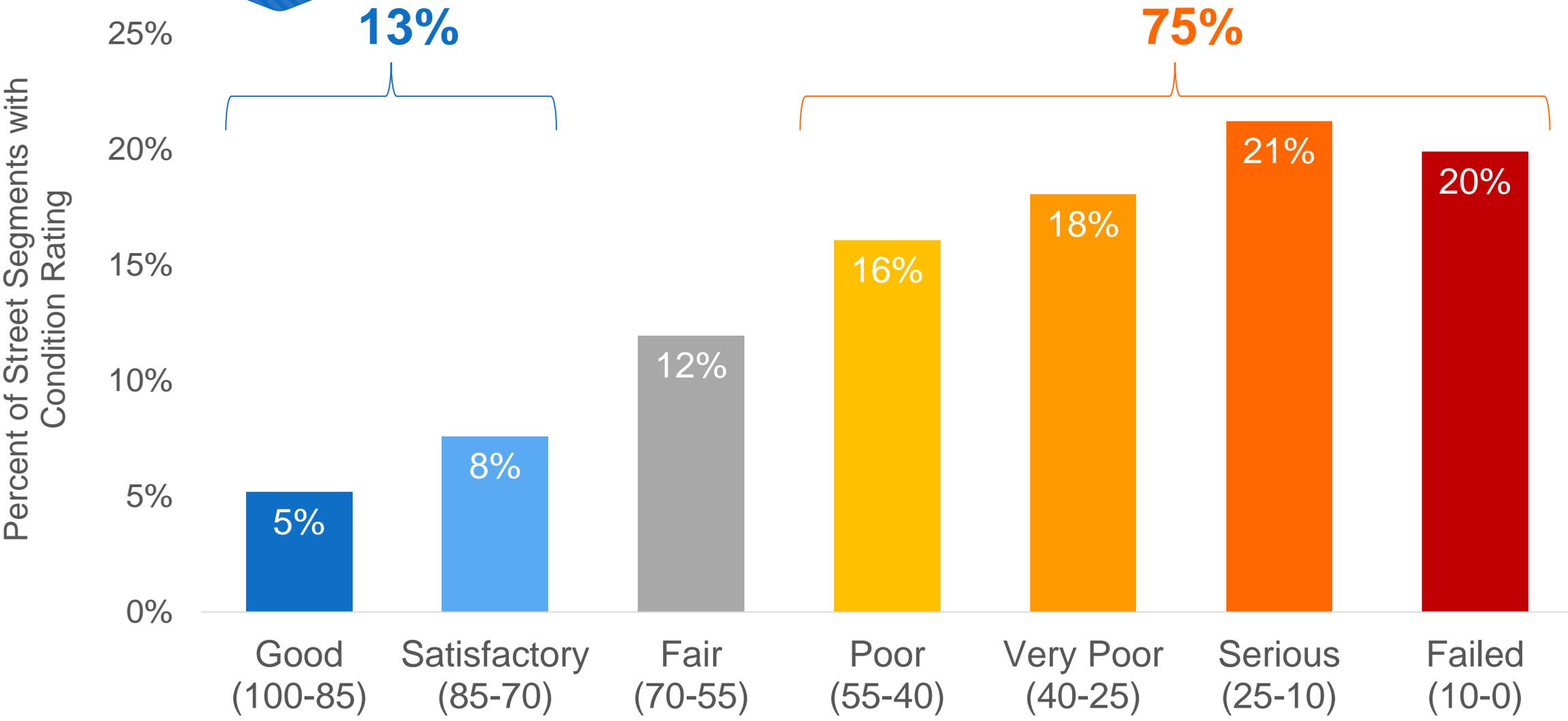


# Pavement Condition Index for Streets: 2018

The 2018 rating is calculated by taking the 2017 ratings and modifying them based on street degradation and/or investment. A full re-rating will be done for 2019.



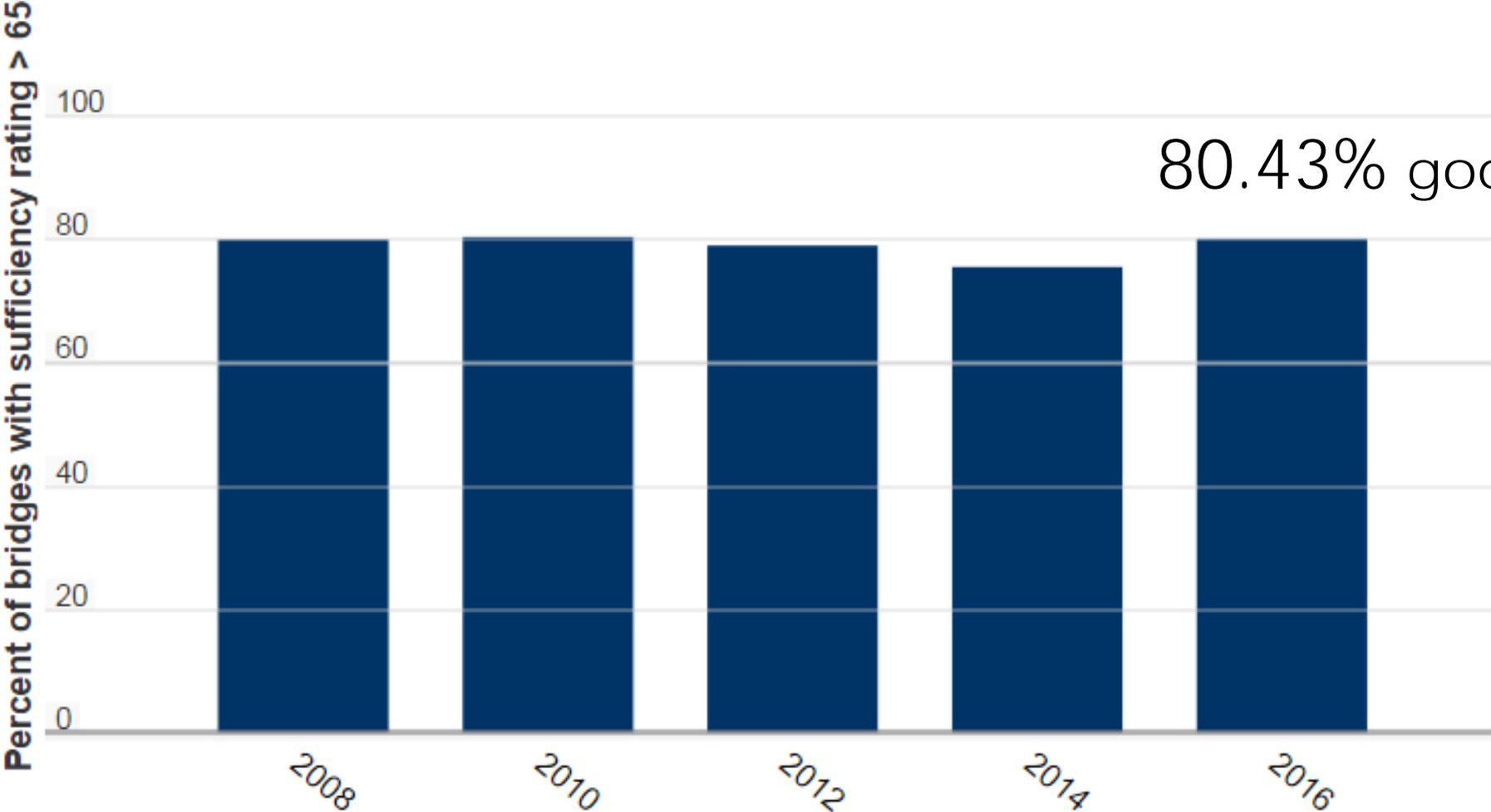
# Future Pavement Condition Index for Streets: 2027 (with current level of annual maintenance investment)



Source: Public Works, Road Needs Analysis

# Bridge Condition Rating

■ Percent of Bridges in Good or Better Condition (Sufficiency Rating > 65)



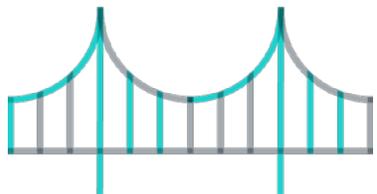
80.43% good or better

Source: Public Works

Biennial bridge condition inspection coming later in 2018

# Bridge Priority Recommendations

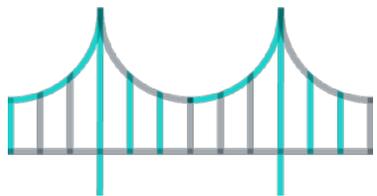
Location	Sufficiency Rating	Structural Rating	Work Needed	Estimated Cost	Funding Sources
Kenneth Road over Big Blue River	None (closed)		Replace	\$4.5M	GO KC, grant, PIAC, JaCo, OP
Byrams Ford over Round Grove Creek	None (closed)		Replace	\$1.4M	GO KC/PIAC
Raytown Road over Lumpkin's Fork	30.7	106.0	Replace	\$3.7M	GO KC
Hillcrest Road over Small Creek	7.0	72.4	Replace	\$2M	Bridge funds (design)
Gregory Blvd over Big Blue River and Union Pacific Railroad	10.5	63.2	Rehab	\$5.3M	GO KC
N Main St over Small Creek	16.4	51.6	Replace	\$1.5M	Bridge funds (design)
155 <sup>th</sup> Street over Lumpkin's Fork	None (closed)		Replace	\$1.4M	Bridge funds, Raymore
Benton Boulevard over Brush Creek	66.5	104.3	Rehab	\$3.7M	GO KC
NE 104 <sup>th</sup> Street W of N Willow Avenue	76.0	9.6	Replace	\$550K	TIF



**Backlog of Needed Bridge Repairs and Replacements: \$125 million**

# Bridge Priority Recommendations

Location	Sufficiency Rating	Structural Rating	Work Needed	Estimated Cost	Funding Sources
N Waukomis Dr over Line Creek	59.1	43.1	Replace	TBD	Grant, Platte County
Lexington Avenue over Chestnut Trafficway	57.5	24.4	Rehab	TBD	Bridge funds (design)
NE Pleasant Valley Rd over Big Shoal Creek	35.95	73	Replace	TBD	PIAC (design)
NE 112th St over Fishing River	64	64.3	Replace	TBD	PIAC (design)
Pittman Road over Round Grove Creek	67.7	52.2	Replace	TBD	PIAC (design)
Raytown Road over Small Creek	66.7	30.1	Replace	TBD	PIAC (design)
Red Bridge Rd over Creek	69.7	10.7	Replace	TBD	PIAC (design)



**Backlog of Needed Bridge Repairs and Replacements: \$125 million**

# City Fiber Asset Update

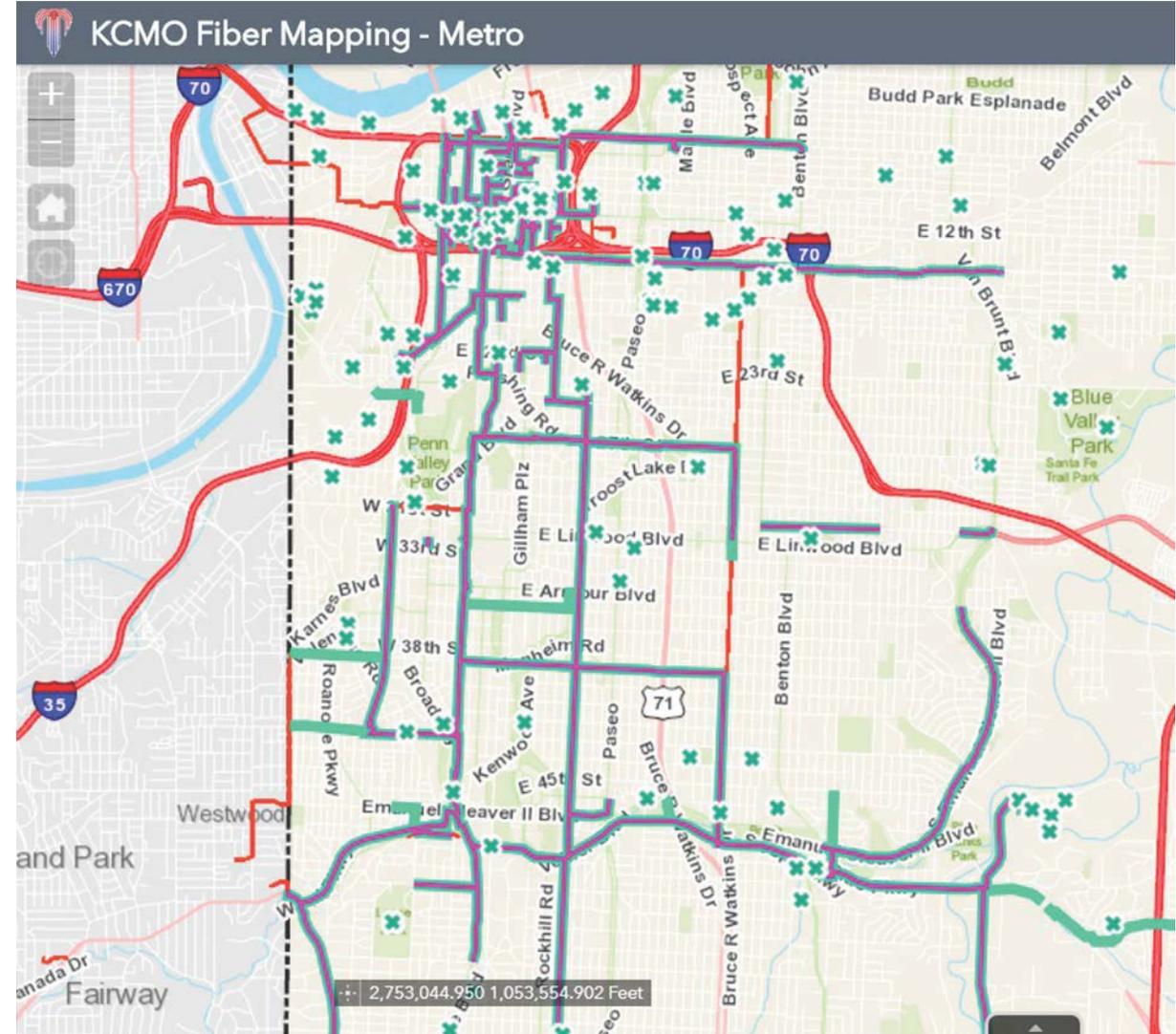
## Over 390 miles of fiber and conduit

- 140 miles connecting 290 signals
- 250 miles through municipal agreements

## Connected facilities include:

- KCPD East Patrol, North Patrol, Crime Lab
- Health Department
- Water Services
- Convention Center
- Sprint Arena
- City Hall
- Traffic Operations Center
- SPEC building
- Street Maintenance District 3

City-Wide Communications Master Plan  
developed by Olsson Associates



# Parks Asset Management

- KC Parks is part of the City's process of rolling out the first stage of its new enterprise permitting software system.
- As part of the development process for this new system, a batch process is being created that will push collected data on infrastructure permits that have been issued into an asset management system called Cartegraph.
- The Cartegraph system provides a full range of asset management tools beyond just inventory and lifecycle costs.
- It also provides the added capability of plotting the assets on a map, which will improve coordination with other departments. This geospatial capability is also critical to project funding when funds are sometimes location dependent. The geospatial capacity also will allow for tracking of the city's tree inventory, including removal, replacement, trimming, and treatment, which will equate to greater efficiencies in maintenance and service.

# Parks GO Bond Projects

- Two major infrastructure projects, **Maplewoods Parkway** and the **Paseo Gateway**, have leveraged the City's investment to secure Federal funding in order maximize the effectiveness of the total capital funding spent on the projects.
  - A **public meeting** for Maplewoods Parkway Phase 2 from Shoal Creek Parkway to N Cookingham Drive is scheduled for **March 12, 2018 from 5:00 to 7:00 pm** at Bell Prairie Elementary School.
- Both projects provide better connectivity through safe, efficient, convenient, and sustainable means.
  - The on-site management of storm water runoff
  - The use of LED lighting
  - The inclusion of enhanced bike and pedestrian facilities
  - The incorporation of public art



# Parks Fleet Reduction and “Right Sizing”

- Over 30 trucks in the Parks fleet are aged, costly, and oversized for the needs of Parks’ tasks
- “Right Sizing” fleet by increasing equipment utilization and reduce overall number of vehicles.
- Example: An International 7400 at \$175,000 replacement concept for a Swap Loader that allows transition from tasks such as watering, hauling, and winter snow operations.
- An F550 with each of these swap options is available for \$100,000 resulting in a cost savings of over 50%.
- Lighter trucks reduce initial cost, maintenance cost to park amenities, trails, grounds, etc.
- Provide practical replacement schedule reducing vehicle maintenance



# Tree Champions Group

## **Mission:**

Develop a strategic/funding/staffing plan to restore & expand KCMO's urban tree canopy and persuade citizens & leaders of Kansas City of the true value of trees.

## **Who:**

Citywide stakeholders' group will develop/implement a strategy to plant trees on public & private property. Parks & Recreation, Office of Environmental Quality, & Bridging The Gap to provide staff support. Mayor James has sent invitations to 20+ members to serve on the Kansas City Tree Champions, with a first meeting on 3/22.

## **Challenges:**

KCMO has ~ 17 million trees. The value of one large shade tree is estimated in tens of thousands of dollars over its lifetime. KCMO's tree canopy is in decline from age, extreme weather, land development, & diseases, with a net loss of ~ 28,000 trees annually. Emerald ash borer will likely destroy a million ash trees in KCMO by 2026 (perhaps as many as 6 million across the metro area).

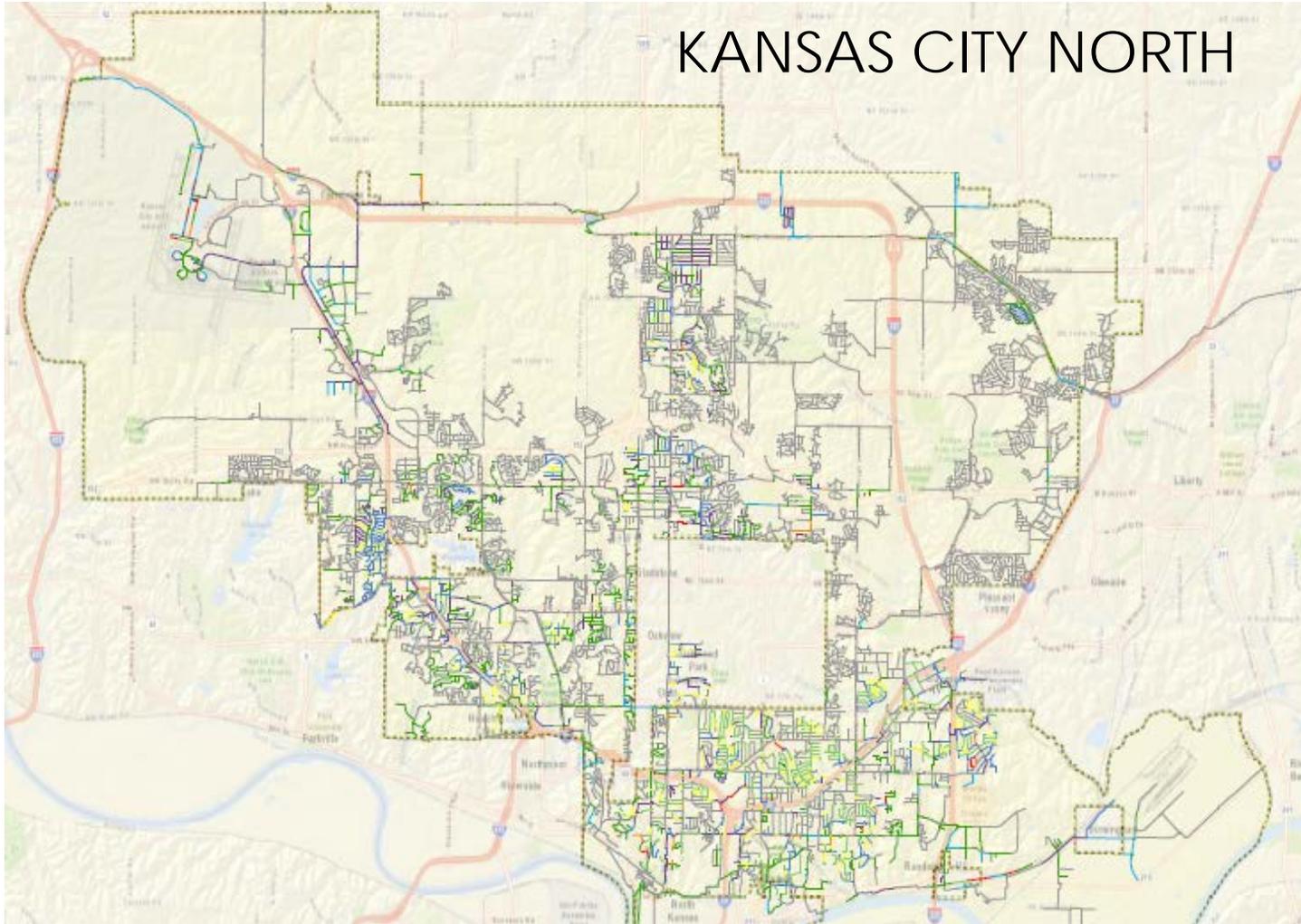
## **Climate Mitigation/Resilience Strategy:**

Planting trees strategically represents one of the least expensive and most effective strategies to reduce GHG emissions & also make Kansas City more resilient to the current & future impacts of climate change, tempering the already powerful heat-island effect and reducing residential utility bills.

## **Goal:**

Specific goal to be recommended by the Kansas City Tree Champions

# Water Master Plan: Heat Map



		Likelihood of Failure										Group	
		1	2	3	4	5	6	7	8	9	10	Miles	
Consequence of Failure	10	0.59	0.45	0.00	0.37	1.19	1.52	0.99	0.19	0.00	0.44	A	14.21
	9	1.92	6.99	0.00	1.24	1.96	3.80	0.55	0.36	0.37	0.41	B	17.42
	8	10.11	0.78	0.03	0.86	6.48	6.84	3.14	1.63	1.05	1.40	C	103.75
	7	33.19	4.36	0.84	1.92	10.22	10.40	5.11	2.58	1.75	2.31	D	222.14
	6	30.25	9.06	1.10	4.85	16.60	23.57	9.46	7.49	3.88	6.47	E	201.94
	5	54.52	9.02	1.47	15.35	36.74	50.76	14.73	9.39	5.71	7.83	F	201.32
	4	80.89	23.32	3.54	21.96	63.39	90.63	31.01	25.26	15.47	24.84	G	69.50
	3	137.42	88.62	15.97	10.73	102.05	160.50	72.45	77.84	53.57	78.91	H	618.47
	2	227.24	96.97	21.17	22.74	139.94	243.29	62.27	75.71	64.82	86.24	Z	1230.88
	1	1.21	2.92	0.57	0.21	1.57	2.62	1.61	1.50	1.63	0.41	Total:	2679.62
		Miles										Total Miles: 2,679.62	

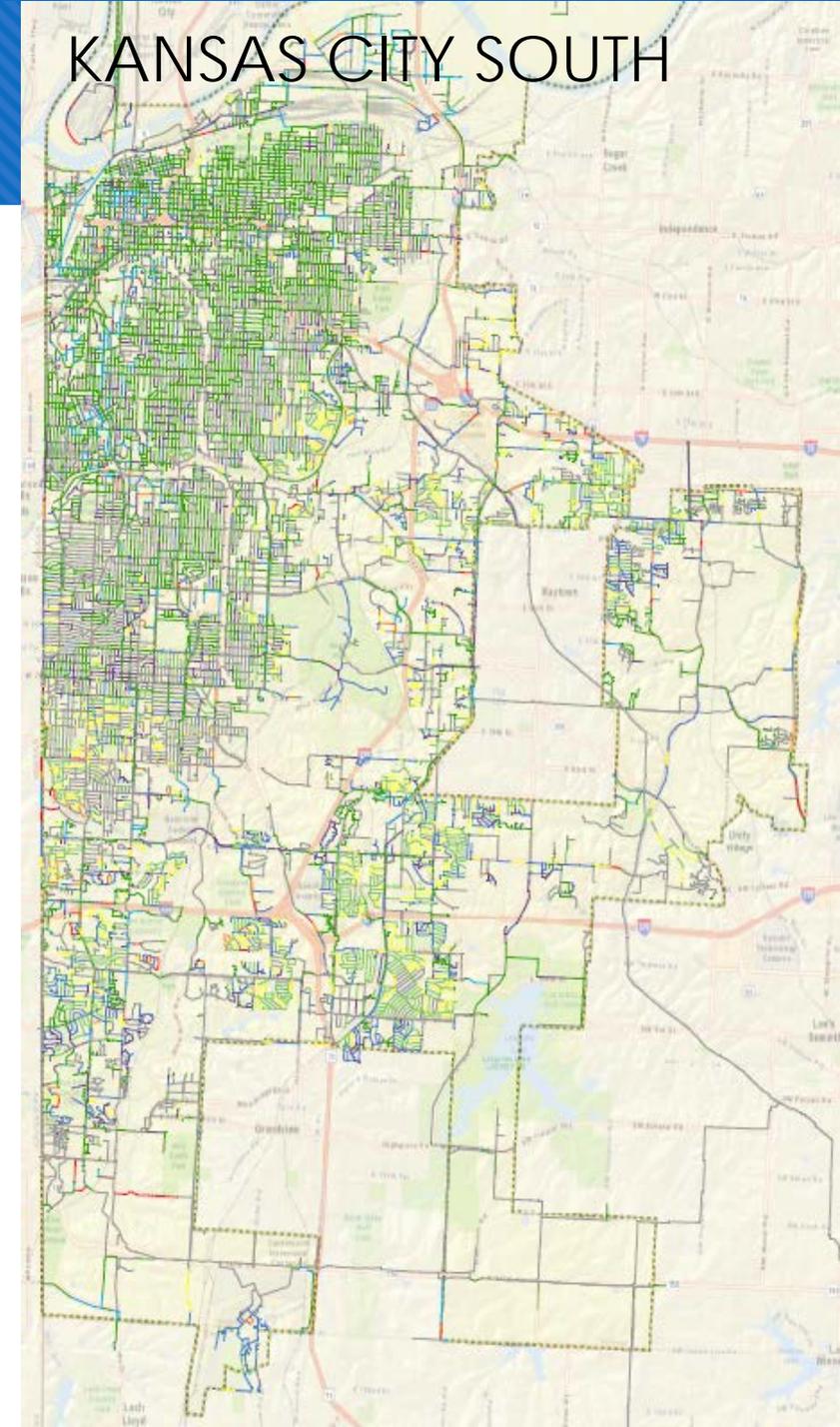
## Solution:

Water Main Replacement Programs to repair 28 miles of water mains each year

# Water Master Plan: Heat Map

KANSAS CITY SOUTH

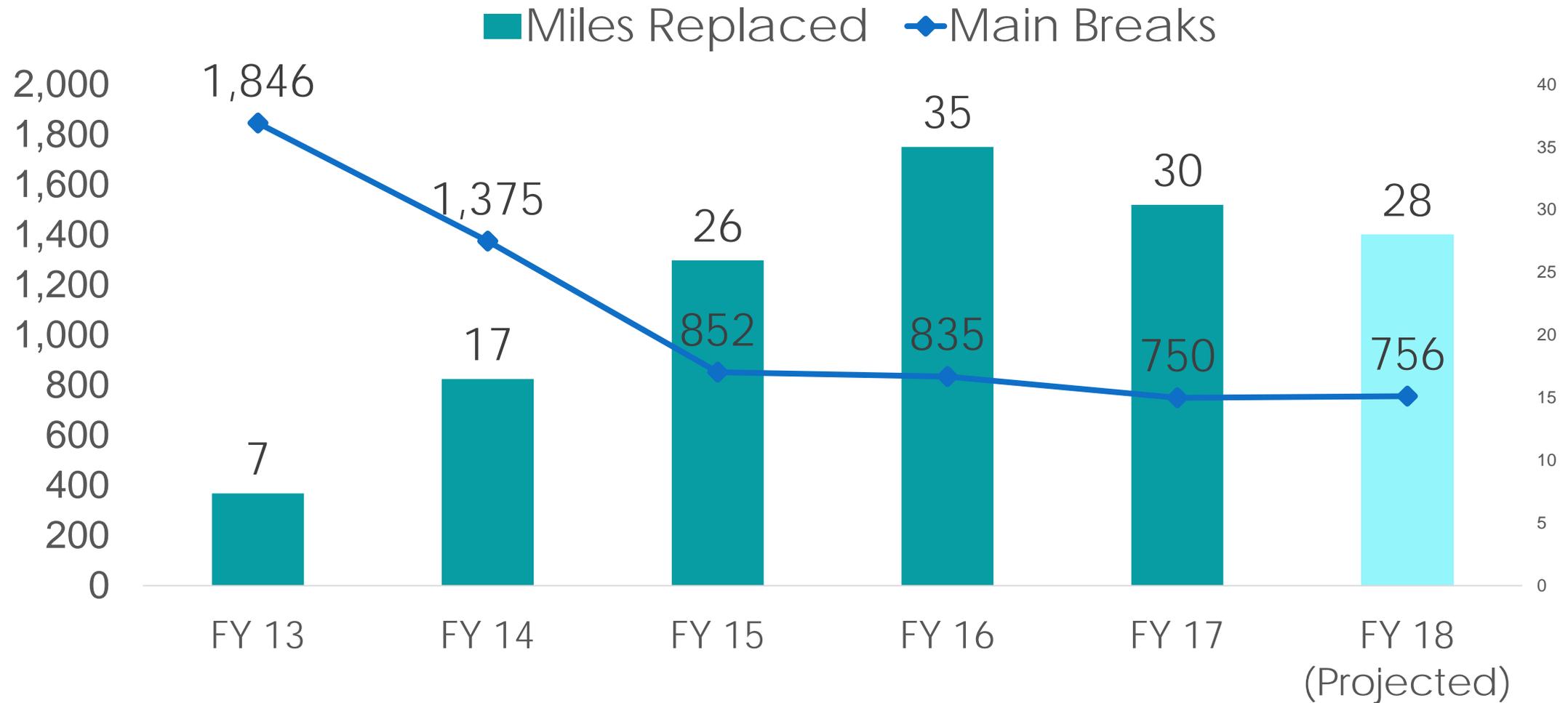
		Likelihood of Failure										Group	
		1	2	3	4	5	6	7	8	9	10		Miles
Consequence of Failure	10	0.59	0.45	0.00	0.37	1.19	1.52	0.99	0.19	0.00	0.44	A	14.21
	9	1.92	6.99	0.00	1.24	1.96	3.80	0.55	0.36	0.37	0.41	B	17.42
	8	10.11	0.78	0.03	0.86	6.48	6.84	3.14	1.63	1.05	1.40	C	103.75
	7	33.19	4.36	0.84	1.92	10.22	10.40	5.11	2.58	1.75	2.31	D	222.14
	6	30.25	9.06	1.10	4.85	16.60	23.57	9.46	7.49	3.88	6.47	E	201.94
	5	54.52	9.02	1.47	15.35	36.74	50.76	14.73	9.39	5.71	7.83	F	201.32
	4	80.89	23.32	3.54	21.96	63.39	90.63	31.01	25.26	15.47	24.84	G	69.50
	3	137.42	88.62	15.97	10.73	102.05	160.50	72.45	77.84	53.57	78.91	H	618.47
	2	227.24	96.97	21.17	22.74	139.94	243.29	62.27	75.71	64.82	86.24	Z	1230.88
	1	1.21	2.92	0.57	0.21	1.57	2.62	1.61	1.50	1.63	0.41	Total:	2679.62
Miles		Total Miles: 2,679.62											



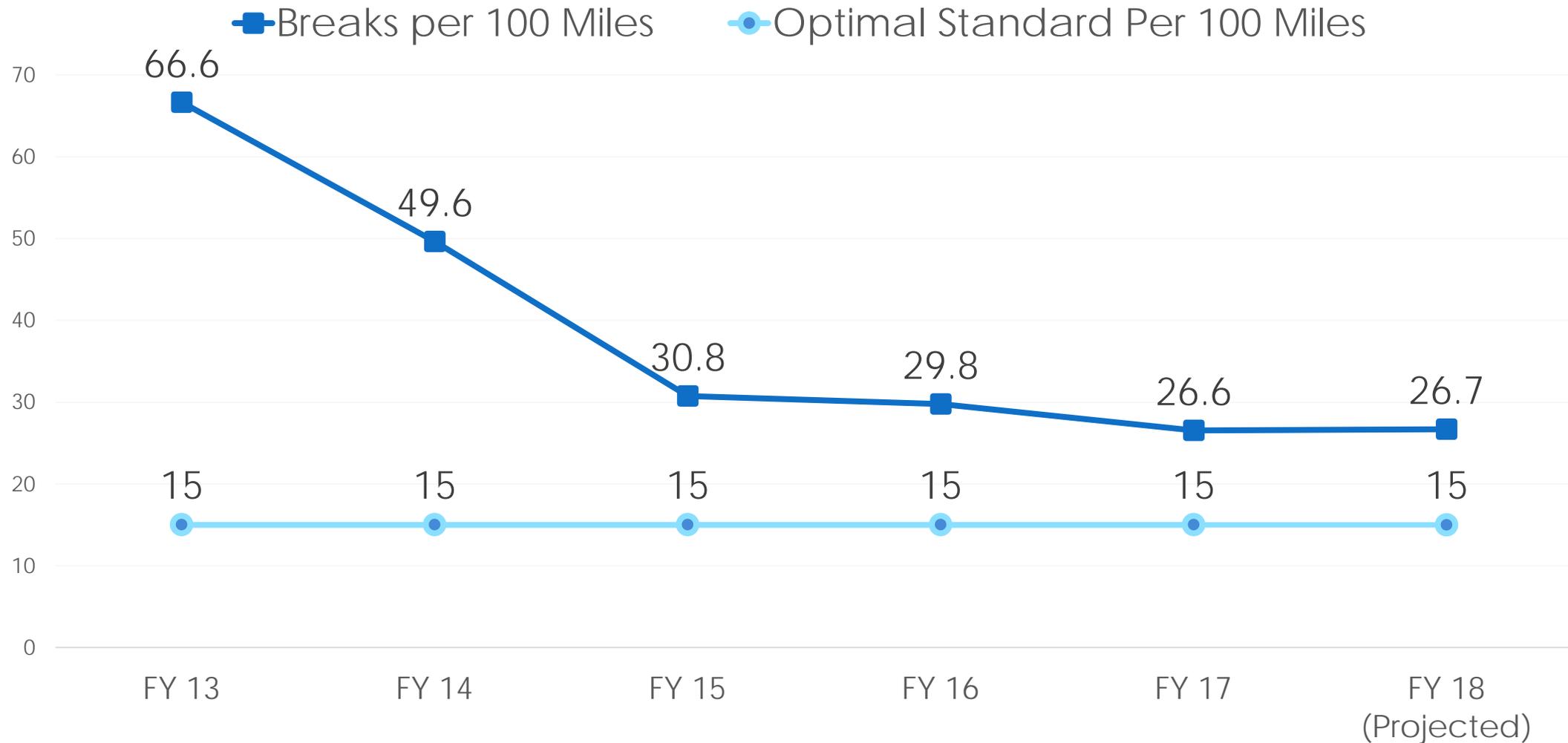
## Solution:

Water Main Replacement Programs to repair 28 miles of water mains each year

# Water Main Breaks Over Time



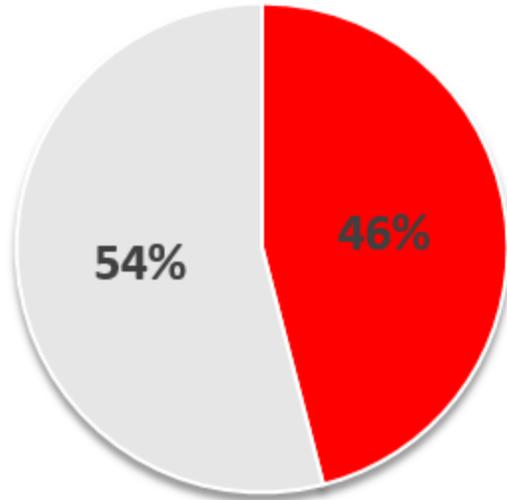
# Water Main Breaks Over Time Compared to Benchmarks



Source: Water Services Department

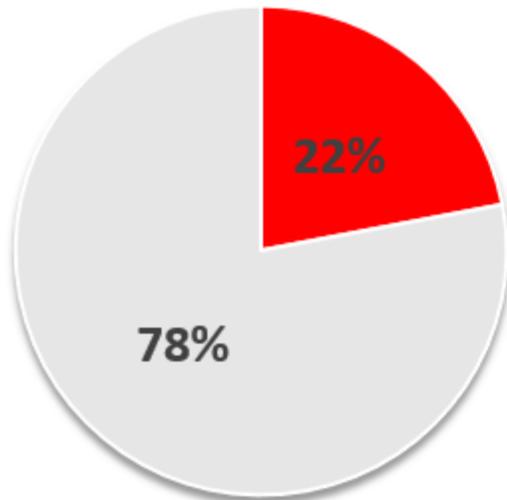
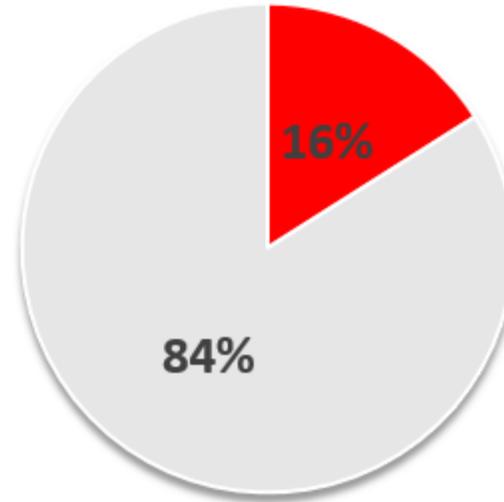
# Water Master Plan: Valve Exercising

## Initial Operability

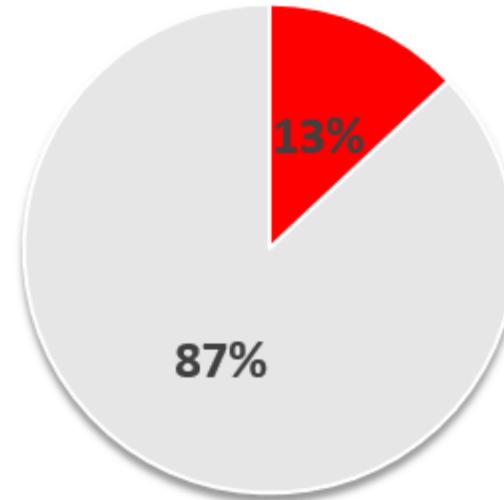


**37,375 Valves**  
(2011-2018)

## Current Operability



**11,622 Valves**  
(July '16-January '18)



Operable  
Inoperable

# Master Planning Initiatives: Status

## Master Plan Initiative Develops Long Term Strategy

- Water Supply & Treatment Plant Facility Plan is nearing completion and outlines needed improvements focused on next 5 years and longer 10 year planning horizon based on updated water consumption and population growth.
- Water main replacement modeling tool for prioritizing water main breaks may be updated later this year or early next year with additional tool to provide KC Water more information for annual prioritization process.
- Wastewater Re-Use Feasibility Study is nearing completion and is looking promising with three (3) potential large water-user partners.

# Levee Condition/Flood Control

- KCMO Water Services Department operates and maintains 11.5 miles of levees, 1.9 miles of floodwalls and 15 flood pump stations
- Joint inspections (City and the U.S. Army Corps of Engineers) are performed every year, usually in April or May
- KCMO levees received a “Minimally Acceptable” rating for the last three years



Source: Water Services Department



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- Turkey Creek – Missouri Interceptor was bid by USACE on September 15, 2017; awarded September 29, 2017
- Dodson Industrial Area Levee – was bid by USACE on October 12, 2017; awarded November 3, 2017
- Swope Park Industrial Area Levee – USACE plans to bid late 2018

# Strategy B

Implement a plan to expand the public art program to a broader category of assets, with the inclusion of the maintenance of those efforts.

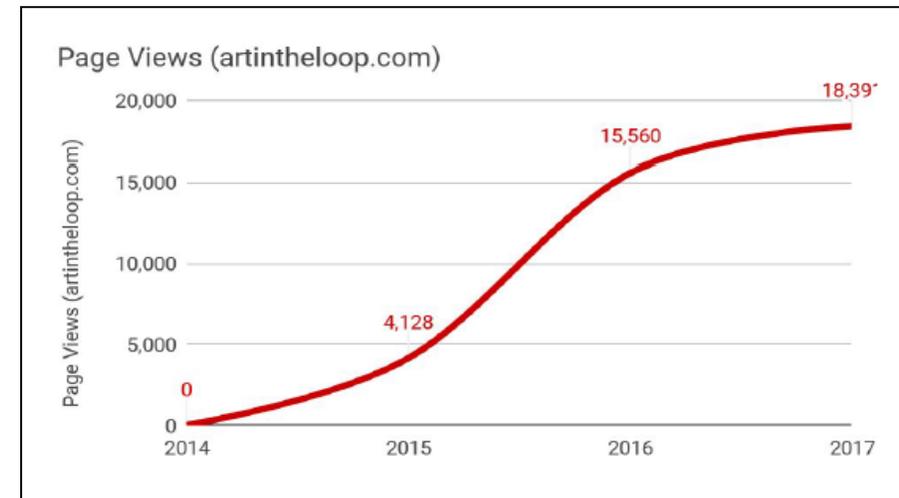
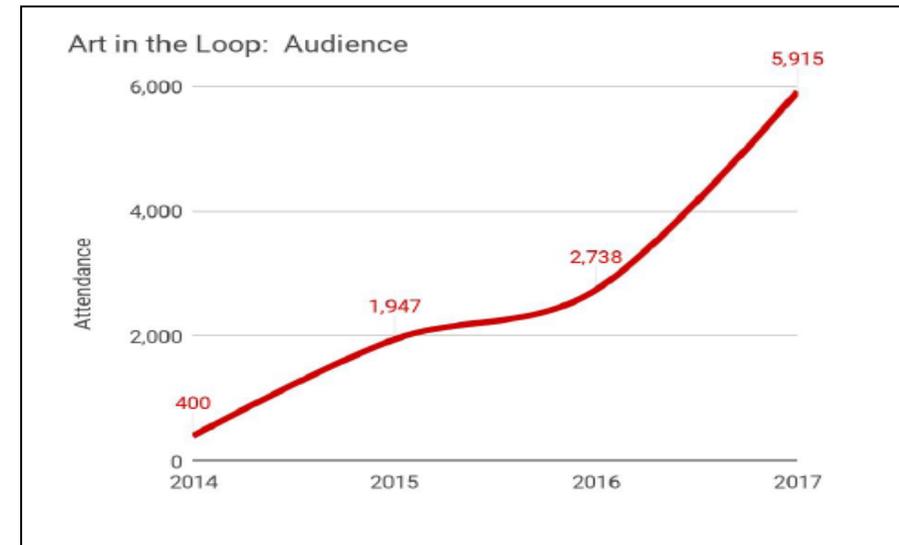
(General Services)

# Public Art Views

## Public Art Views

- KCI: **Thousands per day**
- Convention Center in 2017: **692,707 in attendance**, along with hundreds of thousands on television shots of the Sky Stations
- Views for the Streetcar in 2017: **516,088**
- Municipal Court: **300,000+ per year**
- Art in the Loop in 2017: **19,027 average weekend attendance**

## Art in the Loop Audience



# GO Bond Public Art Budget



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## 2017 – 2018 GO Bond Art Budget

Question 1 (Streets, Sidewalks & Bridges):	\$287,500
Question 2 (Flood Control Projects):	\$11,000
Question 3 (Public Buildings and Structures):	\$143,500

**Total: \$442,000**

## 2018 - 2019 GO Bond Projected Budget

Question 1 (Streets, Sidewalks & Bridges):	\$464,714
Question 2 (Flood Control Projects):	\$86,208
Question 3 (Public Buildings and Structures):	\$185,788

**Total: \$736,710**

## Upcoming GO Bond Art Projects

### Question 1

- Maplewoods Parkway \$278,200
- Wornall Project - \$127,750
- Marlborough – \$118,000

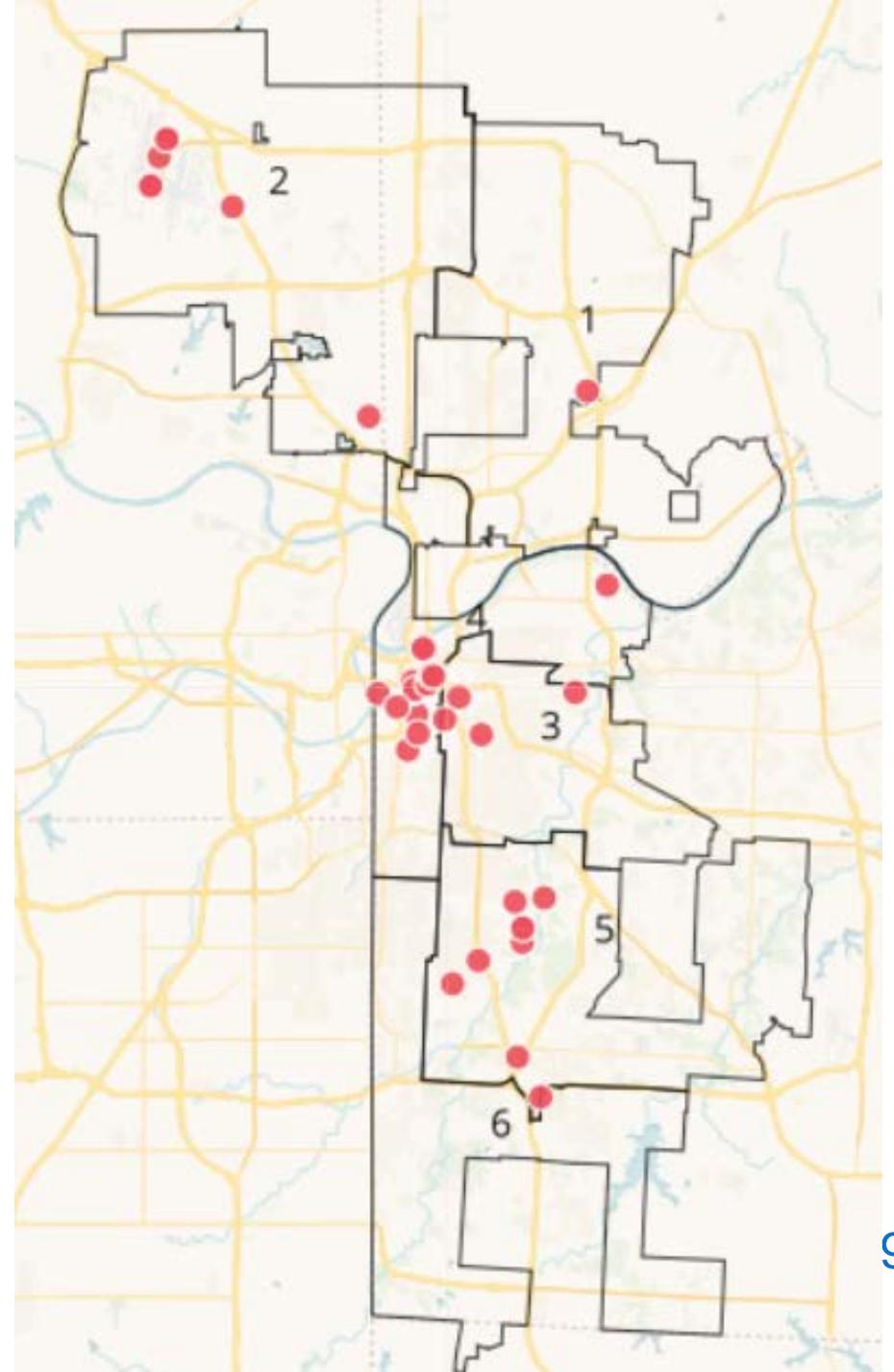
### Question 3

- KC Museum - \$123,788
- Starlight - \$35,500
- Animal Shelter - \$140,000
- North Fire Station - \$50,000

# One Percent for Art Locations

44 projects completed since 1986

Map Link: <https://goo.gl/5i5Whp>



# One Percent for Art – Art Program Maintenance Report

## **Madison Group Fine Art Appraisals created a 10 year Maintenance Program**

- Description of materials
- Exposure
- Site conditions
- Recommendations for immediate work and cost
- Recommendations to how often the work needs to be examined
- Specific products and/or vendor recommendations

Total For Immediate Recommendations: \$647,300

Total For Recommended Annual Maintenance: \$103,925

Total For 3 – 5 Year Interval Recommendations: \$226,000

# One Percent for Art Program- New Art



*Urban Youth Academy Mural*  
Phil Shafer a.k.a. Sike

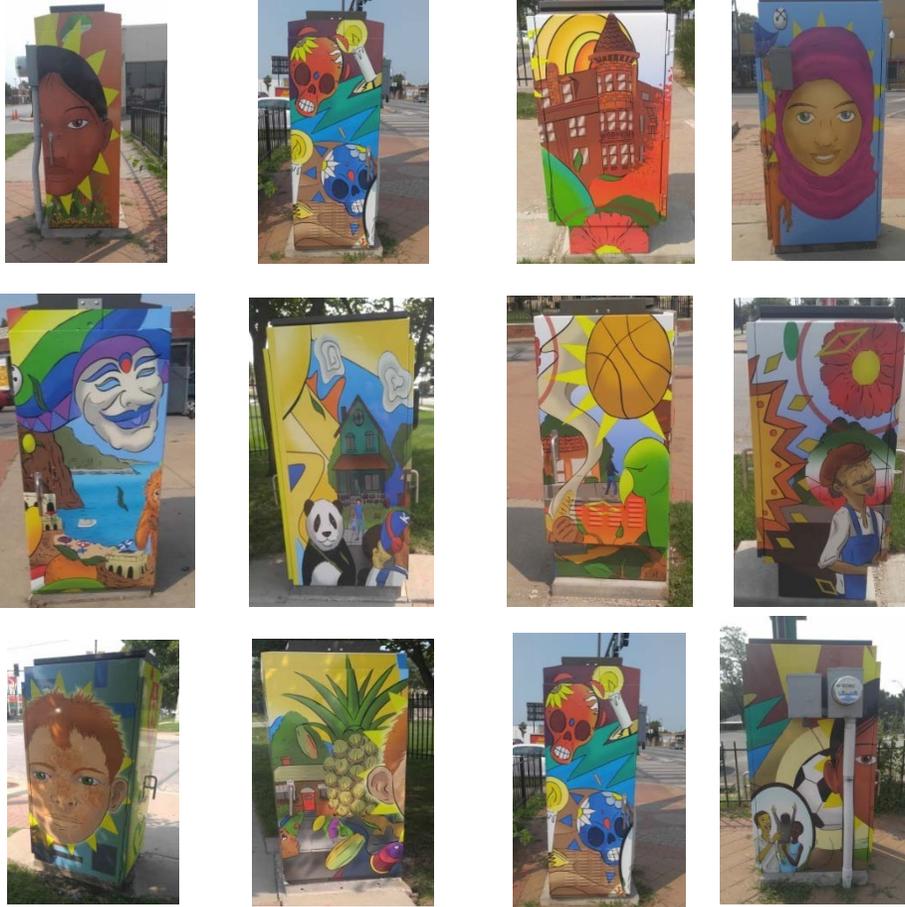
*To Serve and Protect*  
By Frank Swanson  
KCPD North Division



*16 Windows*  
Denise DiPiazza  
16<sup>th</sup> Judicial Circuit Court

# MAPIT – Mural Art Program Inspiring Transformation

*Vinyl-covered Google utility boxes*  
Independence Ave  
Funded by Google



*Parker's Mood*  
JT Daniels  
Funded by  
Google



# Strategy C

Implement the City's Americans with Disabilities Act (ADA) plan to meet the Department of Justice's settlement agreement and ensure that all projects meet ADA standards.

(Office of the City Manager)

# Violation Resolutions

## When:

The settlement was entered into on [July 26, 2012](#) between the City of Kansas City, Missouri and the U.S Department of Justice.

## Goal:

To make Kansas City, MO [facilities](#), [parks](#), [curb ramps](#), and [programs](#) ADA Compliant.

## Progress:

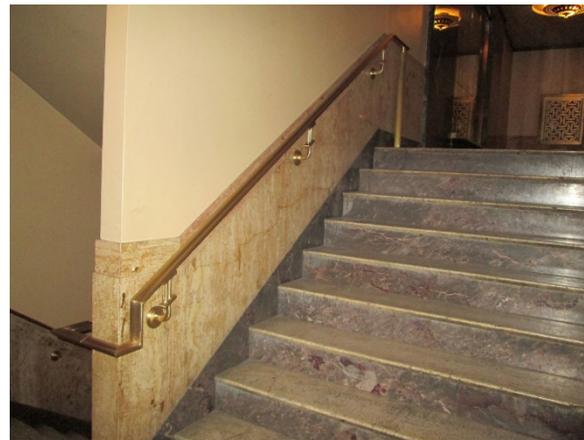
Construction is complete on [28 facilities](#) and some upgrades at City Hall have been completed.

There are [261 remaining facilities](#), including approximately [158 parks](#).

## Examples:



Shoal Creek Living History Museum



Music Hall

# Transition Plan

The Transition Plan, nearly complete, will be a timeline-type document that shows the work still to be completed for all remaining Kansas City facilities and parks, and the timeline for completing that work.

The Department of Justice will have to approve the Transition Plan before it can be implemented.



Work completed at the 13<sup>th</sup> Street entrance to the Convention Center

# Next Steps

## GO Bond-Funded ADA Projects

### Year 1

- City Hall elevator upgrades: Equipment has been ordered and work will begin this summer
- Starlight Theater, Phase 1: Construction is underway for the first phase which will continue through the fall of 2018

### Year 2

- City Hall core
- Starlight Theatre, Phase 2



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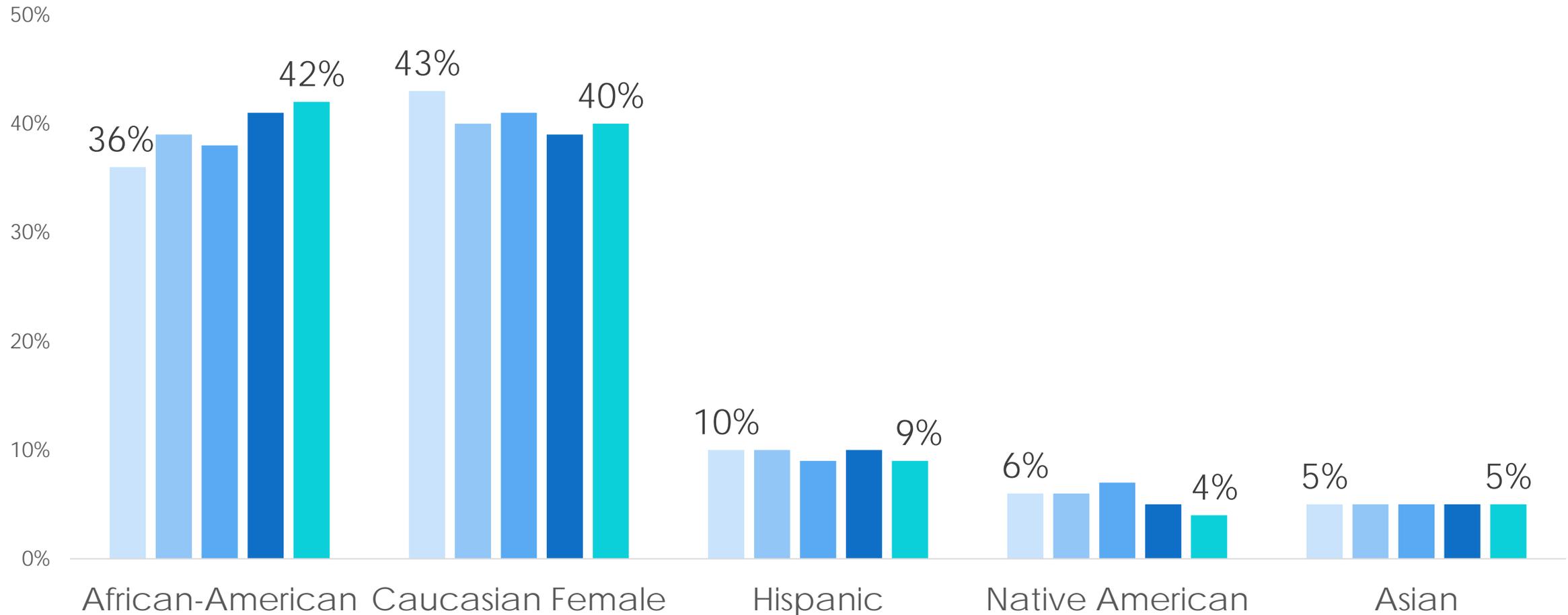
# Objective 4:

Increase and support local workforce development and minority, women, and locally-owned businesses.

# M/WBE Directory – Comparison of Firms Over Time

M/WBE Directory – Percent make-up by Certification Type

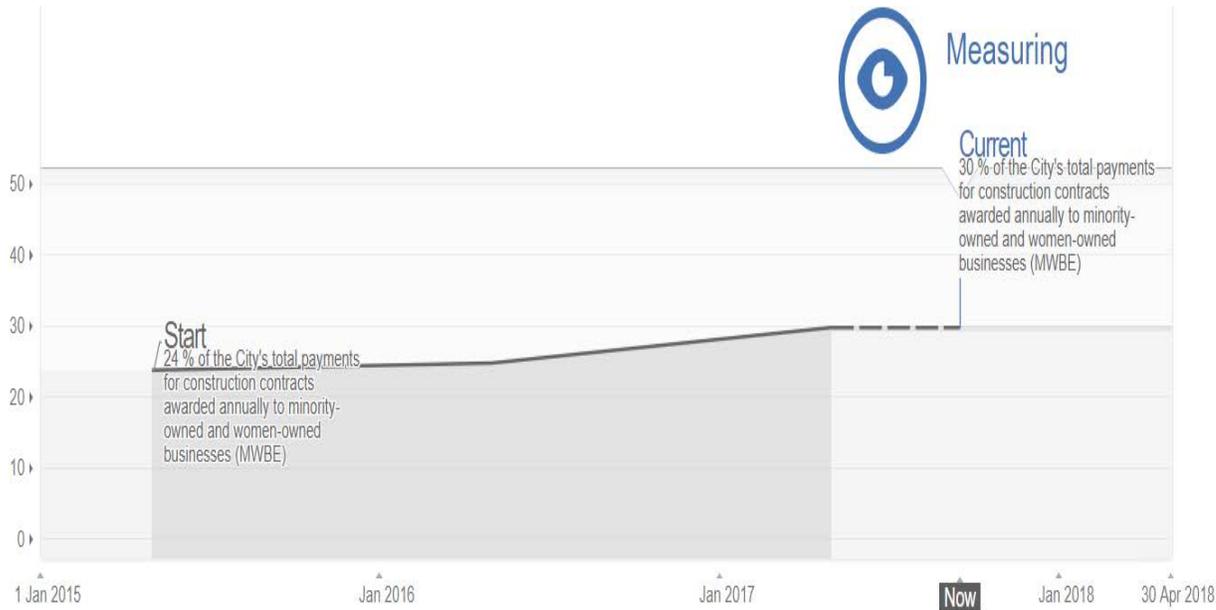
■ 2014 ■ 2015 ■ 2016 ■ 2017 ■ 2018 (YTD)



# FY17 Minority and Women Business Enterprise (MWBE) Participation in Construction and Professional Services

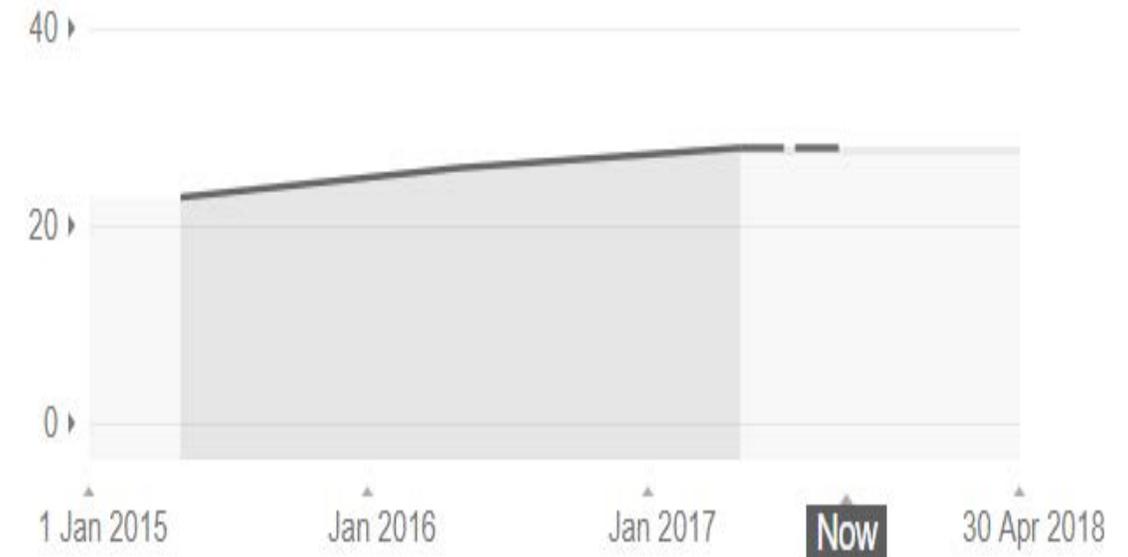
## MWBE Construction Services Contracts

**30%** of the City's total payments for construction contracts awarded annually to minority-owned and women-owned businesses (MWBE)  
Current as of Apr 2017



## MWBE Professional Services Contracts

**28%** of the City's total payments for professional services contracts awarded annually to MWBE



# Strategy A

Utilize advertisements, the Annual Capital Improvement Overview, and City-sponsored learning opportunities to increase awareness and response to City-issued Requests for Qualifications/Proposals (RFQ/Ps).  
(Human Relations)

# HRD Supportive Communication Efforts

## **A. Communication Effort**

- Email to M/WBE firms making them aware of established goals

## **B. Monthly workshops (M/WDBE)**

- Radio show: "DISCRIMINATION - Report It, Don't Ignore It!"  
SATURDAYS at 11:00 AM on KPRT - 1590 AM (English/Spanish)
- Social Media (Facebook)

## **C. Direct Solicitation Based Upon Scope of Work**

- Ongoing email regarding established goals
- Outreach notification
- Vendor registration

## **D. Annual KCGPC conference (August)**

# 2017 KCMO Disparity Study Findings

A. Study supports KCMO compelling interest for continuation of the program.

B. Qualitative evidence of disparities in the KC economy

- Discriminatory attitudes & negative perceptions
- Exclusion from industry & information networks
- Inability to obtain work on an equal basis
  - No goals vastly reduced opportunities
  - Most M/WBEs do little private sector work
  - Prime contracts are especially difficult to obtain

C. Access to credit remains a large challenge for MWBE firms

D. Large disparity in receipts between MWBE firms and other non-minority firms

E. 92% of KCMO dollars are spent in Missouri & Kansas

F. Availability of MBE firms 14.7%; WBE firms 14.4%.

G. Minorities & White women earned lower wages, earned less from their businesses & formed fewer businesses than similar White males in KC metro area.

# 2017 KCMO Disparity Study Recommendations

1. Credit for MWBE Self-Performing Work
2. Increase KCMO annual target goal based on study
3. More monitoring resources are needed
4. Collect subcontracting data for all firms
5. Expand Financing & Bonding Program
6. Increase compliance training for prime contractors
7. Continue to apply race neutral measures
8. Issue "control" contracts (In lieu of a specific goal)
9. Eliminate one year waiting period for certification
10. Count supplier at 60%

Ordinance implementing recommendations is currently in front of Council

# Strategy B

Update and implement Workforce Strategic Plans on all City and statutory agencies' projects. (Human Relations)

# Workforce Initiatives

## A. GO KC

Collaborative effort with Public Works & Councilperson(s) (Wagner/Canady)

## B. SLBE Fiscal Years 2011-2017

- Number of contracts: 199
- Contract dollars awarded: \$21.4 million

## C. Construction Workforce Disparity Study

- To identify availability of workers in the community
- Anticipated for Winter 2018

# Strategy C

Develop and implement  
Community Benefit Agreements  
and local preference plans for  
use in City and statutory agency  
projects. (Human Relations)

# CBA Initiatives

- **SLBE-WSDEPS**

- **Veteran Owned Small Business Program**

# Questions?

Stay up to date on progress at [kcstat.kcmo.org](http://kcstat.kcmo.org)

#KCStat

Next KCStat:

April 3, 9 AM: Planning, Zoning, and Economic Development

