

# Infrastructure Committee Update

Karl Oberjohn

Council Member

Co-Chair, Infrastructure Committee

# Outline

- Street repair methods
  - Short-term mill and overlay
  - Long-term “deep fix”
- Status of all city streets
  - Streets rebuilt since 2000
  - Streets yet to be rebuilt
- Funding sources
  - Restricted Funds
  - \$2.5M Street Loan
- Ten-year outlook

# Repair Methods

- Short-Term Solution: Mill & Overlay
  - Top layer (2 inches) of a street is removed by a large milling machine and replaced with a new layer of bituminous pavement
  - 8-15 year life cycle
  - No upgrades to buried utilities
  - For estimation purposes, very roughly \$50/foot

# Repair Methods

- Long-Term Solution: “Deep Fix”
  - Sanitation District No. 1: “When planning road reconstruction or resurfacing projects, make sure that proper drainage designs are implemented.”
  - Replacing entire street presents opportunity to upgrade buried utilities
    - Replace water and gas lines with modern materials
      - Example: replacing lead water pipes
    - Separate combined storm and sanitary sewers
  - Subsequent maintenance only requires mill and overlay and possibly curb repair
  - Cost depends on complexity of buried infrastructure
  - For estimation purposes, very roughly \$400-600/foot

# Why “Deep Fix?”

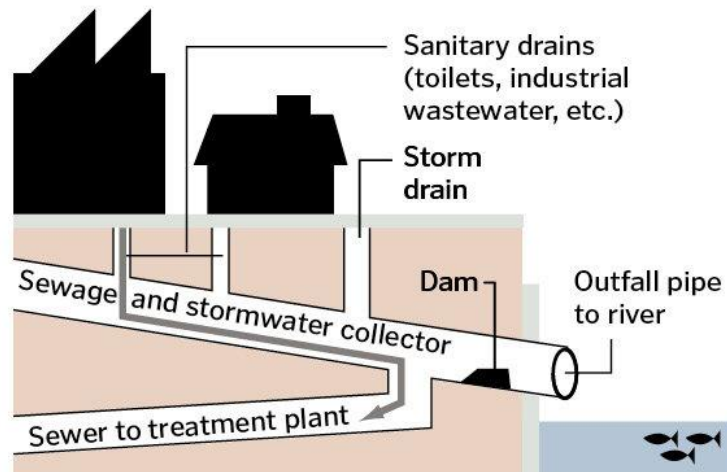
- Old sewer lines, especially combined lines (storm + sanitary) contribute to overflows in basements and discharge of pollutants into Ohio River
- New utility lines will last 75-100 years
- Pavement will last longer with better foundation
- Since beginning of Street Program in 2000, 19 streets have been completely rebuilt using the “Deep Fix” method
- 13 streets have not been substantially improved

# Combined Sewer Overflows

## How a combined sewer system works

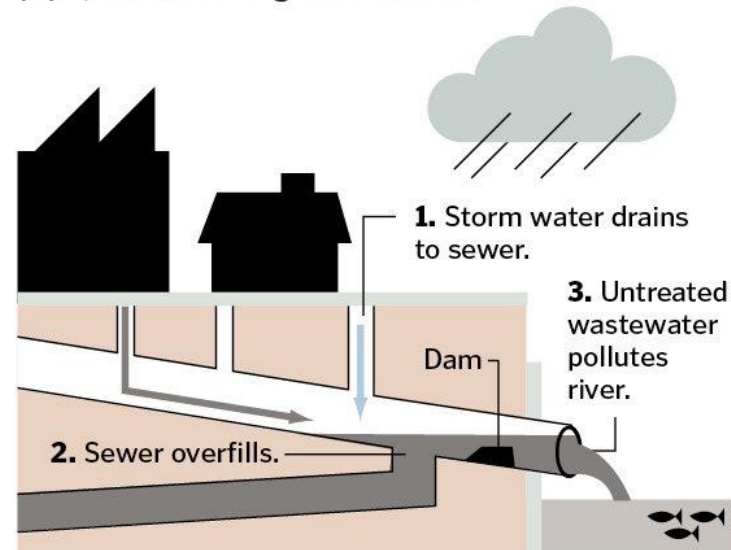
A combined sewer system collects both wastewater from domestic, commercial and industrial sources with runoff water from streets and buildings. The collected wastewater is then treated before it is released to streams, rivers or lakes. Problems arise when the system is overloaded after a big storm.

**ON A DRY DAY:** Wastewater and street runoff collected in the sewer is blocked by a partial dam in the collection pipe and flows by gravity to the treatment plant.



SOURCE: U.S. Environmental Protection Agency

**AFTER A BIG STORM:** Runoff from streets causes collector to overfill. When untreated wastewater rises above the dam in collector pipe, it is discharged into river.



KEN MARSHALL | THE PLAIN DEALER

# Completed Streets

STREET NAME	YEAR
ROSE CIRCLE	2000
ST. JAMES AVE	2000
HILLCREST LANE	2002
CECELIA AVE.	2003
SCENIC AVENUE	2003
MOUNT ALLEN RD.	2008
ST JOSEPH AVE.	2008
HILLTOP DRIVE	2010
ROSEMONT AVE	2010
MORGAN CT.	2011
TERRACE DRIVE	2012
EXTER DRIVE	2013
ARLINGTON (SOUTH)	2014
OLD STATE RD	2014
ALHAMBRA CT.	2015
CORAM STREET	2015
HARRIET STREET	2015
ALTAVIA	2016
ABERDEEN RD	2017



# LINK-GIS Web Map

Building	Recreation
Building	Ball Fields
Pool	Playground/General Rec
Tank	Tee/Green
Concrete Pad	
Roads	Topography
Paved Road	Index Contour
Upaved Road	Intermediate Contour
Bridges	Creek / Stream
Paved Parking	River / Lake
Unpaved Parking	
Railroad	Boundaries
	Parcel
	Zoning
Utilities	
Sewer	
Sewer Structure	
Water Pipe	
Water Hydrant	

1:5,800



2332 Royal Drive  
Fort Mitchell, KY 41017  
859.331.8980  
Office hours M-F 8-5  
[www.linkgis.org](http://www.linkgis.org)

Parcel data provided by CCPVA,  
PCPVA and LINK-GIS.

**Date: 10/22/2017**

These GIS data are deemed reliable and every effort has been made to ensure their accuracy. They are, however, provided "as is" without warranty of correctness, timeliness, reliability, or completeness. Map elements do not represent a legal survey of land. Use of these data for any purpose should be with an acknowledgement of their limitations, including the fact that they are dynamic in nature and in a constant state of maintenance. Field investigation may be necessary.







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# LINK-GIS Web Map

**Building**

- Building
- Pool
- Tank
- Concrete Pad

**Recreation**

- Ball Fields
- Playground/General Rec
- Tee/Green

**Roads**

- Paved Road
- Upaved Road
- Bridges
- Paved
- Unpaved
- Parking
- Railroad

**Utilities**

- Sewer
- Sewer Structure
- Water Pipe
- Water Hydrant

**Topography**

- Index Contour
- Intermediate Contour
- Creek / Stream
- River / Lake

**Boundaries**

- Parcel
- Zoning

1:7,200

0 300 600 Feet

↑

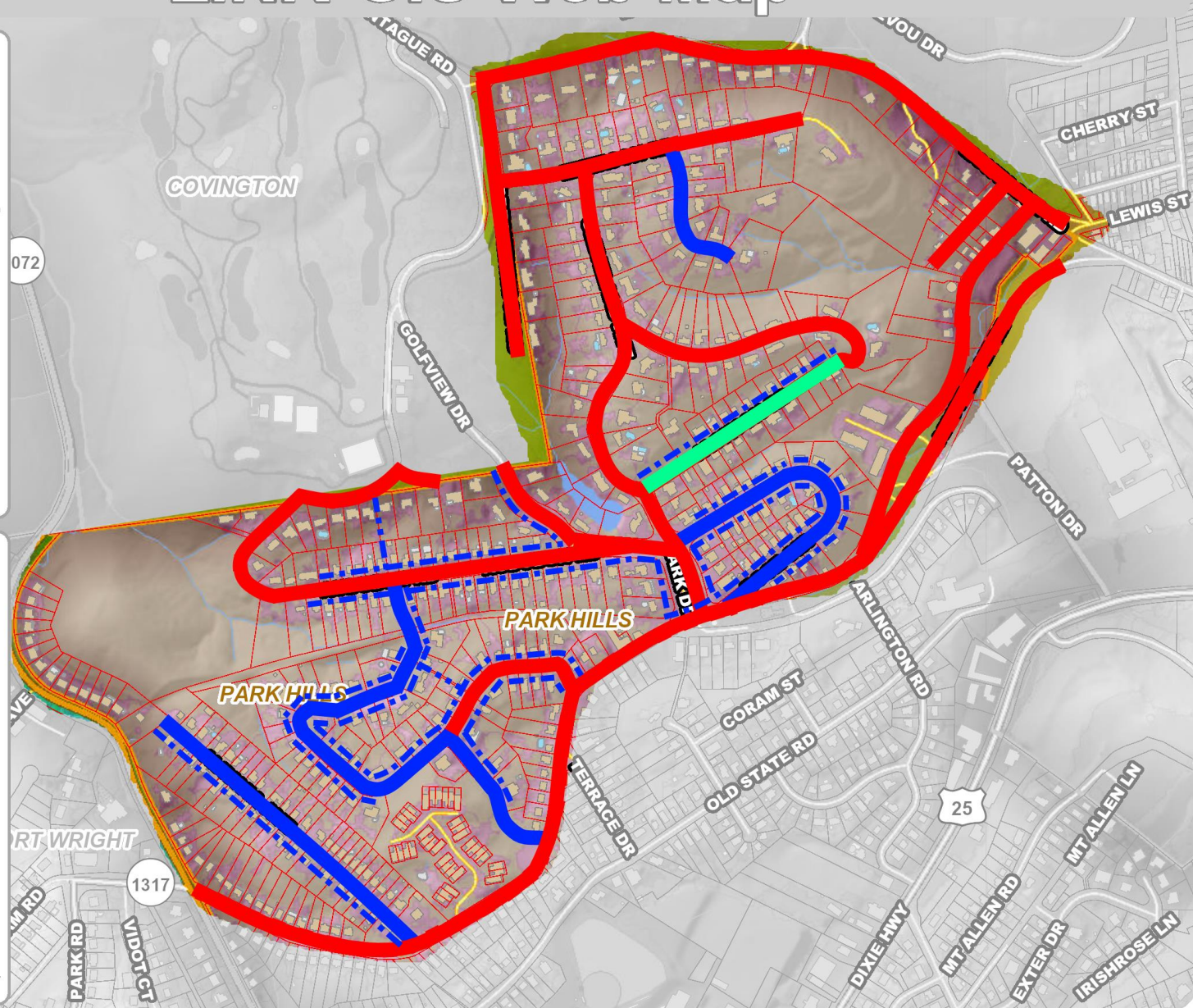


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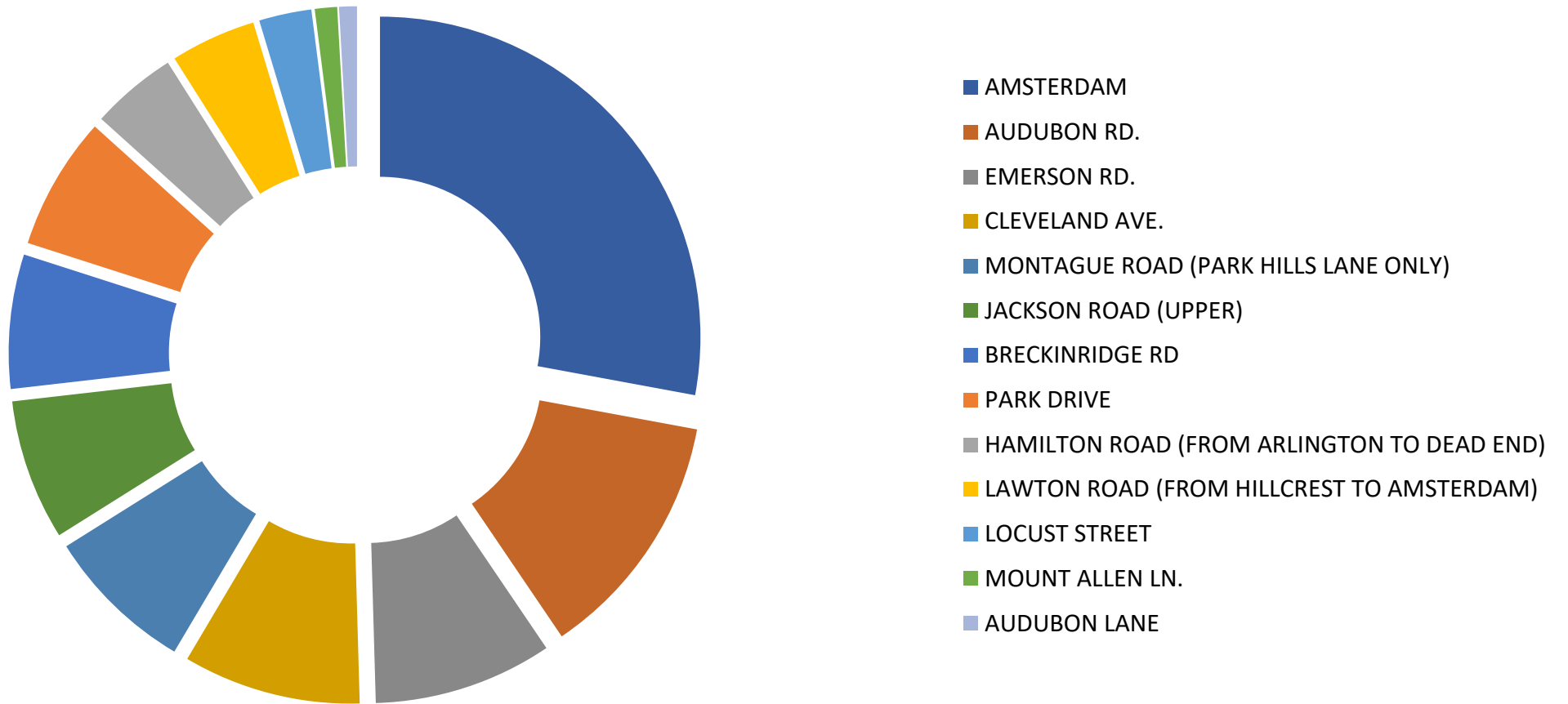
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# Remaining Streets



# Remaining Streets – Rough Cost Estimate

STREET NAME	Street Length Remaining	Mill & Overlay \$50/ft	Deep Fix \$400/ft	Deep Fix \$500/ft	Deep Fix \$600/ft
AMSTERDAM (COUNTY ROAD)	4980	\$ 249,000	\$1,992,000	\$2,490,000	\$ 2,988,000
AUDUBON RD.	2250	\$ 112,500	\$ 900,000	\$1,125,000	\$ 1,350,000
EMERSON RD.	1610	\$ 80,500	\$ 644,000	\$ 805,000	\$ 966,000
CLEVELAND AVE.	1600	\$ 80,000	\$ 640,000	\$ 800,000	\$ 960,000
MONTAGUE ROAD (SHARED WITH COVINGTON)	1350	\$ 67,500	\$ 540,000	\$ 675,000	\$ 810,000
JACKSON ROAD (UPPER)	1267	\$ 63,350	\$ 506,800	\$ 633,500	\$ 760,200
BRECKINRIDGE RD	1208	\$ 60,400	\$ 483,200	\$ 604,000	\$ 724,800
PARK DRIVE	1200	\$ 60,000	\$ 480,000	\$ 600,000	\$ 720,000
HAMILTON ROAD (FROM ARLINGTON TO DEAD END)	775	\$ 38,750	\$ 310,000	\$ 387,500	\$ 465,000
LAWTON ROAD (FROM HILLCREST TO AMSTERDAM)	770	\$ 38,500	\$ 308,000	\$ 385,000	\$ 462,000
LOCUST STREET	472	\$ 23,600	\$ 188,800	\$ 236,000	\$ 283,200
MOUNT ALLEN LN.	200	\$ 10,000	\$ 80,000	\$ 100,000	\$ 120,000
AUDUBON LANE	160	\$ 8,000	\$ 64,000	\$ 80,000	\$ 96,000
	17842		\$7,136,800	\$8,921,000	\$10,705,200
	(3.4 miles)				

# Funding Sources

- General Fund
- Vehicle Sticker Fund
- General Fund Reserve
- Restricted Funds
  - Municipal Road Aid (MRA)
  - Road Tax
- \$2.5M Street Loan
- Grants

# General Fund

- Revenue from taxes and fees – \$1.6M budgeted for FY 2017-18
- Mainly allocated to various departments (Administration, Police, Fire)
- Not a primary funding source for infrastructure projects

# General Fund

- 209 – Public Works Department (\$102,000 budgeted)
  - Administration
    - Public Works Director salary & benefits
    - Vehicles and equipment
    - Materials
  - Smaller projects
    - Park Avenue mill and overlay, sidewalk extension
- 609 – Utilities
  - Street Lighting (\$11,000)
  - Traffic Lights (\$700)
- 809 – Capital Improvements
  - Sign Replacement (\$2,500)

# Vehicle Sticker Fund

- Revenue from vehicle sticker fees (\$15/vehicle)
- Budgeted \$25,000 revenue for FY 2017-18
- Balance as of 9/30: \$83,000
- Budgeted expenses for FY 2017-18
  - Sidewalk – \$72,000
  - Lighting – \$10,000
- Not restricted to infrastructure projects



# General Fund Reserve

- Short-term buffer to help pay large bills due before taxes are collected in September
- Should be replenished after taxes are collected
- Balance as of 9/30: \$484,000
- Council vote required to transfer funds from Reserve
- Example: August 10, 2015: Borrowed \$110,630.06 from Reserve Fund to help pay invoices totaling \$171,744.41

# Municipal Road Aid (MRA)

- State of Kentucky allocates a portion of its gasoline tax revenue to cities based on their population
- Received in monthly installments
- Budgeted \$58,000 revenue for FY 2017-18
- Balance as of 9/30: \$261,000
- Acceptable uses, from Kentucky League of Cities:
  - Cities spend streets and roads money on construction and reconstruction (such as filling potholes) as well as on snow removal and treatment, street cleaning, line painting, sidewalks, street lights, etc.
- Cities must conduct an annual public hearing on the proposed usage of the Municipal Road Aid Fund

# Road Tax

- City Council establishes by ordinance, must pass referendum
- Acceptable uses defined in Ordinance No. 12, 1995
  - “Maintenance, repair, overlay, and replacement of public streets and roads”
  - Sidewalk can be added if it is part of a road construction project (N. Arlington)
  - Can not be used for stand-alone sidewalk projects (Old State Road)
- Currently \$1.55 per \$1,000 of assessed property value
  - Compared to \$2.09 per \$1,000 for general property tax – same rate since 2008
- Budgeted \$300,000 in revenue for FY 2017-18
- Balance as of 9/30: \$244,000

# Road Tax

- 1993 – Park Hills Street Committee (Jay Bayer, Charles Meyers, Dennis Finke)
  - Produced 30-page report assessing street pavement conditions and traffic volume as well as opportunities to modernize sewer system
  - Tabulated various suggested tax rates based on length of replacement cycle
- 1995 – Road Tax established
  - \$2.35 per \$1,000 of assessed property devoted solely to street improvements
  - Beginning of Street Program, a plan to “Deep Fix” all the streets in Park Hills

# Road Tax

- 2008 – Road Tax temporarily reduced
  - Plan to split tax into two components for five-year period
    - \$1.55 per \$1,000 for street improvements (66%)
    - \$0.80 per \$1,000 for firetruck acquisition and community development (34%)
  - Scheduled to revert to original \$2.35 per \$1,000 solely for street improvements in 2014

# Road Tax

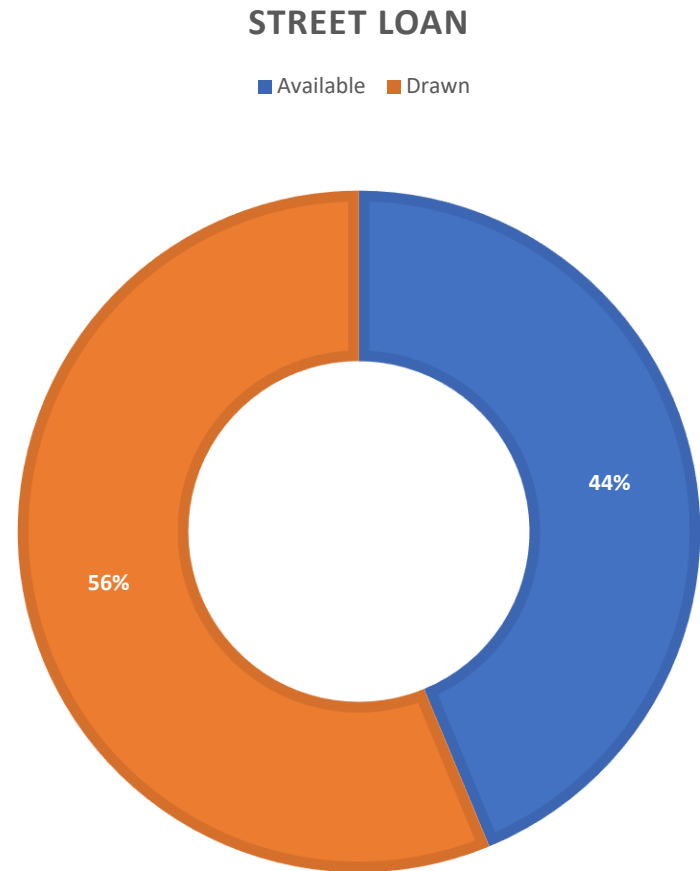
- 2012 – Road Tax permanently reduced
  - Repealed \$0.80 per \$1,000 for firetruck/community development
  - Permanently established \$1.55 per \$1,000 for street improvements
  - City Engineer studied impact on Street Program
    - As of 2012, 48% of streets had been reconstructed
    - Reducing road tax 34% would stretch completion time from 20 years (2032) to 30 years (2042)

# \$2.5M Street Loan

- Initiated October 2015 to help complete larger projects in one phase
- 3.20% interest rate for first 10 years
- 2.50% + 5-Year Treasury Rate (would be about 4.5% today)
- Open end draw period up to 15 years
- Interest charged only on what is drawn
- \$50,000 principal payments due every quarter (First day of January, April, July, October) plus interest
- Paid in full April 2028 assuming full \$2.5M is drawn

# \$2.5M Street Loan – Balances

- \$1,406,000 has been drawn (56%)
  - Alhambra / Coram / Harriet
  - Altavia
  - Aberdeen
- \$1,094,000 is available to draw (44%)





# \$2.5M Street Loan – Forecasted Payments

Date	Road Tax Fund +	MRA Fund -	Loan Payment =	Remaining
7/1/2018	\$ 300,000	\$ 58,000	\$ 237,903	\$ 120,097
7/1/2019	\$ 300,000	\$ 58,000	\$ 257,813	\$ 100,187
7/1/2020	\$ 300,000	\$ 58,000	\$ 253,600	\$ 104,400
7/1/2021	\$ 300,000	\$ 58,000	\$ 247,200	\$ 110,800
7/1/2022	\$ 300,000	\$ 58,000	\$ 240,800	\$ 117,200
7/1/2023	\$ 300,000	\$ 58,000	\$ 234,400	\$ 123,600
7/1/2024	\$ 300,000	\$ 58,000	\$ 228,000	\$ 130,000
7/1/2025	\$ 300,000	\$ 58,000	\$ 221,600	\$ 136,400
7/1/2026	\$ 300,000	\$ 58,000	\$ 219,385	\$ 138,615
7/1/2027	\$ 300,000	\$ 58,000	\$ 212,210	\$ 145,790
4/1/2028	\$ 300,000	\$ 58,000	\$ 153,330	\$ 204,670

# \$2.5M Street Loan

- Road Tax and Municipal Road Aid Revenue = \$358,000/year
- Available funds after loan payments
  - Next five years (2018-2022): \$111,000/year average
  - Subsequent five years (2023-2027): \$135,000/year average
- Total interest paid over life of loan: \$387,000

# Outlook

- Current/Proposed Projects

- Underway

- Audubon Storm Sewer Repair: \$185,000

- Design Complete

- North Arlington Road: \$696,000
    - Lower Jackson Road: \$800,000

- Preliminary

- St. Joseph Lane Sidewalk: \$50-60,000 if awarded Transportation Alternatives Program (TAP) Grant

# Outlook

- North Arlington Road – \$696,000
  - Last street between Amsterdam and Dixie (besides Hamilton) that has not been rebuilt
  - Primary connector street to Dixie Highway
  - New sidewalk will greatly improve pedestrian safety and comfort
- Lower Jackson Road – \$800,000
  - Geotechnically challenging storm sewer upgrade necessary to serve Lower and eventually Upper Jackson Road
  - SD1 has awarded Park Hills a 50/50 grant reducing sewer cost from \$425,200 to \$212,600
    - Must accept grant by December 3

# Outlook

- Loan utilization
  - N. Arlington and Lower Jackson projects would be the last ones to utilize the \$2.5M Street Loan
- Loan repayment
  - Loan will be repaid over the next 10.5 years until April 2028
  - 1-3 “deep fix” road construction projects in that time
  - Mill and overlay streets as required as short-term solution

# Recommendations

- Finish what we started!
  - Complete the modernization of our wastewater infrastructure (“Deep Fixes”)
  - Council vote at 11/13 Business Meeting on whether to accept SD1 grant for Jackson
- Determine “deep fix” priorities after N. Arlington and Lower Jackson
  - Short/medium through streets: Lawton, Cleveland, Park
  - Await Audubon Forest completion: Audubon
  - Await Gateway development: Hamilton, Amsterdam
  - Special cases: Montague (shared with Covington), Amsterdam (county road)
- Pavement condition assessment
  - Establish an ongoing mill and overlay schedule
- Involve Infrastructure Committee in financial planning
- Present more-detailed loan and restricted fund information to Council