

TENTATIVE AGENDA
RAYTOWN BOARD OF ALDERMEN
COMMITTEE OF THE WHOLE
SEPTEMBER 7, 2021
RAYTOWN CITY HALL
10000 EAST 59TH STREET
RAYTOWN, MISSOURI 64133
AND
ONLINE ZOOM WEBINAR
6:00 P.M.

A video recording of the Committee of the Whole meeting will be available online and linked on the City's website within one week following the meeting's date and time.

zoom.us/join
Webinar ID: 864 3476 4856
Passcode: 951394

Roll

- 1. Approval of the August 17, 2021 Committee of the Whole meeting minutes.**
- 2. Asset Management – I/I Reduction**
Jose Leon, Public Works Director
- 3. Right-of-Way Ordinance Revisions**
Stephanie Boyce, Public Works Assistant Director

ADJOURNMENT

MINUTES
RAYTOWN BOARD OF ALDERMEN
COMMITTEE OF THE WHOLE
AUGUST 17, 2021
RAYTOWN CITY HALL
10000 EAST 59TH STREET
RAYTOWN, MISSOURI 64133
AND
ONLINE ZOOM WEBINAR
6:00 P.M.

Mayor Michael McDonough called the August 17, 2021 Committee of the Whole meeting to order at 6:03 p.m.

Roll Call

Roll was called by Teresa Henry, City Clerk, and the attendance was as follows:

Present: Alderman Mary Jane Van Buskirk, Alderman Ryan Myers, Alderman Jim Aziere, Alderman Bill Van Buskirk, Alderman Ian Scott, Alderman Derek Ward, Alderman Loretha Hayden

Absent: Alderman Greg Walters, Alderman Janet Emerson, Alderman Bonnaye Mims

1. Approval of the August 3, 2021 Committee of the Whole meeting minutes.

Alderman Scott, seconded by Alderman Myers, made a motion to adopt. The motion was approved by a vote of 7-0-1.

Ayes: Aldermen Scott, Myers, Aziere, Hayden, Mary Jane Van Buskirk, Bill Van Buskirk, Ward

Nays: None

Absent: Aldermen Walters, Emerson, Mims

2. Fiscal Year 2021 – 2022 Departmental Budget Presentations:

Police, Public Safety Sales Tax Fund

Robert Kuehl, Police Chief

Chief Kuehl presented the item.

Capital Sales Tax Fund

Robert Kuehl, Police Chief; Jose Leon, Public Works Director

Jose Leon, Public Works Director, presented the item.

Public Works, Transportation Sales Tax Fund, Storm Water Fund

Jose Leon, Public Works Director

Jose Leon, Public Works Director, presented the item.

Sewer Fund – Finance and Public Works

Russ Petry, Finance Director; Jose Leon, Public Works Director

Russ Petry, Finance Director, presented the item.

Finance, TIF Fund, Capital Improvements Fund

Russ Petry, Finance Director

Jose Leon, Public Works Director presented the item and remained for any discussion.

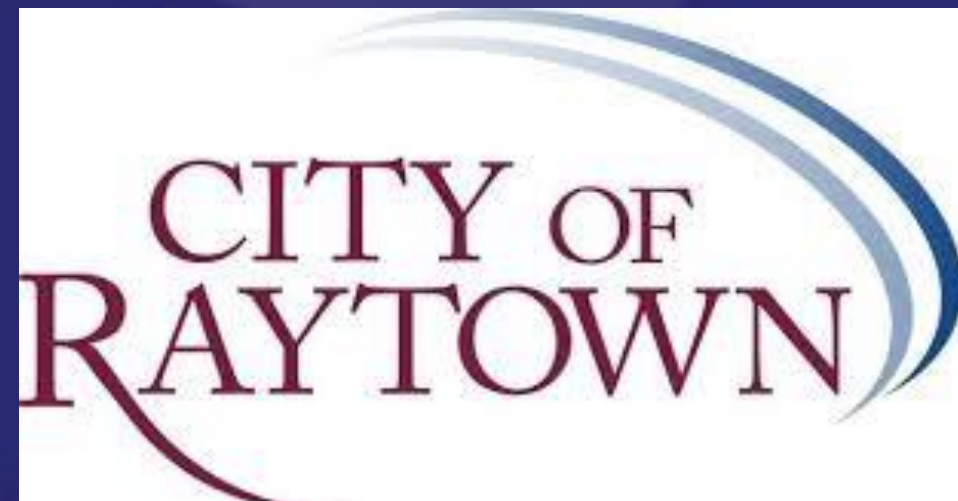
ADJOURNMENT

Alderman Myers, seconded by Alderman Aziere, made a motion to adjourn. The motion was approved unanimously.

The meeting adjourned at 6:56 p.m.

DRAFT

APPLICATION OF MACHINE LEARNING IN SEWER ASSET MANAGEMENT

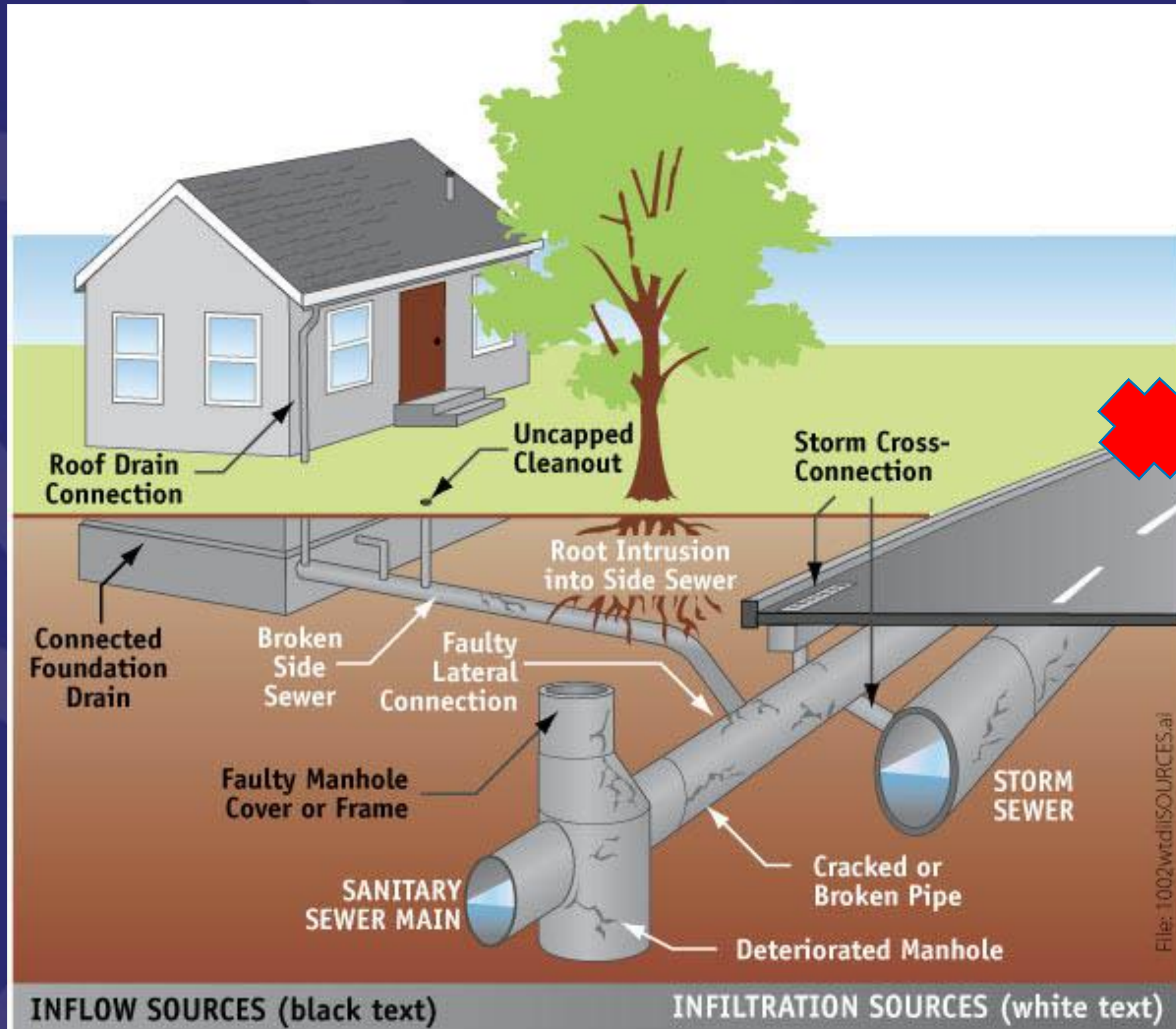


Agenda

- Raytown in 2019
- Project Drivers and Vision
- Raytown – NEER Partnership
- AI Model for Condition Assessment & Validation
- Capital Improvement Project Implementation
- Wrap-up and Questions



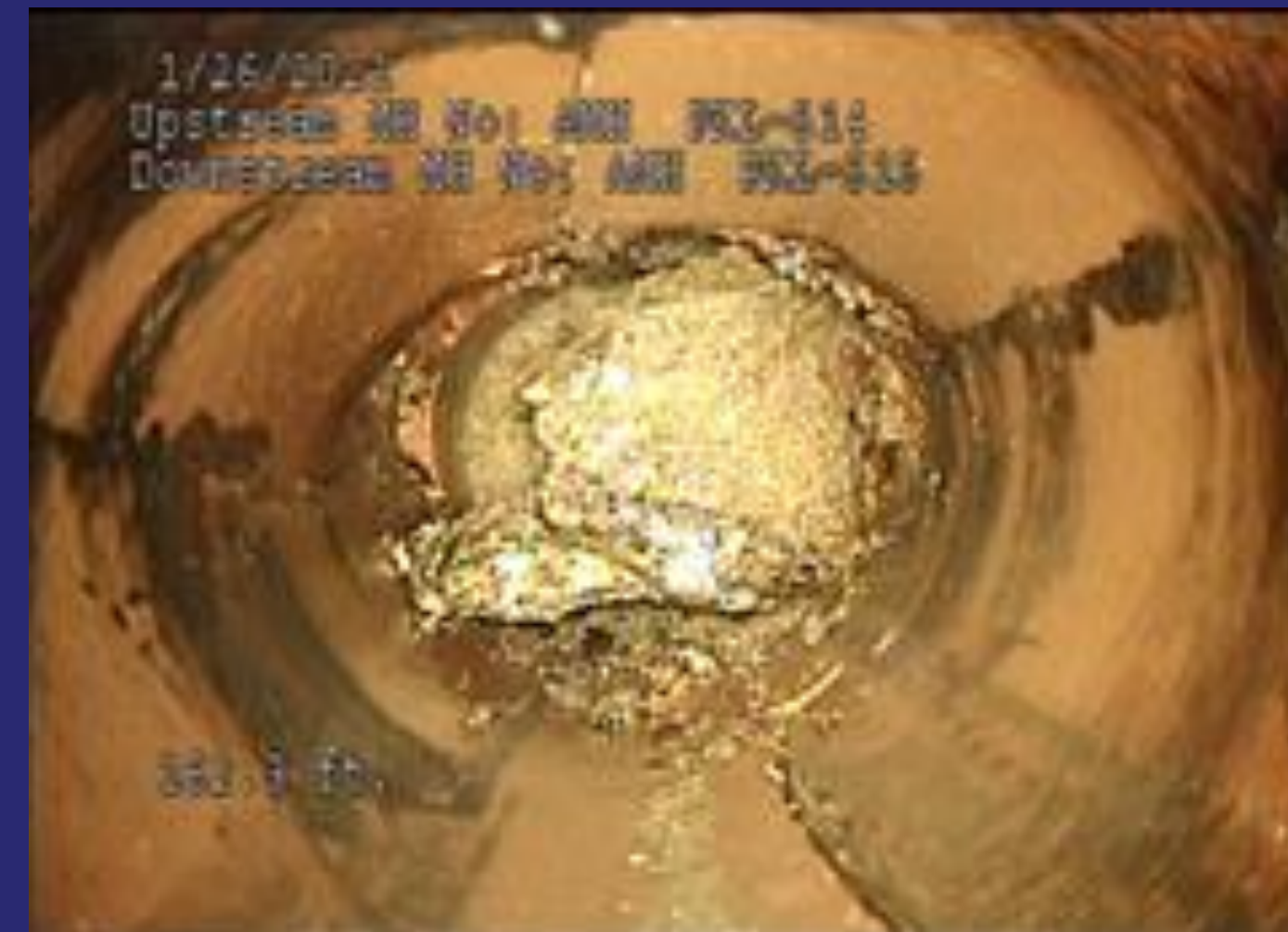
What is Inflow and Infiltration (I&I)?



Inflow happens when groundwater and stormwater seep into the **sanitary sewer** system through private and public defects within the collection system.

Infiltration is when groundwater enters the **sanitary sewer** system through faulty pipes or manholes.

Does Raytown have I/I issues?



Does Raytown have an issue with I&I? Short Answer.....Continued

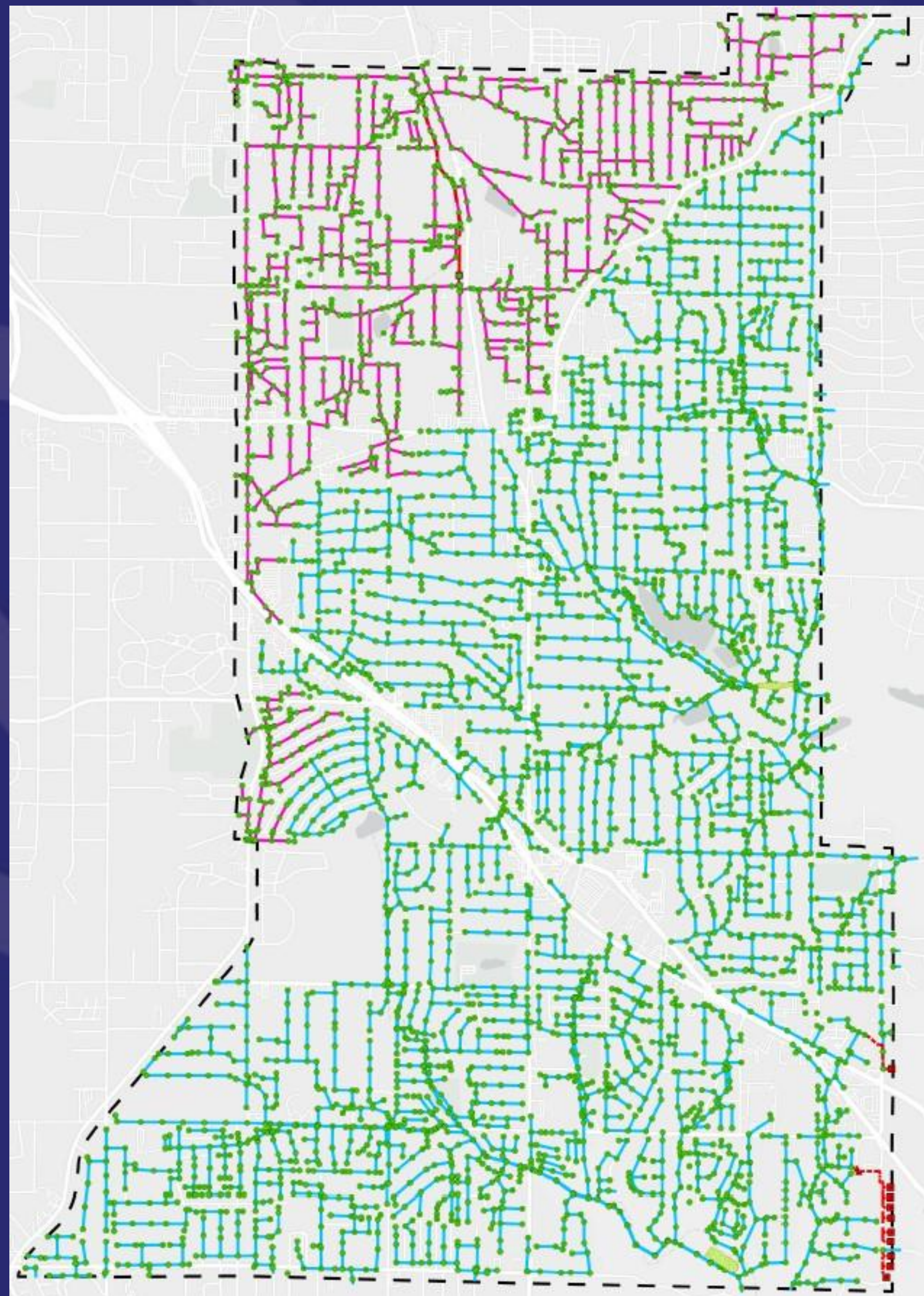


59th & Raytown Rd – SE Corner
5/28/2020



Southwood Lagoon- 5/28/2020
6 Million Gallon Capacity

How we pay for sewer treatment



KCMO

2017-18 = \$1,414,429.28
 2018-19 = \$1,454,140.88
 2019-20 = \$1,398,979.26
 2020-21 = \$1,491,321.94

FY 2021-22 Budget =
 \$1,630,000.00

LBVSD

2017-18 = \$2,604,612.96
 2018-19 = \$2,414,672.44
 2019-20 = \$2,779,197.84
 2020-21 = \$2,819,180.00

FY 2021-22 Budget =
 \$3,000,000.00

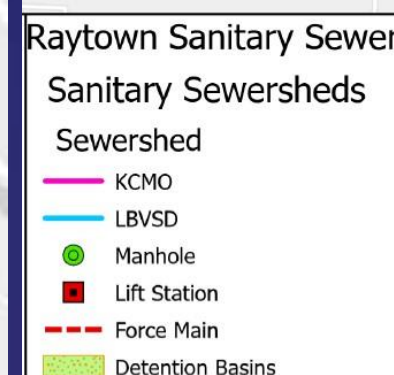
Total

2017-18 = \$4,019,042.24
 2018-19 = \$3,868,813.32
 2019-20 = \$4,178,171.10
 2020-21 = \$4,238,501.94

FY 2021-22 Budget =
 \$4,630,000.00

Specifics

- KCMO rate set per parcel (residential or commercial)
- LBVSD rate set on 5 year rolling average (new accounting)
- LBVSD rates fluctuate based on treated amount. Changes with I/I issues
- KCMO negotiating new agreement. Wants to implement penalties for I/I in our system



Bigger the I/.....Bigger the Bill (\$\$)

WHITE OAK (3-023)

MGD Scale: 0 to 15.87 Flume: 18" nested in a 36" Parshall Flume

REPORTED STATION TOTALIZED FLOW
MONTH TO DATE LAST MONTH

STATION TOTALIZED RAINFALL
MONTH TO DATE LAST MONTH

Print Screen

A/V METER
DIAGNOSTIC SCREEN

30.06 MG

134.54 MG

1.08 IN

7.38 IN

RAINFALL VS. FLOW

HIGH LEVEL IN PIPE
ALARM SETPOINT

36.0 IN

LEVEL IN PIPE

0.0 IN

ISCO SIGNATURE LASER FLOW
SECONDARY PIPE FLOW METER 25 MGD

3.27 MGD

PARSHALL FLUME ISCO 3010
PRIMARY FLOW METER 15.87 MGD

3.20 MGD

REPORTED
FLOW

3.20 MGD

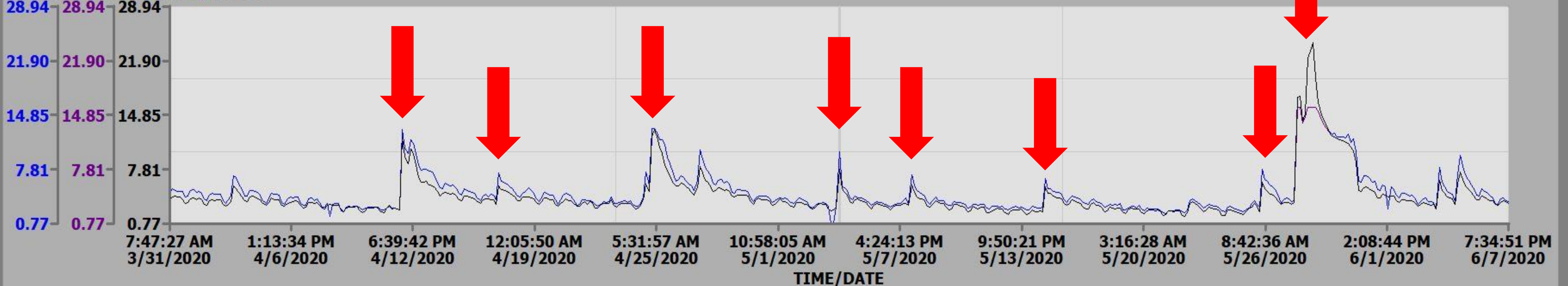
REPORTED FLOW
DEVICE SWITCH-OVER
SETPOINT

15.00 MGD

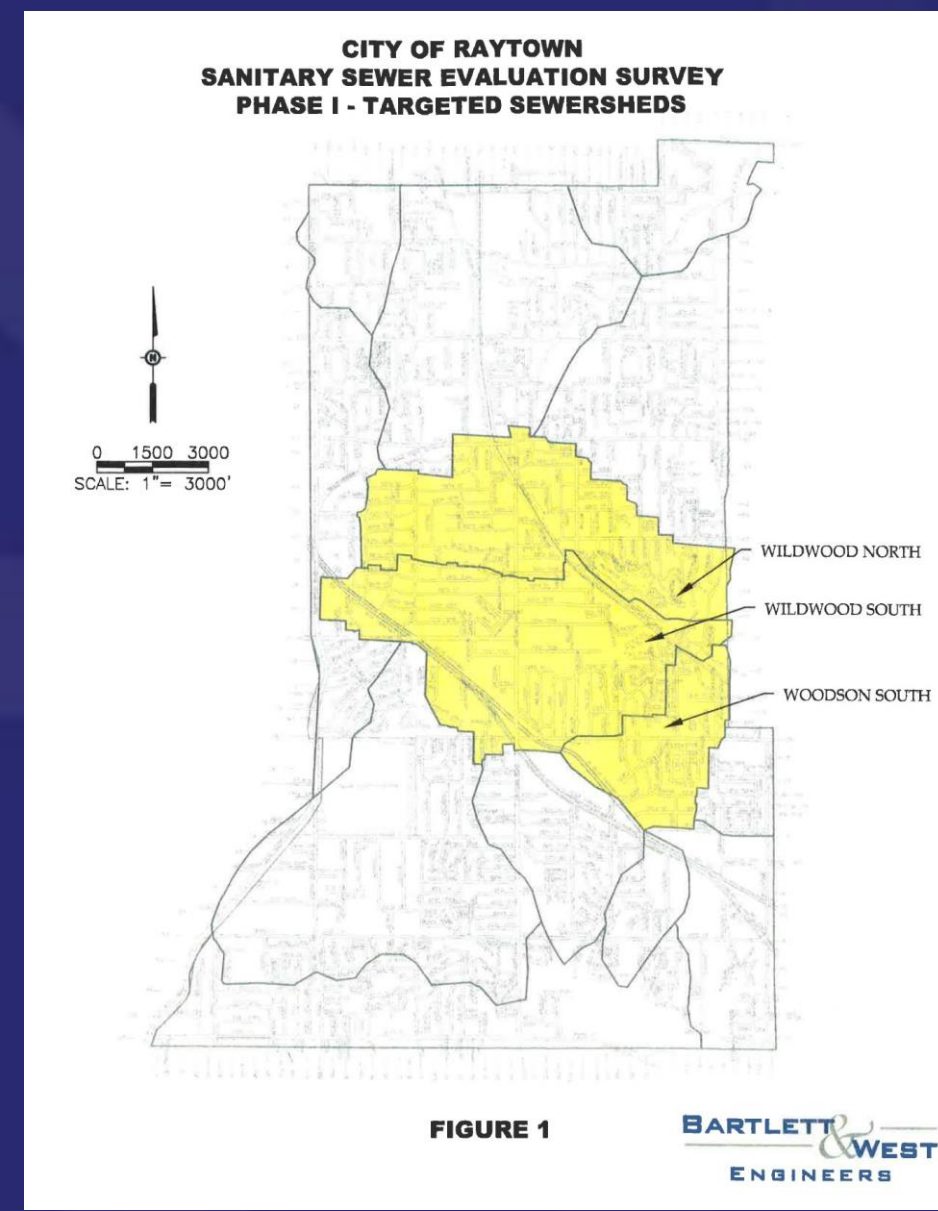
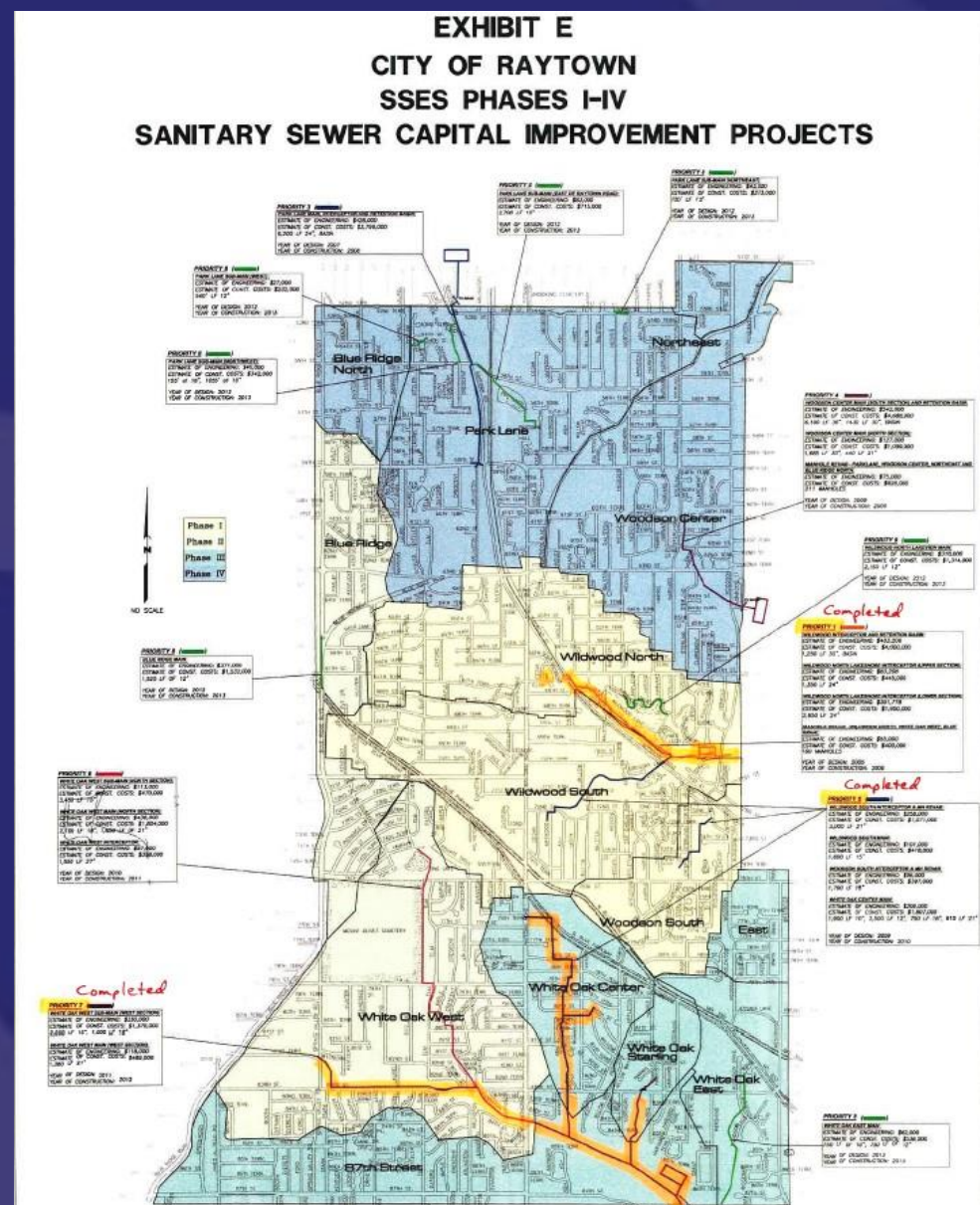
REPORTING DEVICE

FLUME

FLOW RATE (MGD) / RAINFALL RATE (MGD)



What did GBA help us with?



BURNS & McDONNELL

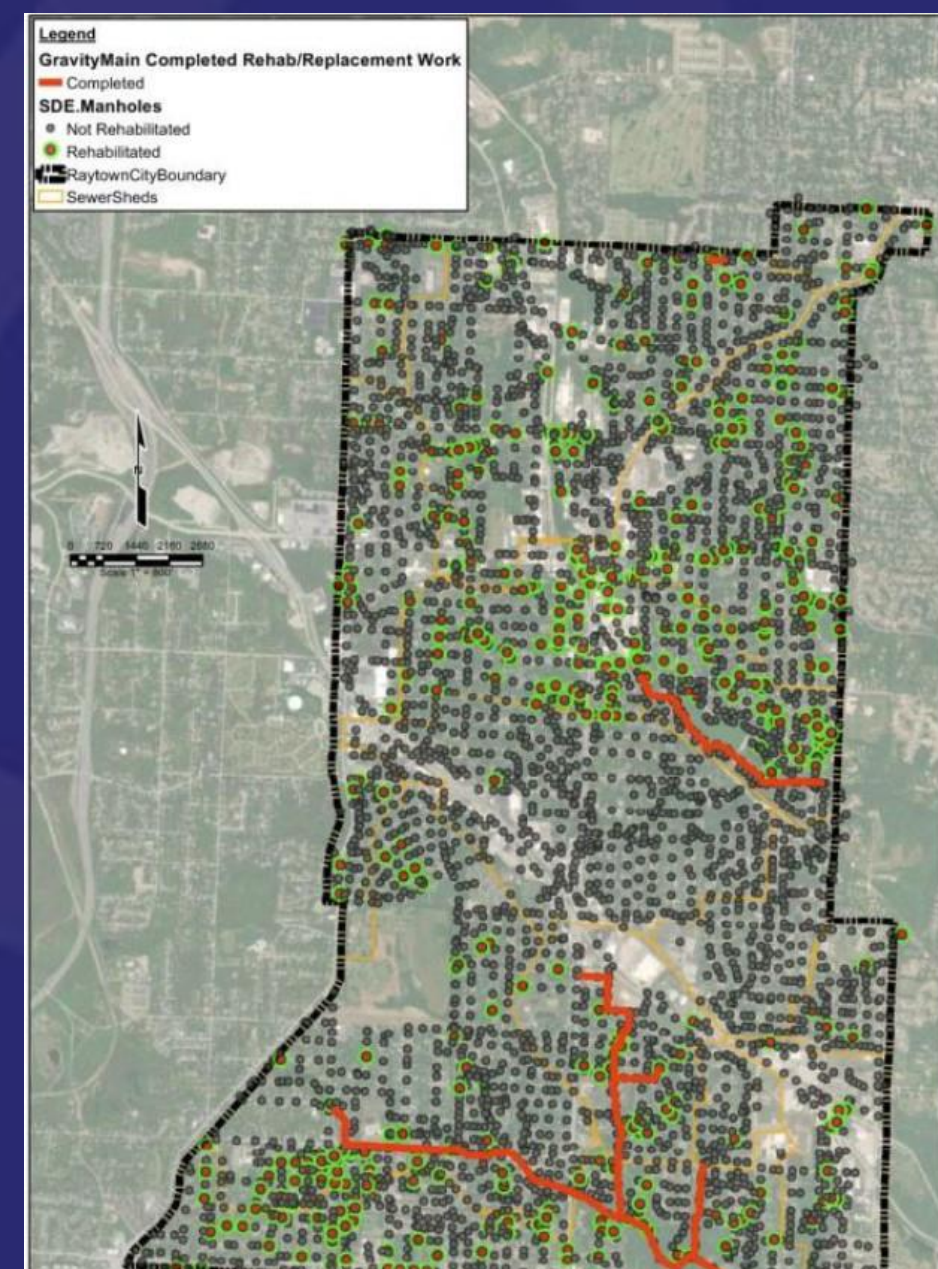
2016 Sanitary Sewer System
Review, Flow Analysis, and Billing
Study Appendices A-M

CITY OF
RAYTOWN

City of Raytown

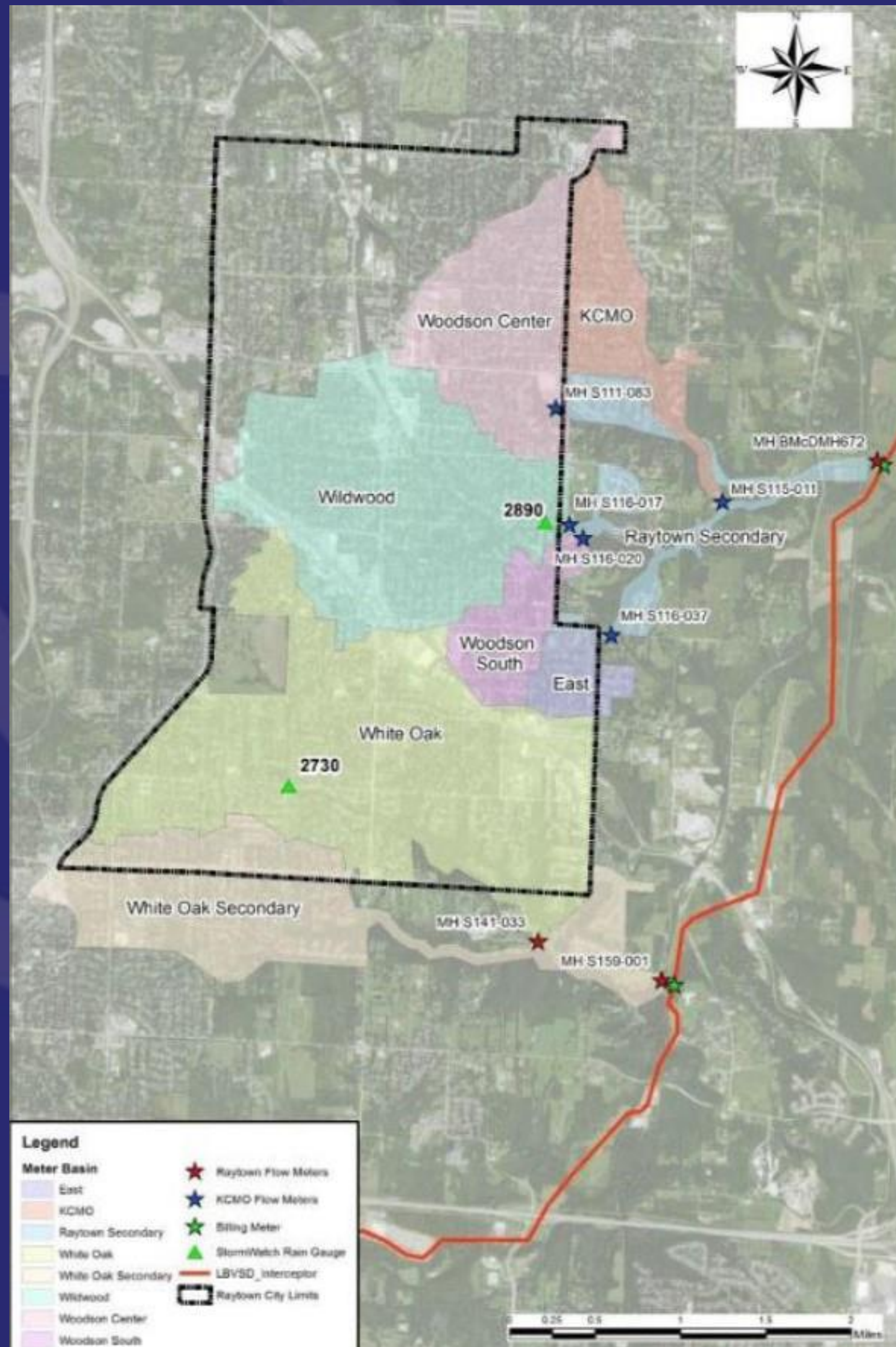
2016
Project No. 91935

Final Revision
10/20/2016



- GBA to help determine a plan to minimize I/I issues
- Reviewed 2003-2006 Bartlett & West Studies and proceeding City projects
- Reviewed Burns & McDonnell sewer rate study for flow monitoring recommendations
- Worked with staff to update GIS information for accuracy
- Reviewed NEER analysis
- Data analysis from existing flow meters
- Reviewed maintenance and operations history
- Reviewed backup sanitary sewer system data
- Reviewed annual Root Control program
- Developed a 7-year CIP for I/I reduction in our system

What we know

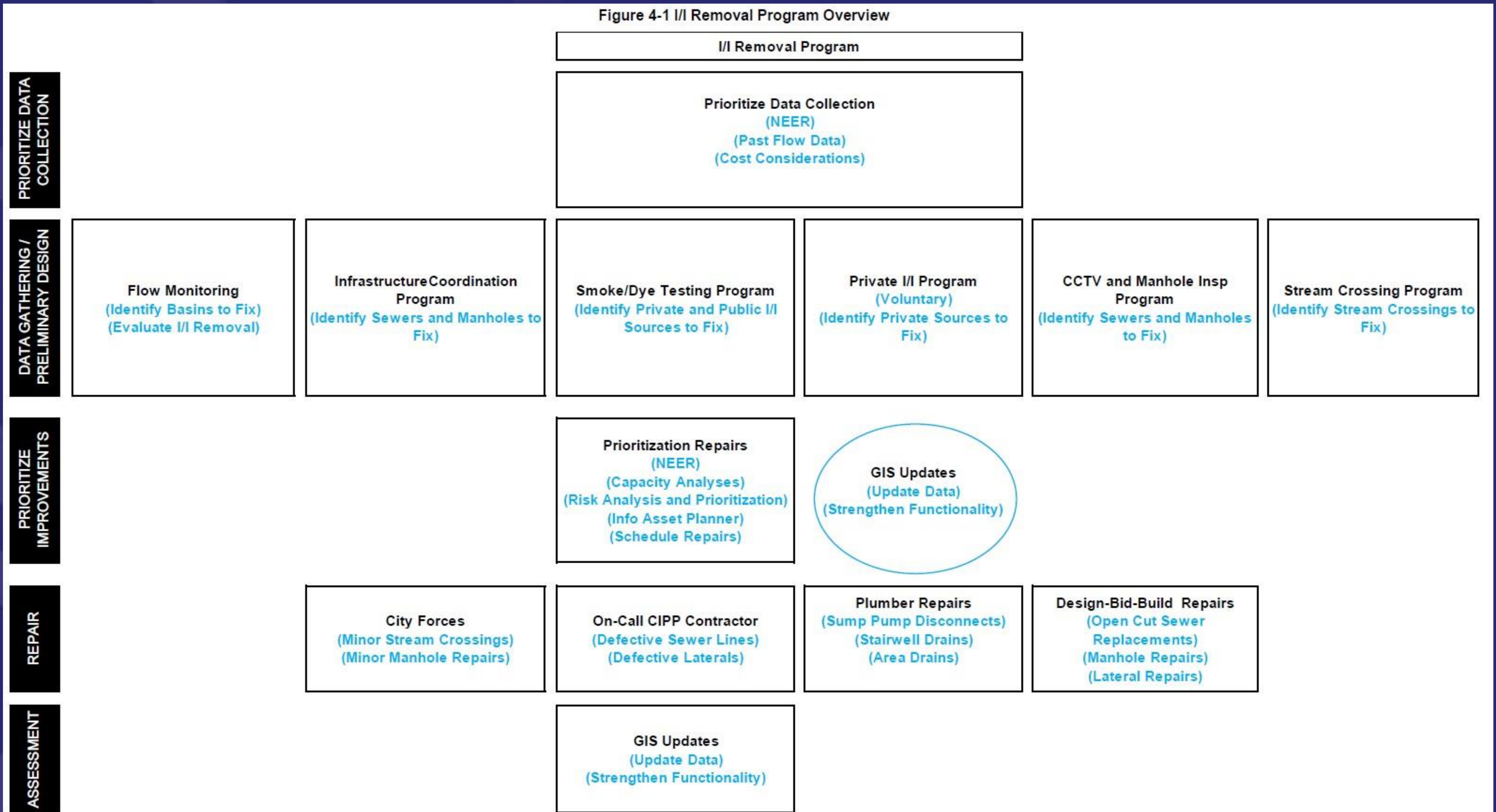


- The sewer sheds with highest I/I during analysis performed by Bartlett & West are: White Oak, Woodson Center, and Wildwood (north & south)
- NEERs analysis of risk scoring also assessed the worst scoring in these areas are highly concentrated
- High risk manholes and mains are interconnected because they are generally built during the same time.
- A holistic approach to addressing I/I issues is needed to affirm City resources are being spent properly. As we lower I/I in our sewer system, the City receives the benefit by lower treatment costs
- Establish Preliminary Engineering phase of projects to identify I/I sources and verify City data is accurate prior to design. City records had not been updated since 2007.

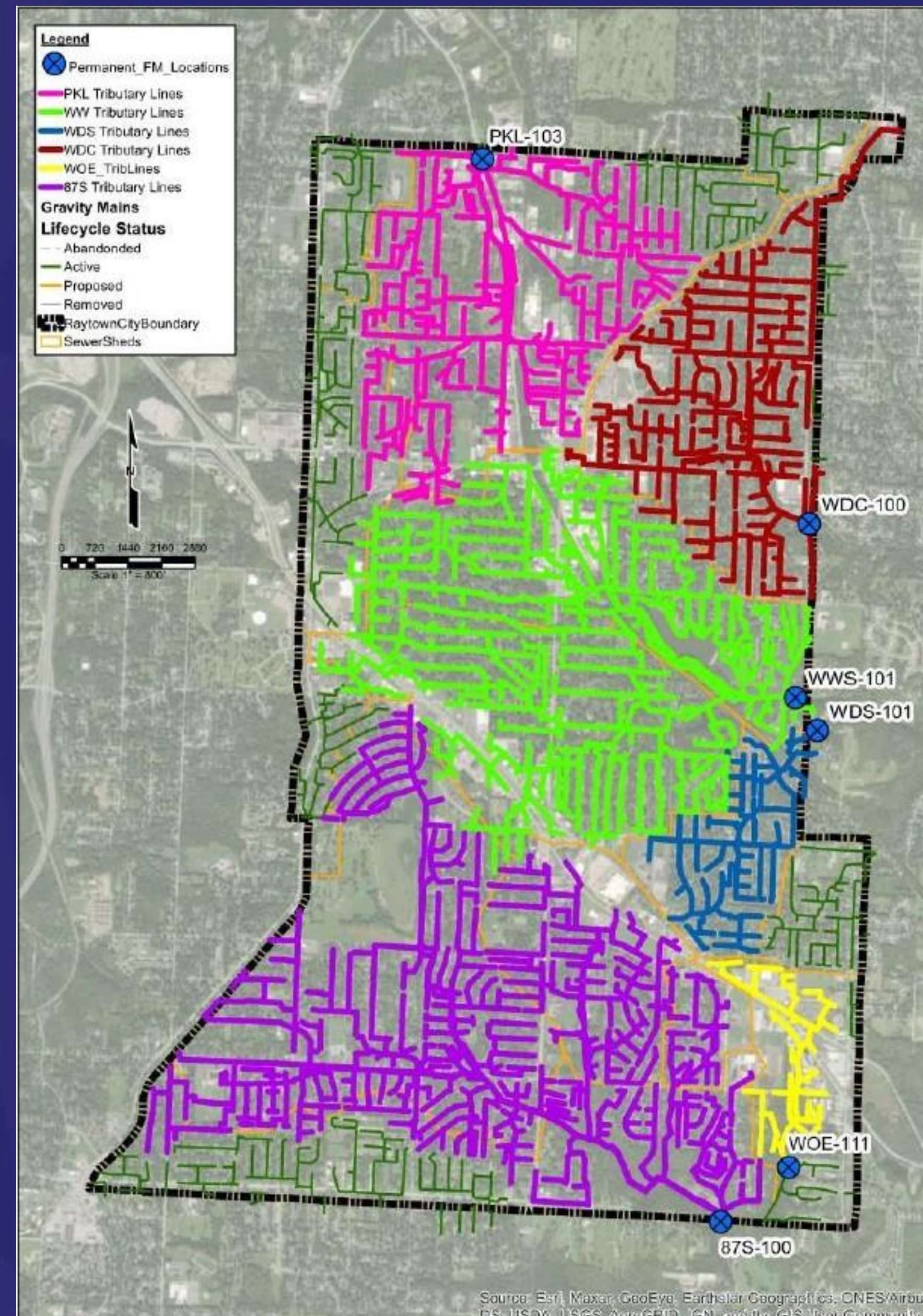
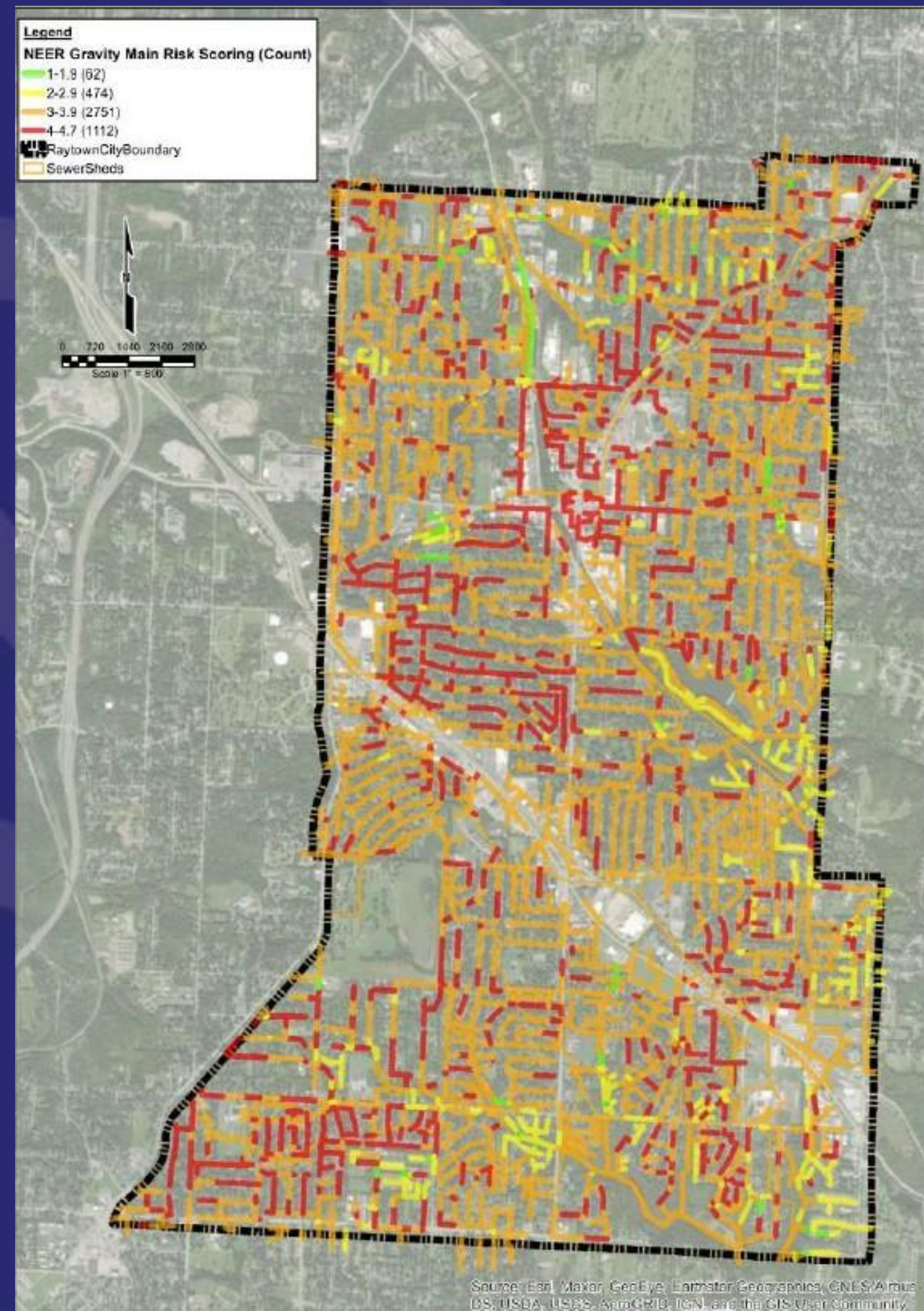
The City has a total of 15 sewer sheds

Recommendations – Holistic Approach

Figure 4-1 I/I Removal Program Overview



Recommendations – Explained



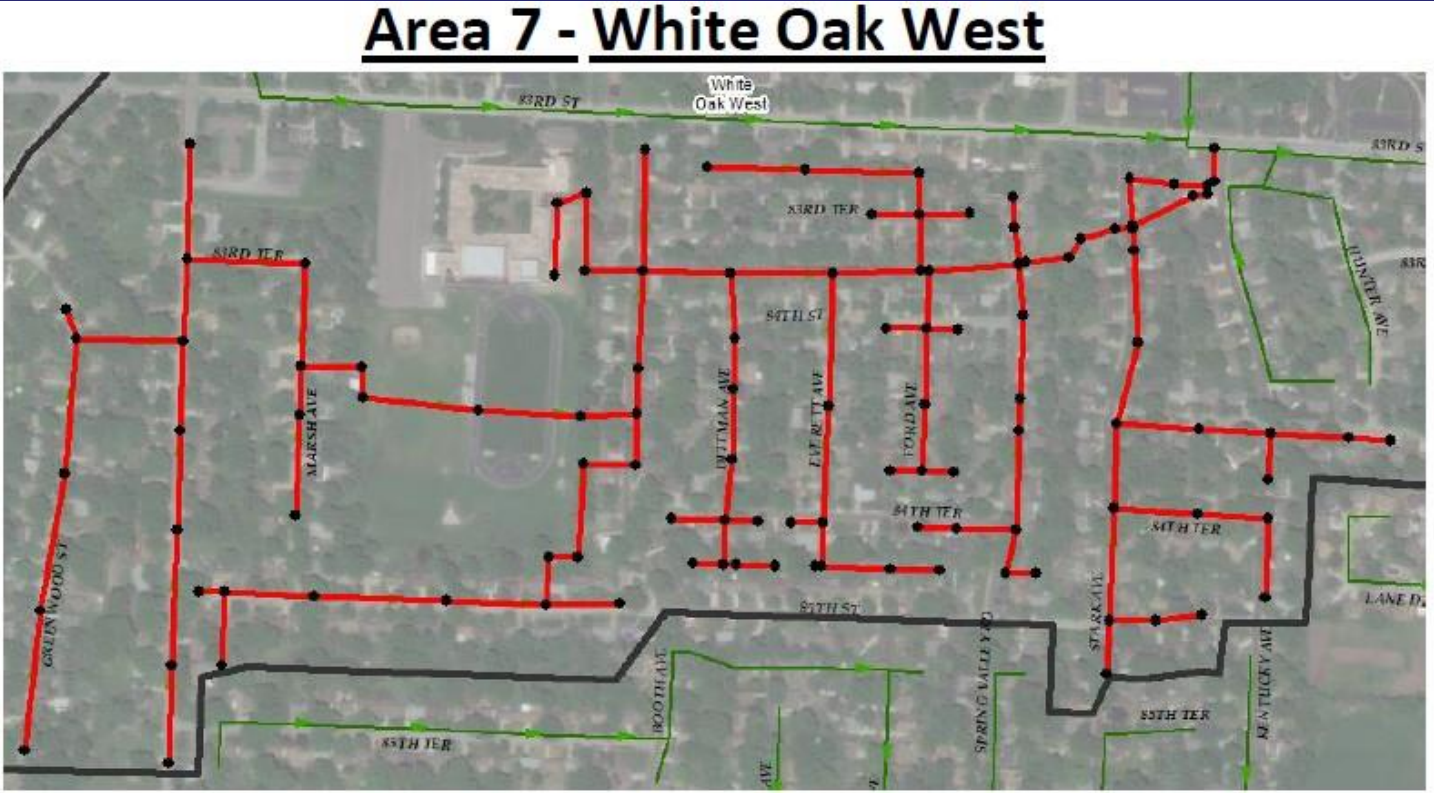
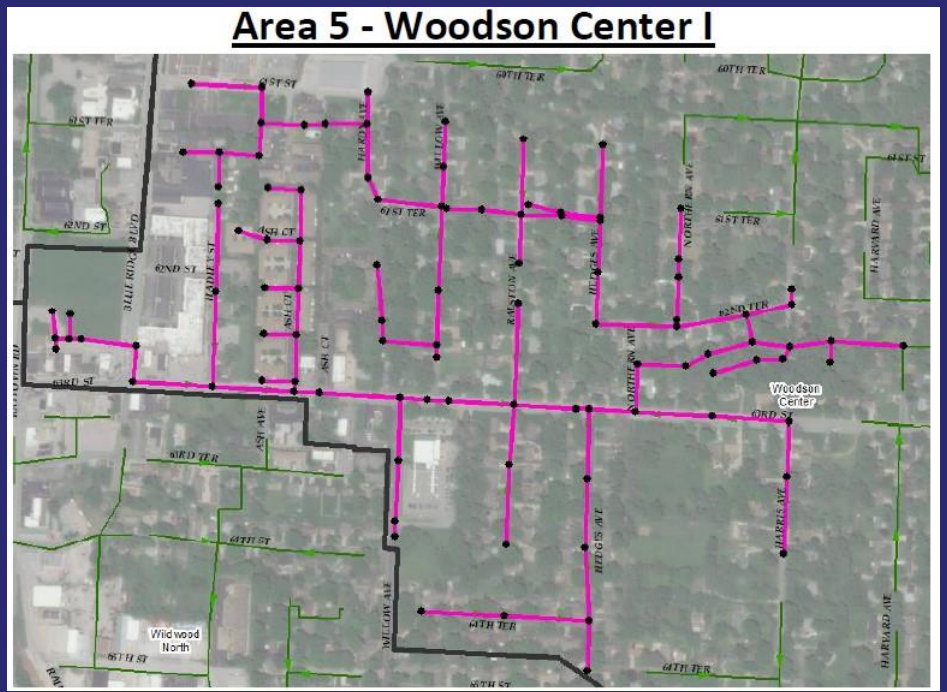
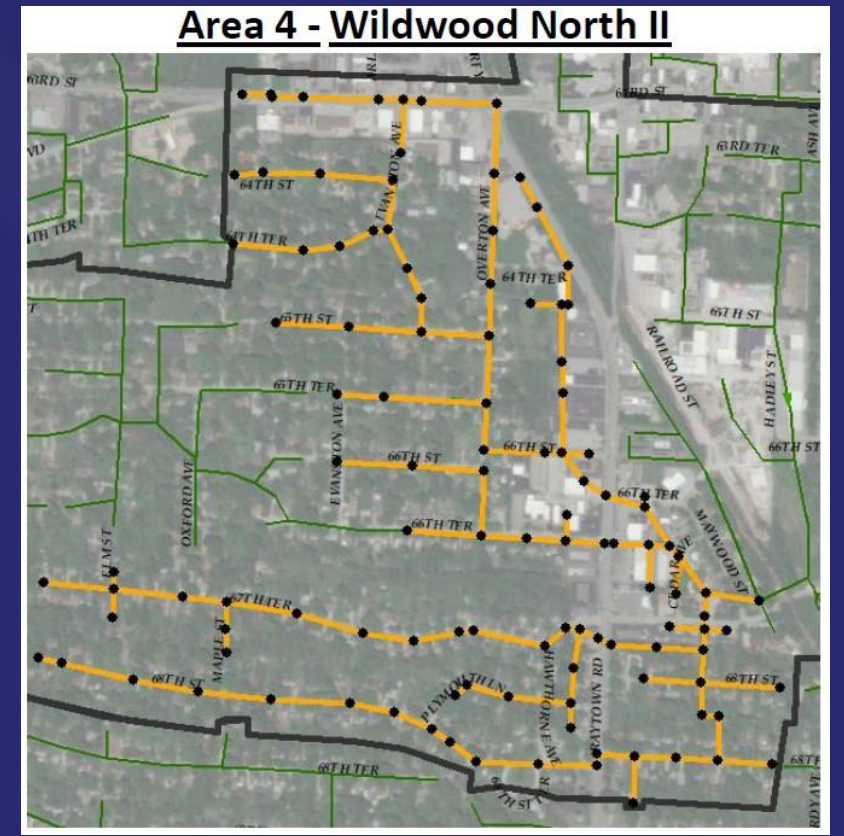
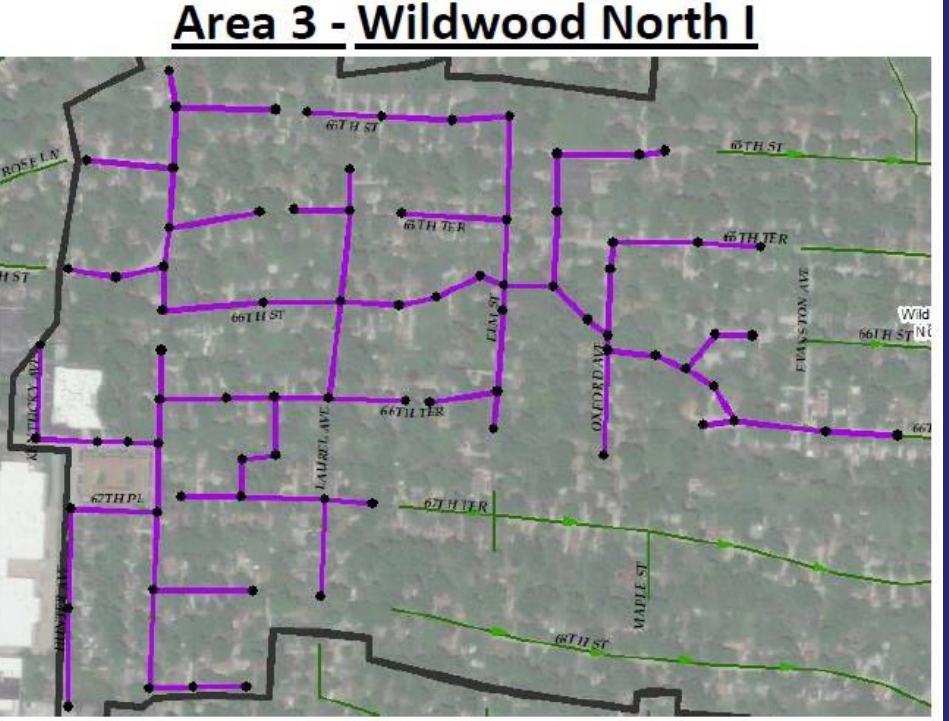
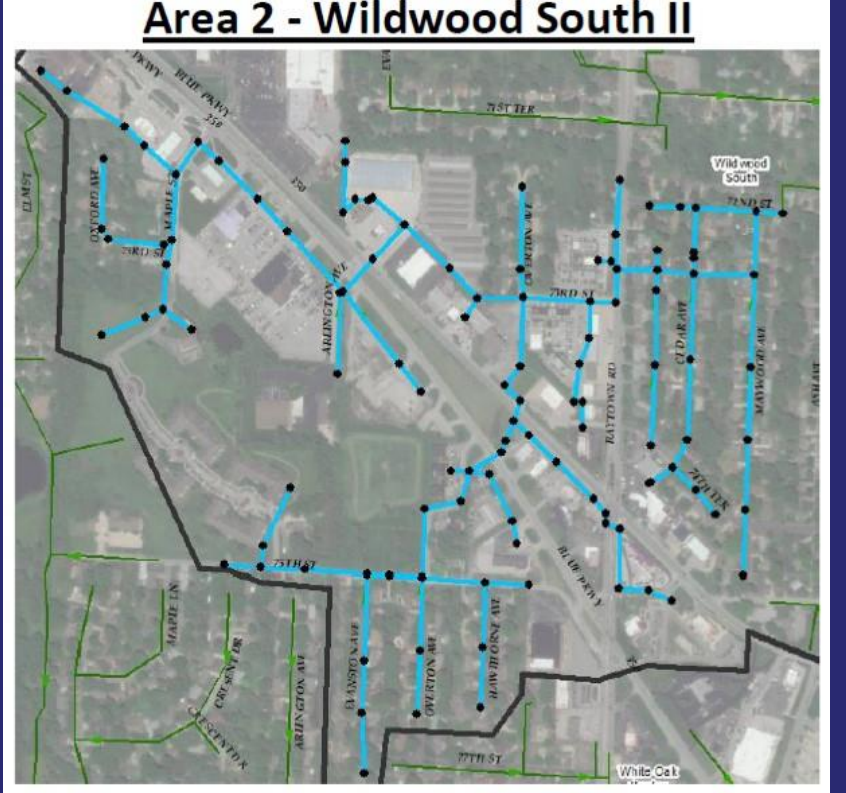
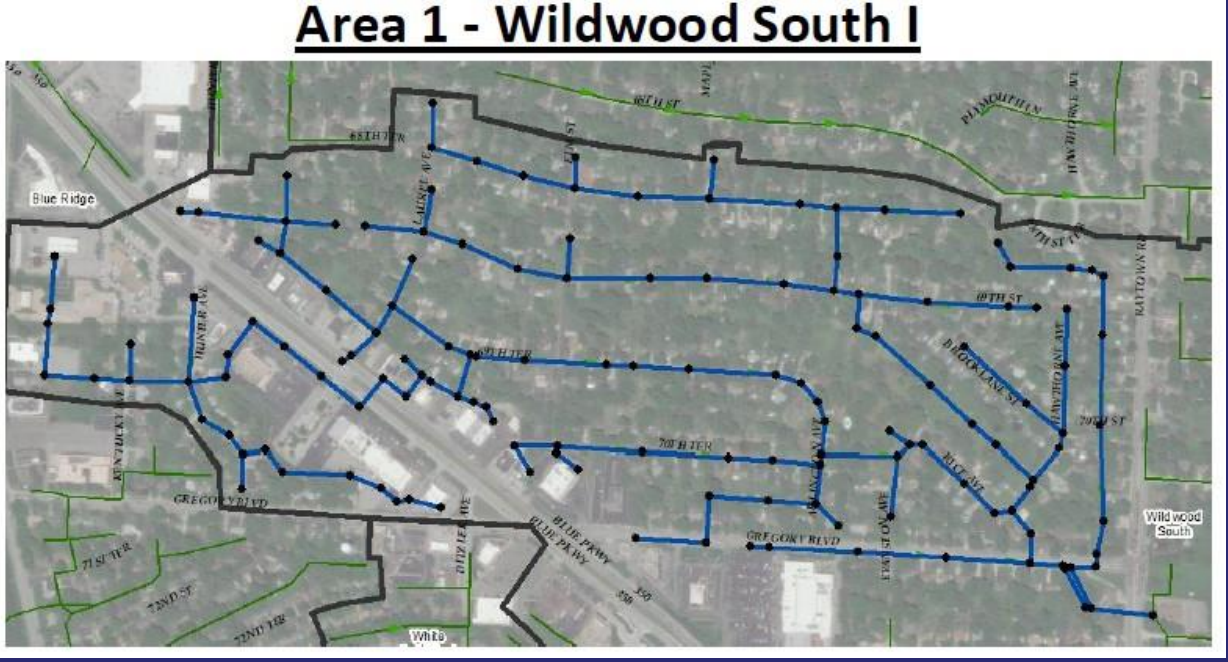
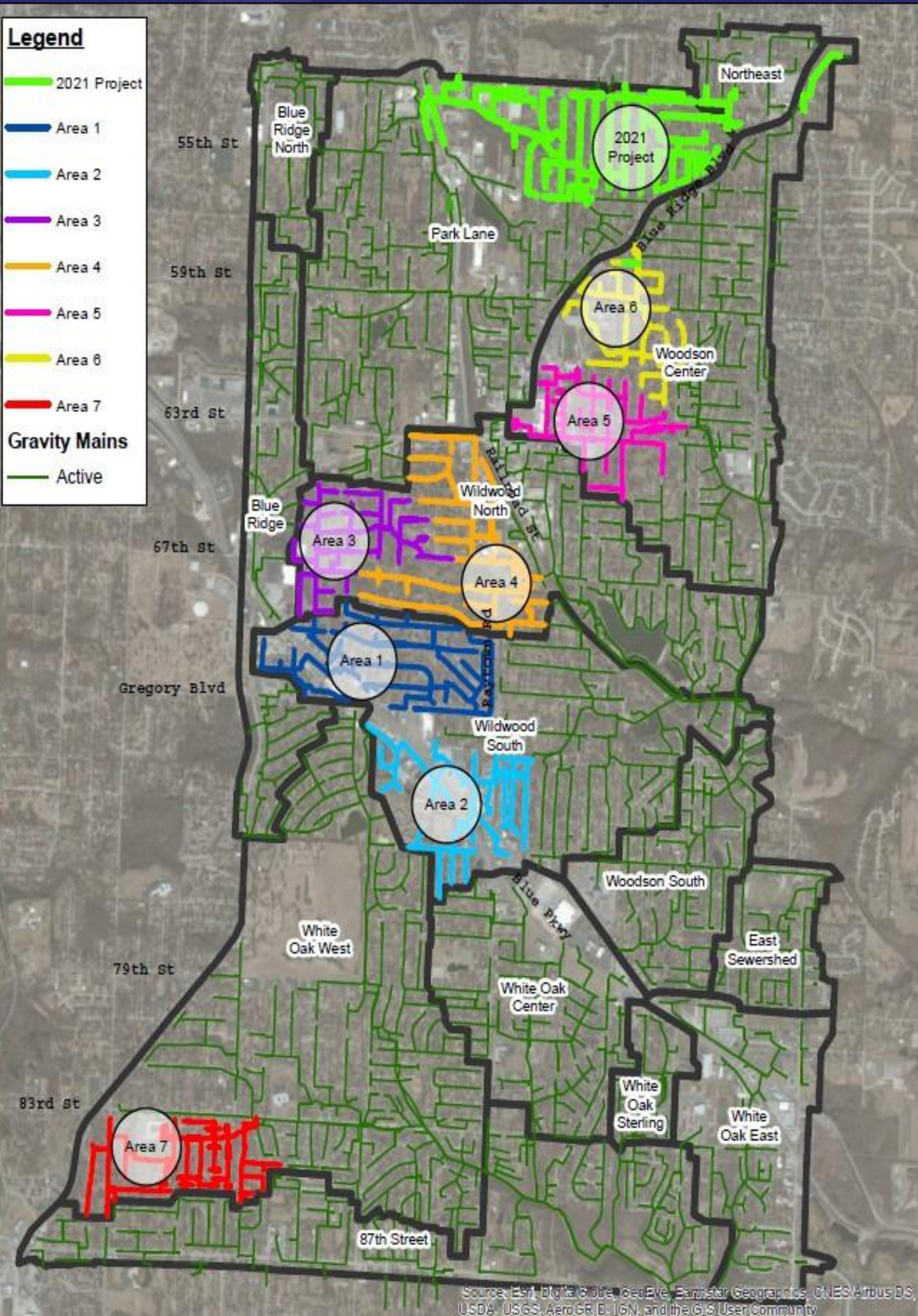
- A holistic approach to address I/I issues is needed to affirm City resources are being spent properly. As we reduce I/I in our sewer system, the City receives the benefit by lower treatment costs from KCMO and LBVSD.
- Prioritize Leakiest Sewer Sheds: White Oak, Woodson Center, and Wildwood (north & south)
- Narrow scope to concentration of very-high and high risk NEER scoring
- Temporary sewer metering in area selected to measure effectiveness of project
- Identify I/I sources both private/public
- CCTV project area for point repairs and other necessary information prior to design

and the master planning



begins.

CIP - 7 Year Approach



CIP Information

- Affordable Range 17,000LF to 29,000 LF
- 154,000 LF or 17.5% of total network (20% with 2021 project)
- Preliminary I/I Investigation
- Design
- Construction
- Total Project Cost Range \$1.8 million to \$3.3 million each
- Combination of NEER risk scoring and heaviest I/I sewer sheds for prioritization

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

2022 Sanitary Sewer Project

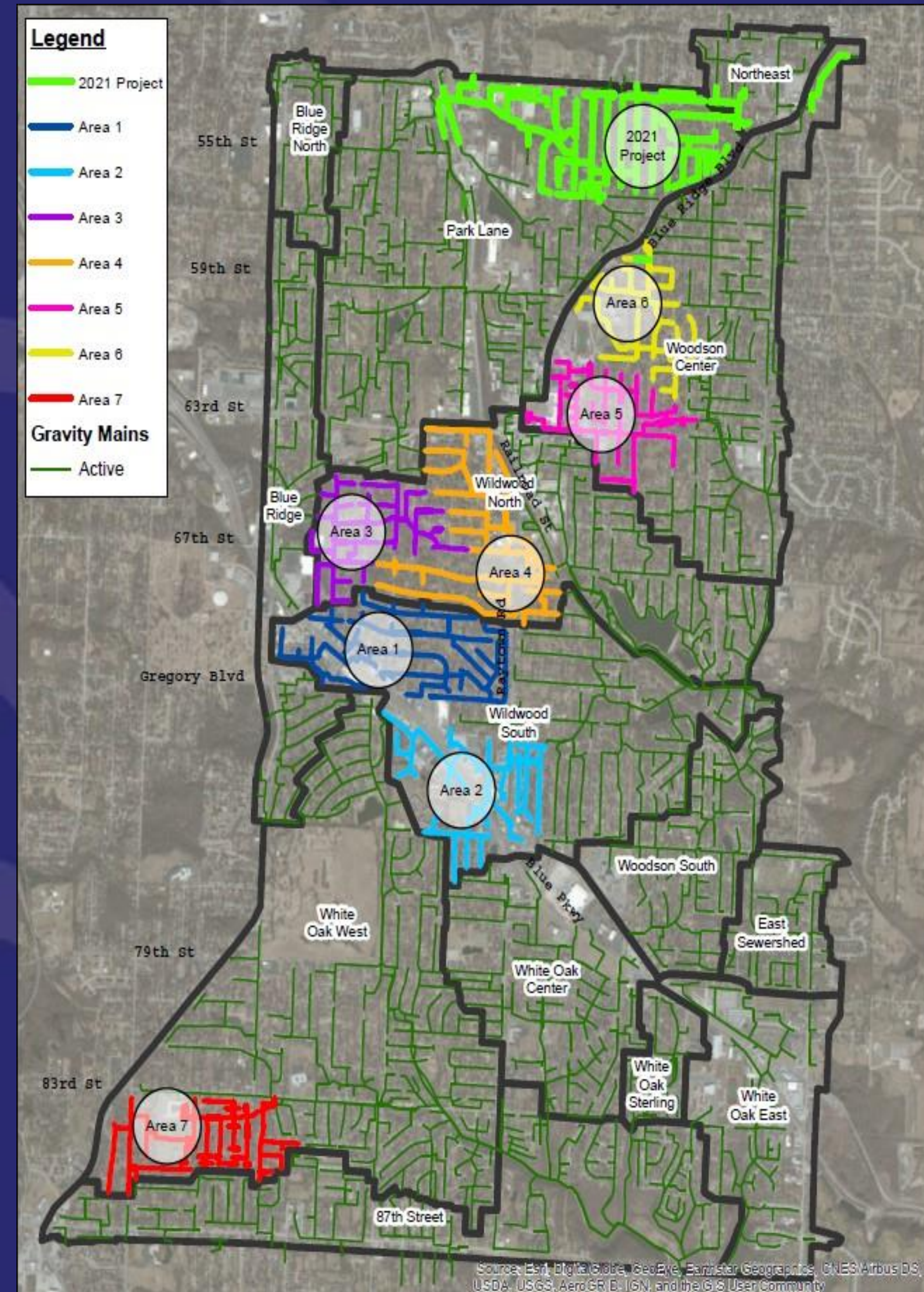
Area 1 - Wildwood South I



2022 Project Information

- 29,000 LF of 8"-12" VCP sewers
- 147 Manholes
- 2021 staff will initiate Preliminary Engineering
- Smoke and Dye Testing, Field Inspections, CCTV data collection, Pre-Construction Flow Monitoring
- Estimated Total Construction/Engineering = \$3,255,647 (20% contingency)
- Preliminary Engineering = \$240,000

Post Construction flow monitoring will be performed to measure reduction in flow throughout project area
 Post CCTV data will be collected to ensure work is performed properly



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ANY QUESTIONS?

THANK YOU



Proposed Right-of-Way Ordinance Revisions

September 7, 2021

Background

- In past and present dealings with local utility agencies, staff is proposing to amend the language written in Chapter 36 of the Raytown Municipal code which addresses the City's Right-of-Way.
- The changes will better protect the City, its infrastructure and its citizens by increasing bond amount to sufficiently cover the cost of restoration.
- Changes will also provide a more efficient way of processing and inspecting permits
- In addition to the municipal code changes, staff has proposed changes to the Right-of-Way fees.
- The changes are detailed below in addition to a fee analysis.



Proposed Municipal Code Changes



Section 36-127 – Use of the right-of-way.

(i) All earth, materials, sidewalks, paving, crossings, utilities, other public improvements or improvements of any kind damaged or removed by the ROW-user shall be fully repaired or replaced promptly **prior to the permit expiration date** by the ROW-user at its sole expense and to the reasonable satisfaction of the city.

Proposed Municipal Code Changes

Section 36-132 – Permit requirement.

(d) A right-of-way permit is required for emergency situations. If, due to an emergency, it is necessary for the ROW-user to immediately perform work in the right-of-way, and it is impractical for the ROW-user to first get the appropriate permit, the work may be performed, and the required permit shall be obtained ~~as soon as possible during the next city working~~ business day.



Proposed Municipal Code Changes

(Name of Company)- PERFORMANCE BOND

(On the Letterhead of the Bank)

(Date)

To: _____ (Name)
_____ (Address)
_____ (Address)

Dear Sir,

PERFORMANCE GUARANTEE - (Name of Company)-(Name and Description of the Project)

You entered into a contract with _____ (Name of Company) dated _____.

We, (Name of Bank), irrevocably and unconditionally undertake with you that whenever you give written notice to us stating that in your sole and absolute judgment the (1st party) has failed to observe or perform any of the terms, conditions or provisions of the Contract on its part to be observed or performed, we will, notwithstanding any objection which may be made by the (1st Party) and without any right of set-off or counterclaim, immediately pay to you or as you may direct such amount as you may in such notice require not exceeding (Amount in words and Figure).

This Bank Guarantee (Performance Bond) is valid and will continue to be valid from the date of this letter for the Guaranteed Sum until the Performance Certificate is issued by or on behalf of the Employer to you, the 2nd Party pursuant to the main contract or, if a dispute arises under the contract, after the final determination of that dispute, whichever occurs later.

Upon receiving a notice from you, we shall immediately effect payment to your Account No. _____ with (Name of Bank and Address) of the value of the sum claimed by you in relation to the default up to the maximum value of the Guaranteed Sum and any payment by us in accordance with this Guarantee must be immediately available and freely transferable (Amount in words) free and clear of and without any deduction for or on account of any present or future taxes, levies, imposts, duties, charges, fees, set off, counterclaims, deductions or withholdings of any nature whatsoever and by whomsoever imposed.

Section 36-134 – Liability insurance, performance and maintenance bond requirement.

(b) The permittee shall at all times during the term of the permit, and for two years thereafter, maintain a performance and maintenance bond in a form approved by the city attorney. The amount of the bond will be \$5,000.00 or the value of the restoration, whichever is greater, for a term consistent with the term of the permit plus two additional years, conditioned upon the permittee's faithful performance of the provisions, terms and conditions conferred by this article. An annual bond in an reasonable amount of as determined by the city engineer, or his/her designee ~~\$50,000.00~~ which automatically renews 5 yearly during this period shall satisfy the requirement of this section. In the event the city shall exercise its right to revoke the permit as granted herein, then the city shall be entitled to recover under the terms of said bond the full amount of any loss occasioned.

Proposed Municipal Code Changes

Section 36-135 - Right-of-way permit fees.

(b) The right-of-way permit fee may include an administrative fee, a traffic control fee and a degradation or street/sidewalk cut fee. ~~The degradation fee shall be calculated upon the area of the excavation in the public right of way, and the area one foot around the perimeter of the excavation.~~

(c) Permit fees are non-refundable.

(fe) The city engineer may waive the ~~degradation~~ street/sidewalk cut fee for any excavation in the public right-of-way undertaken within the 12 calendar months immediately preceding the scheduled improvement or reconstruction of the street.



Proposed Municipal Code Changes



Section 36-137 – Permitted work.

(e) The permittee shall notify the city no less than ~~three~~ ten (10) working days in advance of any construction, reconstruction, repair, location or relocation of facilities which would require any street closure or which reduces traffic flow to less than two lanes of moving traffic for more than four hours. Except in the event of an emergency as reasonably determined by the permittee, no such closure shall take place without notice and prior authorization from the city. In addition, permittee will be required to notify the public of the closure with a digital message board.

(f) Nonemergency work on arterial and collector streets may not be accomplished during the hours of 7:00 a.m. to 8:30 a.m. and 4:00 p.m. to 6:00 p.m., in order to minimize disruption of traffic flow. The permittee may perform excavation work after regular working hours on weekends if the Director approves such a schedule and the permittee deposits with the City an amount mutually agreeable to cover the additional costs to City of supervising and managing the work during these time periods. City may draw on this amount as it incurs costs for labor, materials and other expenses. However, only restoration work will be allowed to be performed on weekends.

Proposed Municipal Code Changes



Section 36-138 – Right-of-way repair and restoration.

(g) 11. If multiple excavation points, upon completion of the refilling of the excavation, the city engineer or his/her designee may require the permittee to resurface that portion of the street damaged by the permittee's excavation or obstruction. In addition, if the excavation points are closer than 10 feet, the excavation areas will be made into one area.

(jh) Payment of a ~~degradation~~ street/sidewalk cut fee shall not relieve the permittee of the obligation to complete the necessary right-of-way restoration.

Permit Fees

- The permit fees collected by applicants are intended to recover the cost of staff time and resources through the right of way management process.
- In the following slides you will see:
 - A breakdown of fees of the surrounding jurisdictions
 - A breakdown of City of Raytown current fees and proposed fees
 - An analysis of City of Raytown staff time spent on ROW permits
 - An example of permit types with the associated fees



Surrounding Jurisdiction Fees

Surrounding City ROW FEES						
Agency	Fees					
	Base	Street Cut	Traffic Control	Bond/Deposit	Other	Average
Blue Springs	\$125/660 Ft	\$20.00	\$125.00	\$1,500.00		\$270.00
Grandview	35/Address	\$750 bond		\$5,000.00	\$15/Foot C&G \$45/sq yd pavement	\$35+
Independence	90/200 Ft	\$40.00	\$55.00		\$40 - reinspection per 1/2 hr	\$225.00
Lee's Summit	\$80/660 Ft	\$80.00				\$160.00
Liberty	\$45 - \$200			\$5,000/\$50,000		\$200.00
					Average	\$185.00

City of Raytown Fees

Existing Fees

- Base Fee - \$75.00 per project
 - This fee does not include traffic control, solely administrative fees.
- Street Degradation fee - \$0.25 - \$0.75/area
 - This generally ranges from \$8.50 and up

Proposed Fees

- Base Fee - \$100.00 for up to 200 contiguous feet
- Traffic Control - \$40.00
 - This may not be needed for every permit.
- Street/Sidewalk Cut
 - Residential \$50.00
 - Other \$100.00
 - Only assessed on permits where street/sidewalk cuts are made.

The existing permit fees in place do not adequately recuperate the cost of staff time and resources used in right-of-way management.

City of Raytown Fee Analysis

Raytown ROW Fee Analysis				
Employee	Type of Work	Hours Spent	Rate	Total
Inspector	Permit Review	1.00	\$30.00	\$30.00
	TTC Review	0.50	\$30.00	\$15.00
	Inspection	1.00	\$30.00	\$30.00
	Paperwork	0.50	\$30.00	\$15.00
City Engineer	Permit Review			
	TTC Review	1.00	\$45.00	\$45.00
	Inspection			
	Paperwork			
Administrative Assistant	Paperwork	0.50	\$26.00	\$13.00
			GRAND TOTAL	\$148.00

Example Permit with Fees

Utility Agency

• 2,000 linear feet	\$1,000
• 30 Street Cuts	\$3,000
• 5 sidewalk Cuts	\$500
• 1 Traffic Control Plan	\$40
<hr/>	
• PROPOSED TOTAL PERMIT FEES	\$4,540
• CITY'S COST	\$4,550

Residential Driveway Approach

• Remove and Replace Driveway	\$100
• No Traffic Control	\$0
• No street/sidewalk cuts	\$0
<hr/>	
• PROPOSED TOTAL PERMIT FEES	\$100
• CITY'S COST	\$108

Revenue

Past Permit Revenue

- FY 2017-18 - \$27,500
- FY 2018-19 - \$51,775
- FY 2019-20 - \$25,800

Proposed Revenue

- FY 2021-22 - \$55,000

Permit fees collected are intended to cover the administrative, processing, inspection, re-inspection, documentation and closeout process of right-of-way management.

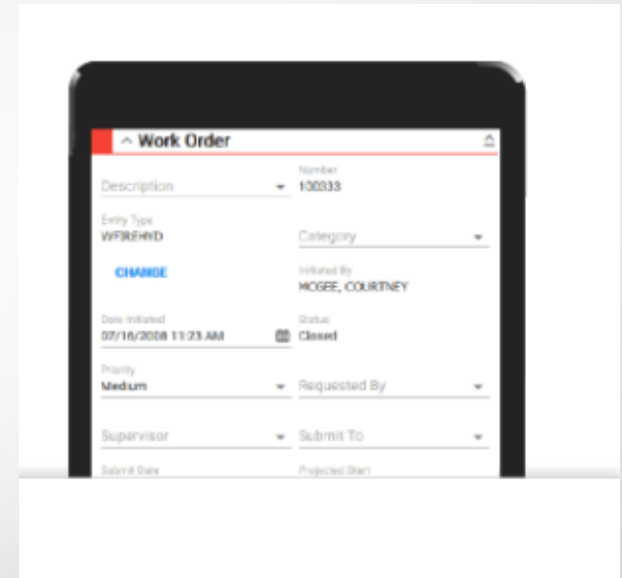
What do the changes mean?



- Added protection for the City and its citizens.
- Ensure quality restoration to the City's right-of-way.
- Increases costs to sufficiently cover staff time and resources used.
- Utility Coordination Meeting regarding changes and expectations moving forward.

Future Improvements

- Cityworks implementation
- Online Permitting Improvements
- Field Tablets





Questions?