Daniel Morgan Boone Park Green Infrastructure Project

Public Meeting

Thursday, June 8, 2023

About the Project

- **Green infrastructure and stormwater collection system project** in the Town Fork Creek Watershed
- Stormwater from around DMB Park will be **collected and separated** from the combined sewer system
- Green infrastructure and native plants will be used to help **absorb excess stormwater and collect, treat and infiltrate stormwater runoff**

- **North:** 55th Street
- **South:** East Gregory Boulevard
- **East:** U.S. 71 Highway
- **West:** Morningside Driv

Project Goals

Create hundreds of "Green Acres"

WHAT IS A "GREEN ACRE?"
Urban areas contain many acres of impervious cover, including streets, driveways, and roofs. When stormwater runoff from an acre of this impervious cover is diverted to a green infrastructure facility, it is considered a "GREEN ACRE".

Reduce combined sewer overflows by collecting millions of gallons of excess storm water

Develop a preliminary design of the recommended design alternatives

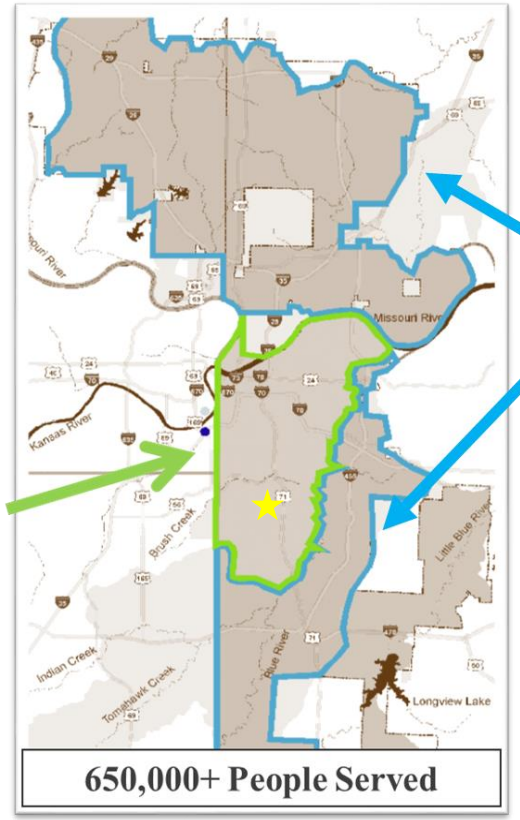
Work with the community to evaluate design alternatives for the project which incorporate green infrastructure elements and stormwater collection

What is the Smart Sewer Program?

In 2010, the City of Kansas City, Missouri entered into a Consent Decree with the United States Environmental Protection Agency (EPA) to reduce the annual volume of overflows from the City's sewer systems. KC Water's Smart Sewer program is a **30-year, multibillion-dollar program** to address this challenge through 2040.

Combined Sewer System

- 58 Square Miles
- 1,060 Miles of Pipe
- Dates back to 1857
- 90 Outfalls
- 6.4 B Gal. Overflow (avg./year)



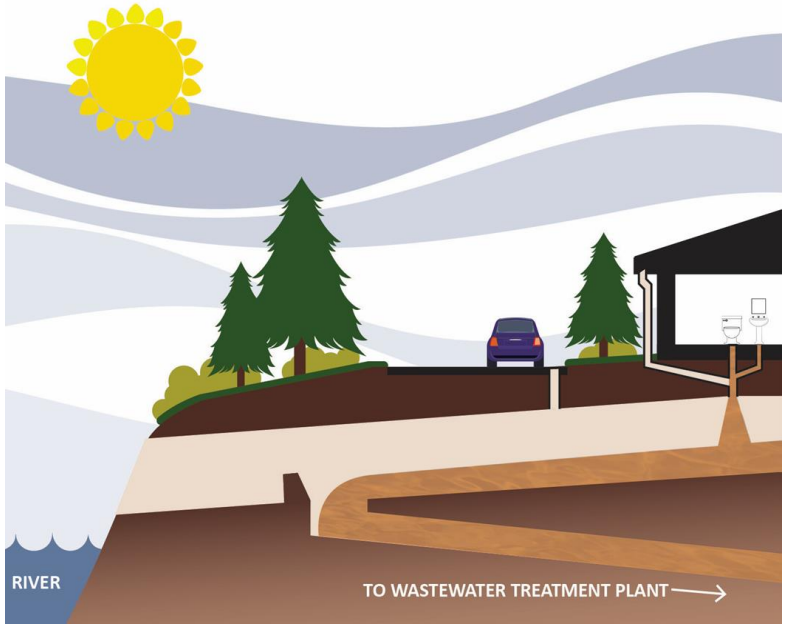
Combined Sewer System
Separate Sewer System

Separate Sewer System

- 260 Square Miles
- 1,750 miles of pipe
- Dates Back to 1960's

smartsewer
INNOVATION & INFRASTRUCTURE TO LAST A LIFETIME

Reduce Combined Sewer Overflows



Current, Dry Weather

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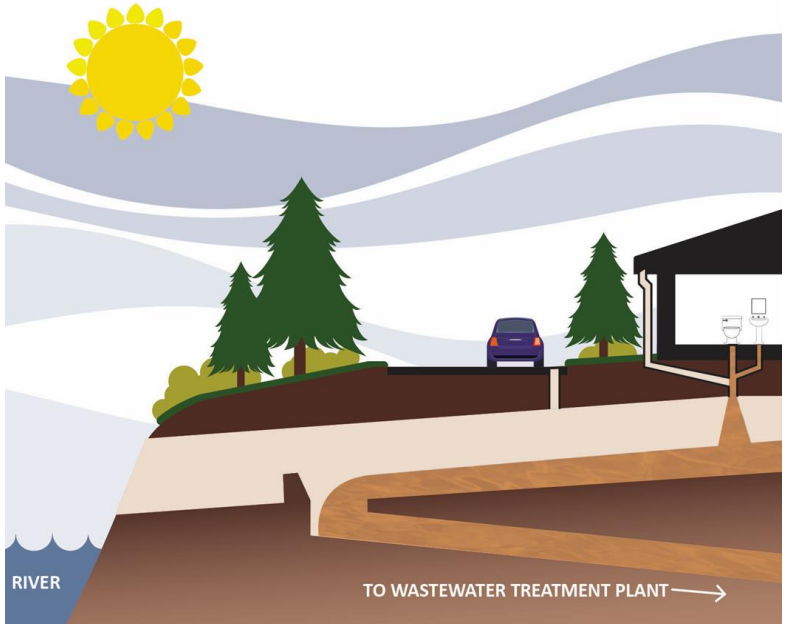
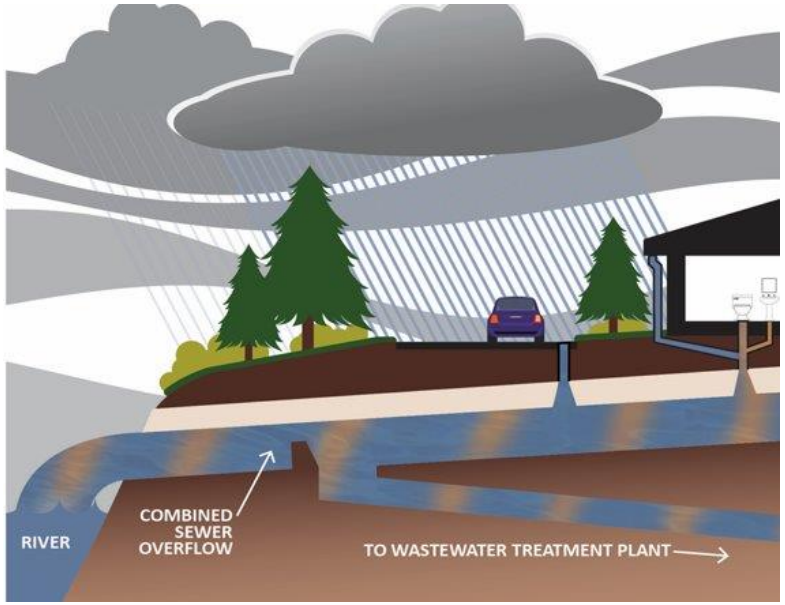
INNOVATION & INFRASTRUCTURE TO LAST A LIFETIME

Reduce Combined Sewer Overflows

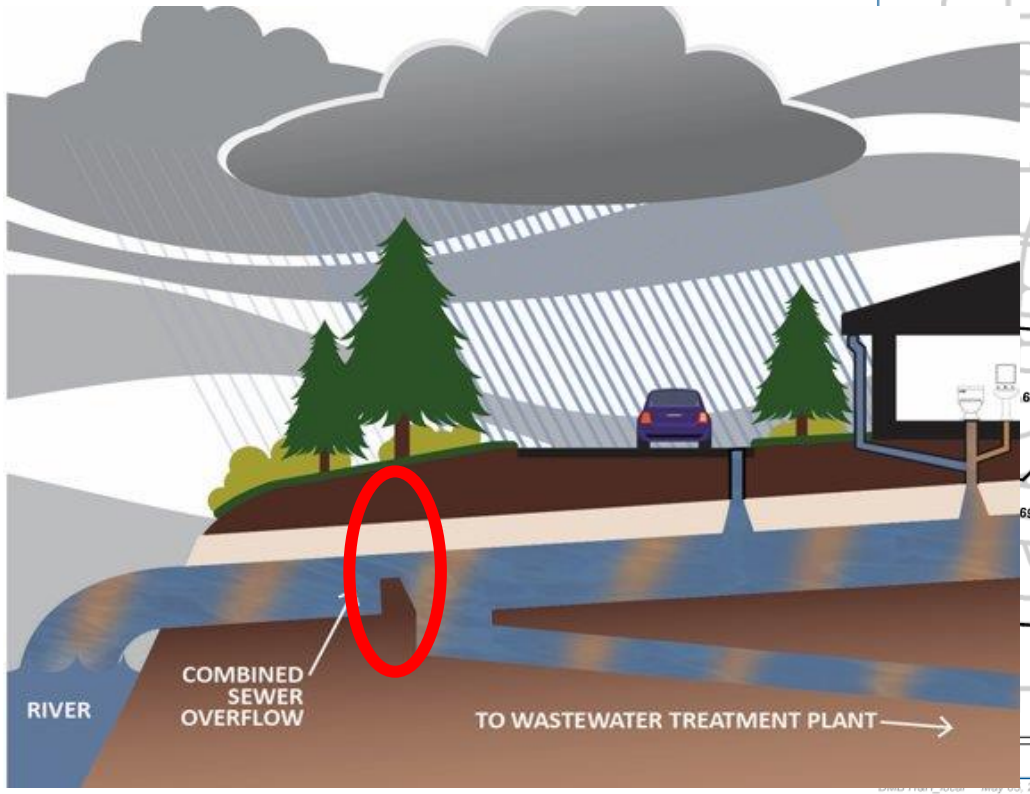


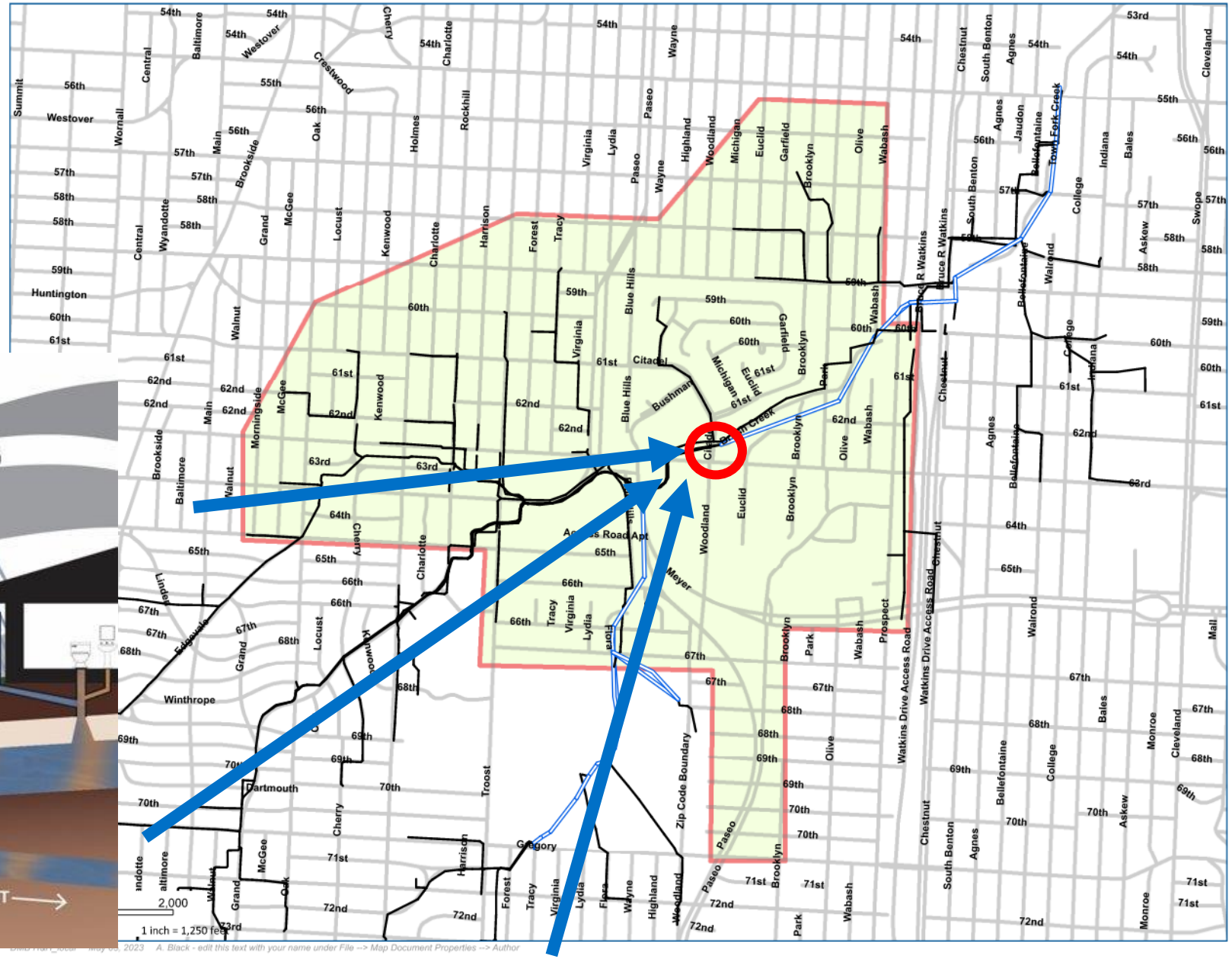
Current, Dry Weather



Current, Wet Weather

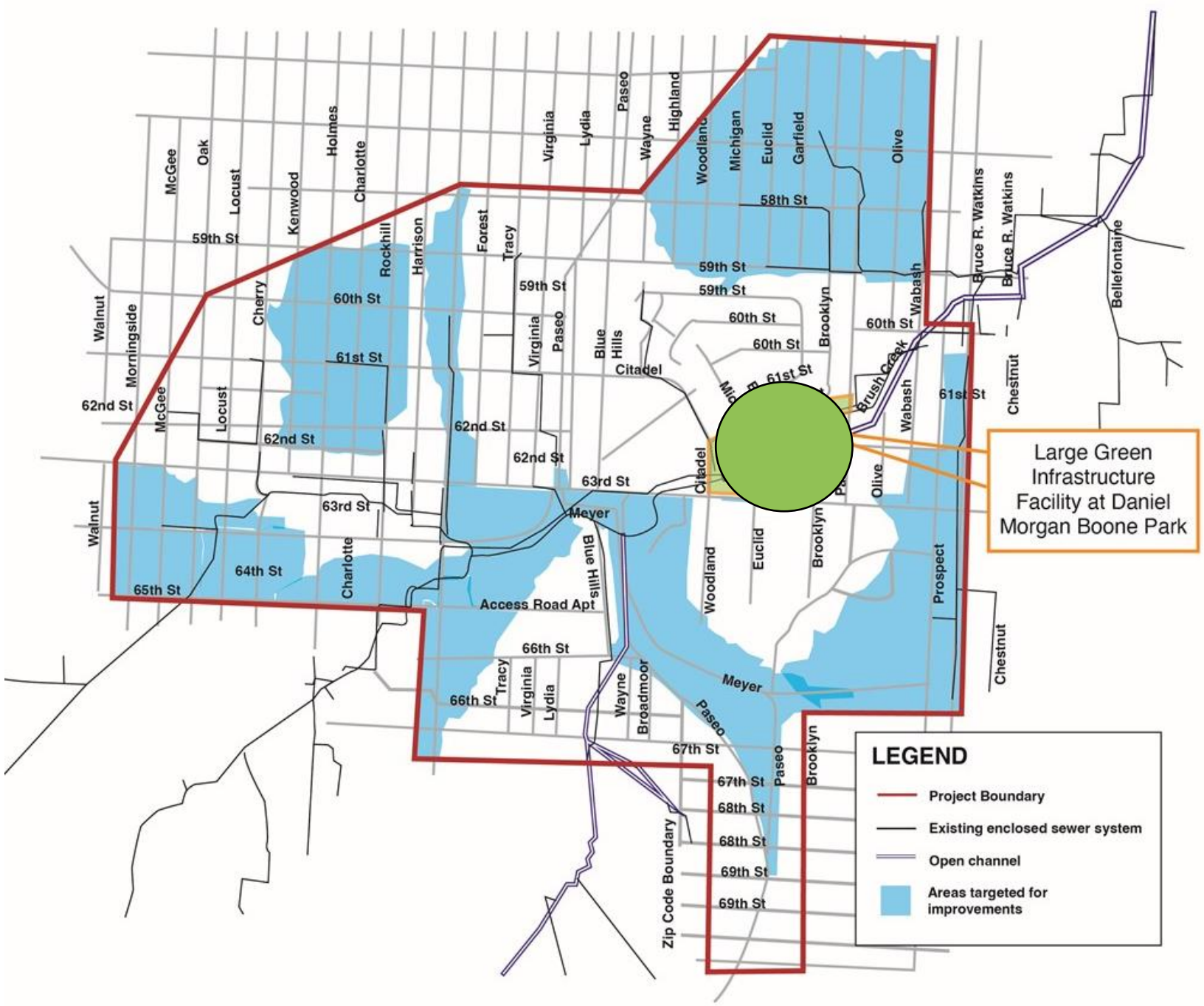
Combined Sewer Outfall 90





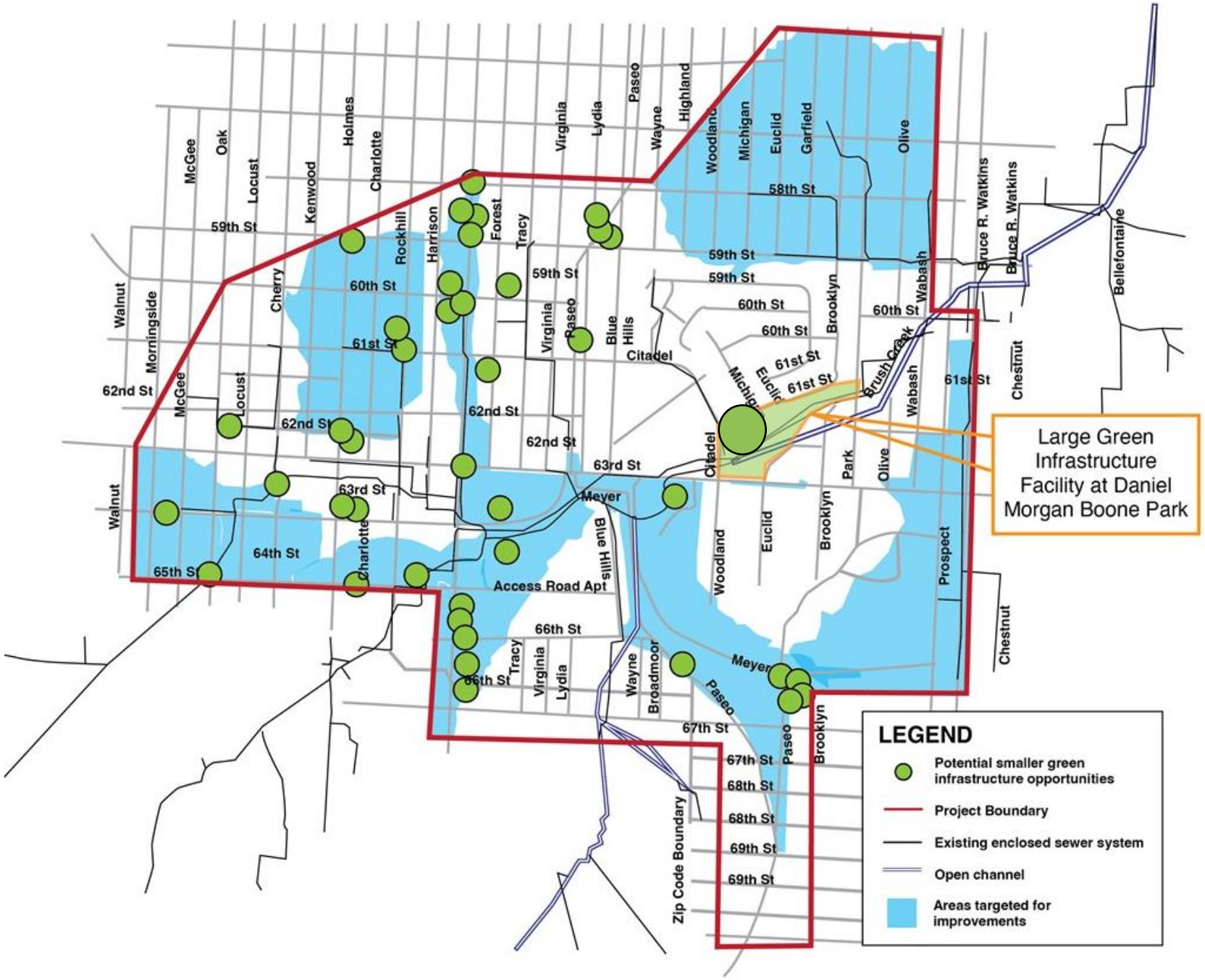
Potential Green Infrastructure Locations

Centralized at Daniel Morgan Boone Park



Potential Green Infrastructure Locations

Distributed Throughout Watershed



The Role of Green Infrastructure

Green infrastructure **slows, absorbs, and filters stormwater** before it enters and overflows Kansas City's sewer system.

It will improve the quality of water entering Town Fork Creek while working with the existing sewer system to **reduce the amount of combined sewer flow** entering the waterway.

Engineering Design

While often perceived by the public as a natural setting, **green infrastructure is functional** and requires the same level of attention and design as any other public infrastructure.

The DMB team is currently evaluating balancing a large green infrastructure facility at Daniel Morgan Boone Park with smaller, distributed green infrastructure facilities upstream of the park.

Landscape Architecture Approach

- This is a **Consent Decree Infrastructure Project** that happens to reside in a KCMO park
- With assistance from **community input**, we want to **blend aesthetics, amenities, and infrastructure** into a **community asset** that benefits **everyone**
- The creek and topography create a natural barrier that splits the park into unique north and south regions
- Green infrastructure will be a driving force of design
- The Boone-Hays cemetery will be preserved

Daniel Morgan Boone Park
Before a Rain Event

This rendering demonstrates what the green infrastructure facility is anticipated to look like the majority of the time. The smaller pool shown would facilitate habitat creation and vegetation that help the green infrastructure function as intended.

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Daniel Morgan Boone Park
After a Rain Event

This rendering demonstrates what the green infrastructure facility might look like in the 24-48 hours following a rain event. After this time period, if there is no additional rainfall, the facility will drain to look more like the “Before a Rain Event” rendering.

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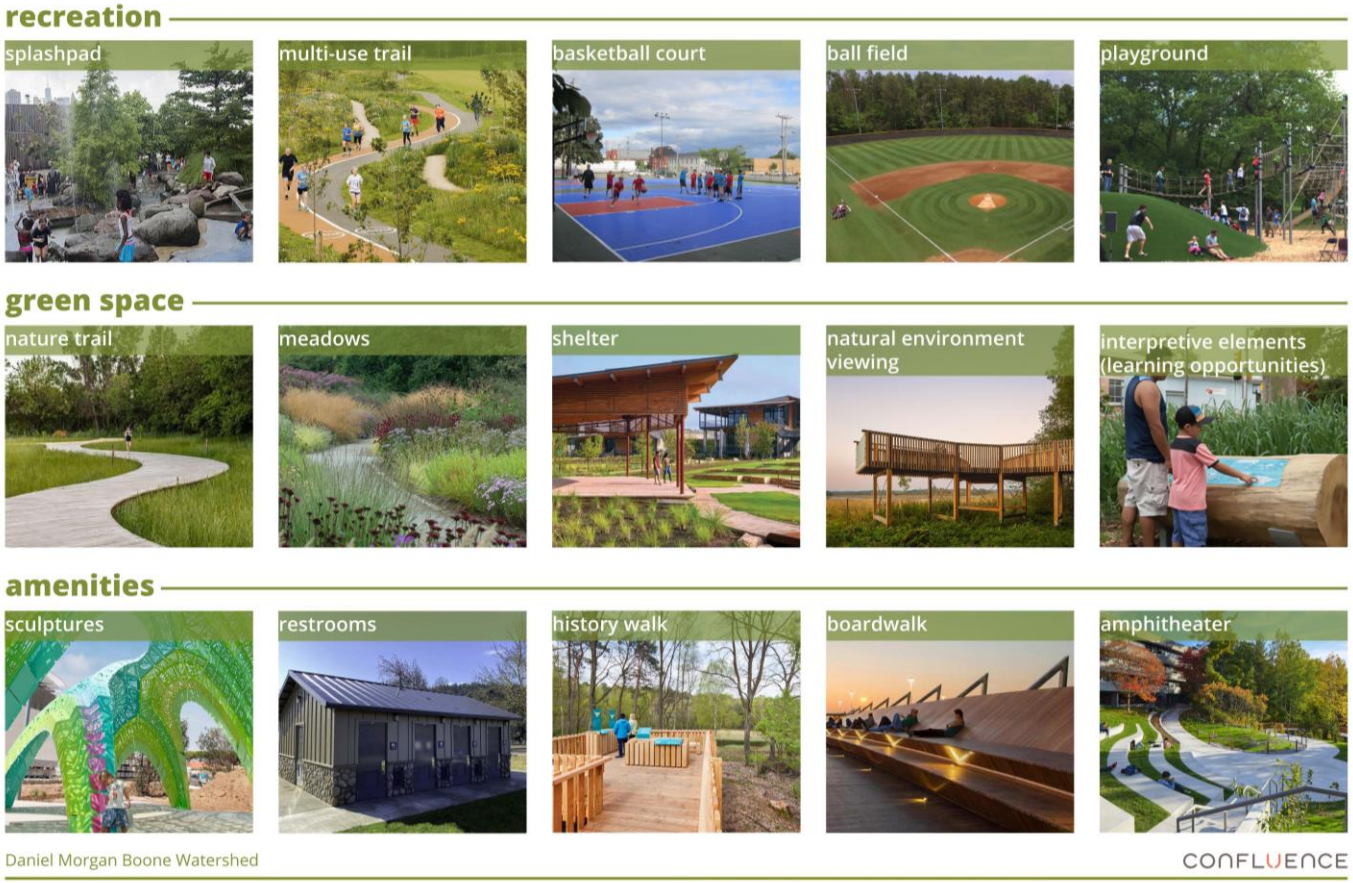
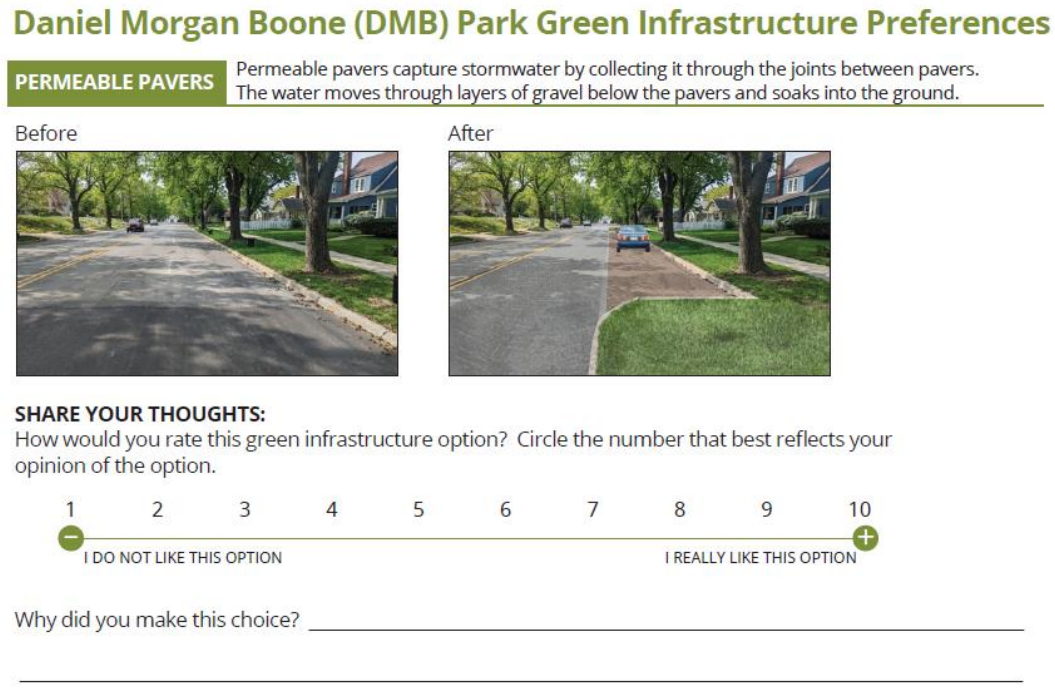
FEEDBACK EXERCISE #1 IMAGES BOARD



- KC Water can incorporate space within the project to integrate future amenities.
- Certain amenities will require collaboration through **additional funding sources**
- Use the activity sheet to select **two (2)** preferred amenities in each category.

FEEDBACK EXERCISE #2
DISTRIBUTED GREEN INFRASTRUCTURE

- Conceptual drawings of **three (3) types of green infrastructure**
- These should be considered **DRAFT**, and not definitive for future infrastructure
- Intent is to receive feedback from you as we walk through examples



Daniel Morgan Boone (DMB) Park Green Infrastructure Preferences

PERMEABLE PAVERS Permeable pavers capture stormwater by collecting it through the joints between pavers. The water moves through layers of gravel below the pavers and soaks into the ground.

Before

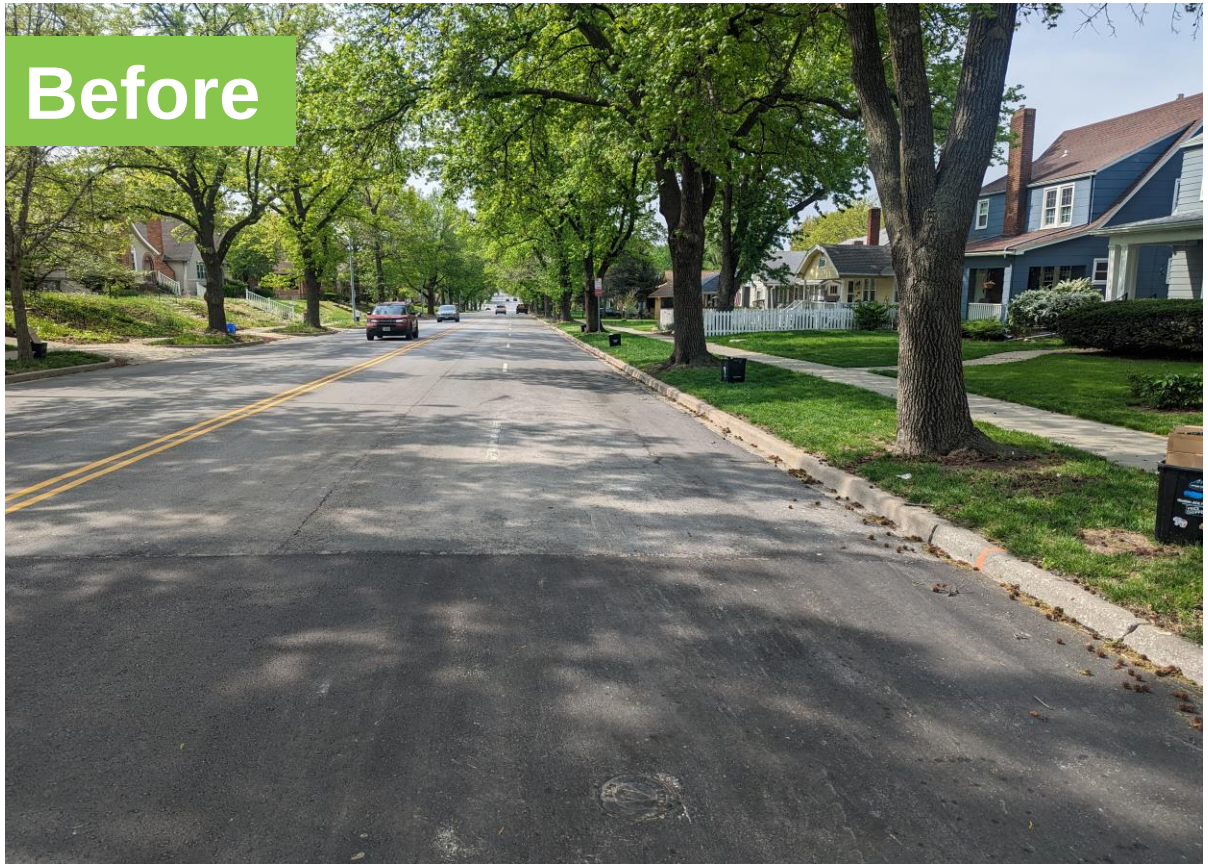
SHARE YOUR THOUGHTS:
How would you rate this green infrastructure option? Circle the number that best reflects your opinion of the option.

1 2 3 4 5 6 7 8 9 10

I DO NOT LIKE THIS OPTION — I REALLY LIKE THIS OPTION

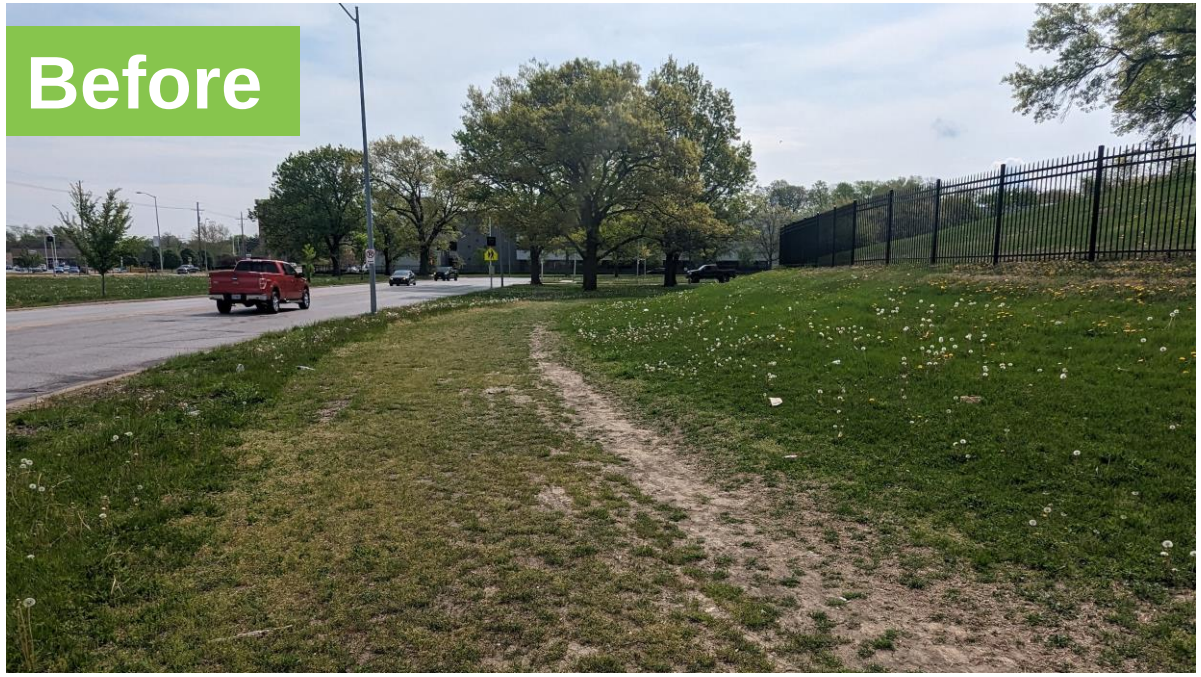
Why did you make this choice? _____

EXAMPLE
Permeable Pavers Green Infrastructure

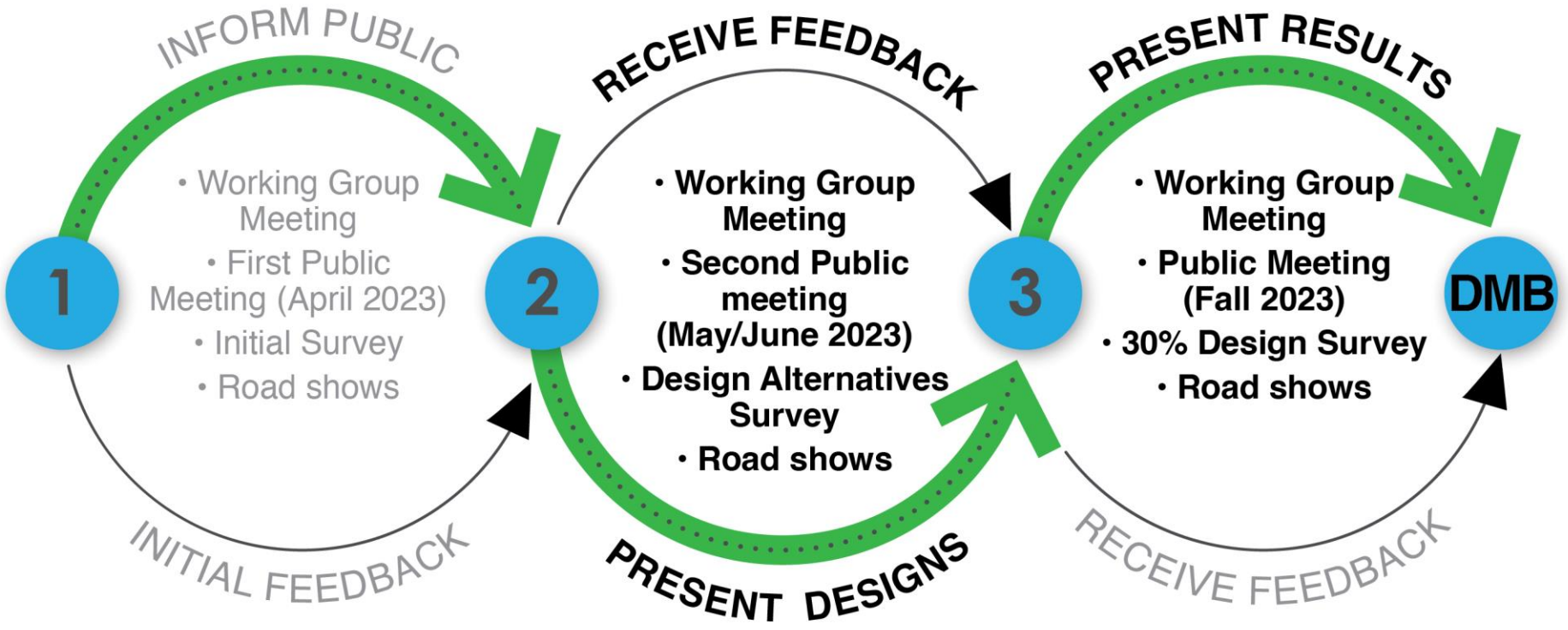


EXAMPLE
Bioretention Green Infrastructure

EXAMPLE
Bioswale Green Infrastructure



Community Engagement Process



Q&A/ Stay Up to Date!

www.kcsmartsewer.us/projects/dmb

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Areas Contributing to Overflows