



Wakarusa River Design Development

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Acknowledgments:

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Project Introduction

Located in Douglas County, Kansas, the Wakarusa River corridor is a critical ecological and cultural landscape, facing mounting development pressure. Our project responds to pressing issues of habitat fragmentation, water quality degradation, and climate vulnerability through a framework of conservation, restoration, and sustainable land-use planning. This design development booklet provides solutions for three corridor scale solutions and a Eudora site scale solution. The landscapes we designed respond to environmental challenges but also rekindle the cultural and recreational relationships between the community and the river.

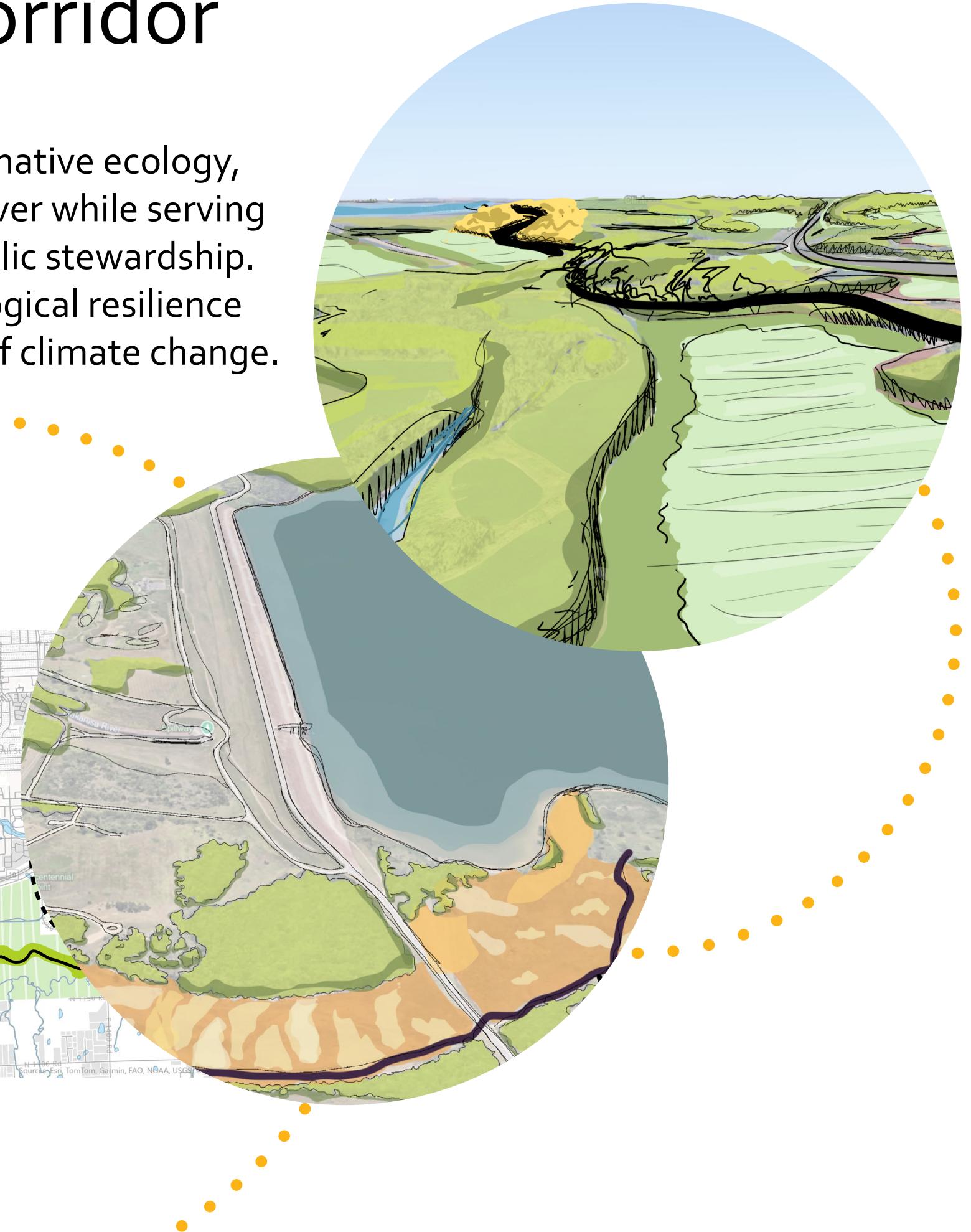
Part 1

Wakarusa Regenerative Corridor

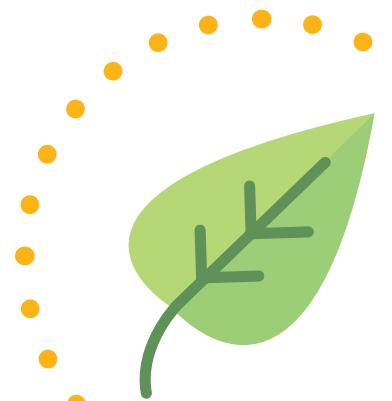
Corridor Scale

Wakarusa Regenerative Corridor

The Wakarusa River Regenerative Corridor enhances the native ecology, agriculture, and riparian functions along the Wakarusa River while serving as an educational & recreational amenity that fosters public stewardship. This project demonstrates how equitable social and ecological resilience can help mitigate the social and environmental impacts of climate change.

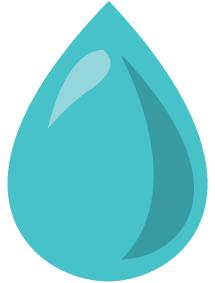


Goals & Objectives



Ecology & Biodiversity

- Preserve & Regenerate Native Ecosystems
- Introduce regenerative agriculture
- Enhance ecological connectivity



River & Water

- Improve water quality
- Enhance water infiltration
- Plan for water preservation



Social Connectivity

- Provide equitable access to the river
- Integrate local & indigenous culture
- Increase stewardship through education

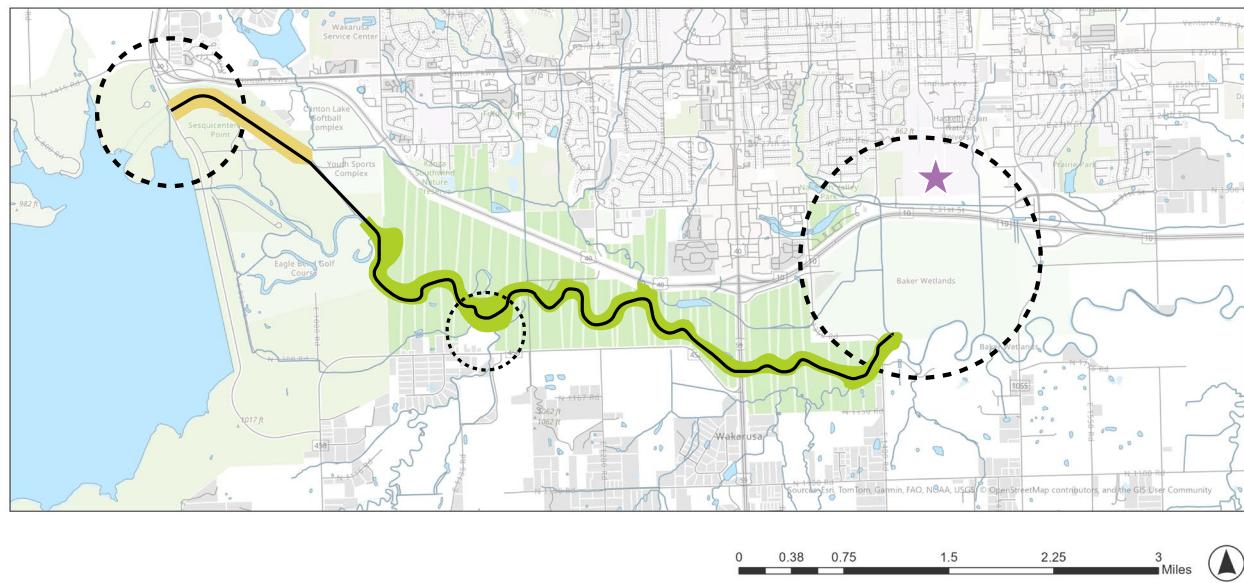


Focus Areas

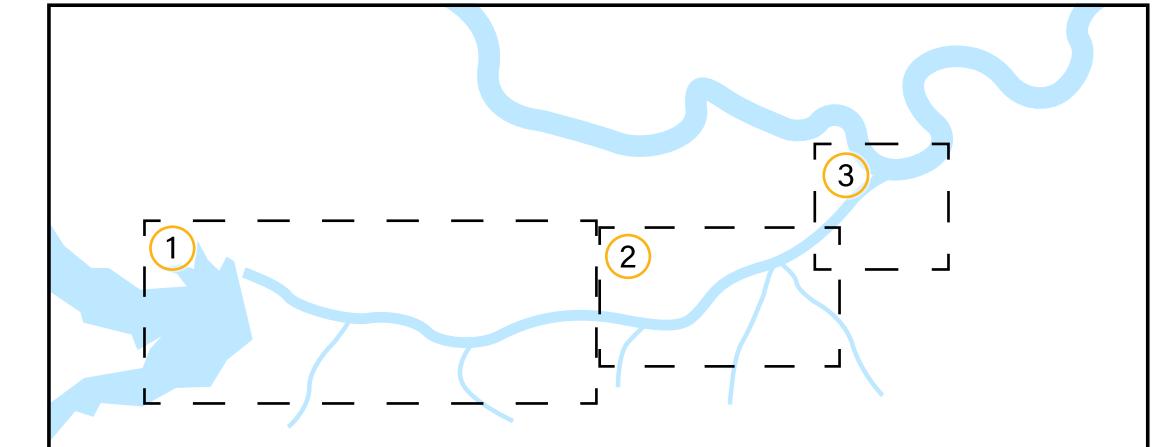
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Wakarusa Regenerative Greenway

Connecting South Lawrence to equitable green space



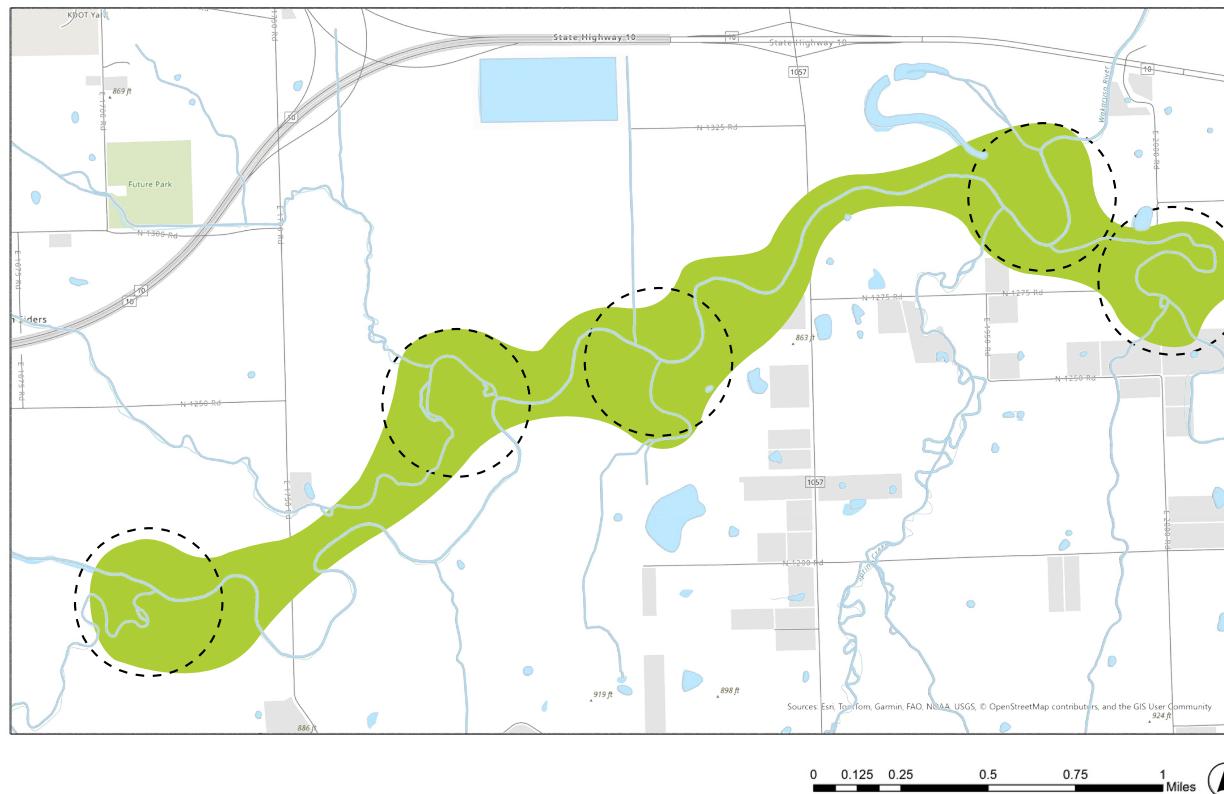
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Confluence Wetlands

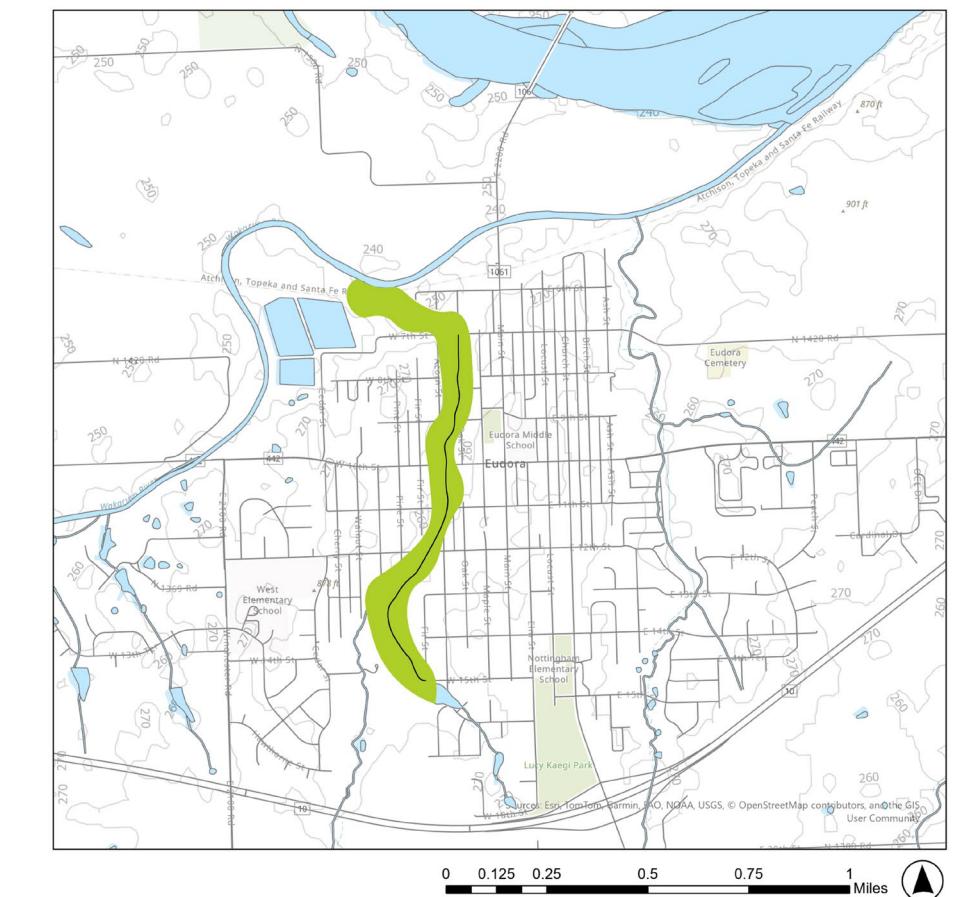
Ecological restoration

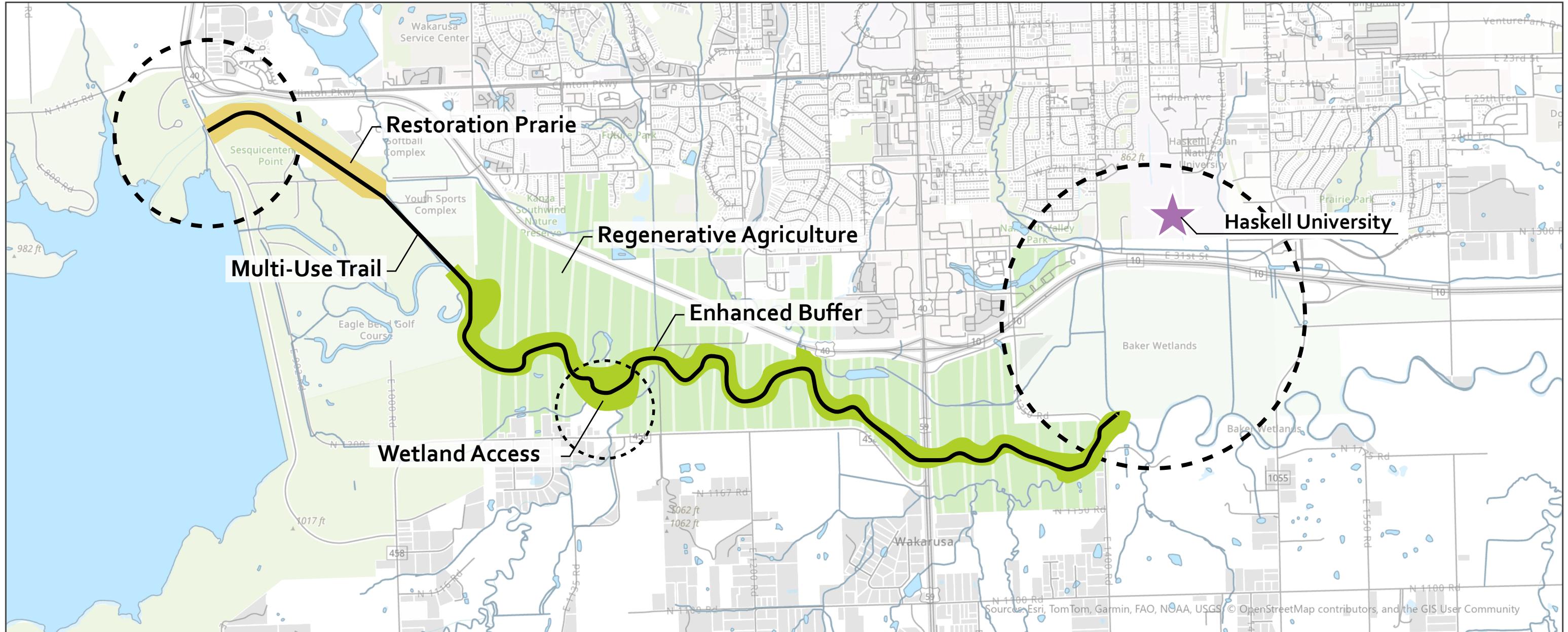


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Eudora Greenway

Flood mitigating linear park



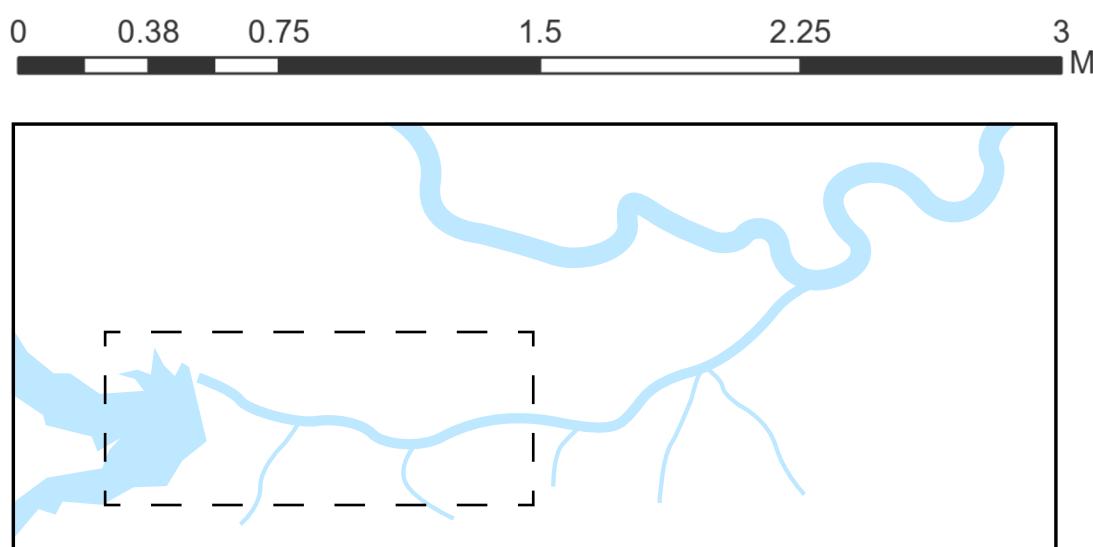
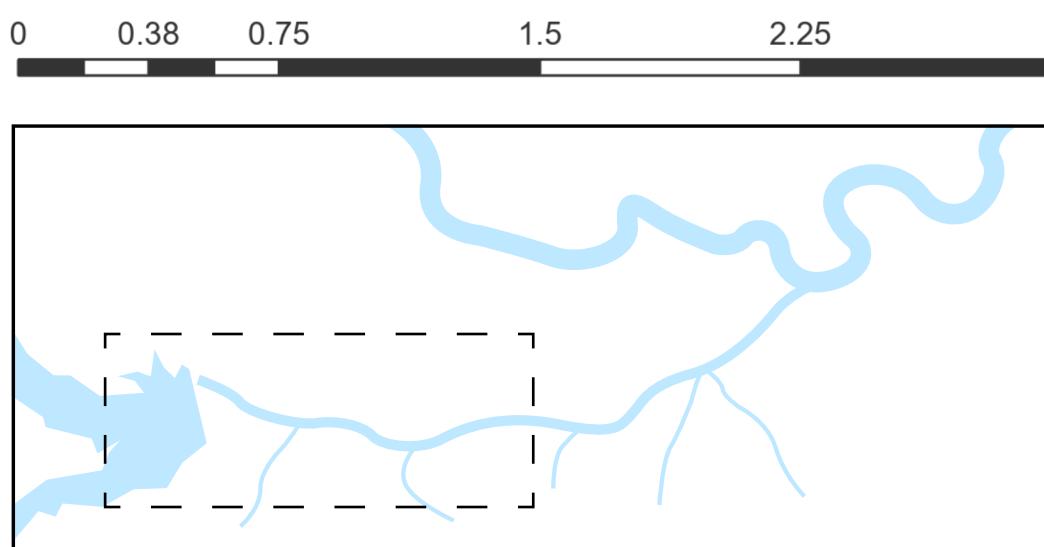


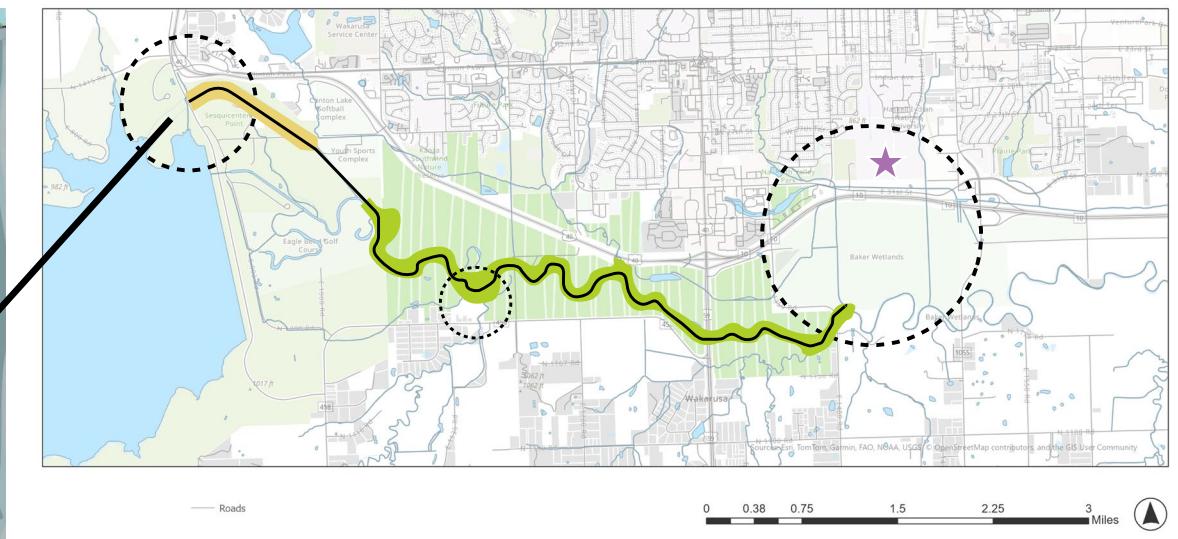
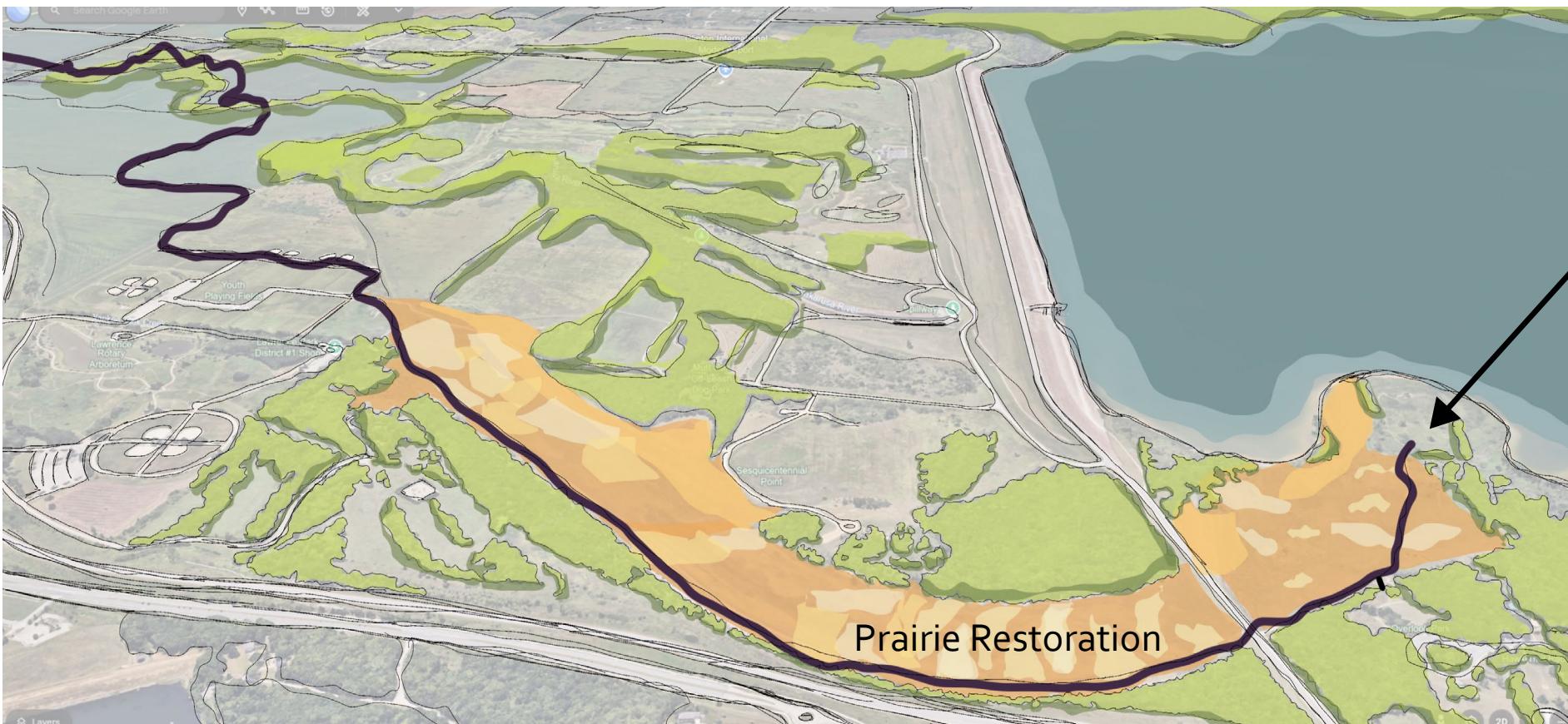
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Wakarusa Regenerative Greenway

Connecting South Lawrence to equitable green space

- Connects diverse recreational amenities & ecology
- Equitable access for socially vulnerable community members
- Enhanced vegetation buffer and agricultural practices improve ecology
- Water quality & infiltration enhanced through vegetation
- Shaded trail and river mitigate warming temperatures along the path





Monarch Butterflies



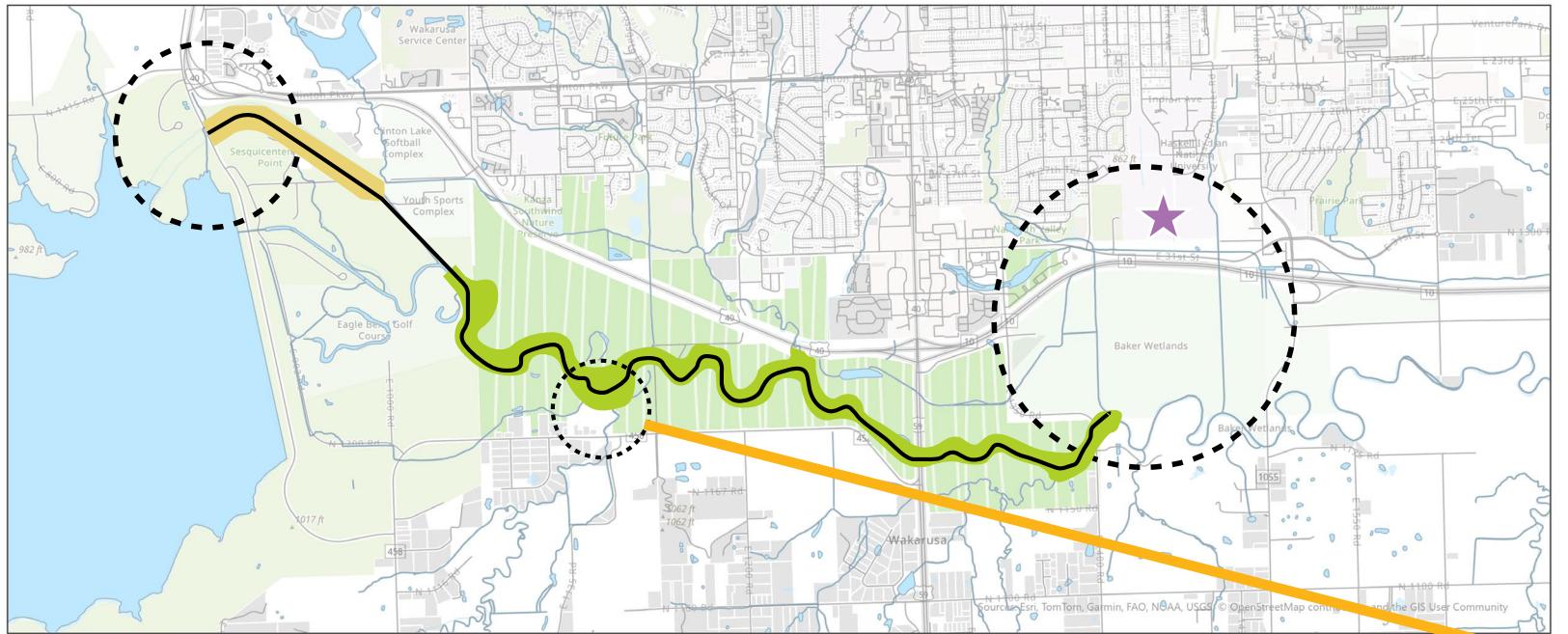
Lesser Prairie-Chicken



Tall Grass Prairie

Tall Grass Prairie Restoration

Habitat dedicated to threatened native species



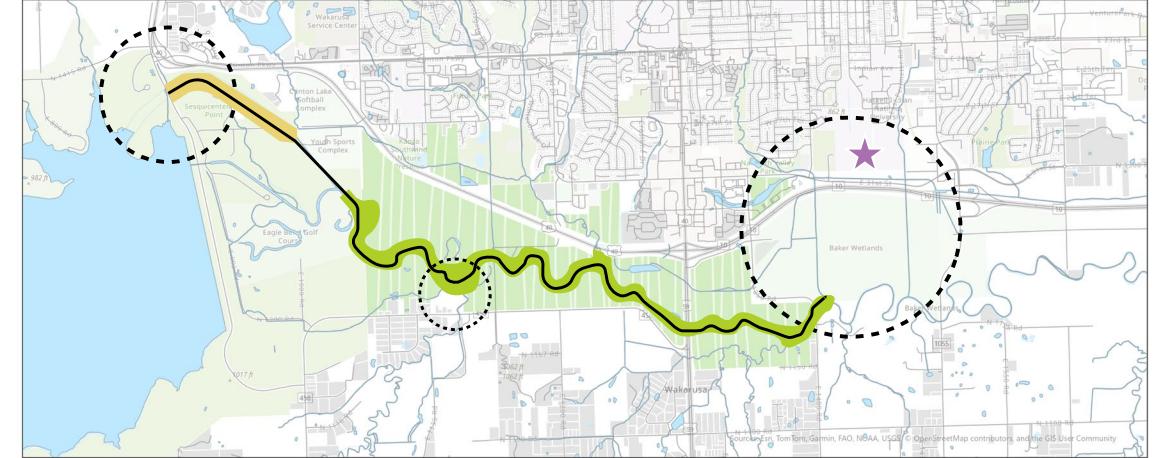
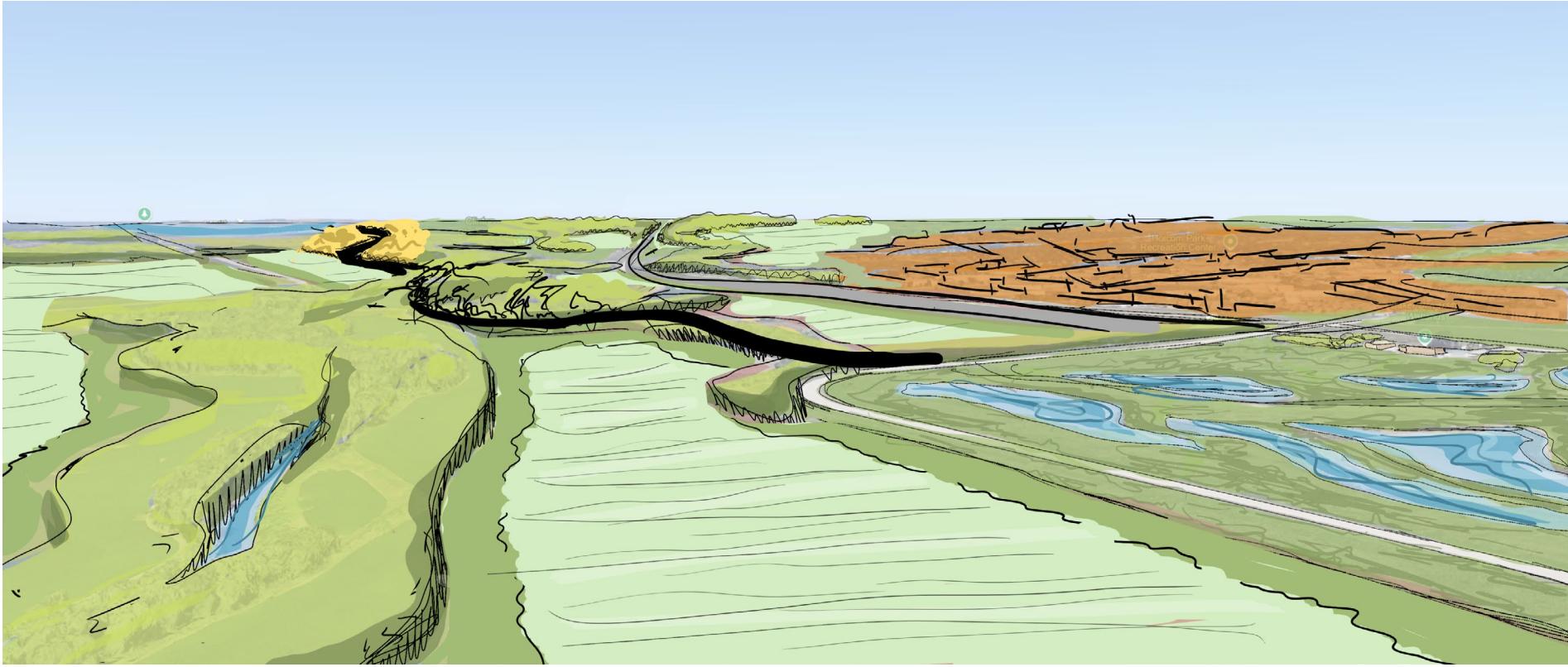
Wetland Access

Washington Creek & Wakarusa confluence wetland access



- Preservation supports diverse plant and animal species
- Naturally removes pollutants & captures sediment
- Absorbs excess water, helping reduce flood risks
- Critical habitat and migration pathways for wildlife
- Opportunity to integrate educational and Indigenous cultural elements



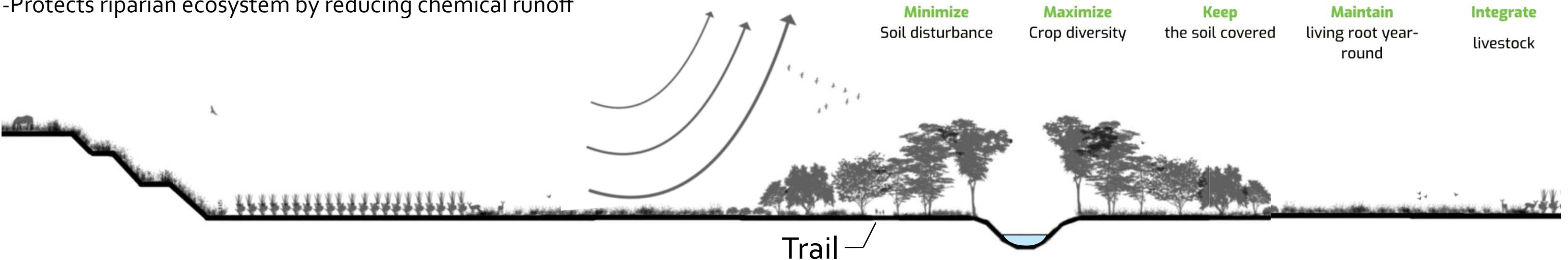


5 Core Principles of Regenerative Agriculture

Wakarusa Regenerative Greenway

Regenerative agriculture abutting trail

- Builds deep, healthy soils that retain moisture and withstand extreme weather
- Sequesters carbon with cover crops and no-till farming
- Improves water retention, reduces runoff and erosion
- Protects riparian ecosystem by reducing chemical runoff



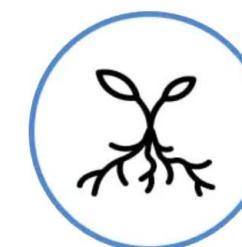
Minimize
Soil disturbance



Maximize
Crop diversity



Keep
the soil covered



Maintain
living root year-round



Integrate
livestock

Greenway Section

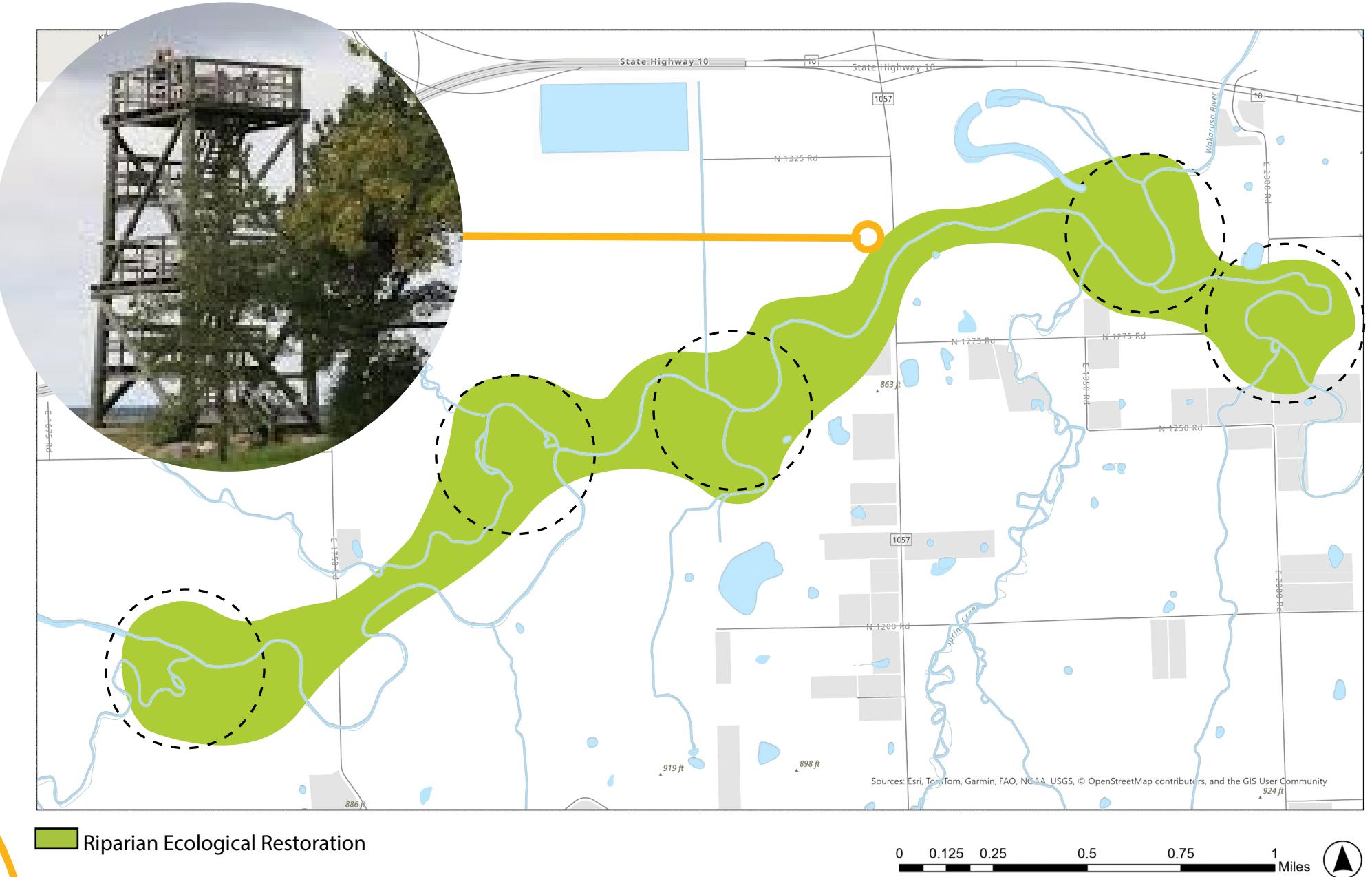
Enhanced vegetated buffer & trail system

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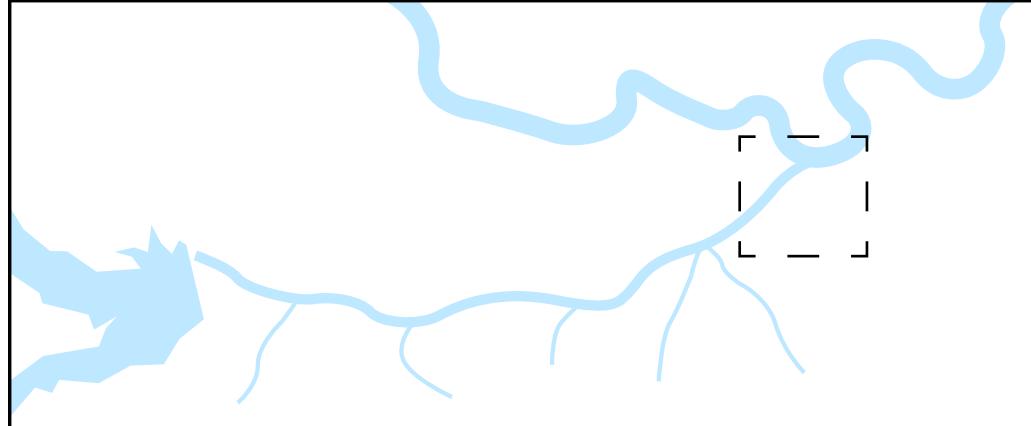
Confluence Wetlands

Riparian Ecological Restoration

- Connects critical habitats, supporting wildlife movement and migration
- Enhances biodiversity by linking ecosystem
- Improves water quality through natural filtration
- Mitigates flooding with restored wetlands and vegetation
- Provides undisturbed refuge for sensitive species
- Supports bird conservation with minimal disturbance



Eudora Greenway Vision



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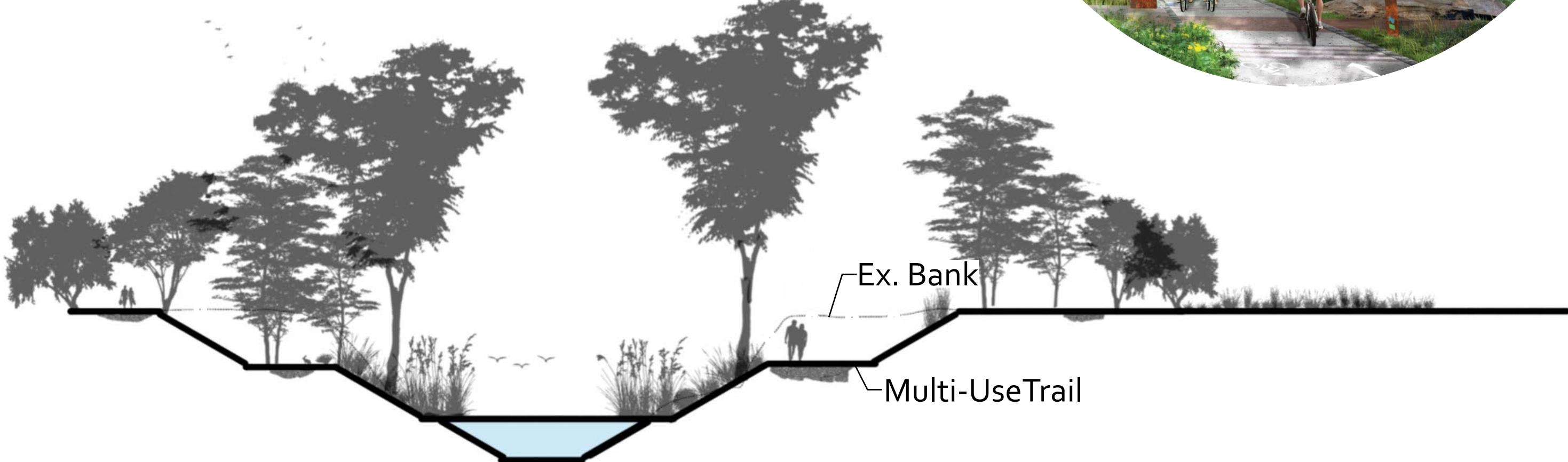
Eudora Greenway

Flood mitigating linear park

- Stepped lower-angle bank to slow & manage water flow
- Expanded native vegetation to enhance infiltration and reduce runoff
- Recreational amenity that also has storm water management function



Riparian Ecological Enhancement



Part 2

Eudora Riverside Revival

Eudora Site Scale

Eudora Riverside Revival

History - Ecology - Connection

Wakarusa Riverside Revival restores Eudora's **historic bond** with the Wakarusa River, a place once known for gathering, recreation, and celebration, while establishing a **purposeful landscape** for future generations to enjoy. With new amenities, renewed access, and restored native habitats, the park becomes both a living memory and a lasting place for **connection**, play, and community pride.



Goals & Objectives



Ecology & Biodiversity

- Restore **native riparian ecosystem**
- Create **washlands**
- Enhance **ecological connectivity**



River & Water

- Improve **water quality**
- Increase **flood resilience**
- Reclaim **river access**



Social Connectivity

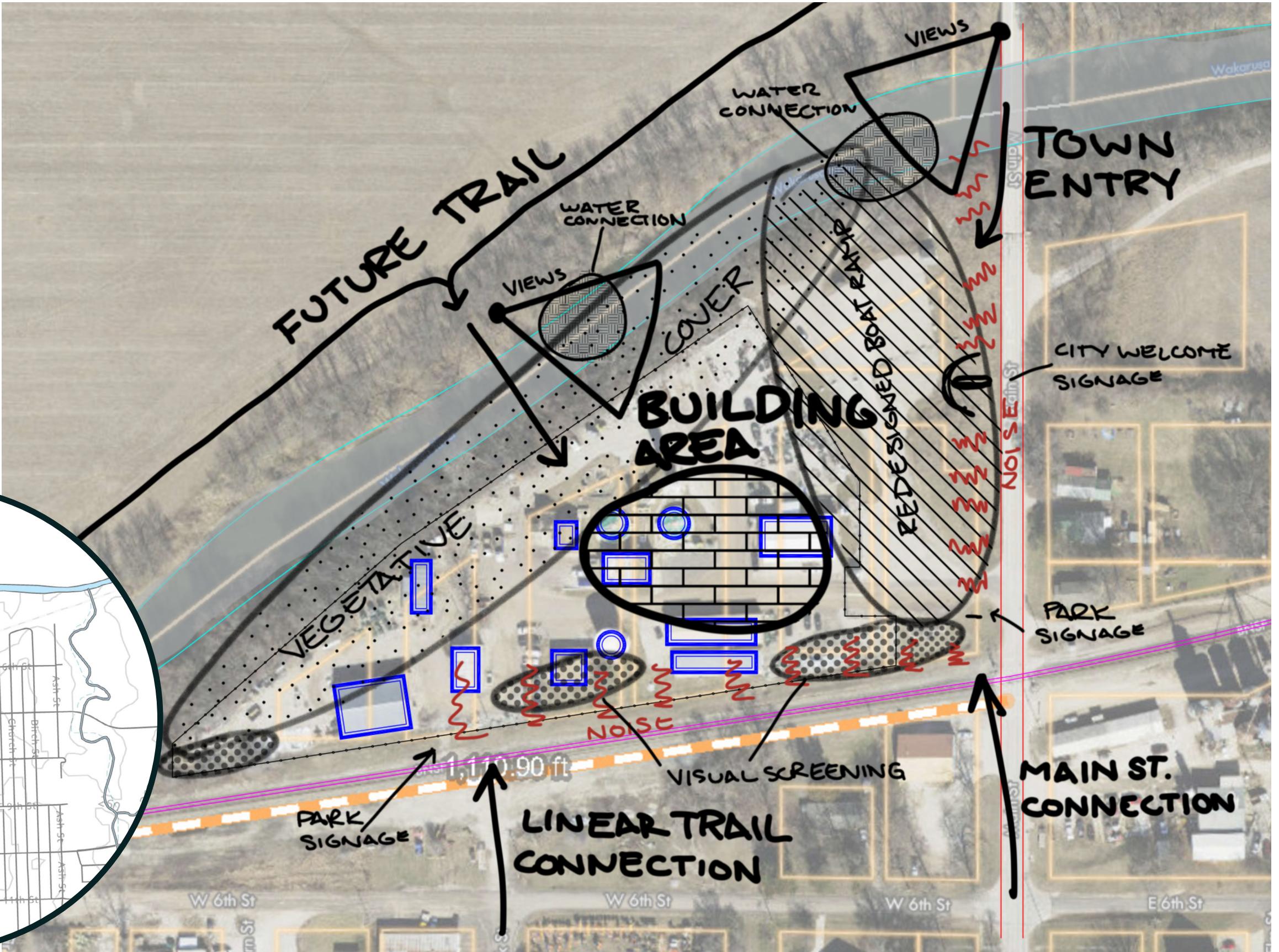
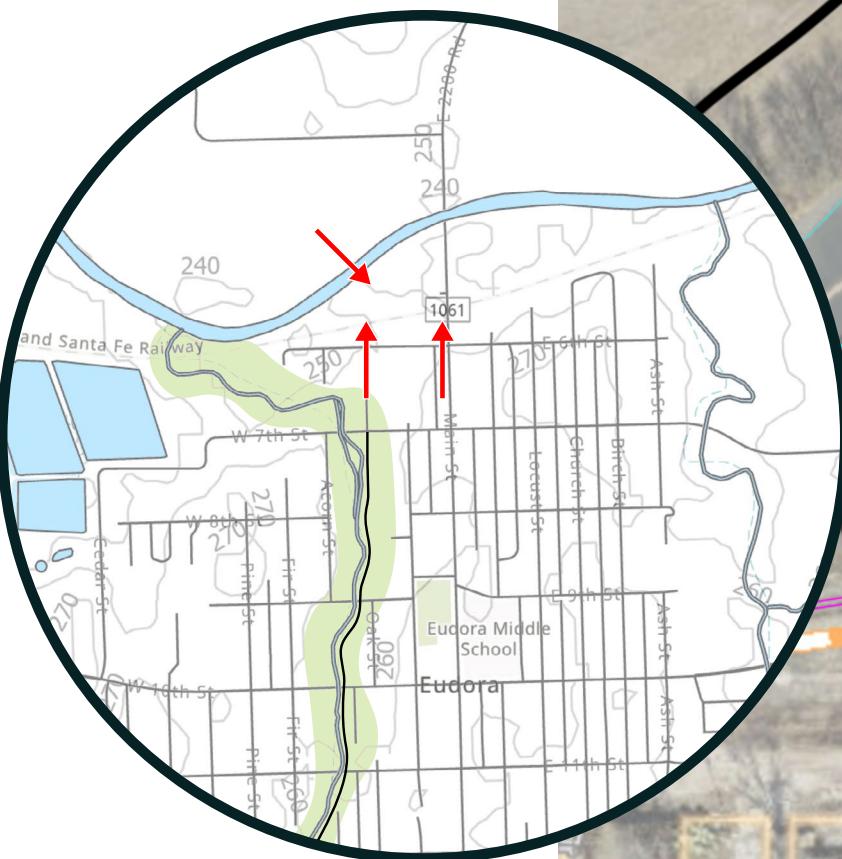
- Strengthen **community connections**
- Celebrate **local culture**
- Attract **entertainment**



Eudora Site Analysis

Summary:

- River access
- Street & train traffic
- Circulation connectivity
- Existing vegetation
- 500 yr. flood elevation



User Analysis



Teenager

- **Demographics:** Male, 16 years old.
- **Income:** Part-time job earnings.
- **Housing:** Lives with parents
- **Interests:** Videogames, basketball, and socializing with peers.
- **Usage Patterns:** Afternoon & early evening visits after school & on weekends.



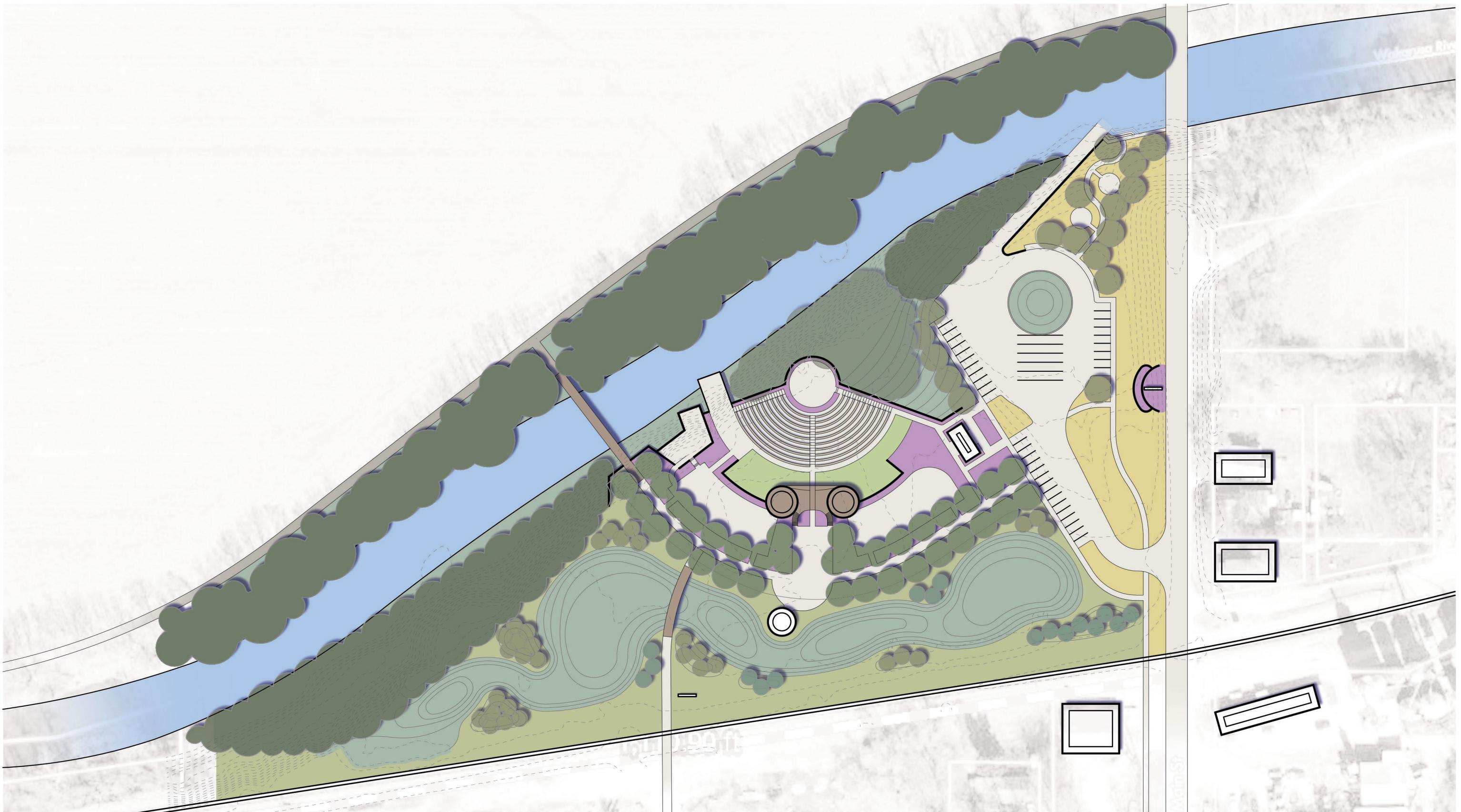
Young Couple

- **Demographics:** Married couple in their early 30s with a toddler
- **Income:** Combined household income of approximately \$110,000.
- **Housing:** Homeowners in SE side of town in more suburban neighborhood.
- **Interests:** Playground facilities, family picnic areas, and walking trails suitable for strollers.
- **Usage Patterns:** Frequent weekend visits and occasional weekday afternoons.



Retired Couple

- **Demographics:** Single female, aged 68
- **Income:** Fixed retirement income
- **Housing:** Owns a townhouse in Eudora.
- **Interests:** Gardening, bird-watching, and gentle exercise like walks.
- **Usage Patterns:** Morning visits on weekdays for relaxation and socialization.



SITE PLAN
SCALE: 1"=100'-0"

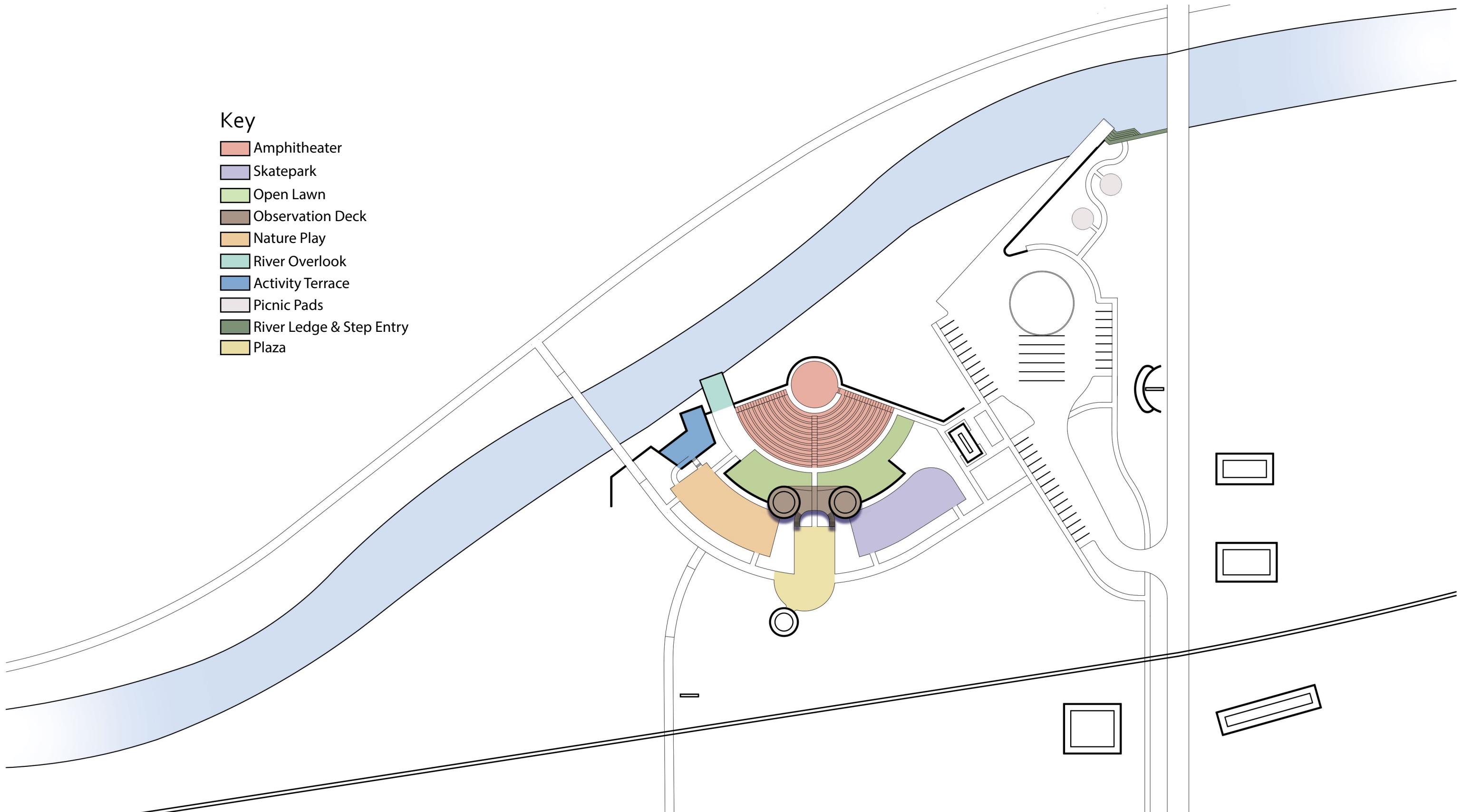
0 100 200 300 feet
SCALE: 1" = 100'-0"



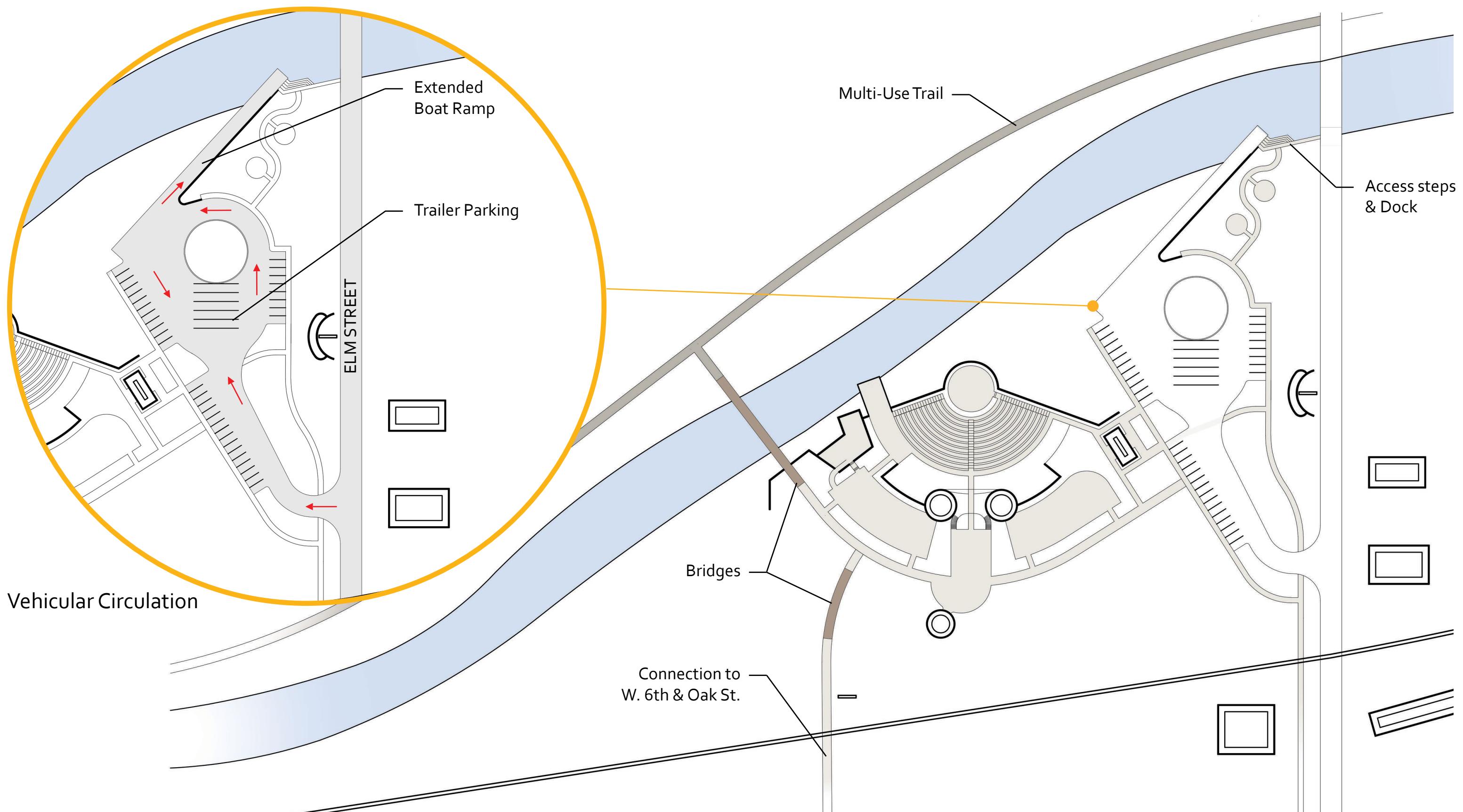
Programming

Key

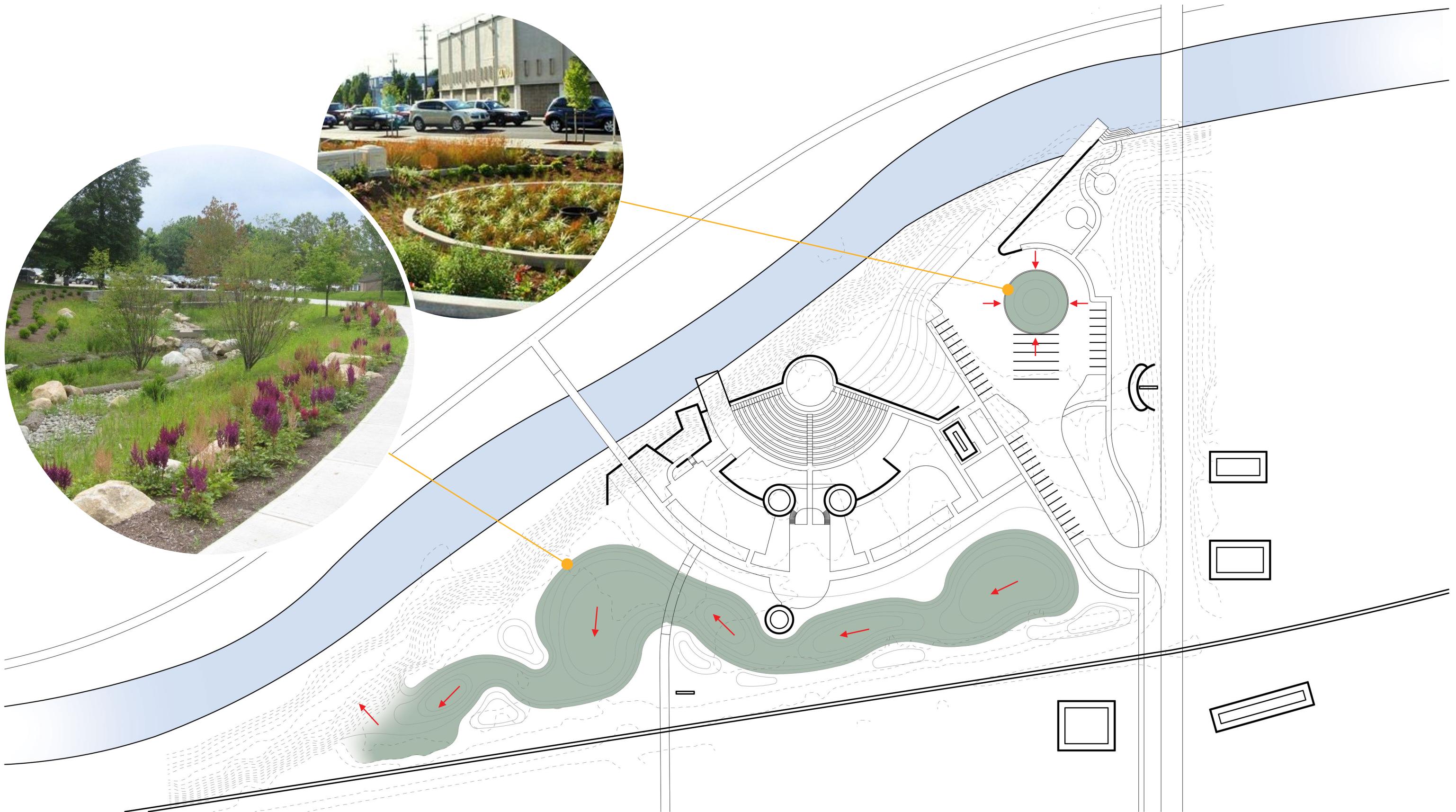
- Amphitheater
- Skatepark
- Open Lawn
- Observation Deck
- Nature Play
- River Overlook
- Activity Terrace
- Picnic Pads
- River Ledge & Step Entry
- Plaza



Circulation



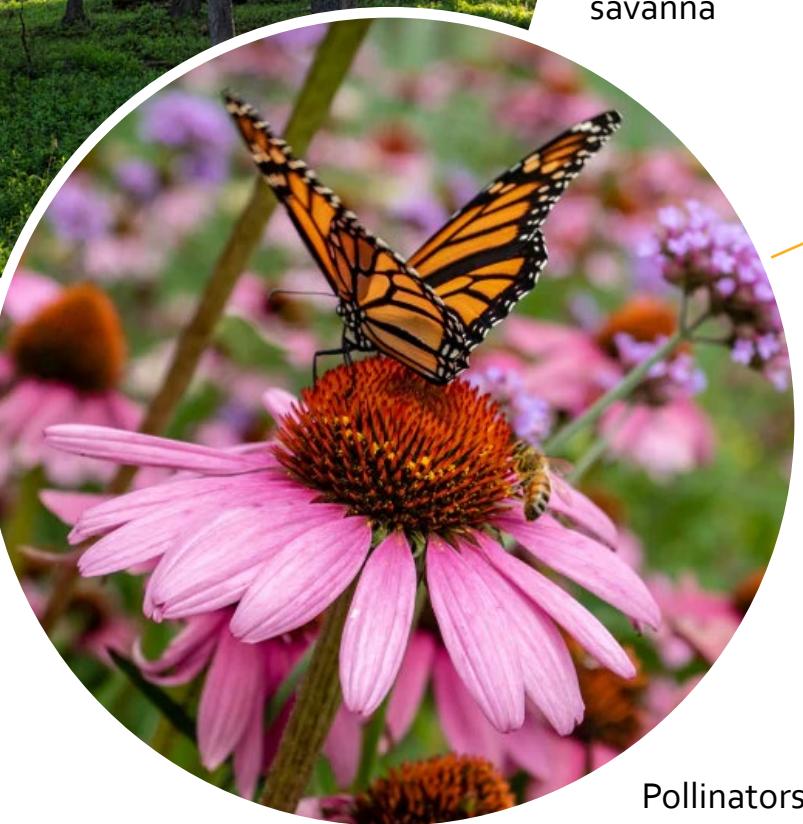
Stormwater Management



Vegetation



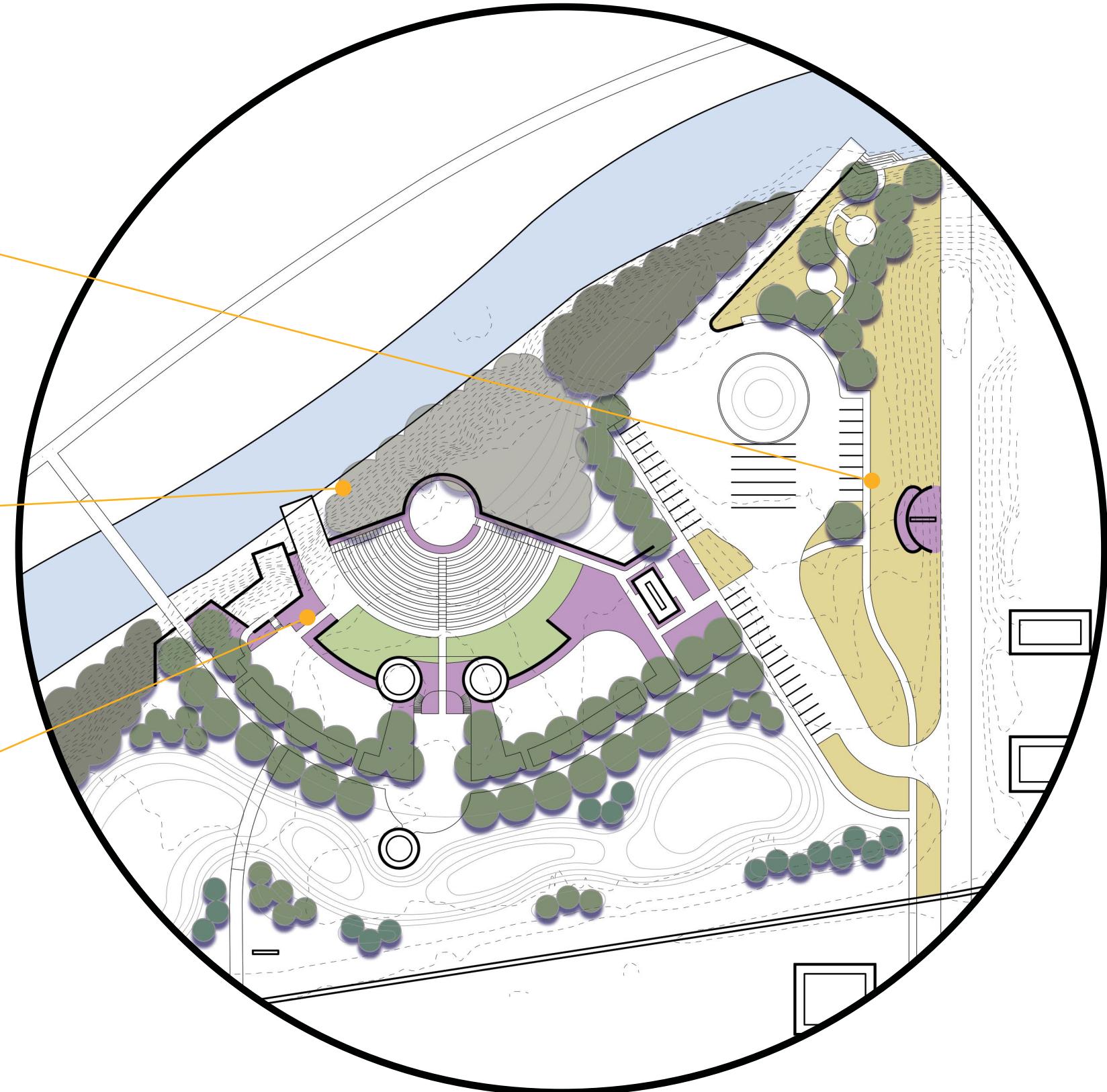
Oak-hickory savanna



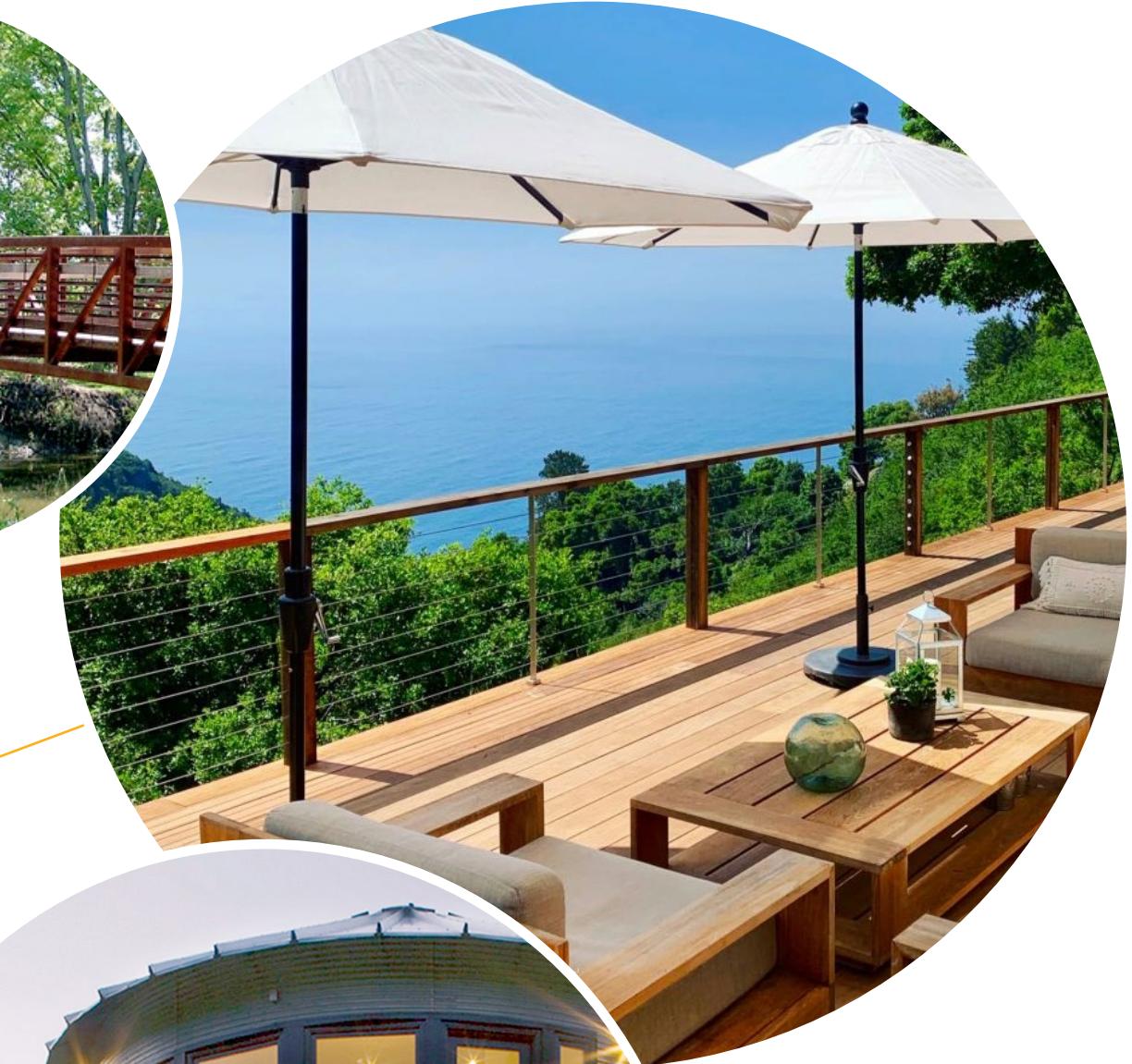
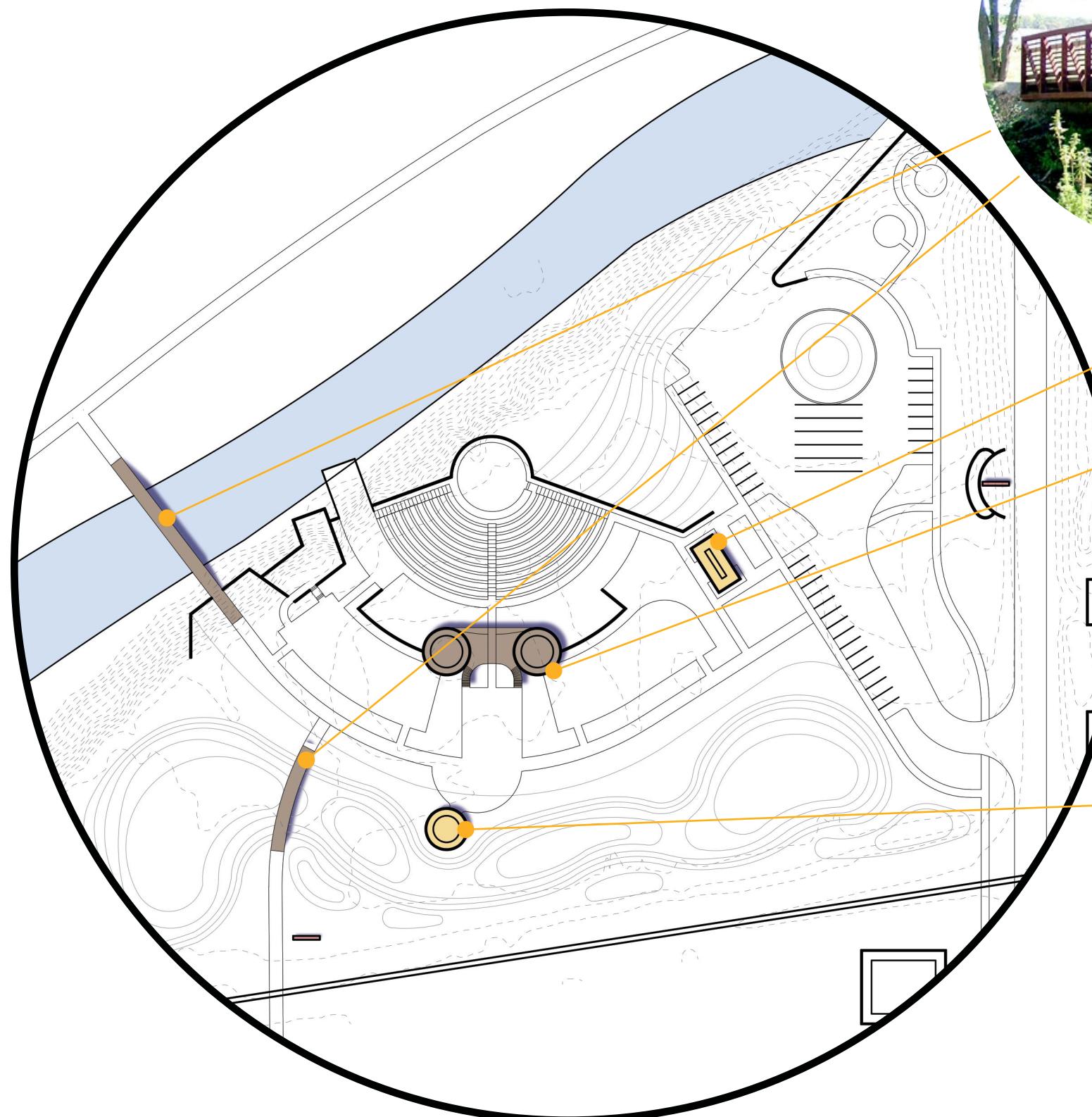
Pollinators

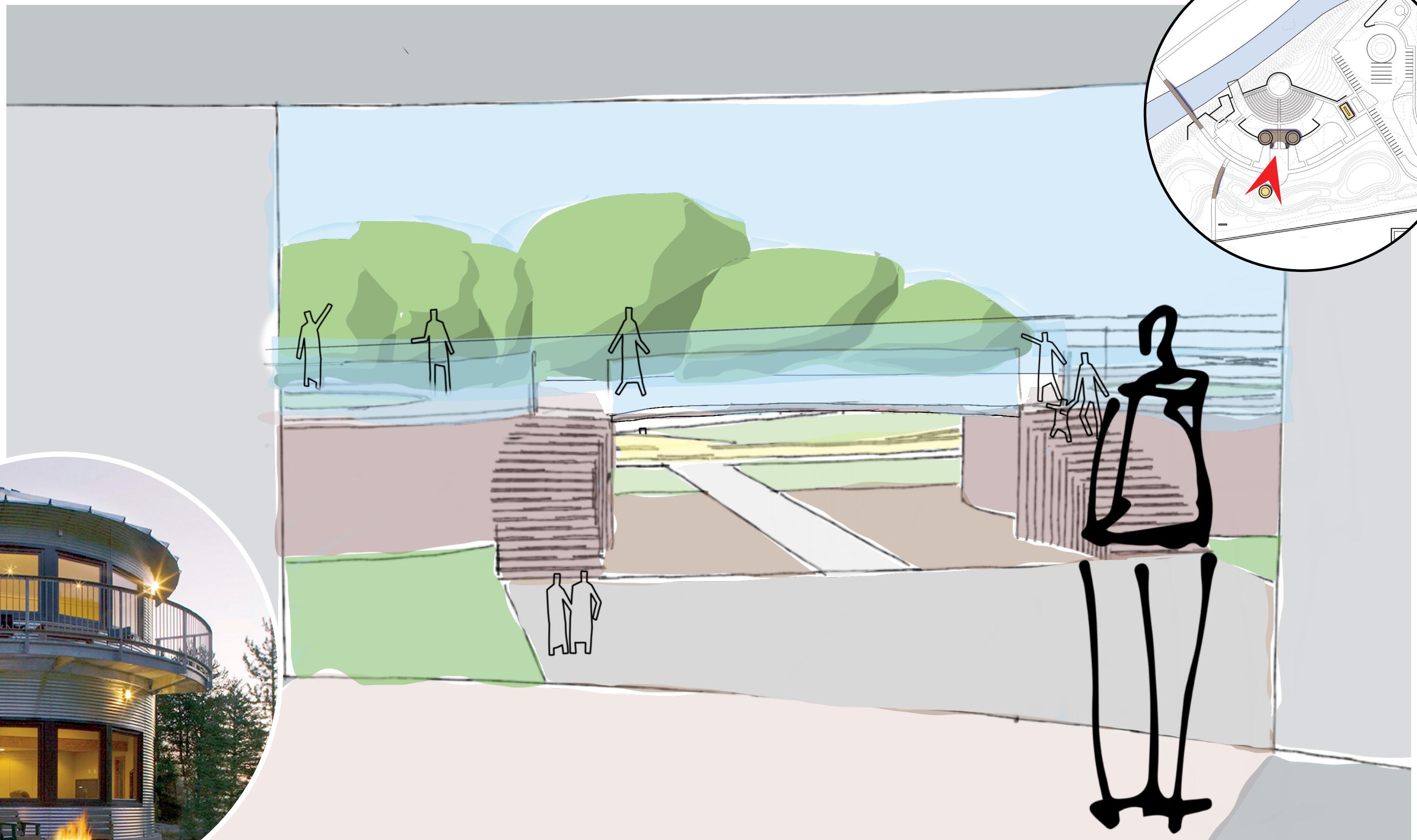


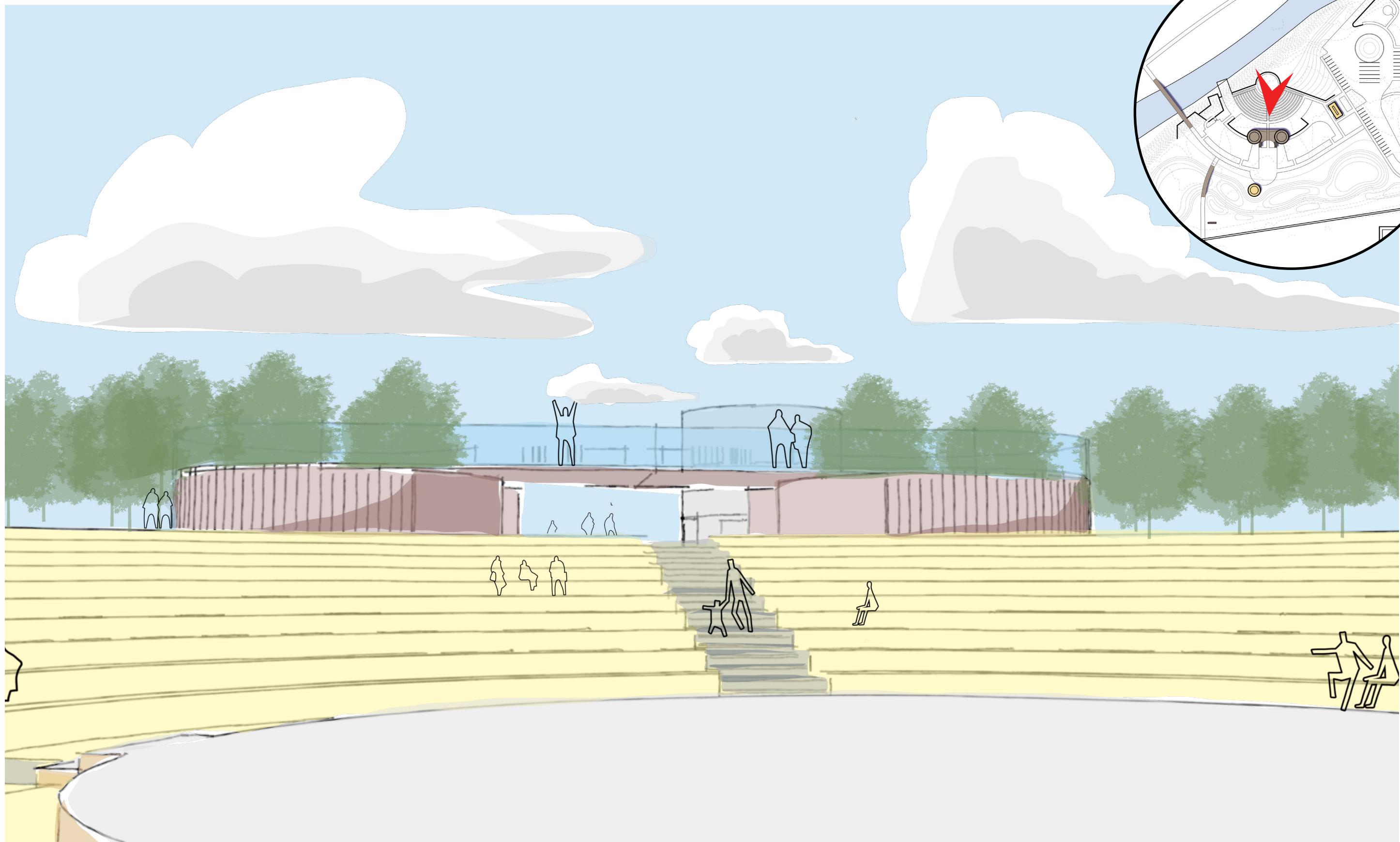
Native prairie

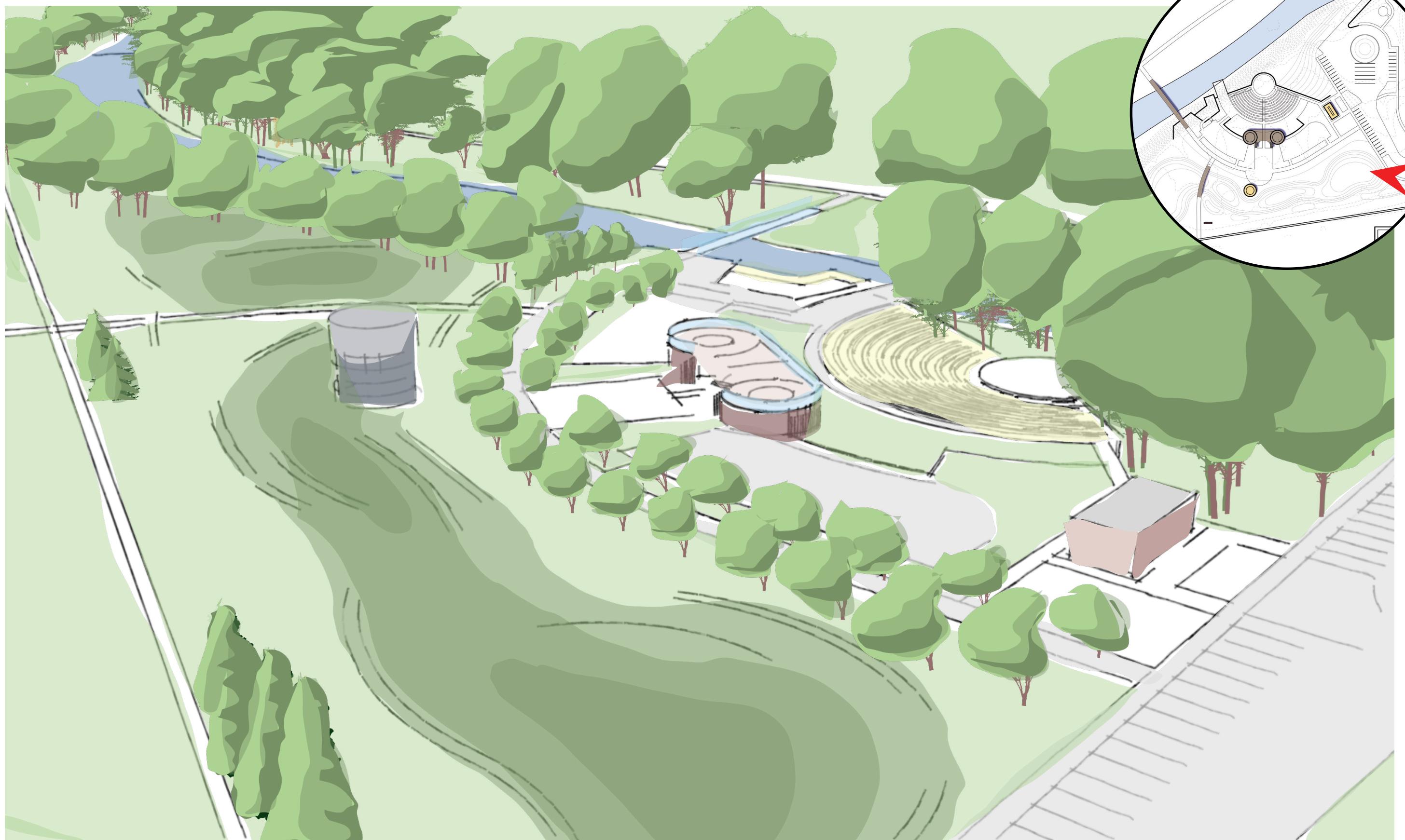


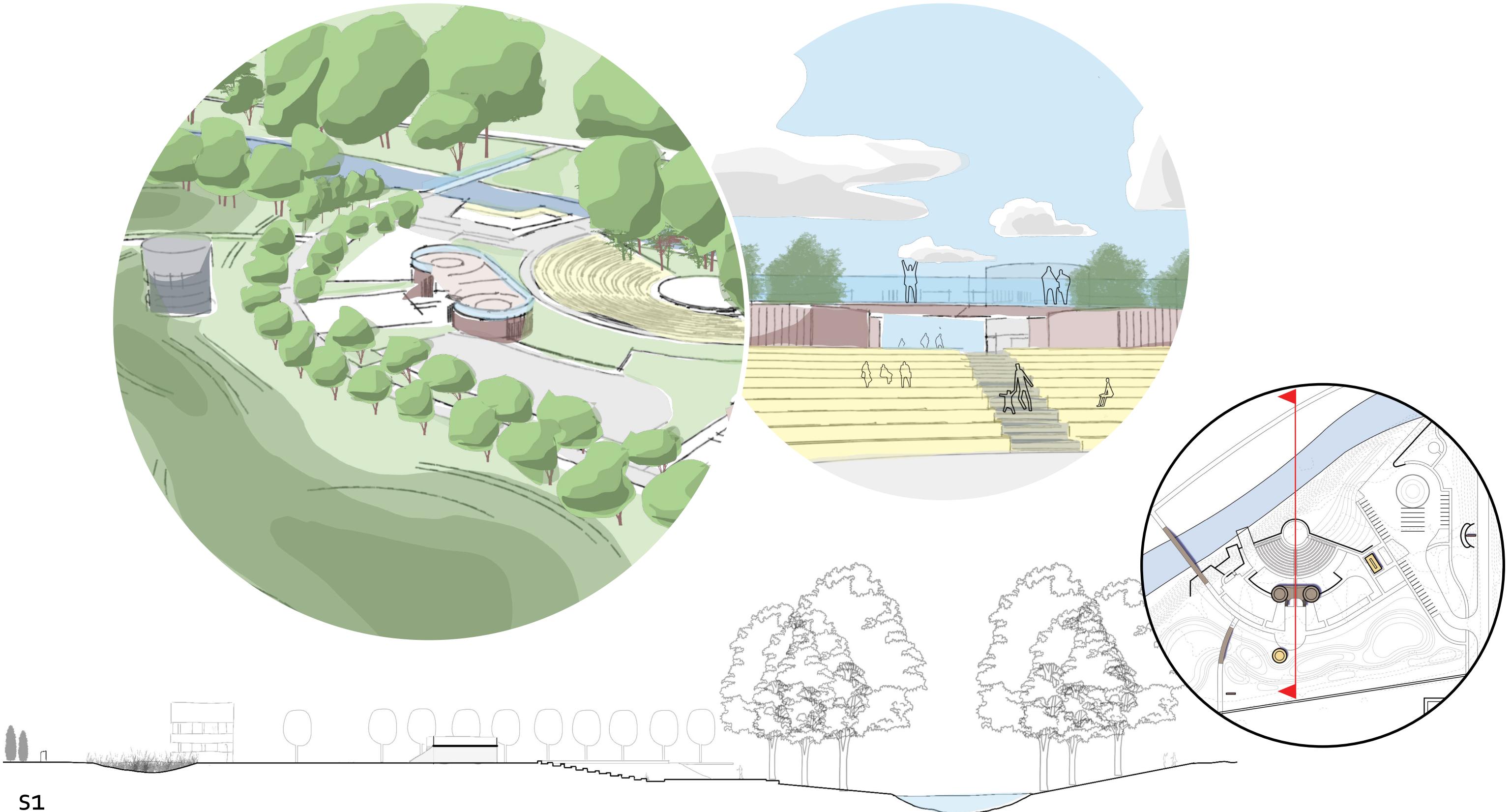
Site Structures

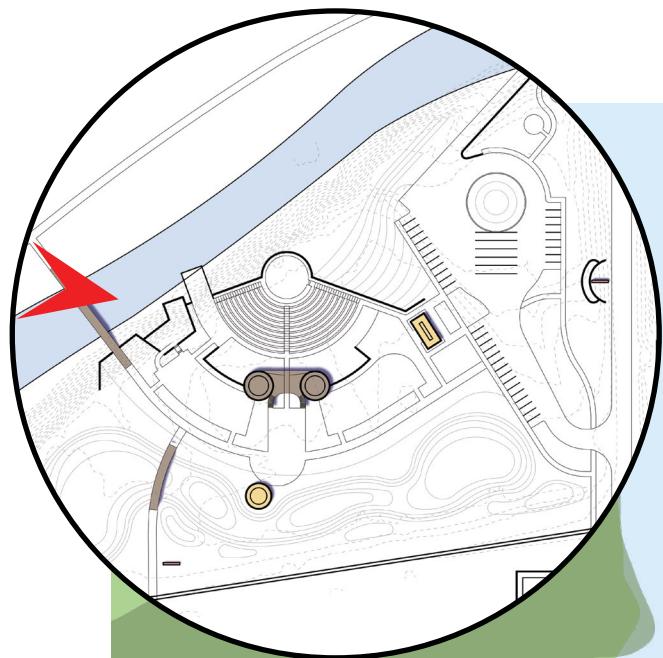


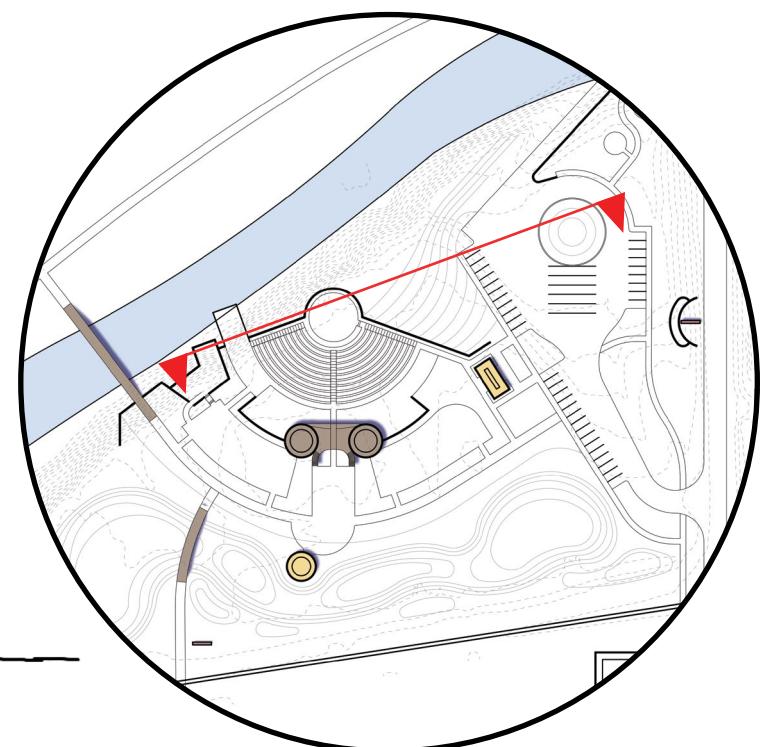
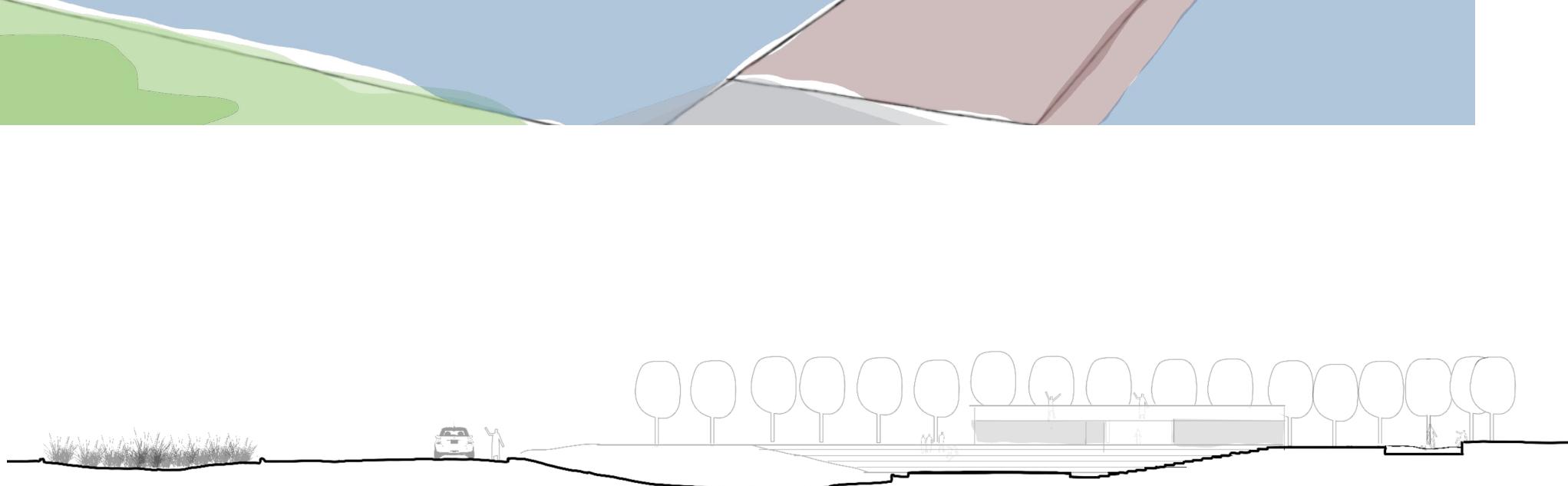
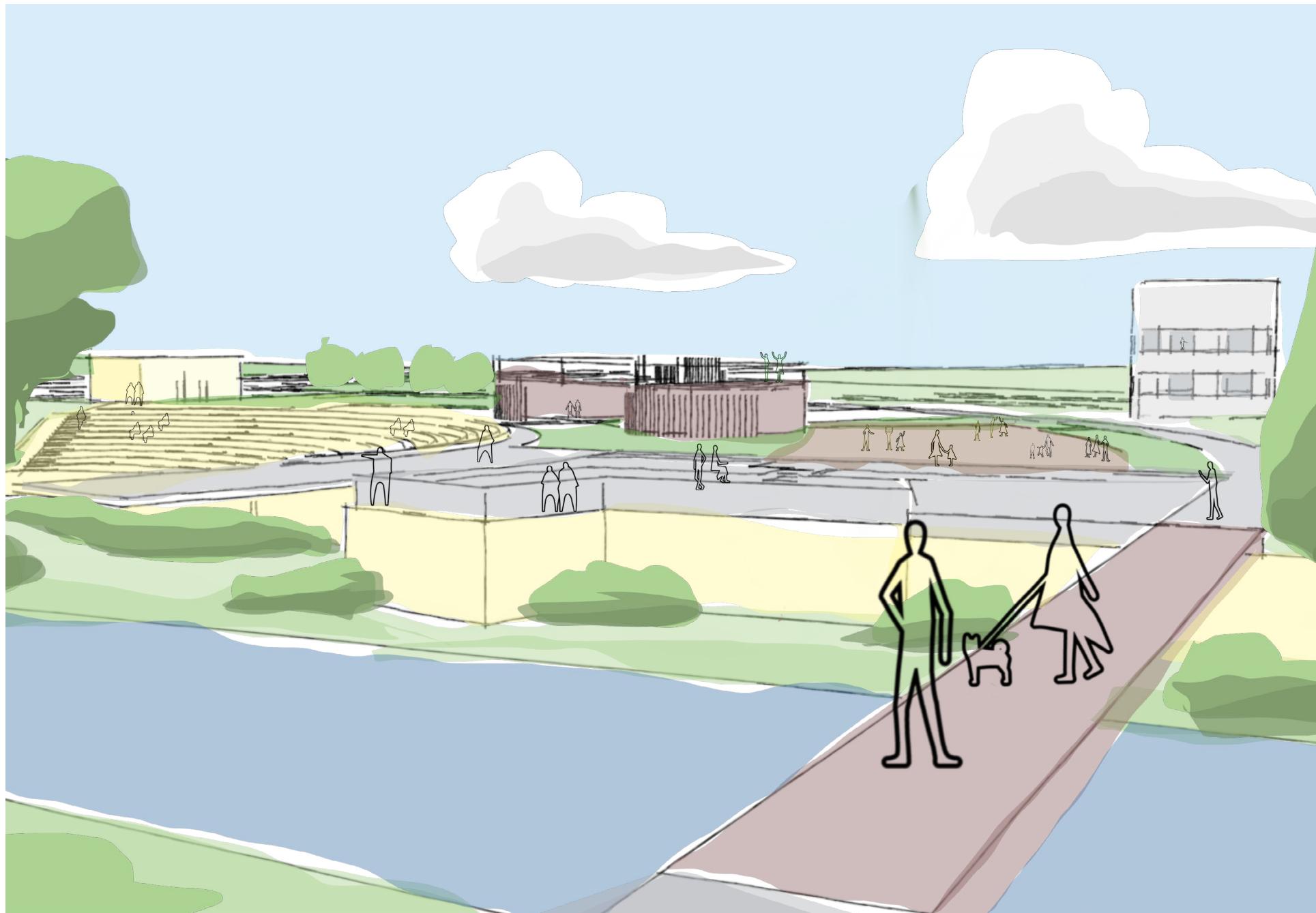


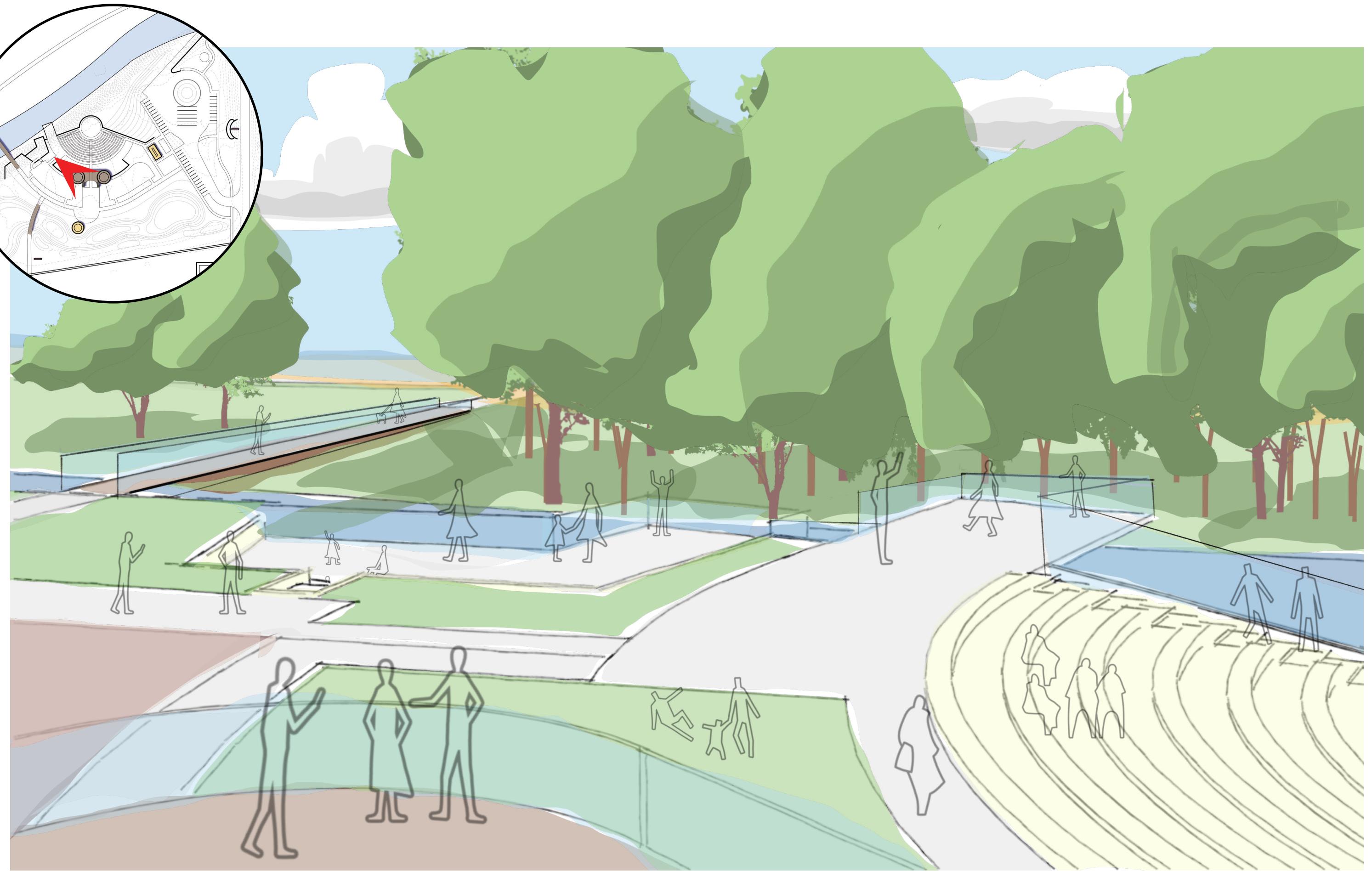


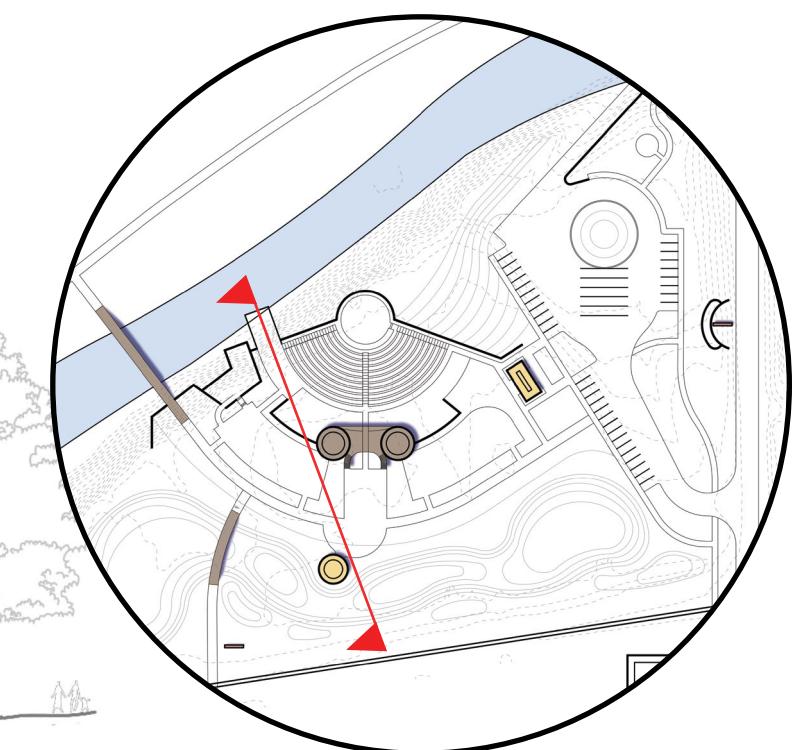
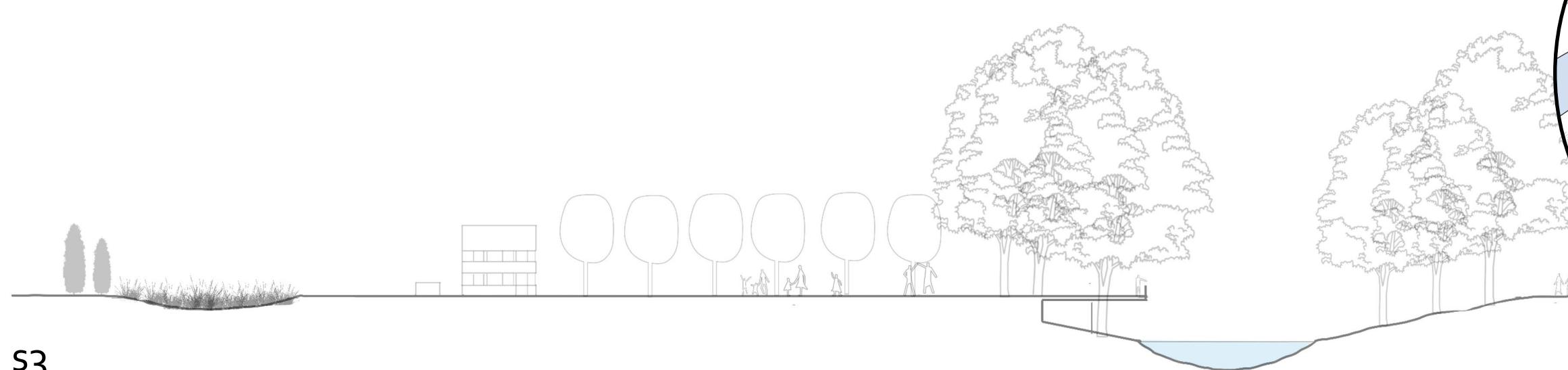


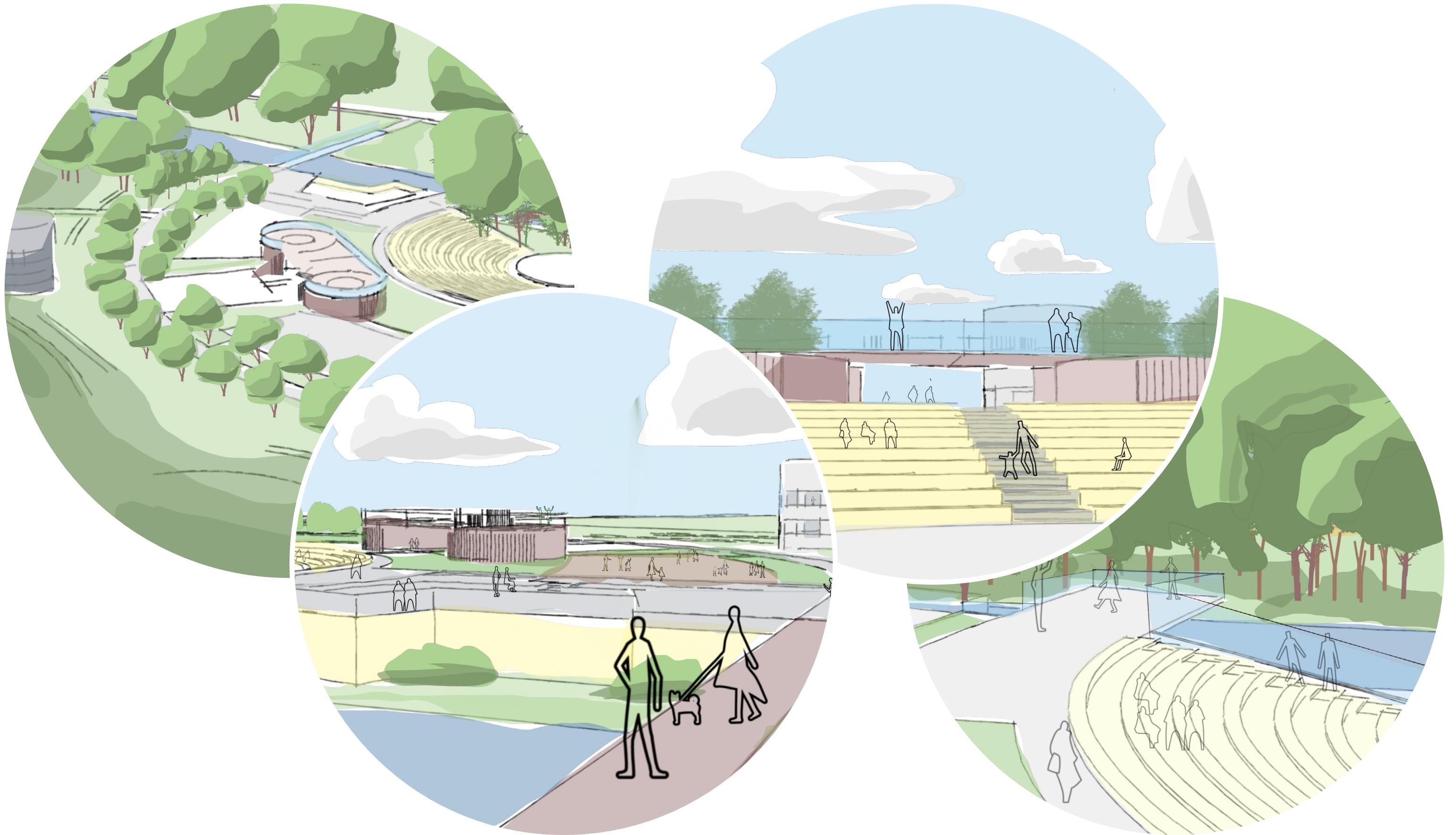












Thank You!