

WEST DES MOINES

RACCOON RIVER GREENWAY

Executive Summary







ACKNOWLEDGMENTS

Prepared For:

City of West Des Moines
Parks & Recreation
Five Waters Project

Submitted By:

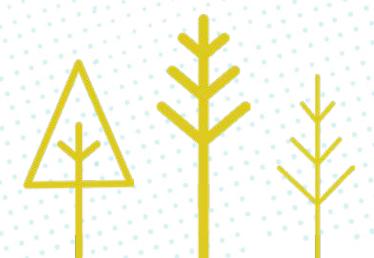
Genus Landscape Architects

Special Thanks: Red Dot Advertising



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INTRODUCTION

In Context | Five Waters Project

The Raccoon River Greenway originally grew from a larger initiative to improve residents' quality of life in West Des Moines . Five different strategic locations were identified to make implementations. These include, Blue Heron Lake, Jordan Creek, Sugar Creek, Pond on Civic Campus, and Raccoon River. Together, these five bodies of water make up the Five Waters Project. Each location has its own unique project:

- 1. Civic Campus Amphitheater [Pond on Civic Campus]
 - This will be a cultural center for the city where residents and visitors can enjoy a variety of performances and events.
- 2. Raccoon River Park Boathouse [Blue Heron Lake]
 - The Boathouse allows people to explore and experience the lake and surrounding area in new ways by providing bicycle and non-motorized watercraft rentals. It will also provide personal kayak and canoe storage.
- 3. Marathon Loop [Along Sugar Creek, Jordan Creek, and Raccoon River]
 - The Marathon Loop is a 26.2-mile-long trail that will connect Valley View Park, Raccoon River Park, South Woods Park, and other proposed future parks.
- 4. Raccoon River Greenway [Raccoon River]
- 5. Raccoon River Pedestrian Bridges + Great Western Trail Connection [Raccoon River]
 - These 2 bridges will provide access points to cross the river and connect the city trail system to a larger regional trail system.

The core focus of the Five Waters Project is to transform the city's parks from "everyday places to places of everyday wonder," by providing people with new and exciting ways to experience and explore the great outdoors. Not only is this project about creating new opportunities for people; it is about preserving the land, improving water quality, and protecting wildlife. Through these efforts, the city plans to build West Des Moines into a destination for outdoor recreation, with the added benefit of helping local businesses' ability recruit and retain new talent of all ages.

In Focus | Raccoon River Greenway Corridor

The Raccoon River corridor can be characterized as being primarily rural, bordered by agricultural uses along its western half, and primarily urban, bordered by a network of state, county, and city parkland along its eastern half. At its core, the Raccoon River Greenway Corridor [RRGC] builds upon these existing parks to enhance rural-urban connections through the corridor. Yet, this project provides much more than physical trails and park connections. The RRGC gives residents and visitors of all ages new ways to explore and discover nature.

In conjunction with the Greater Des Moines Water Trails and Greenways Plan, the project will also enhance connections to the river via amenities such as portage routes to existing trails, paddler access, pedestrian bridges, and camping. All the while recognizing the importance of improving water quality and preserving and enhancing the natural environment of the greenway corridor.

General Notes on the Area:

Location: [Eastern Side] Intersection of Railroad Ave & SE 1st Street

[Western Side] Intersection of 360th Street & Utica Trail

Size: ± 6,191 acres

Existing Parks: • Brown's Woods County Park

Purple Martin Lake Water Resource Area

Raccoon River Park

• Walnut Woods State Park

Key Elements: • Trailheads

Paved Trails

Pedestrian Bridges

Water Trails

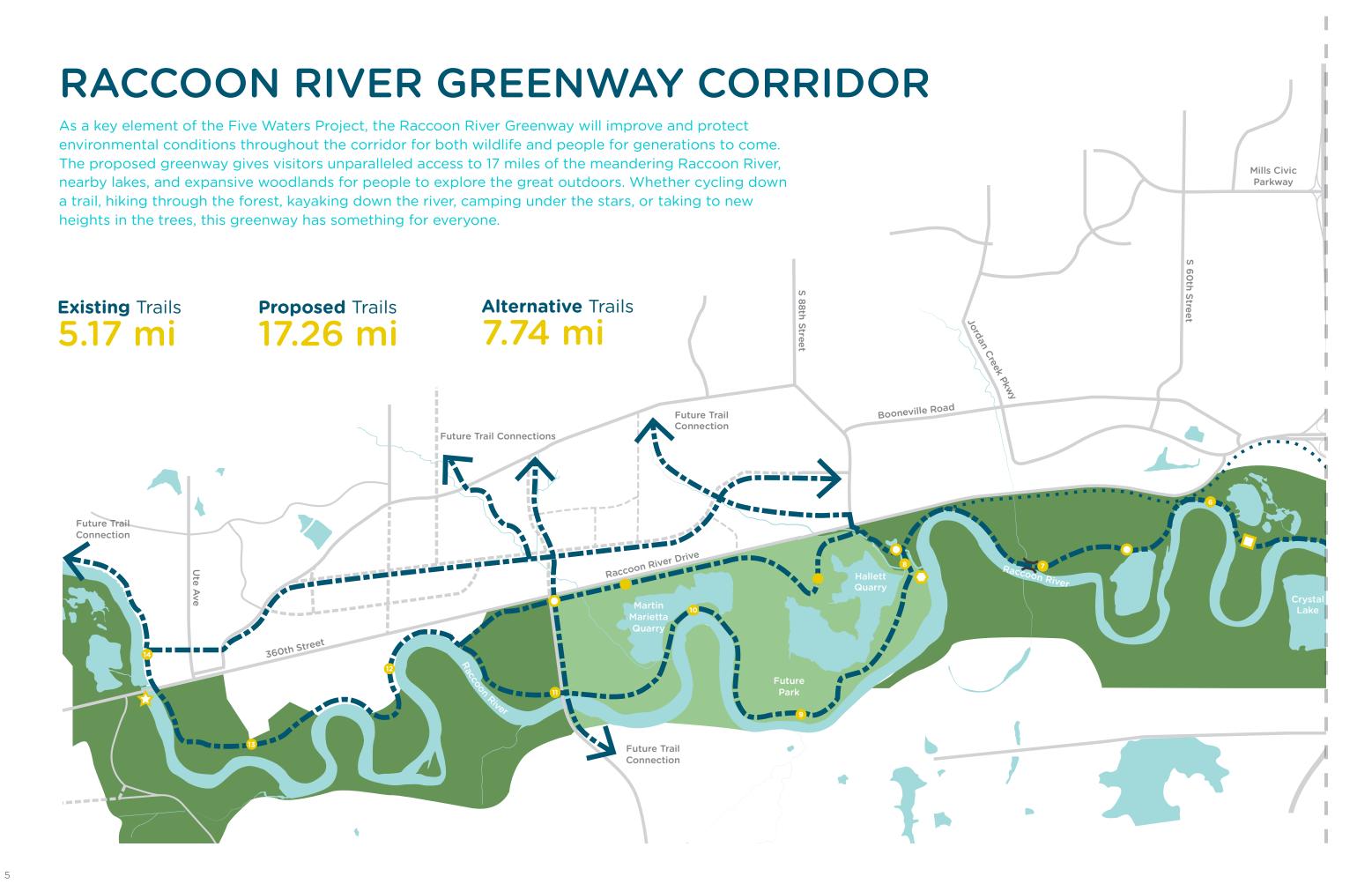
Outlooks / Viewing Towers

Proposed Adventure Park

Proposed Future Park

Camping





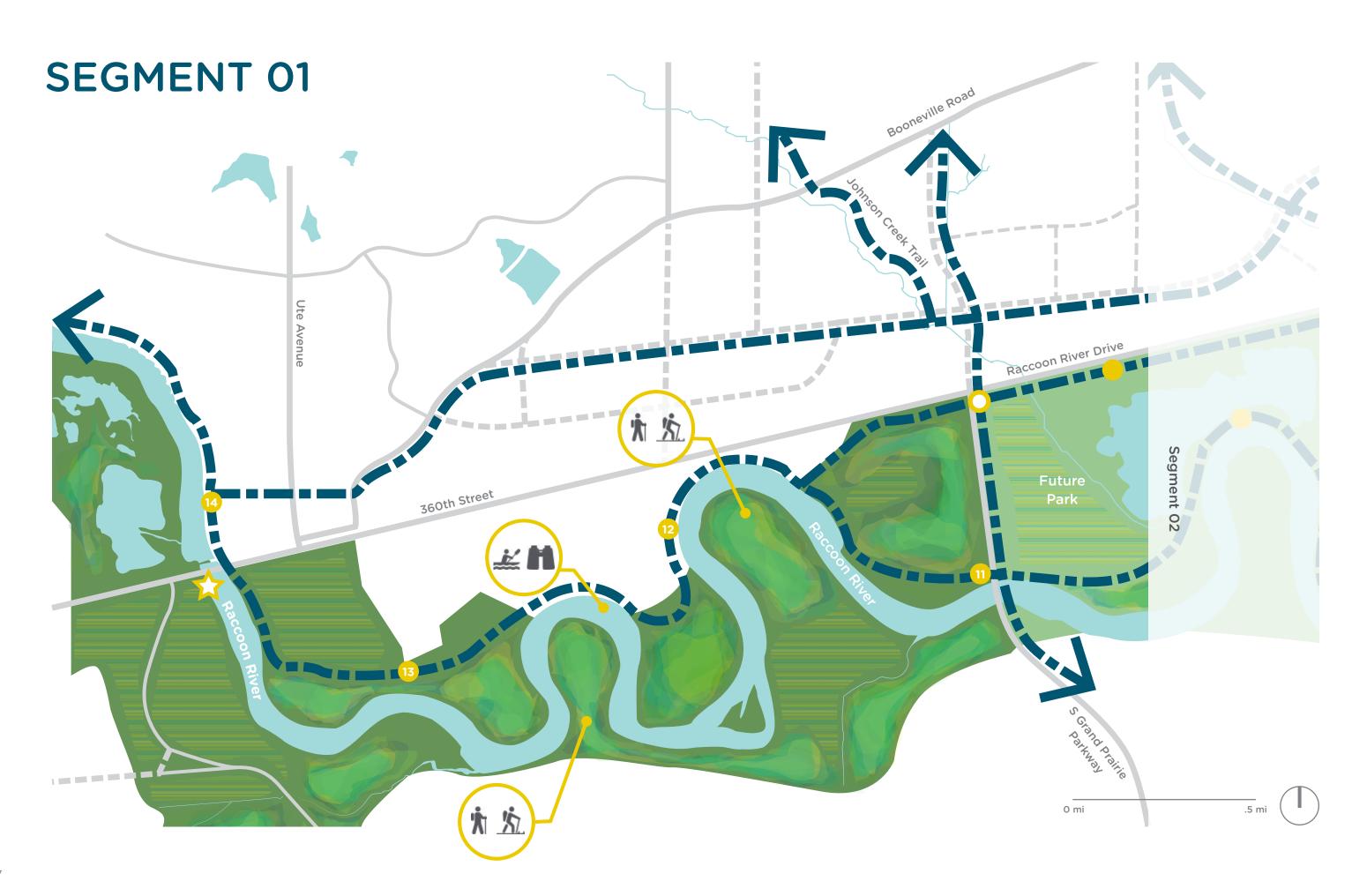


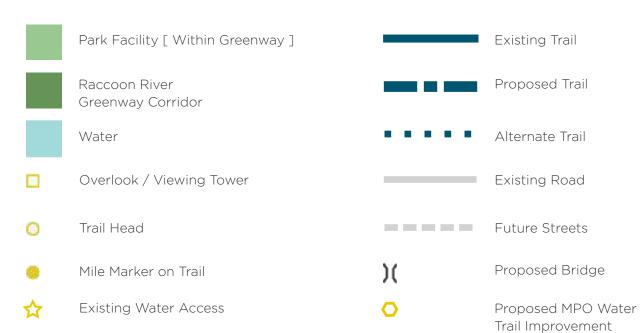




Future Streets









Existing Conditions



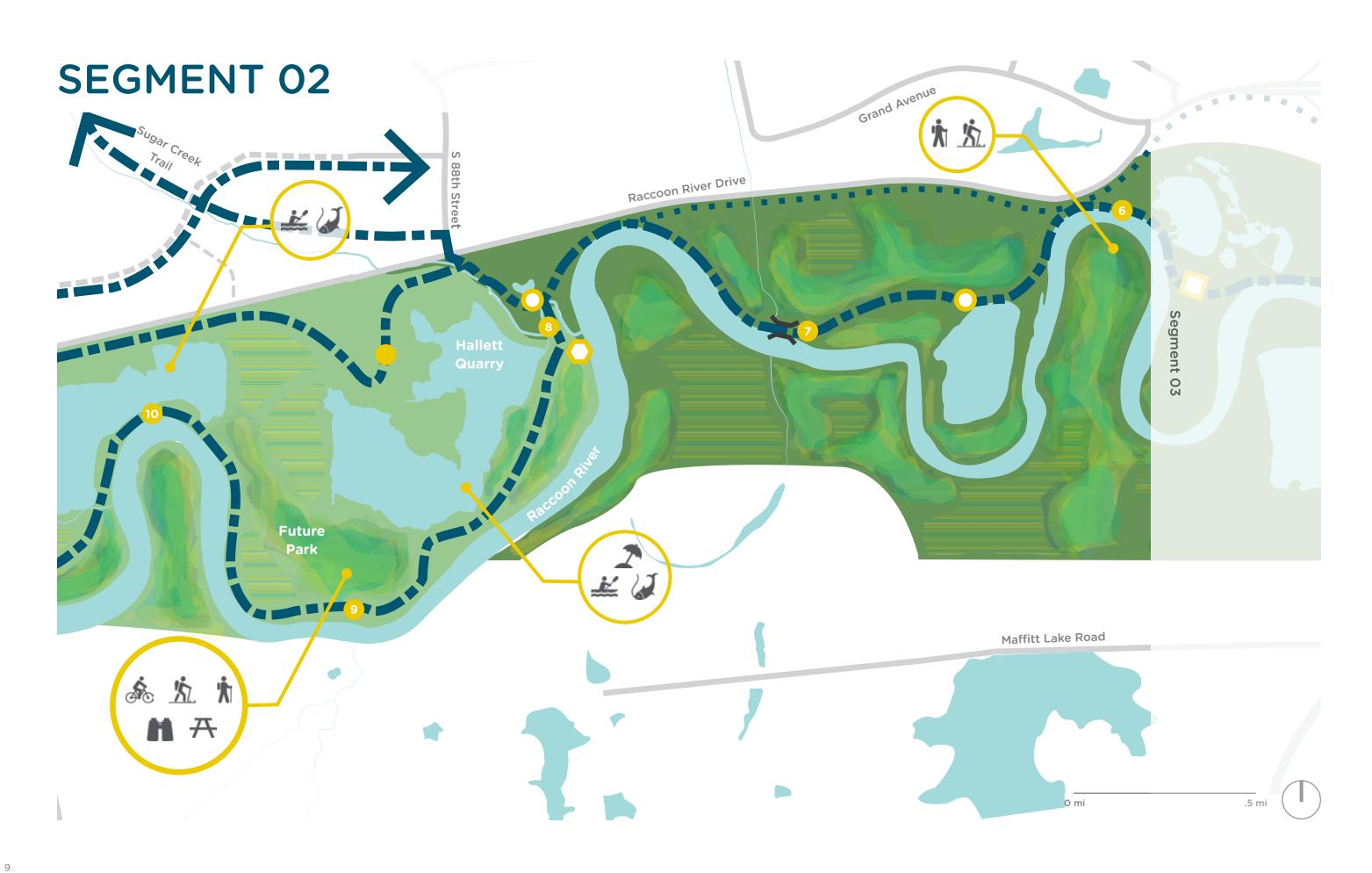


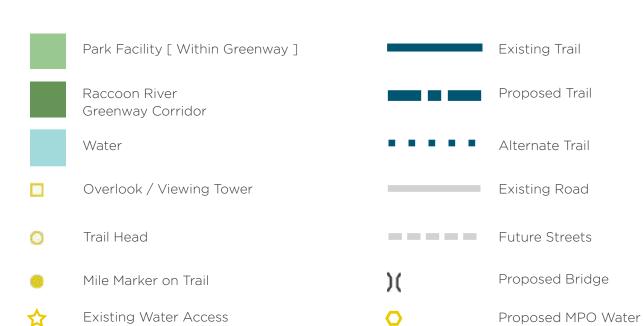


Precedent | Wayfinding











Existing Conditions

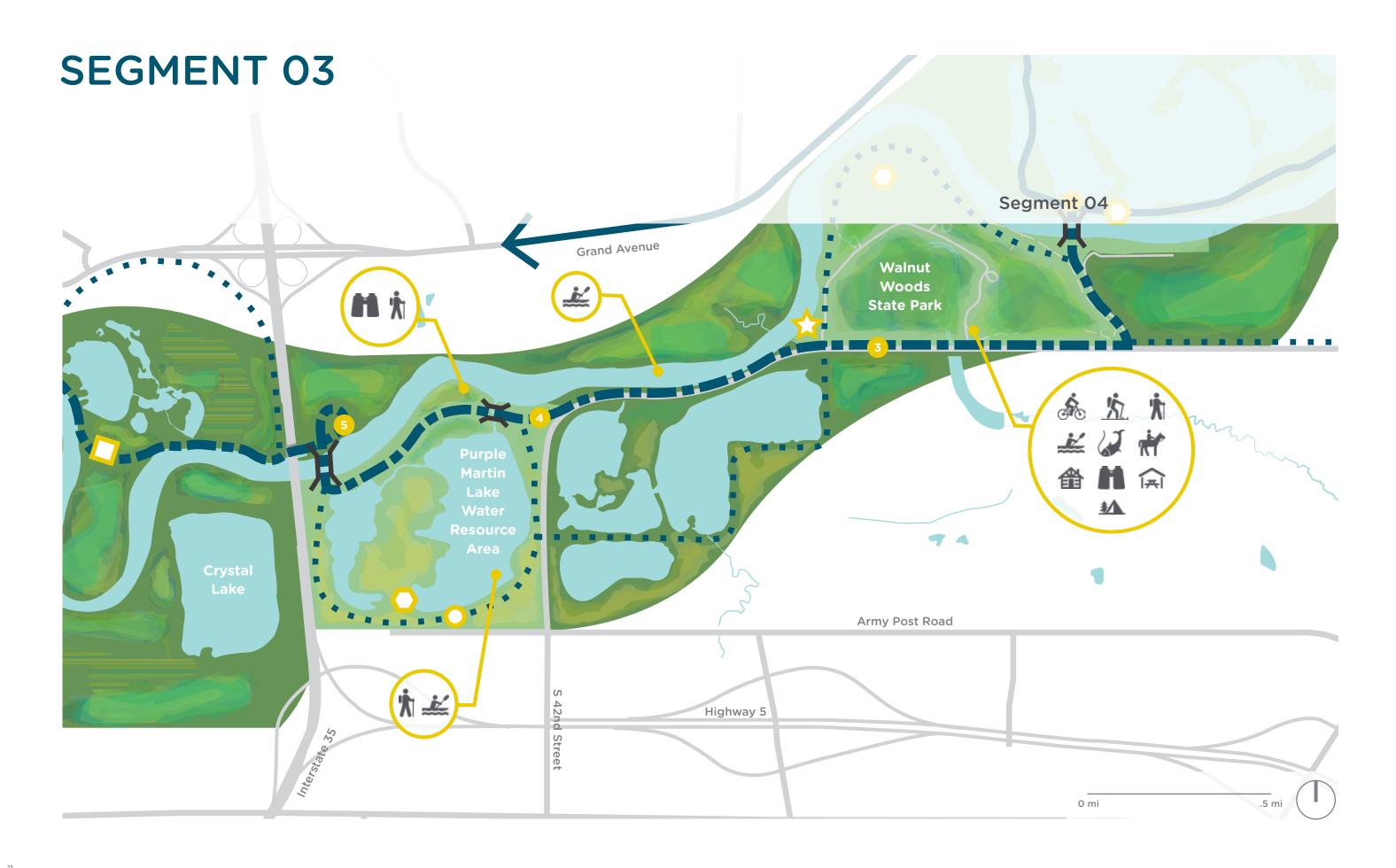


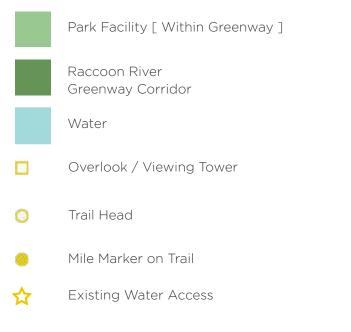
Trail Improvement

Precedent | Overlooks













Existing Conditions



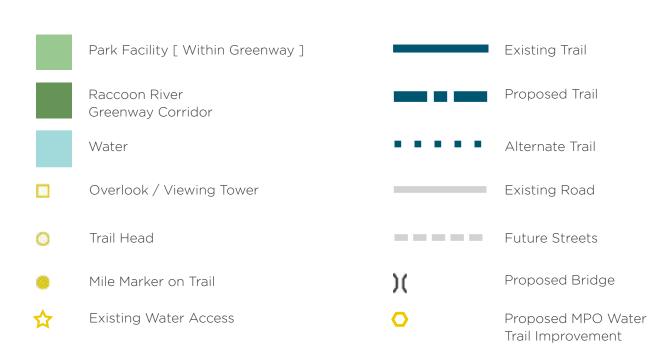


- Walnut Woods State Park [WWSP] showing the lodge
- 2. Raccoon River next to WWSP
- 3. Hiking trail in WWSP
- 4. Camping area in WWSP
- 5. View of Purple
 Martin Lake
 showing the
 habitat for Purple
 Martin birds

Proposed Pedestrian Bridge at I-35









Existing Conditions



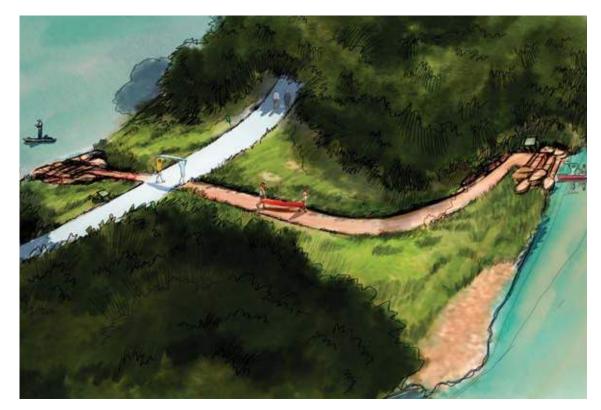








Precedent | Portage Access



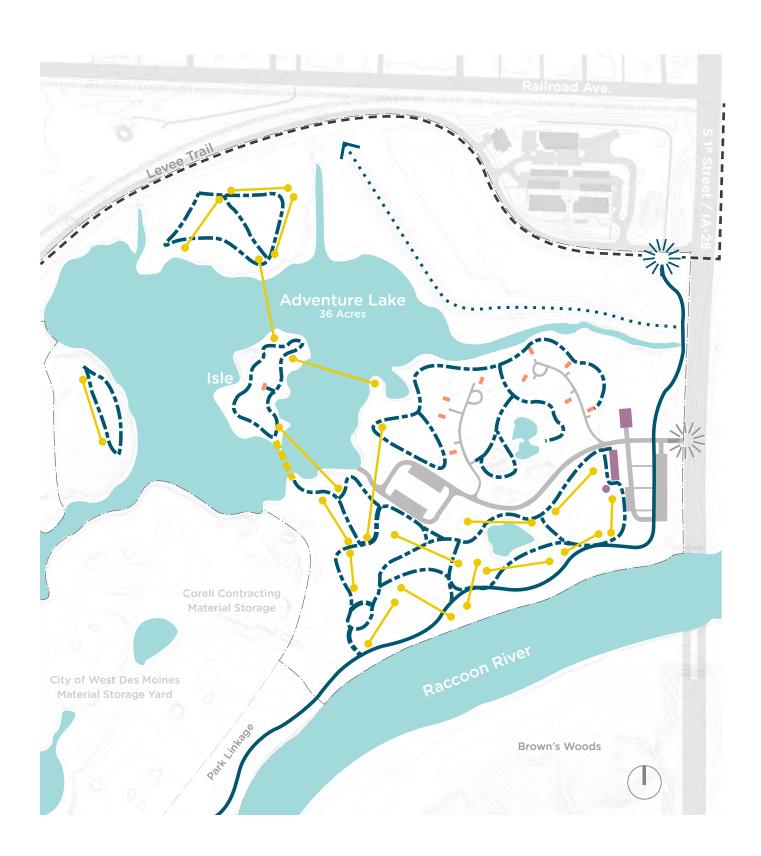
- 1. Blue Heron Lake
- 4. Playground at Raccoon River Park
- 2. Raccoon River Park trail 5. On the water at Blue Heron Lake
- 3. Brown's Woods

ADVENTURE PARK

As the eastern gateway to the Raccoon River Greenway Corridor, the Adventure Park is about giving people new thrilling ways to experience the great outdoors. The Adventure Park's unique location, nestled between the Raccoon River and a lake amongst the woods, connects people with nature whether it be transversing through the trees, relaxing in a rental cabin or tent, racing on a bike around the trails, or paddling out on the water.



OVERALL SITE PLAN



Legend



Notes

Location: Intersection of SE 1st Street & Railroad Ave.

Size: 124 Acres

Trails: ± 3 miles of Adventure Park Trails

Existing Buildings

±1 mile of Raccoon River Greenway Proposed Trails through Site Area

± .5 mile of Raccoon River Greenway Corridor Alternate Trails

Key Elements:

- Multi-Purpose Trails
- Combined High Ropes & Zip Line Course
- Line Course
- Suspension Bridge
- Rent-able Cabins/Camp Sites
- Paved Vehicular Access & Parking
- Park Offices

Vehicular Access Point

Maintenance Buildings

PRECEDENT IMAGERY

High Ropes Course & Zip Lining











Putting the 'Adventure' in Adventure Park, a proposed high ropes and zip lining course weaves and winds through the trees and across the lake. Variation in course difficulty provides people of all ages and skill levels the opportunity to experience the outdoors like never before in West Des Moines.

Urban Camping











Proposed within the Adventure Park area are ten cabins. Far from 'roughing it', these for-rent cabins offer visitors a little camping retreat from the hustle-n-bustle of the city while maintaining many of the comforts of home.

PARK IDENTITY + CHARACTER

Multi-Purpose Trails











In addition to the primary Greenway Trail, the Adventure Park possesses several distinct multi-purpose trails. The combination of soft and paved paths provides visitors even more opportunities and ways to enjoy the great outdoors. From trail running to cross-country skiing to mountain biking, these trails offer exciting recreational opportunities in all seasons.

Water Recreation

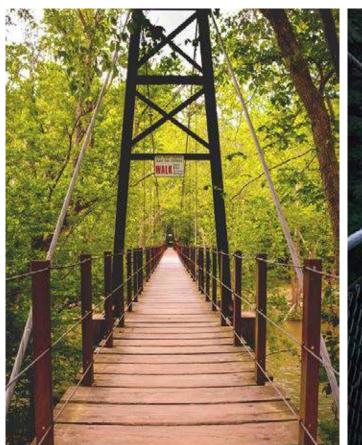






The Adventure Park provides visitors with a variety of recreational opportunities on the water. Bank access around the lake along with a designated canoe and kayak launch makes it easy for all to engage with the water and participate in an assortment of aquatic activities.

Pedestrian Bridge







A pedestrian-only bridge spans a portion of the lake and connects the central island to the rest of the Adventure Park. A multi-purpose trail loop circles the island and links together several zip line towers.

ADVENTURE PARK VISUALIZATIONS





Existing Adventure Park site conditions Above:

Left: Visualization depicting overlapping levels of sport and fun in

the proposed Adventure Park



Existing view of the lake and island Above:

Right:

View from the 10k Levee Loop Trail with glimpses of ropes courses, zip lining, a pedestrian bridge, and water recreation



ADVENTURE PARK RENDERING



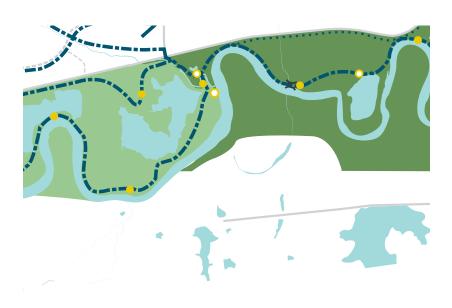
COST OPINION

Segment 01



	1	ı
Item	Quantity/Unit	Cost
Trails		
Primary Trails [10' wide]	5.13 mi	\$4,047,570
Site Amenities		
Trail Mile Markers	1LS	\$10,000
Trailhead [1 trailhead]	1 AL	\$250,000
	Subtotal	\$4,307,570
20% Contingency		\$861,514
15% Env. Reports, Design, + Survey Fees		\$646,135
Estimated Total Project Cost		\$5,815,219

Segment 02



Item	Quantity/Unit	Cost	
Trails	•	•	
Primary Trails [10' wide]	5.86 MI	\$4,670,000	
Soft / Aggregate Trails	1.47 MI	\$441,000	
Trail Bridge [60' length]	1 AL	\$220,000	
Site Amenities			
Trail Mile Markers	1LS	\$12,000	
Trailhead [2 trailheads]	1 AL	\$500,000	
Subtotal		\$5,843,000	
20% Contingency		\$1,168,600	
15% Env. Reports, Design, + Survey Fees		\$876,450	
Estimate	\$7,888,050		

Note:

Costs included are probable estimates based on master plan level information and based off of 2019 dollars. Escalation to reflect future construction date has not been factored in. Land acquisition not included.

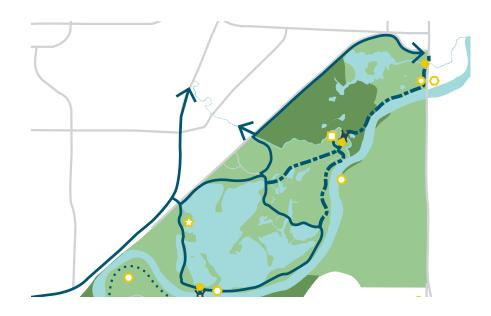
Segment 03



Item	Quantity/Unit	Cost		
Trails				
Primary Trails [10' wide]	3.90 MI	\$3,150,000		
Soft / Aggregate Trails	5.63 MI	\$1,689,000		
Trail Bridge [100' L]	1 AL	\$360,000		
River Bridge: not included, addition needed to identify probable cost	River Bridge: not included, additional engineering needed to identify probable cost			
Site Amenities				
Trail Mile Markers	1LS	\$6,000		
Trailhead [1 trailhead]	1 AL	\$250,000		
Overlook / Tower	1 AL	\$250,000		
	\$5,705,000			
20% Contingency		\$1,141,000		
15% Env. Reports, Design, + Survey Fees		\$855,750		
Estimate	ed Total Project Cost	\$7,701,750		
		•		

COST OPINION

Segment 04



Quantity/Unit Cost		
2.37 MI	\$1,900,000	
0.64 MI	\$215,000	
1 AL	\$270,000	
	2.37 MI 0.64 MI	

River Bridge: not included, additional engineering needed to identify probable cost

Site	Am	en	ities	

Trail Mile Markers	1LS	\$6,000
Trailhead [2 trailheads]	1 AL	\$500,000
Overlook / Tower	1 AL	\$250,000

Estimated Total Project Cost	\$4,240,350
15% Env. Reports, Design, + Survey Fees	\$471,150
20% Contingency	\$628,200
Subtotal	\$3,141,000

Adventure Park



	1	
Item	Quantity/Unit	Cost
Adventure Park		
Adventure Course [20 stations]	1 AL	\$700,000
Zip Line	1 AL	\$300,000
Primary Trails	~3 MI	\$1,200,000
Soft Trails	~1.5 MI	\$450,000
Road and Parking	~20,850 SY	\$2,815,020
Trailhead [1 trailhead]	1 AL	\$250,000
Suspension Bridge	1 AL	\$1,000,000
Water Quality + Site Improvements	1 AL	\$600,000
Signage	1 AL	\$100,000
Access Improvements	1 AL	\$50,000
Ticket Office and Storage Building	1 AL	\$750,000
Restrooms	1 AL	\$500,000
	Subtotal Base Bid	\$8,715,020
	20% Contingency	\$1,743,004

15% Env. Reports, Design, + Survey Fees

Estimated Total Project Cost

Costs included are probable estimates based on master plan level information and based off of 2019 dollars. Escalation to reflect future construction date has not been factored in. Land acquisition not included.

Items not priced during master plan phase: Cabins Site

Park Buildings

Note:

*Adventure Park will likely be privately developed under a public/private partnership.



\$1,307,253 **\$11,765,277**

APPENDIX



FEMA FLOOD MAP

FLOOD HAZARD INFORMATION NO SCREEN Areas Determined to be Outside the 0.2% Annual Chance Floodplain Zoon # SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT AREAS Area of Undetermined Flood Hazard Zono & HTTPS://MSC.FEMA.GOV Channel, Culvert, or Storm Sewer Accredited or Provisionally Accredited Without Base Flood Elevation (BFE) Levee, Dike, or Floodwall GENERAL With BFE or Depth Zone AE, AC, AR, VE. AH Non-accredited Levee, Dike, or Floodwall STRUCTURES SPECIAL FLOOD HAZARD AREAS E 18.2 Cross Sections with 1% Annual Chance 17.5 Water Surface Elevation (BFE) 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average - - - Coastal Transect depth less than one foot or with drainage Coastal Transect Baseline areas of less than one square mile Zown X Profile Baseline Future Conditions 1% Annual Chance Flood Hazard Zone X Hydrographic Feature Base Flood Elevation Line (BFE) OTHER AREAS OF FLOOD HAZARD Area with Reduced Flood Risk due to Levee See Notes. Zono X Limit of Study OTHER Jurisdiction Boundary FEATURES

ICON KEY



Hiking





Facility / Nature Lodge



Wildlife Watching



Ice Rink



Geocaching









Archery Range



Winter Trails





Tent Camping









Public Beach



Tiny Home







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Segment 02 Precedent | Overlooks

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Segment 04 Existing Conditions and Precedent | Portage Access



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High Ropes Course & Zip Lining

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