NORTH BLUFF

PLANNING STUDY

OAK CREEK | WISCONSIN

MAY 2023

OAKCREEK WISCONSIN

Edgewater resources

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— Inventory

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— Executive Summary

Oak Creek is a city located just south of Milwaukee on the shore of Lake Michigan, and is one of the fastest growing cities in Milwaukee County and Wisconsin as a whole.

As Oak Creek has grown as a city since it was incorporated in 1955, its relationship to Lake Michigan has changed over time. Originally, the lake front was seen primarily as an area for industrial development, but with the creation of Bender Park, the new Lake Vista Park, and the North Bluff Stabilization Project, that view is shifting.

The North Bluff Planning Study looks at how the area along the Lake Michigan shoreline north of Lake Vista Park could continue to develop the lake front into a public amenity for the community in conjunction with the North Bluff Stabilization Project.

The Planning Study includes an inventory of existing site conditions, an overview of the public input process including identification of key project stakeholders, and the resulting opportunities and constraints determined through that outreach process.

Site plan alternatives are then documented with feedback received, and the resulting Consensus Plan for the site with economic feasibility analysis and review of potential funding sources to help realize the proposed improvements.

01 — Inventory
Introduction

STUDY PURPOSE

The North Bluff Planning Study began in response to the work the City of Oak Creek (Oak Creek) and Edgewater Resources (ER) has been doing in conjunction with Wisconsin Department of Natural Resources (DNR) and United States Army Corps of Engineers (USACE) to stabilize the shoreline along Lake Michigan. The existing bluff has seen a consistently eroding shoreline, threatening to undue previous site work pertaining to the brown field remediation of a formerly industrial site. Edgewater Resources developed an initial plan to regrade the bluff and stabilize it from further erosion, and has been working on this study in conjunction with that effort. Once the bluff is stabilized (construction to begin Summer 2023) there is a tremendous opportunity to transform this dramatic 3,500 linear feet of shore line into a public park that provides unmatched experiences and recreational opportunities, extend the park system created by Bender and Lake Vista Park, and strengthens the health of the local ecosystem. This study serves as a guide for developing that park by analyzing the site and surrounding context, gathering community input, meeting with key stakeholders, and refining a series of plans into a final consensus plan with cost and funding analysis.

PLAN PRIORITIES

During the process of the North Bluff Planning Study and developing the consensus plan, three key priorities to focus on became apparent. Those priorities are:

Connectivity - Create one large continuous lake front experience and park network by connecting the North Bluff to Bender and Lake Vista Park, and possibly to parks further north as well.

Accessibility - Provide everyone in the community with a way to experience the views, native landscapes, and Lake Michigan, regardless of their physical ability, in fun and exciting ways.

Maintenance and Cost - Design the park in a way that requires less up keep and reduces the cost of maintenance, as well as designing it in way that allows it to be constructed in independent phases.

STUDY PROCESS

Community Outreach - Data was collected on the intensity of programming and what elements the community would like to see included in a new park along the lake shore.

Design Charette - A two-day charette (brain storming session) was held in Oak Creek after the ER Team visited the site to come up with initial concepts for the site.

Concept Development - After reviewing initial concepts with different city committees, a draft consensus plan was developed by combining different elements of the previous concept plans to develop single plan.

Consensus Plan - A refined version of the draft consensus plan meant to propose the best use of the park based on community and committee feedback.

01

— Inventory

Location Map

01

— Inventory
Existing Conditions

Bender Park: One of the two parks south of the study area, Bender Park is operated by Milwaukee County Parks and features a large nature trail network, open landscapes, a beach, and a boat launch and harbor.

Lake Vista Park: The second of two parks south of the study area, Lake Vista Park was constructed in 2018 and is operated by the City of Oak Creek. It features a rentable pavilion with a kitchen, open air shelters, a playground, public restrooms, and walking trails that take you down to Lake Michigan and also connect to Bender Park.

Water Intake Facility: Located just south of the North Bluff right on the shore of Lake Michigan is a water intake facility with its own entrance road and parking area. The entrance road has manual swing gate and most of the facility itself is surrounded by fence with barbed wire. The entrance road provides the best vehicular access to the lake shore but also creates valley with steep side slopes.

Lakeshore Commons: Next to Lake Vista Park, Lakeshore Commons is a new housing development currently in its first phase of construction that aims to provide a mix of housing types and large assortment of community amenities. It's proximity to Lake Michigan and the surrounding parks are a selling point for properties.

South Shore Water Reclamation Facility: The reclamation facility to the north of North Bluff is a 125 Acre Site operated by the Milwaukee Metropolitan Sewerage District. The site is surrounded by a sea wall and rip rap, with a paved portion on the north side that serves as fishing pier. There is also a public parking lot with a sidewalk and stairs that takes you down to the fishing pier.

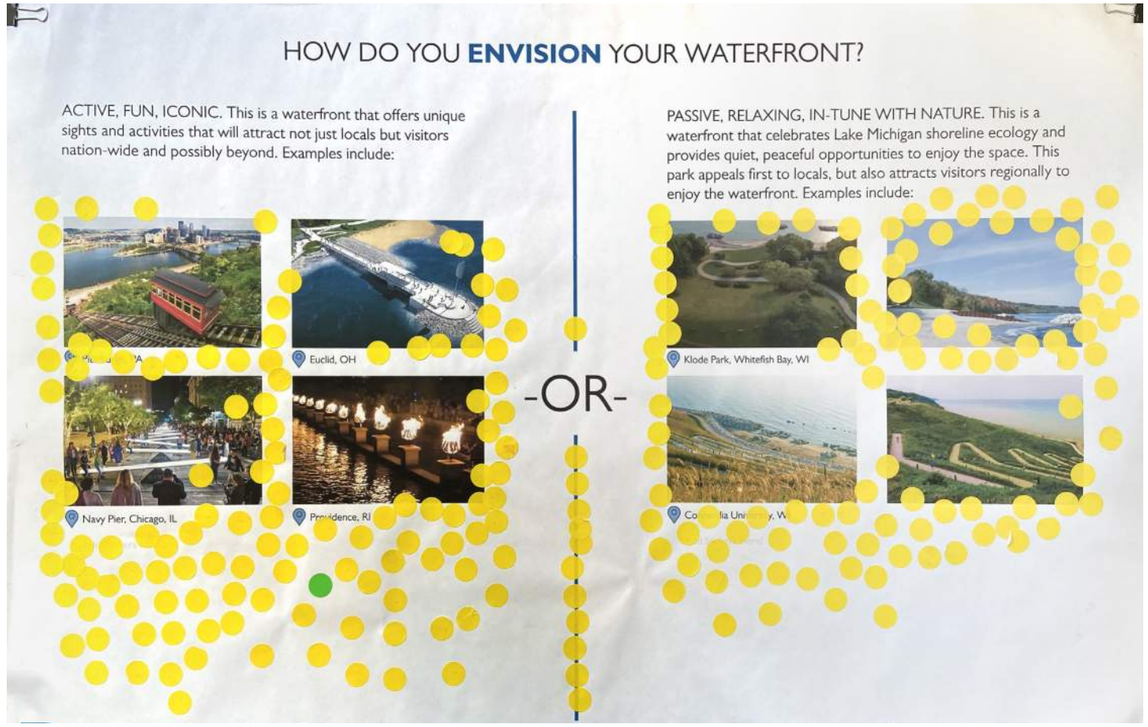
01 — Inventory
Community Input

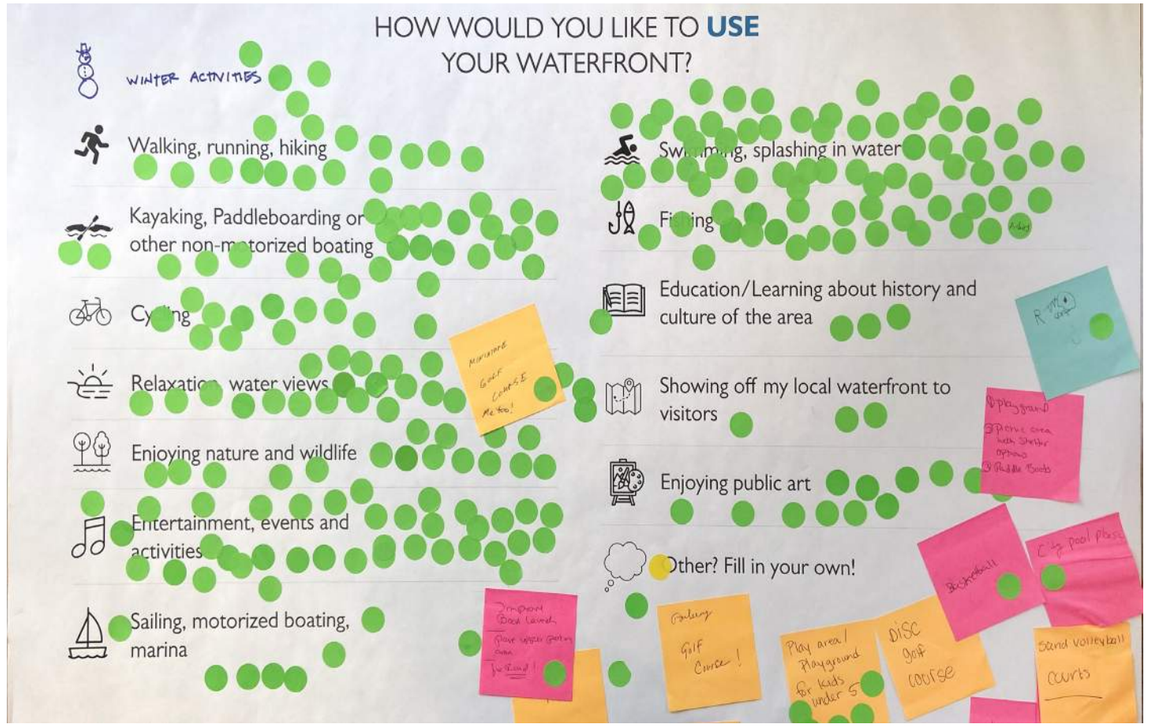
PUBLIC ENGAGEMENT

Gathering community input was the first step in preparing this study and it is always important to listen to community needs prior to starting any public project in order to tailor it to their needs. The Edgewater Resources team's first task was attending the National Night Out Event in August of 2022 to collect input from the public on what intensity of programming and what programming elements they wanted to see from the park. Edgewater Resources prepared two interactive boards to present to the community and let them tell us what they were interested in seeing from this space. The first board asked them to choose between two sets of pictures of parks; one side showing more passive nature based parks and the other showing more active attraction based parks. The second board asked them what uses they would like to see in it. This data was the basis for the initial concepts and showed a desire for both a unique waterfront with iconic features but also a relaxing park offering connection with nature. While the consensus plan came to be what it is now after multiple rounds of revisions, these ideas drove the study forward.

The following community meetings and presentations were held:

- Table at National Night Out, August 2, 2022 - Initial Data Collection
- Three-Day Charette, August 17 - 19, 2022 - Initial Concept Development with Key City Stakeholders
- Stakeholder Meeting, August 25, 2022 - Review of Initial Concepts
- Parks and Recreation Commission Meeting (open to public), September 8, 2022 - Review of Concepts
- Plan Commission Meeting (open to public), September 13, 2022 - Review of Concepts
- Parks and Recreation Commission Meeting (open to public), December 1, 2022 - Review of Draft Consensus Plan
- Plan Commission Meeting (open to public), December 13, 2022 - Review of Draft Consensus Plan
- Community Survey, Open January 17, 2023 to February 28, 2023 - Review of Programming
- Common Council Meeting (open to public), February 21, 2023 - Review of Draft Consensus Plan
- Common Council Meeting (open to public), May 2, 2023 - Presentation of Final Planning Study





02

— Concept Development

Overall Strategy

BROADER CONNECTIONS

During site analysis it became apparent that the North Bluff would be a great addition to the existing park system along Lake Michigan. Lake Vista and Bender Park have a combined acreage greater than 360 acres, and a continuous 1.5 miles of lake front. The addition of North Bluff would to the existing parks would make it nearly 400 acres and 2 miles long of lake front parks.

One of the greatest barriers to creating this continuous park system is the terrain of the site. The first obstacle is the ravine created by drive to the Water Intake Facility. Crossing it in a way that is accessible to everyone will be key to the success of the Bluff as a park and is an opportunity to create an iconic piece of infrastructure.

The steepness of the Bluff itself is also something that will need to be considered in order to provide accessible routes that connect down to the base of the bluff and lake shore. Once accessible routes can be determined though, the steep terrain becomes one of the Bluff's greatest assets, allowing for magnificent views and interesting vistas.

There's also future developments to think about, which present a great opportunity to activate the parks system. Lakeshore Commons is already in its first phases and its residents will become some of the primary users of these parks. The land to the west of the lake will most likely have some form of development, and regardless of what type of development (i.e. residential, commercial, mixed-use) the Bluff will serve as great amenity to them.

Thinking about all these opportunities and constraints, the overall strategy for the park is to create a node of activity at the southern end of the Bluff. This would serve as the main entry to Bluff and provide a connection over the ravine to the Lake Vista Park. From here connections along the top of the bluff and down to lake shore would allow park users to experience the stunning landscape and views.

LEGEND

- APPROXIMATE STUDY BOUNDARY
- MAJOR ACTIVITY NODE
- POINT OF INTEREST
- UPLAND CONNECTIONS
- LAKE-LEVEL CONNECTIONS
- OVER-RAVINE CONNECTION
- BLUFF REGRADING AND SHORELINE IMPROVEMENTS
- UPLAND IMPROVEMENTS
- FUTURE UNDEFINED DEVELOPMENT
- LAKESHORE COMMONS

02

— Concept Development

Consensus Plan

INITIAL CONCEPTS

After visiting the site, reviewing community input, and analyzing the site on a regional scale, the Edgewater Resources Team came up with three concepts over the course of a three-day charette looking at how the park might be developed in a way that provided a unique experience that took advantage of the Bluff's steep terrain, the lake shore, and the stunning environment created by their interaction. These three concepts each centered on one iconic park experience, access to the water, and different supporting amenities. The driving idea behind each concept is that while the terrain could make it difficult to provide access to the lake, the access itself could be fun and exciting, and ultimately define the experience of the Bluff.

Concept A
- Funicular
- Perched Beached
- Fishing Pier
- Nature Based Play
- Natural Prairie Plantings

Concept B
- Elevator
- Look-Out Platform
- Perched Wading Pool
- Fishing Pier
- Rock Scramble
- Natural Prairie Plantings

Concept C
- Embankment Slides
- Terraced Stone Seating
- Perched Beach
- Natural Prairie Plantings

B

A

C

02

— Concept Development

Concept Alternatives

CONCEPT ALTERNATIVES

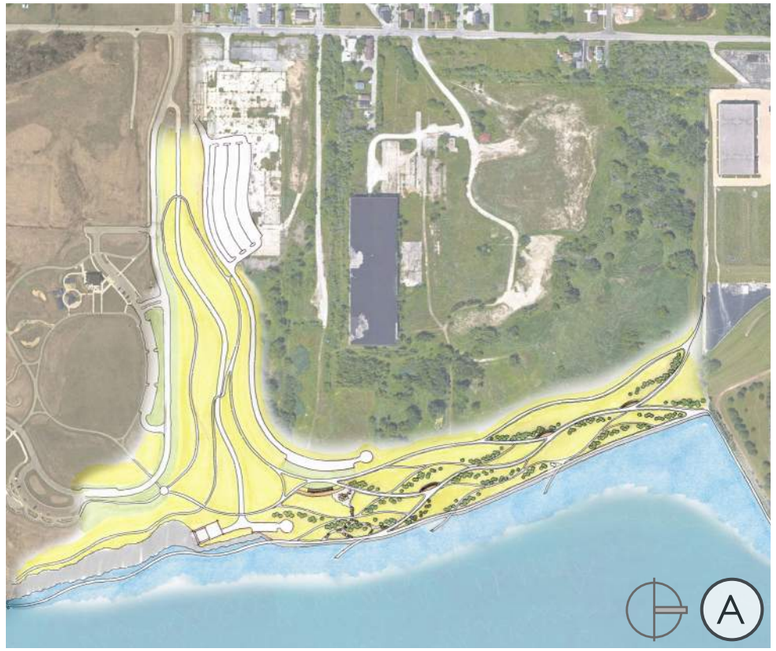
These concepts were partially developed over the course of the three-day and then further refined after a round of comments from key stake holders. These four concepts fall into two categories: The first category (Concepts A & B) being passive recreation based with low amounts of programmings, and the second category (Concepts C & D) being socially interactive with more intensive forms of programming.

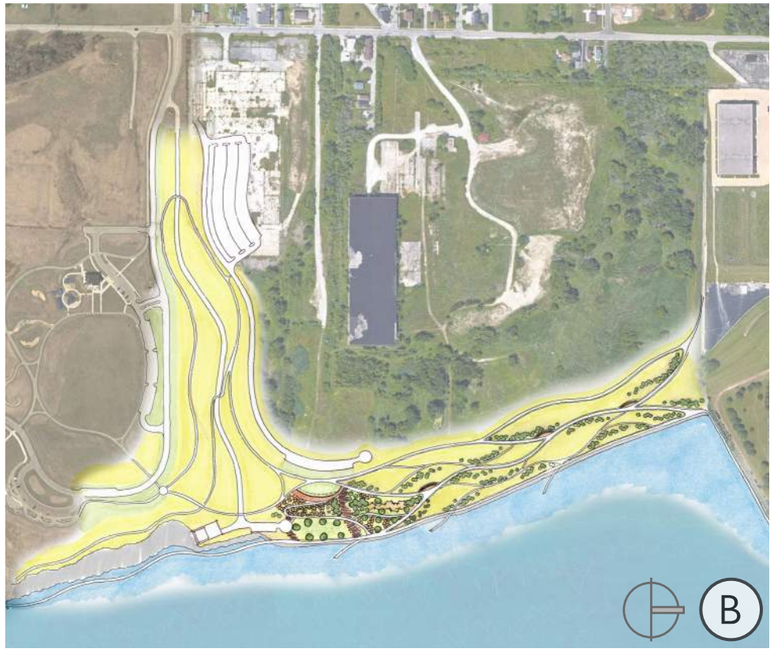
Concept A
- Pedestrian Bridge
- Entrance Overlook
- Multi-Use Trails
- Small Seating Areas
- Rock Scramble

Concept B
- Pedestrian Bridge
- Entrance Overlook
- Terraced Nature Play Areas
- Lake Shore Lawn Area
- Multi-Use Trails
- Small Seating Areas
- Rock Scramble

Concept C
- Pedestrian Bridge
- Entrance Plaza
- Restrooms
- Terraced Seating/Steps
- Embankment Slides
- Perched Beach
- Small Boardwalk
- Sport Trails

Concept D
- Pedestrian Bridge
- Entrance Plaza
- Restrooms
- Central Stair Case
- Perched Wading Pool
- Large Boardwalk
- Sport Trails





02

— Concept Development

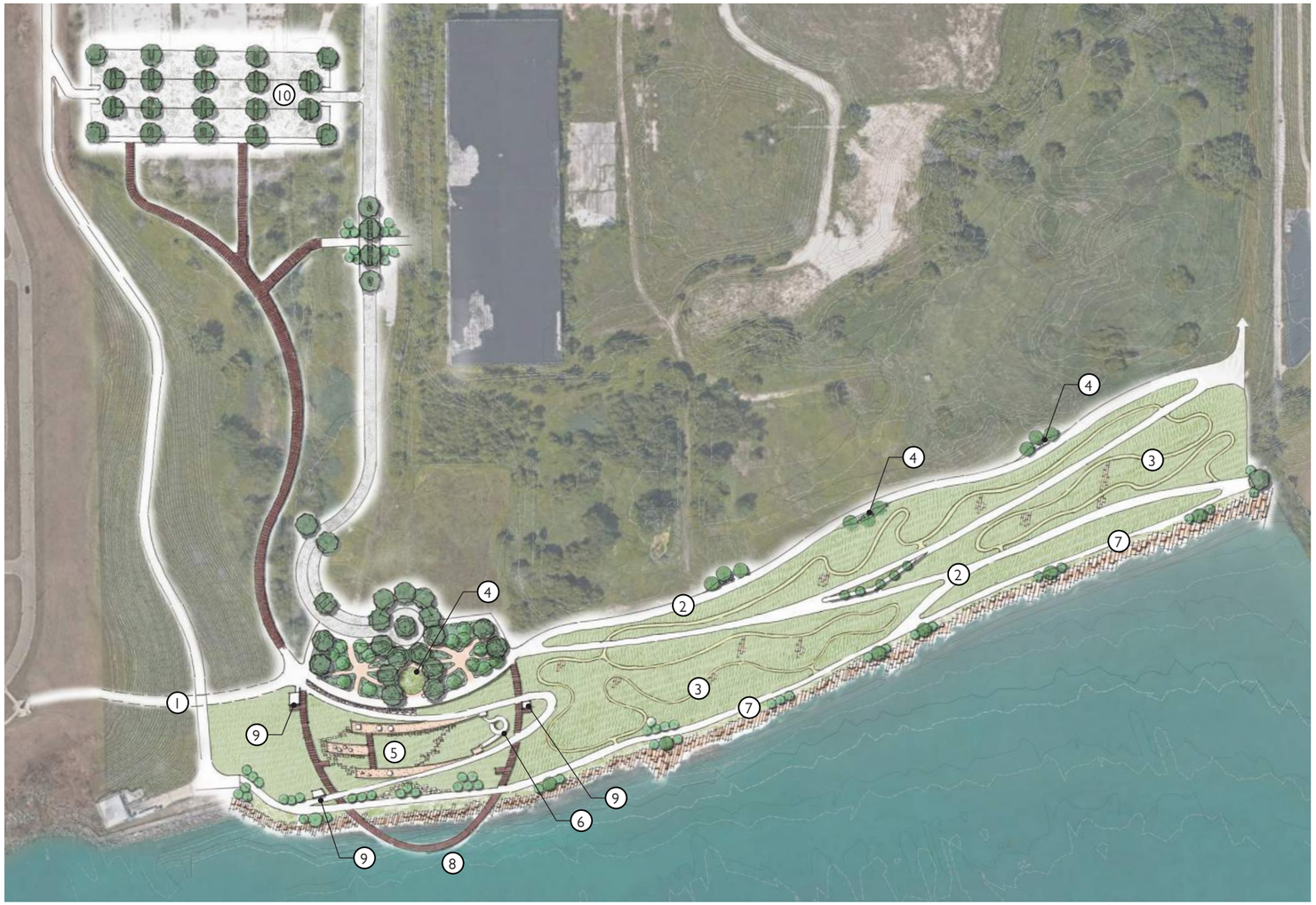
Concept Refinement

DRAFT CONSENSUS PLAN

Once the previous four concepts were presented to the public at the Planning Commission and Parks and Recreation Commission meetings they were synthesized into one draft consensus plan to move the study forward with. This plan combines the ideas of the previous concepts by creating one area of intensive programming with places for people to play and socialize and then provides space for passive recreational activities that rely more on the natural areas created by the Bluff.

Programming Elements

1. Pedestrian Bridge
2. Multi-Use Paths (ADA Compliant)
3. Sport Trails
4. Small Gathering/Seating Spaces
5. Natural Play Features
6. Embankment Slide
7. Accessible Revetment with Walk
8. Elliptical Pier
9. Shelters
10. Parking



NOT TO SCALE

02

— Concept Development

Consensus Plan

CONSENSUS PLAN

The draft consensus plan was also presented to the public at the Planning Commission and Parks and Recreation Commission meetings and was also used as part of a survey collecting feedback more directly from the community. The draft consensus was then further developed by refining the concepts of different areas, incorporating community survey data, and making changes to the design based on new information gained during the engineering process of the bluff.

Programming Elements

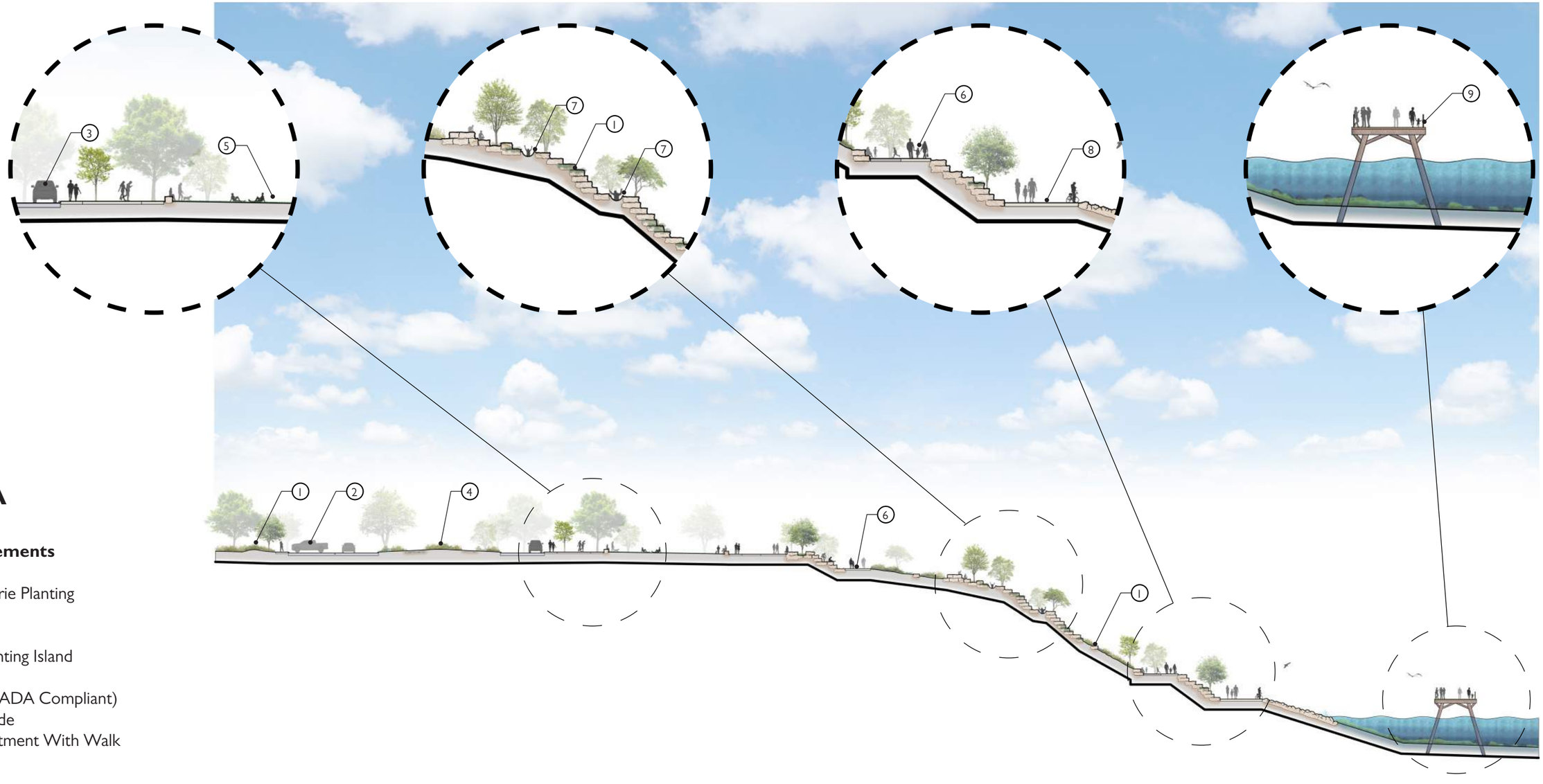
1. Pedestrian Bridge
2. Multi-Use Paths (ADA Compliant)
3. Central Lawn
4. Naturalized Prairie Garden
5. Raised Boardwalk
6. Sport Trails
7. Small Gathering Area/Seating
8. Natural Play Areas
9. Embankment Slides
10. Accessible Revetment with Walk
11. Stacked Stone Revetment
12. Lake Pier
13. Shelters
14. Overlook
15. Prairie Planting on Soil Cap
16. Wetlands
17. Bluff Drainage Way
18. Parking
19. Drop Off and Parking

NOT TO SCALE

02

— Concept Development

Consensus Plan: Section



Section A-A

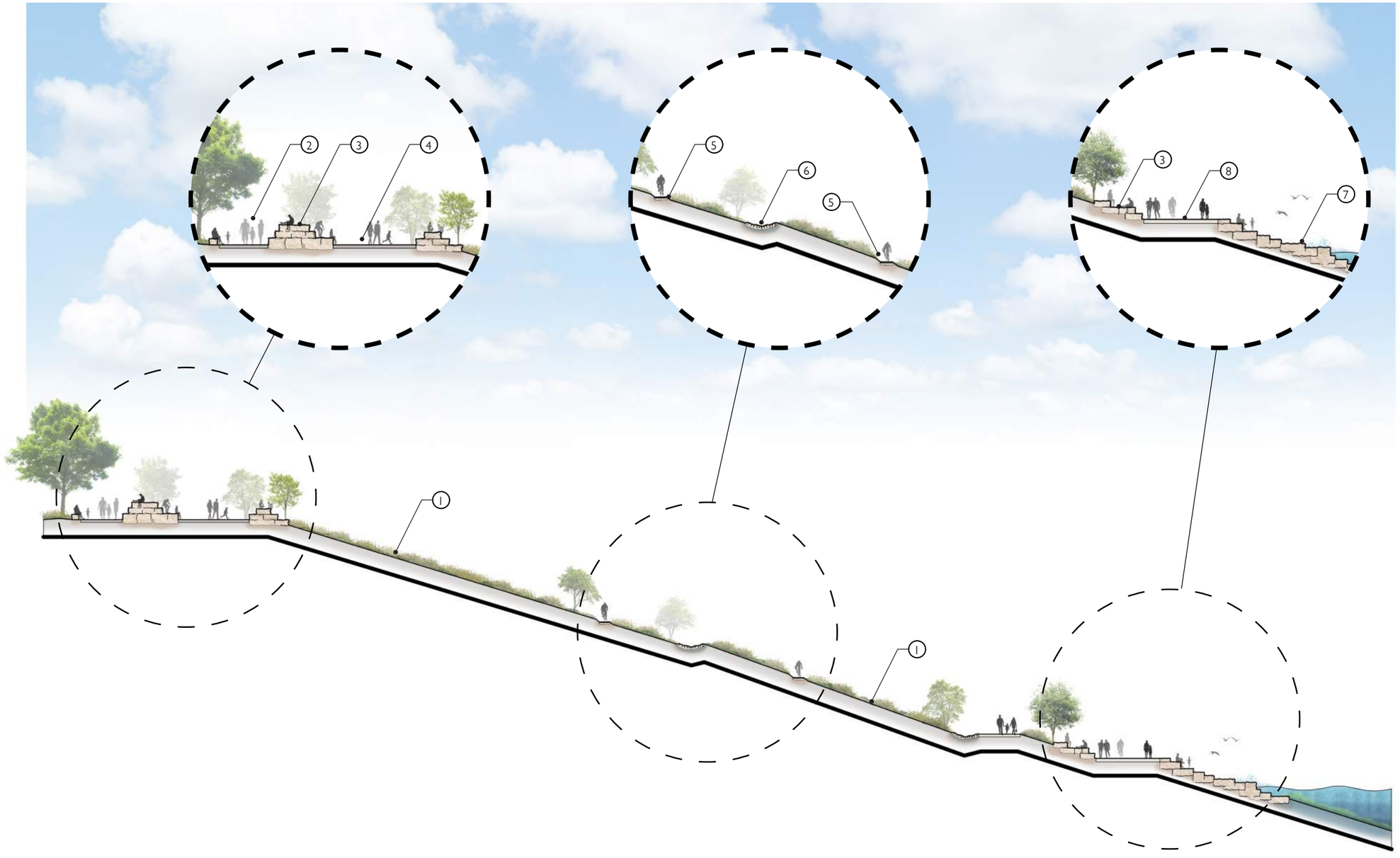
Programming Elements

1. Naturalized Prairie Planting
2. Parking
3. Drop Off
4. Circle Drive Planting Island
5. Central Lawn
6. Multi-Use Path (ADA Compliant)
7. Embankment Slide
8. Accessible Revetment With Walk
9. Lake Pier

02

— Concept Development

Consensus Plan: Section



Section B-B

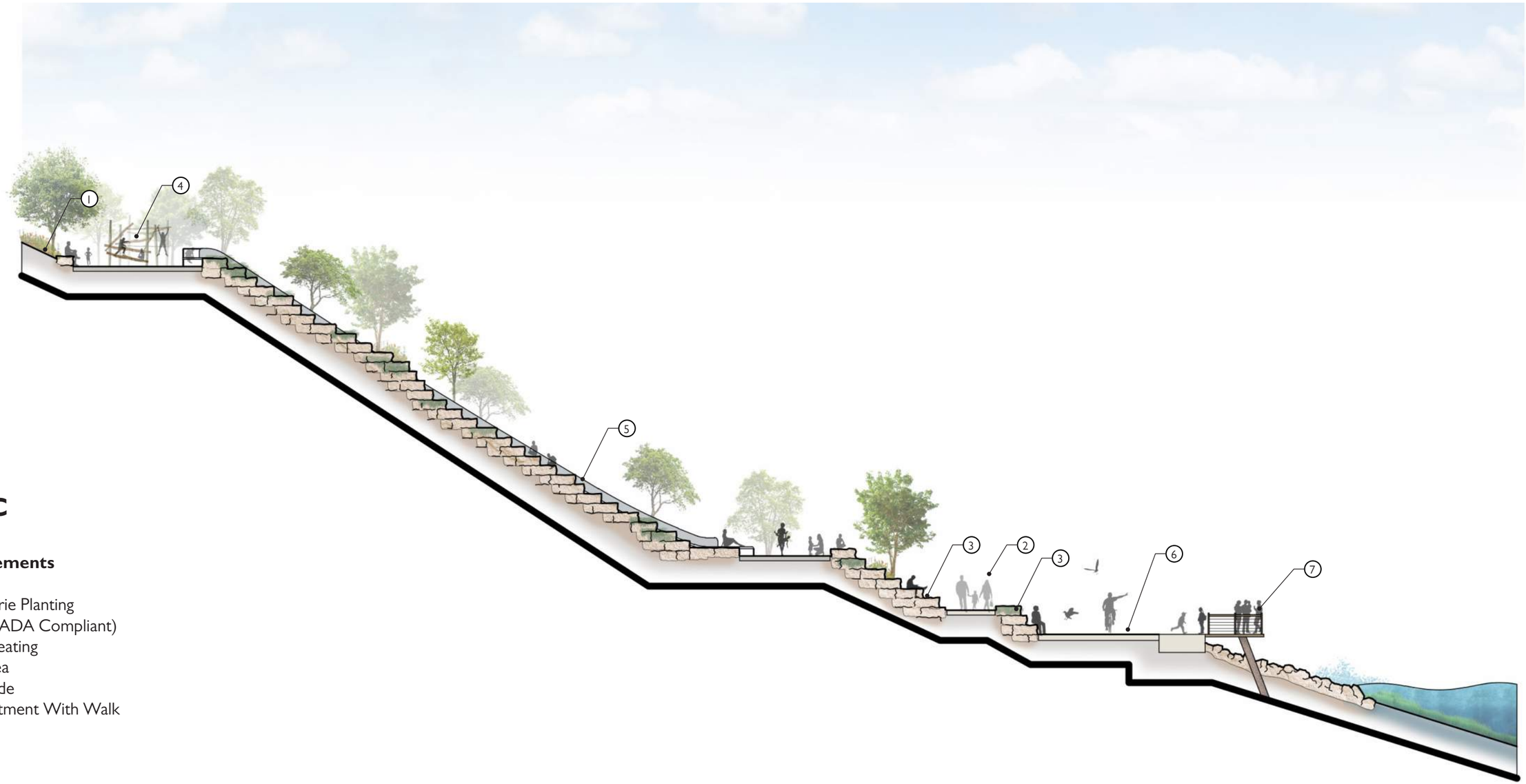
Programming Elements

1. Naturalized Prairie Planting
2. Multi-Use Path (ADA Compliant)
3. Stacked Stone Seating
4. Small Gathering Area
5. Sport Trail
6. Bluff Drainage Way
7. Stacked Stone Revetment
8. Accessible Revetment With Walk

02

— Concept Development

Consensus Plan: Section



Section C-C

Programming Elements

1. Naturalized Prairie Planting
2. Multi-Use Path (ADA Compliant)
3. Stacked Stone Seating
4. Natural Play Area
5. Embankment Slide
6. Accessible Revetment With Walk
7. Lake Pier

02

— Concept Development

Consensus Plan: The Bluff

The Bluff

The Bluff has the opportunity to become the most unique experience in Oak Creek, by giving people the ability to experience different ways of traversing the terrain. Whether it is through the fun of slides, challenge of scrambling up, or the leisure of the ADA Accessible Trails, anyone can find a way to enjoy this unique experience.

02

— Concept Development

Consensus Plan: Pedestrian Bridge

Pedestrian Bridge

One of the most important ideas to come from this plan is the idea of a continuous waterfront park along Lake Michigan starting in the South at Bender and continuing up to the North Bluff reaching nearly 2 miles of shoreline. By putting in a bridge to cross the ravine created by the entrance drive to the water intake facility, this experience becomes a reality to people of all levels of mobility. The bridge itself also becomes a unique experience in itself and would be an iconic piece of architecture.

02

— Concept Development

Consensus Plan: The Lakefront

The Lakefront

How the park integrates with Lake Michigan and how people interact with the lake is an important component of this park. While a desire for swimming and boat launches were expressed during the community engagement process the lake shore along the park is not suited for either activity with out creating a harbor. Instead park visitors will experience the lake from above, with a pier taking them out over the water where they can fish or enjoy their surroundings.

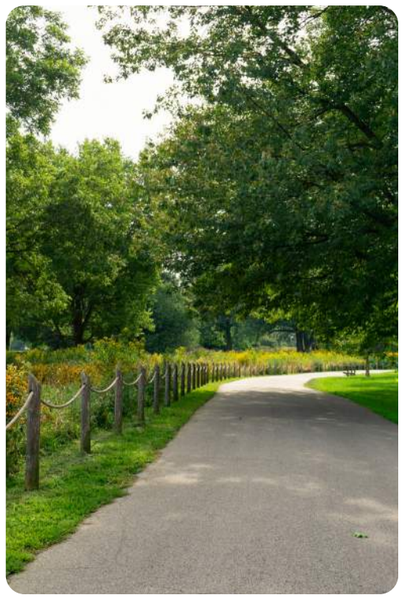
02

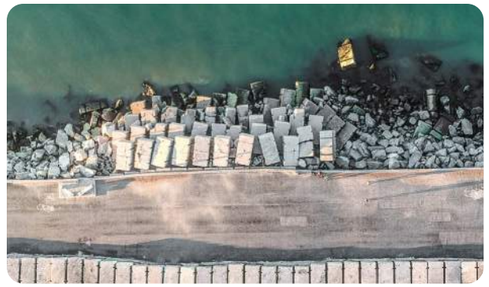
— Concept Development

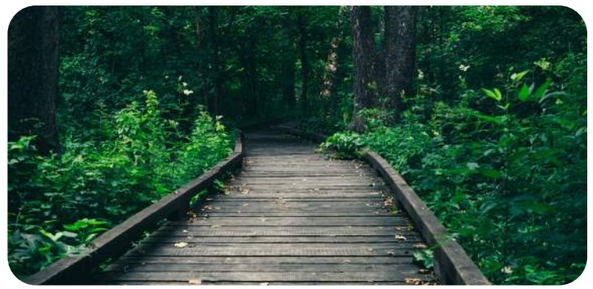
Consensus Plan

Design Precedent

The images shown on this page represent inspiration for program elements proposed on the Final Consensus Plan.







03

— Implementation

Potential Funding Sources

Grant Opportunities

The chart on this page outlines Federal, State, and local grant programs that may be applicable for various scope items in the development of the Baileys Harbor Waterfront. The following pages contain concept-level cost estimates, and list suggested grant sources where appropriate. Other potential funding sources include:

Grant and Philanthropy Programs

- Special gifts, contributions, or scholarships from local citizens or organizations supportive of public open space.
- Park Endowment Fund: Interest to be used for dedicated park expenses after ten years, or other established time period.

Generate Revenue

- Improve/update facilities such as the waterfront TIF (Tax Increment Financing) District to attract more use, increase efficiency, increase taxable values.
- Create revenue-generating amenities/programming at existing facilities, such as: boat rentals, amphitheater with entry fees, etc.
- Increase Taxes:
  A. General Obligation bond issues, supported by the community for special projects.
  B. Special millage, also subject to voter approval, for major programs such as waterfront development.
- Consider strategic private development opportunities to increase tax base.

Reallocate Existing Funds

- Community Development Block Grant funds eligible for capital expenditure, or other federal funds that may become available.
- General fund appropriations for projects that can be phased in predictable increments.

Partner to Share Costs

- Partner with non-profit groups, schools, Township and County.
- Private and non-profit park sponsorships (Adopt-a-Park programs).

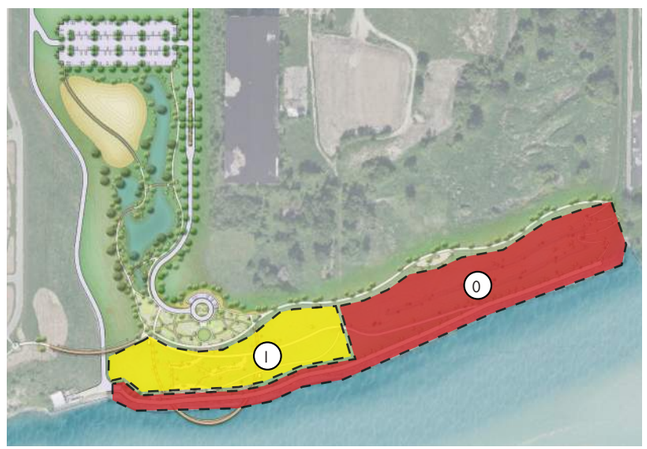
Grant Type	Funding Source	Description	Quantity
Environmental Education Grant	EPA	Funding for projects that design, demonstrate, and/or disseminate environmental education practices, methods, or techniques.	$50,000 - $100,000
Wetland Program Development Grant	EPA	Funding for projects that increase the quantity and quality of wetlands in the U.S. by conserving and restoring wetland acreage and improving their condition.	$75,000-$300,000
Urban Waters Small Grant	EPA	Funding for projects that address local water quality issues related urban runoff polution, provide additional community benefits, actively engages underserved communities, and fosters partnerships.	
Recreational Trails Program	Federal Grant Administered by Wisconsin DNR	Funding for projects that provide outdoor recreation opportunities for public trail and trailhead improvements.	
Land and Water Conservation Fund	Federal Grant Administered by Wisconsin DNR	Funding for projects that provide high-quality outdoor recreational opportunities.	50% of eligible costs
Knowles-Nelson Stewardship Grant Programs	Wisconsin DNR	Multiple grant opportunities including the acquisition and development of local parks (ADLP), urban green space (UGS), urban river (UR).	
Coastal Management Grants	Wisconsin Coastal Management Program	Funding for projects that provide coastal wetland protection, habitat restoration, pollution control, education, historic preservation.	50% Match for projects totalling $60,000 or less. 60% for projects > $60,000.

03 — Implementation

Concept-Level Construction Cost Estimates by Phase

Phase 0 + 1 Scope

Phase 0 work includes the revetment, the revetment path base course (no pavement), fill for approximately half of the Bluff, the drainage ways, and grading in and installing the base course for the first half of the multi-use trail (no pavement). Phase 1 includes fill for the rest of the Bluff, paving the multi-use trail and revetment path, laying in the stacked stone for the nature play areas.



Phase	Work Item	Description	Quantity	Units	Unit Cost	Total Cost
Phase 0 - Revetment and Bluff Stabilization						
	1	Revetment and Bluff Stabilization	1	LS	$ 9,285,000	$ 9,285,000
					Base Bid Subtotal	$ 9,285,000
					Construction Contingency (5%)	$ 465,000
					Project Total	**$ 9,750,000**

Note: Phase 0 Costs Reflect Actual Contractor Bids

Phase 1 - Bluff Stabilization 2						
	1	Mobilization and General Conditions	1	LS	$ 108,000	$ 108,000
	2	Stacked Boulder Scrambles	9,420	SF	$ 150	$ 1,413,000
	3	Reinforced Concrete Trail	18,180	SF	$ 15	$ 273,000
	4	Reinforced Concrete Revetment Path	35,200	SF	$ 15	$ 528,000
	5	Drainage Layer	15,000	TON	$ 29	$ 435,000
	6	General Fill	90,000	CY	$ 8	$ 720,000
	7	Clearing and Grubbing	60,000	SF	$ 2	$ 120,000
	8	Site Restoration - Native Plantings	4.50	AC	$ 20,000	$ 90,000
					Base Bid Subtotal	$ 3,687,000
					Construction Contingency (20%)	$ 738,000
					Project Total	**$ 4,425,000**

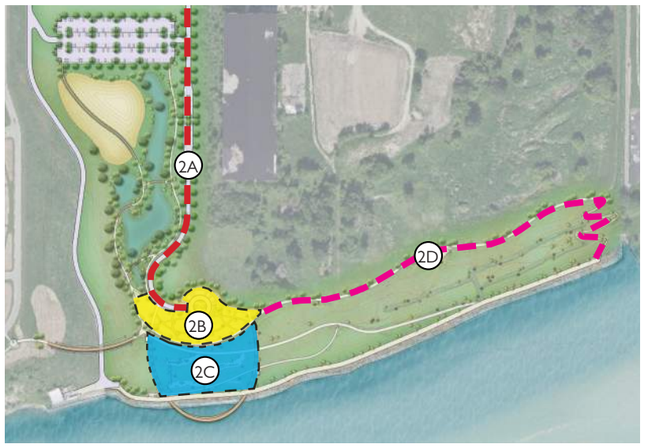
Cost estimate prepared April 2023

03 — Implementation

Concept-Level Construction Cost Estimates by Phase

Phase 2

Phase 2 builds on the Phases 0 and 1 by creating the formal park with an entrance road. It is broken up into subphases based on construction considerations and the allowing certain portions of the park to phased in. This phase of the construction will provide the usable spaces needed for people to enjoy the park and is the bulk of the programming.



Phase	Work Item	Description	Quantity	Units	Unit Cost	Total Cost
Phase 2A - Entrance Road						
	1	Mobilization and General Conditions	1	LS	$ 25,000	$ 25,000
	2	Asphalt Entrance Road	46,250	SF	$ 10	$ 463,000
	3	Concrete Sidewalks	11,850	SF	$ 10	$ 119,000
	4	Entrance Sign	1	LS	$ 5,000	$ 5,000
	5	Street Lights	12	EA	$ 6,000	$ 72,000
	6	Trees: Shade	66	EA	$ 1,000	$ 66,000
	7	Trees: Ornamental	12	EA	$ 800	$ 10,000
	8	Site Restoration - Native Plantings	4.75	AC	$ 20,000	$ 95,000
					Base Bid Subtotal	$ 855,000
					Construction Contingency (20%)	$ 171,000
					Project Total	**$ 1,026,000**
Phase 2B - Natural Gardens						
	1	Mobilization and General Conditions	1	LS	$ 24,000	$ 24,000
	2	Stacked Boulder Wall/Seating	1,050	SF	$ 150	$ 158,000
	3	Concrete Sidewalks	21,065	SF	$ 10	$ 211,000
	4	Top Soil	1,520	CY	$ 18	$ 28,000
	5	Natural Garden Plantings	35,500	SF	$ 10	$ 355,000
	6	Trees: Shade	17	EA	$ 1,000	$ 17,000
	7	Trees: Ornamental	28	EA	$ 800	$ 23,000
	8	Bike Racks	4	EA	$ 500	$ 2,000
	9	Litter/Recycling Bins	6	EA	$ 500	$ 3,000
					Base Bid Subtotal	$ 821,000
					Construction Contingency (20%)	$ 165,000
					Project Total	**$ 986,000**
Phase 2C - Nature Play Areas						
	1	Mobilization and General Conditions	1	LS	$ 35,000	$ 35,000
	2	Stacked Boulder Wall/Seating	600	SF	$ 150	$ 90,000
	3	Concrete Trail	7,065	SF	$ 10	$ 71,000
	4	Nature Play Areas	11,870	SF	$ 50	$ 594,000
	5	Embankment Slides	1	LS	$ 100,000	$ 100,000
	6	Bluff Stairs	520	LF	$ 500	$ 260,000
	7	Trees: Shade	7	EA	$ 1,000	$ 7,000
	8	Trees: Ornamental	48	EA	$ 800	$ 39,000
					Base Bid Subtotal	$ 1,196,000
					Construction Contingency (20%)	$ 240,000
					Project Total	**$ 1,436,000**
Phase 2D - Top of Bluff Path and Improvements						
	1	Mobilization and General Conditions	1	LS	$ 20,000	$ 20,000
	2	Stacked Boulder Wall/Seating	2,175	SF	$ 150	$ 327,000
	3	Concrete Trail	23,450	SF	$ 10	$ 235,000
	4	Switchback Grading	1,825	SY	$ 6	$ 11,000
	5	Crushed Stone Small Gathering Area	5,600	SF	$ 12	$ 68,000
	6	Overlook Deck	1	EA	$ 25,000	$ 25,000
					Base Bid Subtotal	$ 686,000
					Construction Contingency (20%)	$ 138,000
					Project Total	**$ 824,000**

Cost estimate prepared April 2023

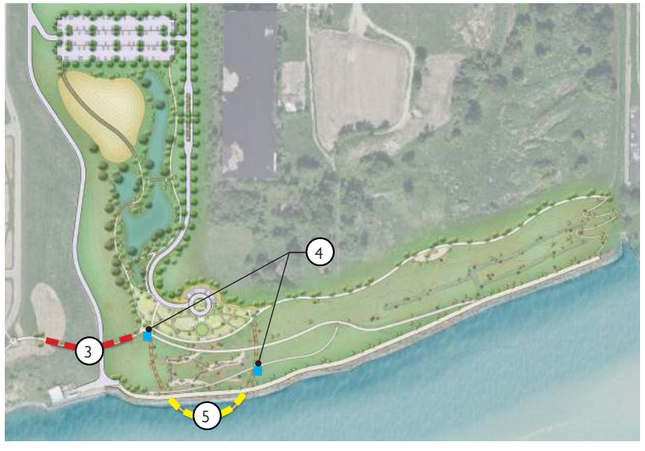
03

— Implementation

Concept-Level Construction Cost Estimates by Phase

Phase 3 + 4 + 5

Phases 3, 4, and 5 are the big ticket items but also the potential to be the most impactful. These phases include the pedestrian bridge over the ravine, two shelters, and the elliptical pier. These phases would tie the Bluff into the regional park system and allow it function as one continuous lake front park.



Phase	Work Item	Description	Quantity	Units	Unit Cost	Total Cost
Phase 3 - Pedestrian Bridge						
	1	Mobilization and General Conditions	1	LS	$ 278,000	$ 278,000
	2	Pedestrian Bridge	4,620	SF	$ 2,000	$ 9,240,000
	3	Concrete Sidewalk	2,175	SF	$ 10	$ 22,000
					Base Bid Subtotal	$ 9,540,000
					Construction Contingency (30%)	$ 2,862,000
					Project Total	**$ 12,402,000**
Phase 4 - Shelters						
	1	Mobilization and General Conditions	1	LS	$ 5,000	$ 5,000
	2	Shelters	500	SF	$ 200	$ 100,000
					Base Bid Subtotal	$ 105,000
					Construction Contingency (20%)	$ 21,000
					Project Total	**$ 126,000**
Phase 5 - Lake Pier						
	1	Mobilization and General Conditions	1	LS	$ 219,000	$ 219,000
	2	Curved Pedestrian Pier	6,000	SF	$ 273	$ 1,638,000
	3	Sheet Pile Cell	6	EA	$ 456,400	$ 2,739,000
					Base Bid Subtotal	$ 4,596,000
					Construction Contingency (30%)	$ 920,000
					Project Total	**$ 5,516,000**

Cost estimate prepared April 2023

03 — Implementation

Concept-Level Construction Cost Estimates by Phase

Phase 6 Scope

Phase 6 focuses remediating the Connell property and providing overflow parking for the Bluff and Lake Vista Park. This phase includes consolidating contaminated soils, building an overflow parking lot, and restoring wetlands. These features will be connected with boardwalks and sidewalks that meander through naturalized prairies and wetlands.

Phase	Work Item	Description	Quantity	Units	Unit Cost	Total Cost
Phase 6A - Soil Consolidation Area						
	1	Mobilization and General Conditions	1	LS	$ 115,000	$ 115,000
	3	Contaminated Soil Consolidation and Cap	1	EA	$ 2,000,000	$ 2,000,000
	4	Site Restoration - Native Plantings	3	AC	$ 20,000	$ 63,000
	5	Trees: Shade	7	EA	$ 1,000	$ 7,000
	6	Trees: Ornamental	7	EA	$ 800	$ 6,000
	7	Concrete Sidewalk	460	SF	$ 10	$ 5,000
	8	Boardwalk	535	LF	$ 400	$ 214,000
					Base Bid Subtotal	$ 2,410,000
					Construction Contingency (20%)	$ 482,000
					Project Total	**$ 2,892,000**
Phase 6B - Overflow Parking Lot						
	1	Mobilization and General Conditions	1	LS	$ 91,000	$ 91,000
	2	Asphalt Parking, Striping, Signage	101,650	SF	$ 10	$ 1,017,000
	3	Site Restoration - Native Plantings	1.50	AC	$ 20,000	$ 30,000
	4	Trees: Shade	51	EA	$ 1,000	$ 51,000
	5	Trees: Ornamental	24	EA	$ 800	$ 20,000
	6	Landscaping	6,085	SF	$ 10	$ 61,000
	7	Topsoil	23,080	CY	$ 18	$ 416,000
	8	Street Light	16	EA	$ 6,000	$ 96,000
	9	Concrete Sidewalk	11,800	SF	$ 10	$ 118,000
					Base Bid Subtotal	$ 1,900,000
					Construction Contingency (20%)	$ 380,000
					Project Total	**$ 2,280,000**
Phase 6C - Wetland Restoration						
	1	Mobilization and General Conditions	1	LS	$ 16,000	$ 16,000
	2	Rough Grading	1	EA	$ 15,000	$ 15,000
	3	Site Restoration - Native Plantings	5	AC	$ 20,000	$ 100,000
	4	Trees: Shade	46	EA	$ 1,000	$ 46,000
	5	Trees: Ornamental	44	EA	$ 800	$ 36,000
	6	Concrete Sidewalk	3,290	SF	$ 10	$ 33,000
	7	Boardwalk	210	LF	$ 400	$ 84,000
					Base Bid Subtotal	$ 330,000
					Construction Contingency (20%)	$ 66,000
					Project Total	**$ 396,000**

Cost estimate prepared April 2023

Edgewater resources

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