Bondurant
Life Connecting

City of Bondurant

CENTRAL DISTRICT STORMWATER IMPROVEMENTS MASTER PLAN

SMITHGROUP

IOWA GREAT PLACE
IOWA DEPARTMENT OF CULTURAL AFFAIRS

City Council Adoption Date: 11/7/2022

Table of Contents

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Bondurant
Life Connecting

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Executive Summary

The City of Bondurant is developing stormwater improvements south of State Highway 65. The improvements will help alleviate flooding associated with Mud Creek, improve circulation along a realigned and improved Grant St S, serve as a catalytic anchor for future growth, and provide a new 116-acre recreational destination serving as a future central public space for Bondurant. This park will serve as an anchor for active recreation by creating opportunities to host running and walking events, connect to the Gay Lea Wilson regional trail system, create a regional skate park destination, and create a water-based amenity that is unique from Lake Petocka.

Based on the recommendations in the Building Bondurant Comprehensive Plan, improving and expanding parks and park experiences is the second highest ranking priority among community members, second only to improving the downtown.

Iowa's Hometown

Designed around the idea of, 'Iowa's Hometown', the master plan presents a vision of how district stormwater improvements could also service as a community amenity. More detailed design is needed to determine the specific outcomes proposed in the park but the key pieces of the park include:

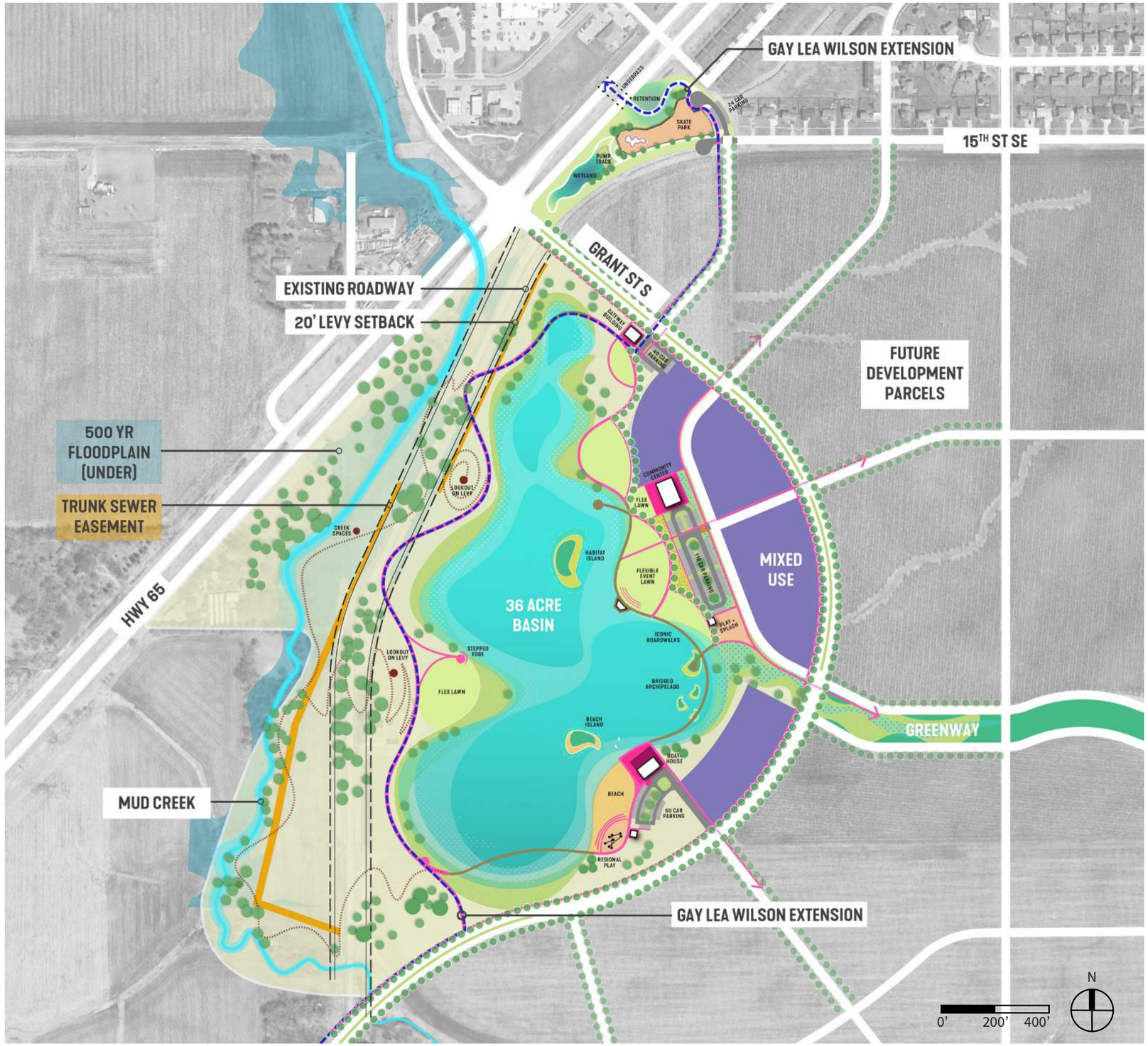
- a 36-acre stormwater management basin
- a community building hosting 150 - 200 people
- a new regional skate park
- a playground
- a splashpad
- paddlecraft access
- beach and water access space
- flexible lawn areas
- more than 3 miles of new trails, multiuse paths, and boardwalks

The plan is based on input from the Parks and Recreation Board, key stakeholders including nearby business-owners, landowners, and community organizations, and the general public. Three public, in-person sessions plus complementary online surveys inform the goals and outcomes of the plans.

The plan is a guide to inform the final design process and outcome of the amenities. More detailed design and permitting will further develop the details of the individual spaces, features, and amenities. The improvements will likely be constructed with a phased approach. The first phase will include the earthwork and infrastructure and utilities essential for the stormwater improvements. Subsequent phases will incorporate additional amenities.

Photo Courtesy: City of Bondurant

Central Park Master Plan



New Amenities Offered

Legend

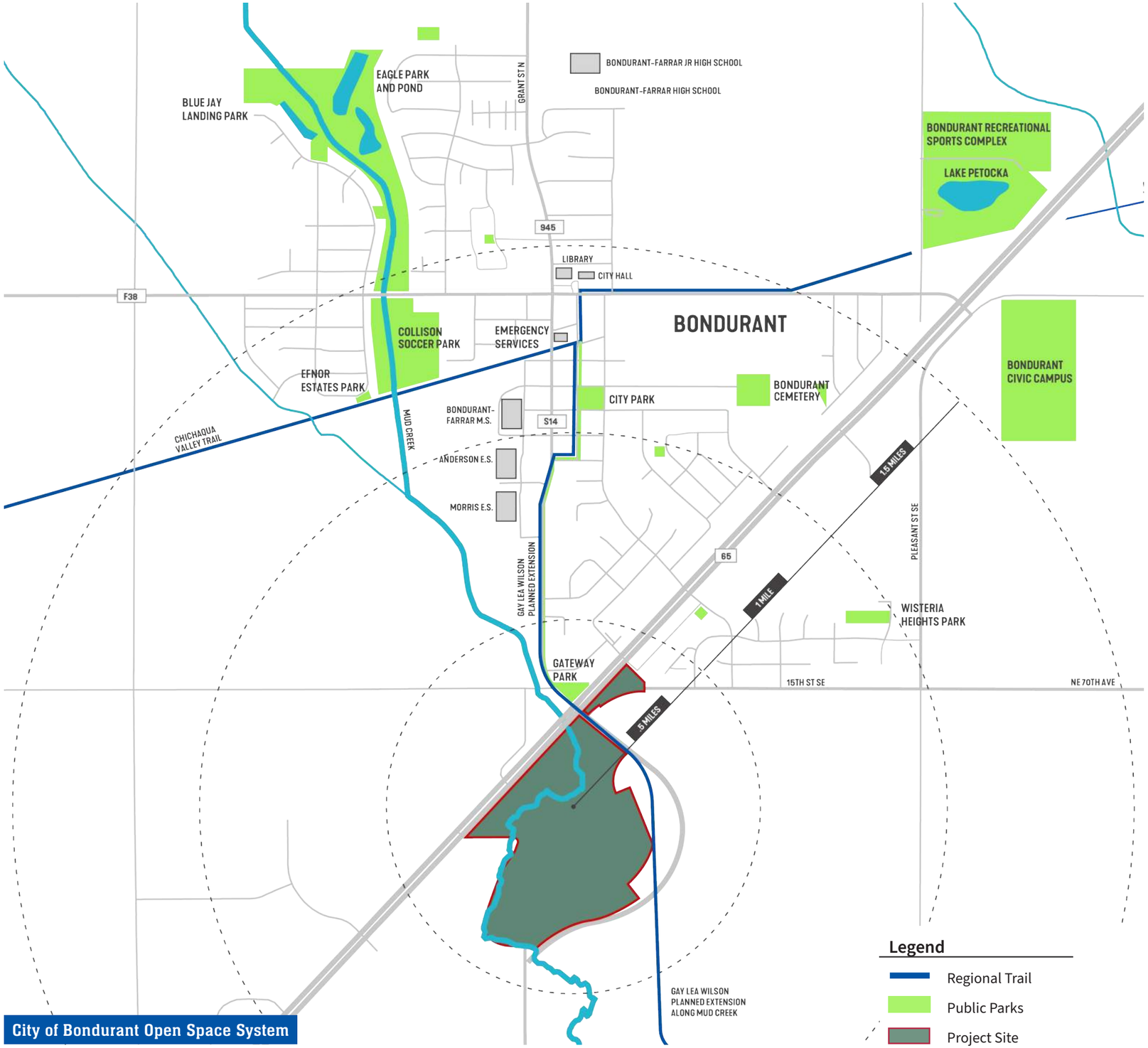
- Development Parcels (12 acres)
- Plaza Space (45,000 sf)
- Flexible Lawn (3.8 acres)
- Water (36 acres)
- Wetland Area (5.5 acres)
- Prairie Meadow (48 acres)
- Beach (35,000 sf)
- Play (45,000 sf)
- Roadways (On Site)
- Multiuse Path (2.0 miles)
- Boardwalk (1/2 mile)
- Soft or Paved Trails (1.0 miles)
- Gay Lea Wilson Trail

1.0 Background

Bondurant is one of the fastest growing communities in Iowa, and the fastest growing community in the Des Moines metro area between 2010 and 2020. The population almost doubled from 2010 to 2020 ; the population increase, estimated by the US Census Bureau, was believed to be just over 9% annually over a 10-year period[1]. This is consistent with steady growth in the community dating back to the 1970's. As noted by a participant in the city's recent Comprehensive Plan Update, "We have the strongest feeling of community in the Des Moines metro region." Bondurant's identity and charm as a family-friendly hometown resonates throughout the community.

Located minutes from Ankeny, Altoona, and Des Moines the community offers hometown living with the convenience of regional amenities. The community is conveniently sited near State Highway 65 and Interstate 80 making commuting to and from Bondurant convenient; the 2020 census identified that the mean commute time to and from work for Bondurant citizens was just over 20 minutes. In addition, the city is immediately adjacent to the Adventureland Amusement Park and is a gateway to the Chichaqua Bottoms and the Chichaqua Valley Trail.

In the 2012 City of Bondurant Comprehensive Plan and the 2013 Park Trail and Greenway Master Plan, the City identified the need to address stormwater runoff as Bondurant continues to develop. In 2022, Central Park was a specific recommendation of the Community Vision Plan's seventh goal which reads, Continue making improvements to existing parks and expand the community's park system as population growth warrants such expansion. More recently the park was identified as an Action Item 1B of the Parks and Recreation goals in chapter nine of the draft Comprehensive Plan Update.



City of Bondurant Open Space System

[1] https://www.census.gov/quickfacts/bondurantcityiowa

Project Site

Central Park is situated adjacent to Highway 65, bordered by Grant St S (which will be realigned in the future) and to the south of 15th St SE with Mud Creek to the west. It provides a potential anchor for future mixed-use and residential development identified in the Building Bondurant Comprehensive Plan.

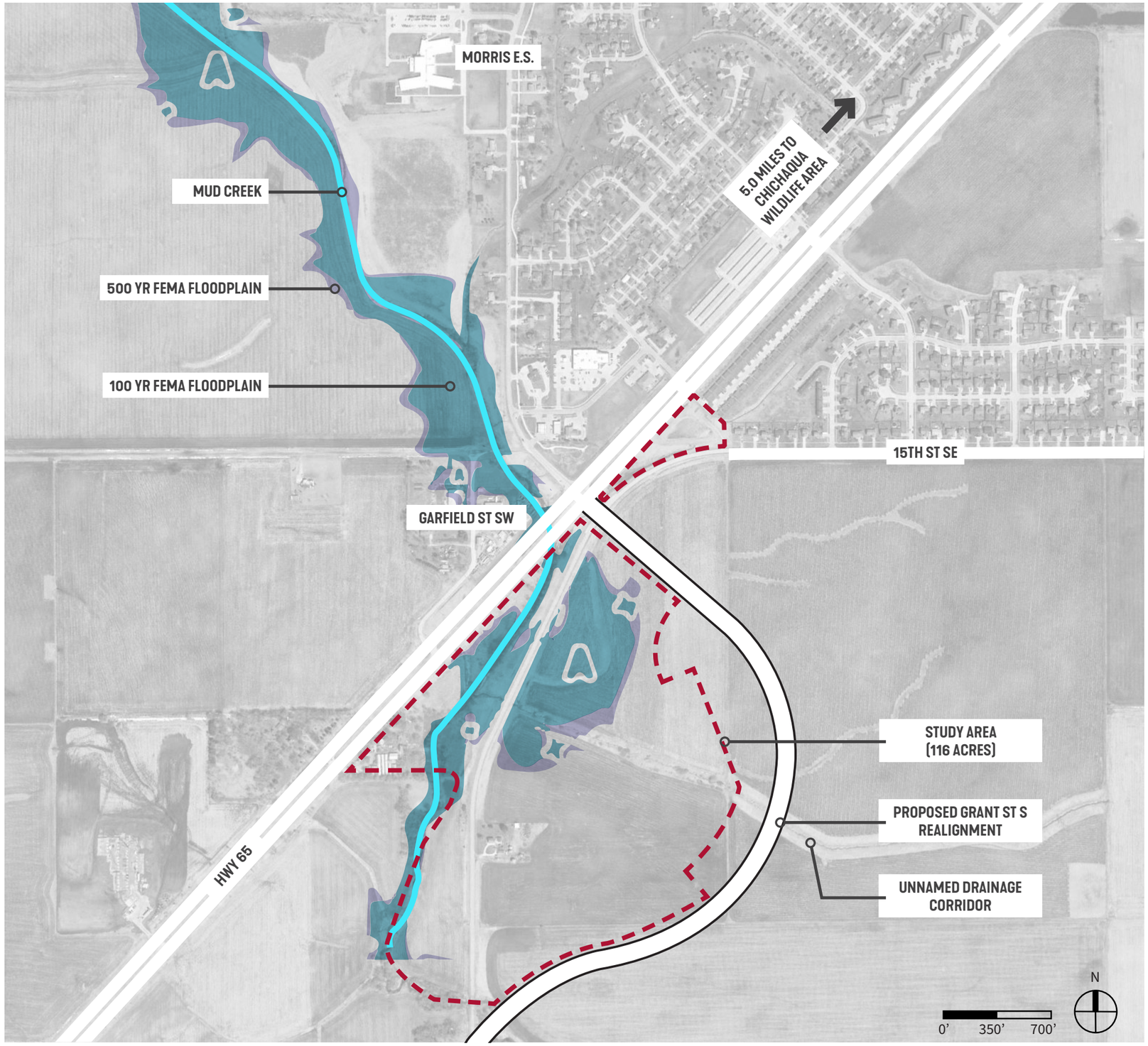
The site is relatively flat; most of the site is comprised of slopes less than 6%, generally sloping east to west towards Mud Creek. Mud Creek runs along the site's west side emerging from under the Highway 65 interchange with Grant St S. It flows south between Highway 65 and Garfield St SW before crossing under Garfield immediately south of the project site and flowing southeast. The low lying ground provided the best opportunity for stormwater improvements to support future growth while protecting the water quality of Mud Creek.

An unnamed drainage corridor fringes the site's south end before discharging to Mud Creek. Currently the site is farmed. There are few trees or other natural resources on site, other than those found in the Mud Creek corridor.

The map to the right shows how the FEMA 100-year (shown in blue) and 500-year floodplain (shown in purple) follow the Mud Creek corridor. They fan east across the project site where the drainage passes under Garfield St SW.

The project site is currently used for row crop farming. There are few existing structures within the park study area. There are no known endangered or threatened species within the park area. A wetland delineation was not prepared for the master plan but is recommended for future design. Dendritic patterns and areas of wetter soil can be seen in aerial photos suggesting hydric soils near and adjacent to the project study area. The site is not known or suspected to be a brownfield.

The site is connected to and will become part of the regional trail system, as the northern (skate park) portion of the park is located at the outlet of a Highway 65 pedestrian underpass connecting to the Gay Lea Wilson trail.) An extension of the Gay Lea Wilson trail will also come through the park.



2.0 Community Engagement

Three different types of engagement were used to collect community and stakeholder feedback and comments throughout the development of the Central Park Master Plan.

The design team met with:

1. Stakeholders invited by the city of Bondurant representing local businesses and employers, adjacent landowners, community groups, and community members in small-group focused interviews.
2. Park and Recreation Board members in group discussions, presentations, and design exercises.
3. The general public in in-person public meetings, presentations, and design exercises and on-line through a series of online public engagement surveys.

Public Input Meetings

1
Dec 7, 2021

Listen
- Existing conditions
- Analysis
- Collect feedback
- Set goals and objectives

2
April 21, 2022

Explore Options
- Program testing
- Concept alternatives

3
July 21, 2022

Realize
- Preferred site alternative review
- Refine and finalize

4
Sept 15, 2022

Finalize
- Preferred skate park layout

See Appendix for detailed public feedback from all three PIMs.

Public Input Meeting 1

More than 240 people participated in the first public engagement session in person and online. This session focused on identifying desired programming experiences at the park. Because flood mitigation and control of Mud Creek was a known expectation of Central Park and a significant determiner of the park's location, it was known before design began that an open body of water would be included in the project. The first public input meeting introduced participants to the Central Park study area and noted the planned stormwater improvements that would be part of the project.

The most desired amenities included an accessible, recreational mid-sized (25 to 35-acre) water body, the importance of new playgrounds and splash pads, a 5k loop trail, and the desire for a flexible community center. Design recommendations included two distinct zones 1) a formalized, central gatherings space anchored by a community center 2) a recreational node focused on water access and recreation.

Public Input Meeting 2

The design team prepared three different concepts based on public input that explored configurations and amenities for the lake, open spaces, and skate park. Site alternatives varied from a single open body progressing to a series of connected lobes to evaluate the type of water experiences desired in the park. In addition, the skate park concept explored iconic features including a pool feature based upon the stormwater basin footprint, stormwater integration, structured canopy, and skate features for varying levels of experience.

Participants in public input meeting 2 help identify the scale of desired program experiences and where they could go through a build-a-park exercise. In this exercise participants were asked to place programmatic experiences in the park using scaled play pieces. The team tested different types of community center architecture and character and refined the types of programmed experiences proposed in the project.

A more lobed, lake with different types of recreational experiences from quiet boating to boardwalk access, swimming and fishing all emerged as strong desires from this engagement session. Additionally, the desire for a boat house also emerged as a strong desire, especially with a larger lake.

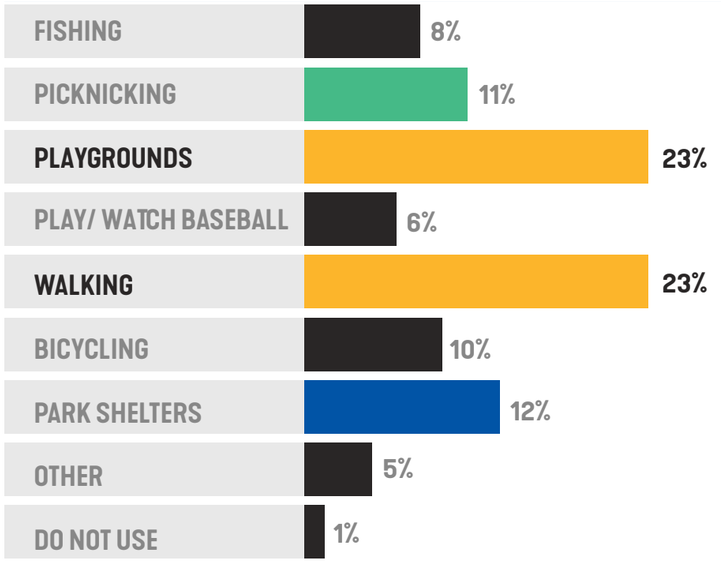
Public Input Meeting 3

Working with the city of Bondurant, the team presented a preferred concept and preliminary opinion of probable cost for Central Park including the skate park. Comments and recommendations for changes included clearly defining potential 5k routes and regional connections, adjust parking around the skate park to preserve wetlands, and delineate the floodway boundaries during 100 year events.

A follow-up meeting was held with volunteer representatives of the Bondurant BMX bike and skate community to review the skate park concept. Participants shared recommendations including accessible features, graffiti wall, pump track, and mini vert.

What programmatic features are most important on site?

How do you use existing parks?



This project will be successful if...

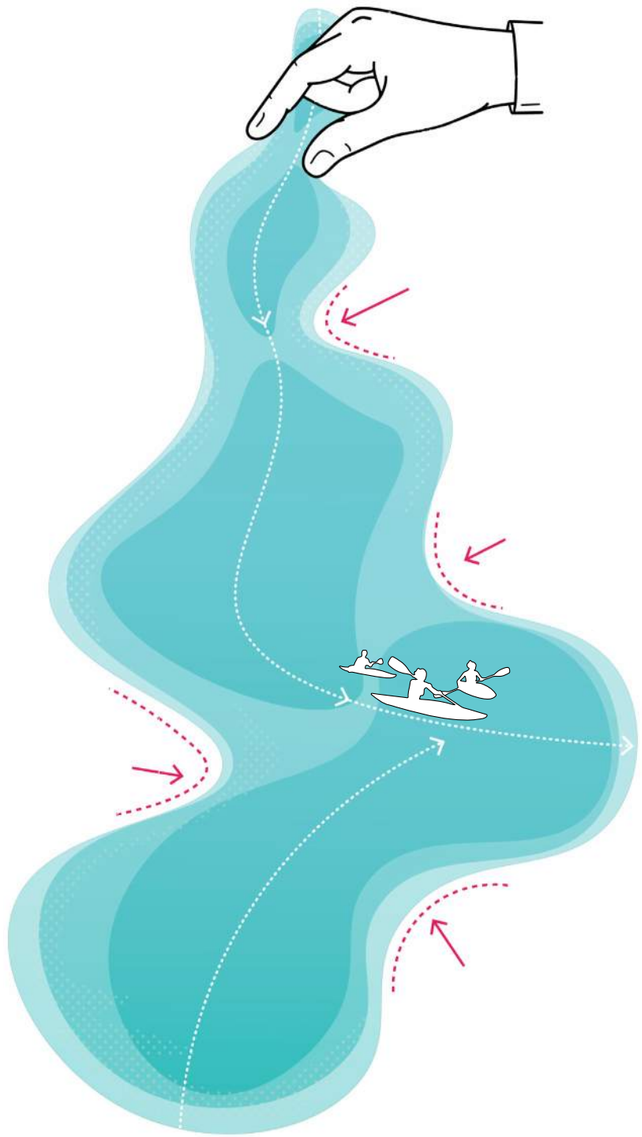
3.0 Master Plan Development

The most significant programmatic desires consistently expressed at all public meetings were: a lobed Central Park lake with flexible space nestled in the voids, a connected network of paths and trails, a community building with views over the water, and play grounds.

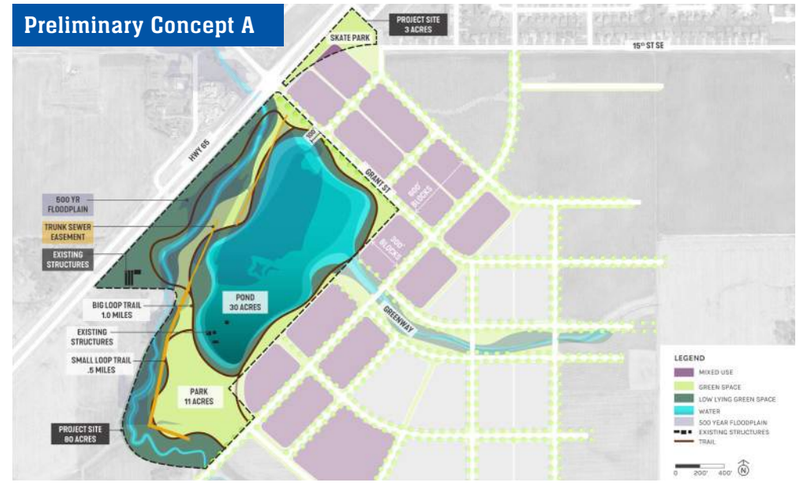
The 35 acre lake lies central in the park as the key visual feature and organizing element. This location mitigates stormwater runoff from existing and planned development while protecting the water quality of Mud Creek. The realignment of Grant St S, sweeps through the project area maximizing frontage to the stormwater basin for future mixed use development. The new greenspace is linked to existing parks and regional trail networks through a series of soft and paved trails looping the lake and serving as a connector between active zones of the park. Unique water engagement is a top priority, so providing access in active and passive ways is crucial including beach access, paddlecraft launches, a boathouse, viewing areas, and iconic boardwalks.

The preferred direction included locating the community building in line with the planned future mixed-use development to provide a central public space. Development projecting westward of Grant St S, into the park to maximize lake frontage was also a primary design driver.

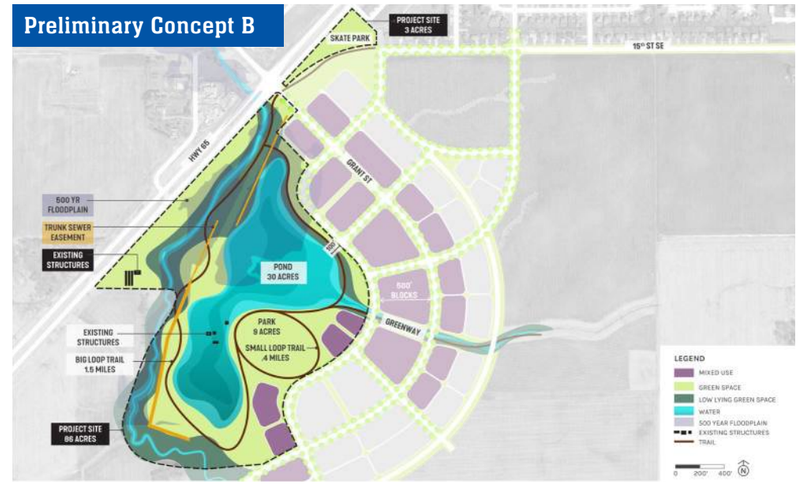
Providing a variety of additional supporting structures throughout the park including open air structures and a boathouse enabled the community building to focus more on flexible uses and events and dispersed the opportunity for picnicking and other events to happen in concert with one another. Development of a plaza space adjacent to the community building supported indoor/outdoor flexibility of the structure but also provided additional opportunities for other types of special events.



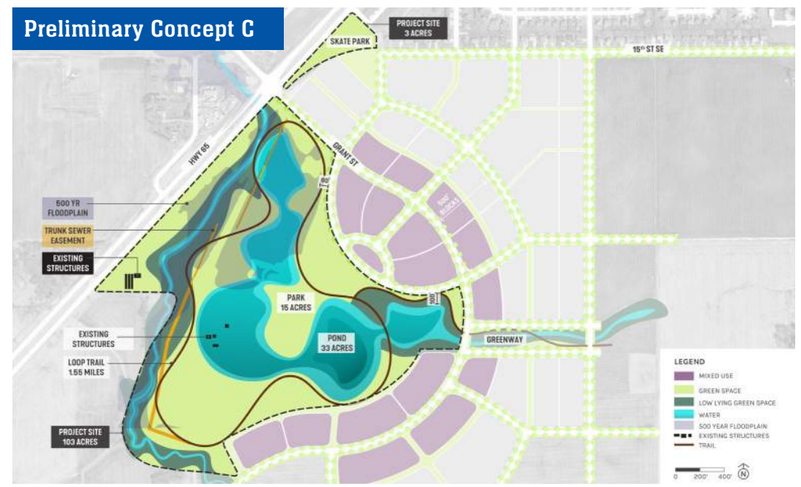
Preliminary Concept A



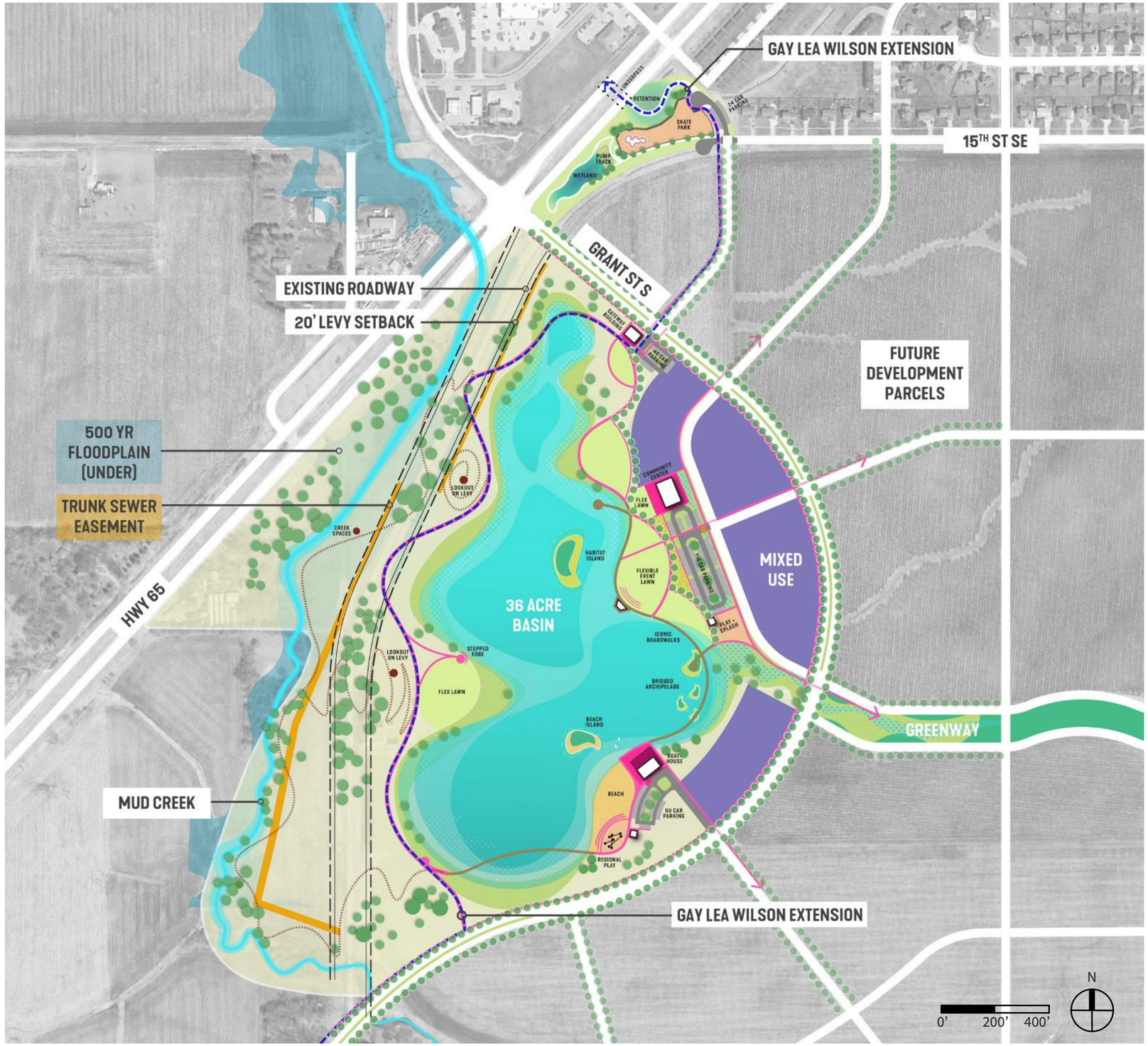
Preliminary Concept B



Preliminary Concept C



Central Park Master Plan



New Amenities Offered

- **116** ACRES OF NEW PARK SPACE
- **36** ACRES OF WATER FOR REC AND HABITAT
- **4** ACRES OF PROGRAMMABLE GREENSPACE
- NEW ICE RINK
- NEW REGIONAL SKATE PARK
- REGIONAL PLAYGROUND
- NEW COMMUNITY CENTER
- NEW BOATHOUSE + BEACH
- NEW PATHS AND TRAILS

Legend

- Development Parcels (12 acres)
- Plaza Space (45,000 sf)
- Flexible Lawn (3.8 acres)
- Water (36 acres)
- Wetland Area (5.5 acres)
- Prairie Meadow (48 acres)
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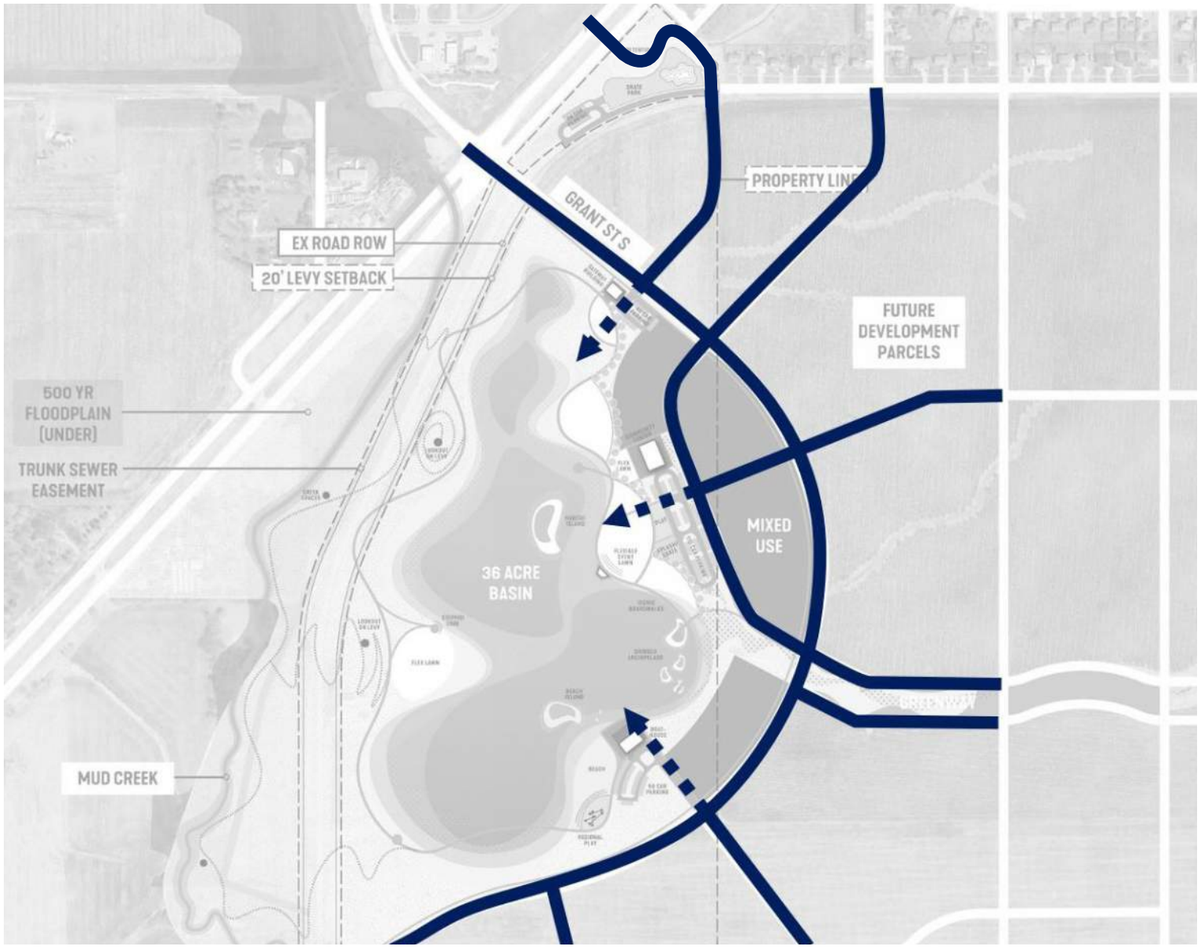
- Soft or Paved Trails (1.0 miles)
- Gay Lea Wilson Trail

Plan Organization

The relationship between Central Park and a potential development to the park's east is very important. Central Park will serve as a catalyst for the new development. A well-designed pedestrian scale corridor will support frequent back and forth trips between the park and the planned mixed-use commercial portions of the new development. Grant St S will be the primary arterial for the new development as well as a regional non-motorized route connecting the Gay Lea Wilson to the Central District Trail. The proposed alignment of Grant St S was modified to provide long, sweeping views of the park, increase pedestrian ease between the park and planned commercial areas, and increase user access to the park from Grant St S along the park's west side. The realignment contributed to the development of three main gateways to the park; one at the north end, one at the center and immediately adjacent to the planned commercial core, and one at the south end of the park.

Grant St S Corridor

Visitors to the new park will arrive from Grant St S, the planned arterial for the new development, or from smaller neighborhood roads to the park's east. With this in mind, Grant St S was realigned to provide long sweeping views of the park, bowing out around and bounding the park's east side to accommodate development frontage park-side of the road. Three main gateways were identified for the park as termini to anticipated sub-arterial road intersections with Grant St S at the park's north, central and southeast portions.



Development Zones

The park is planned in three development zones: 1) the zone around Mud Creek, 2) the existing roadbed, and 3) remainder of the park.

Zone 1 includes the Mud Creek corridor and the existing FEMA floodplain for the creek. There are very few changes proposed for this portion of the site. Some pedestrian trails are proposed on the east side of Mud Creek in this portion of the site, as well as restoration of the floodplain and the meadow areas around Mud Creek. No structures or other development is proposed for this zone.

Zone 2 is the existing Grant St S roadbed and alignment. The existing elevation and alignment of Grant St S operates as a levee for Mud Creek. Modest improvements are proposed in this portion of the site including small structures and trail development atop the levee. The existing roadbed is the minimum elevation of the levee. The park plan proposes additional grading on the top of the old roadbed and along its east side. The grading improvements are intended to give the levee a more rolling aesthetic.

Zone 3 is the largest zone within the park and includes the proposed buildings, most of the trails, parking areas, and the Central Park basin and skate park.

Central Park Basin

Most significant to the public was the desire for a lake that was larger than Lake Petocka and could be used for non-motorized boating activities. Visual access to the lake in the form of docks, boardwalks and other structures was also strongly desired. In addition, swimming and fishing were activity interests from the beginning of design.

A concept with five basins of varying size creates rooms for boaters to move between and increases the shoreline. Additional shoreline also helped increase the length of lake edge trails and provides greater opportunity for the establishment of beneficial wetland habitats along the shore. Small archipelago islands in the shallower bays becoming inundated unded high water fostering wetland habitat. The islands support an iconic boardwalk experience, demonstrate the inundation of water, and serve as a near shore destination from the public beach and boat launch area.

A 36-acre surface area lake with depths ranging from shallow emergent wetland fans of several inches to depths of up to twenty-five feet or deeper will meet both stormwater and recreational needs.

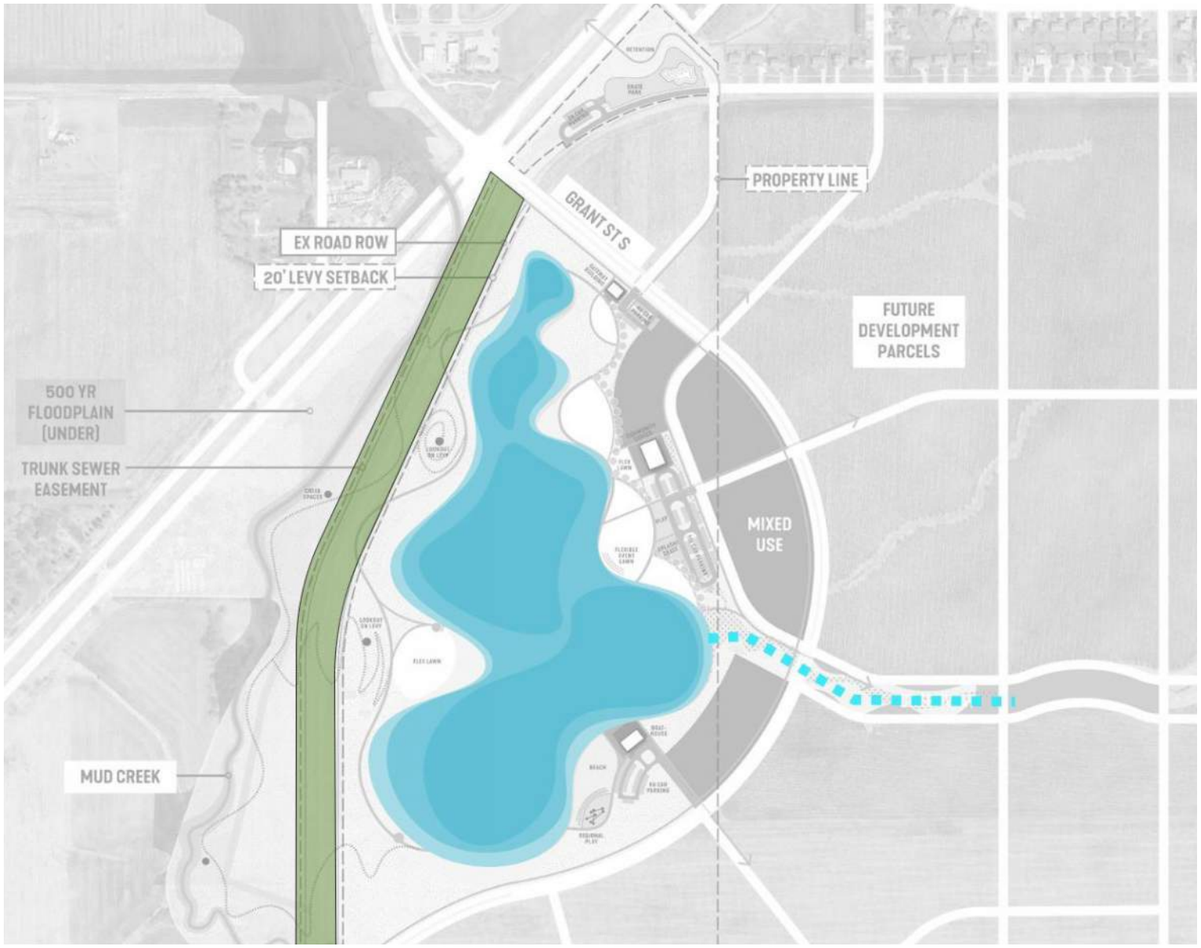
Gateways and Nodes

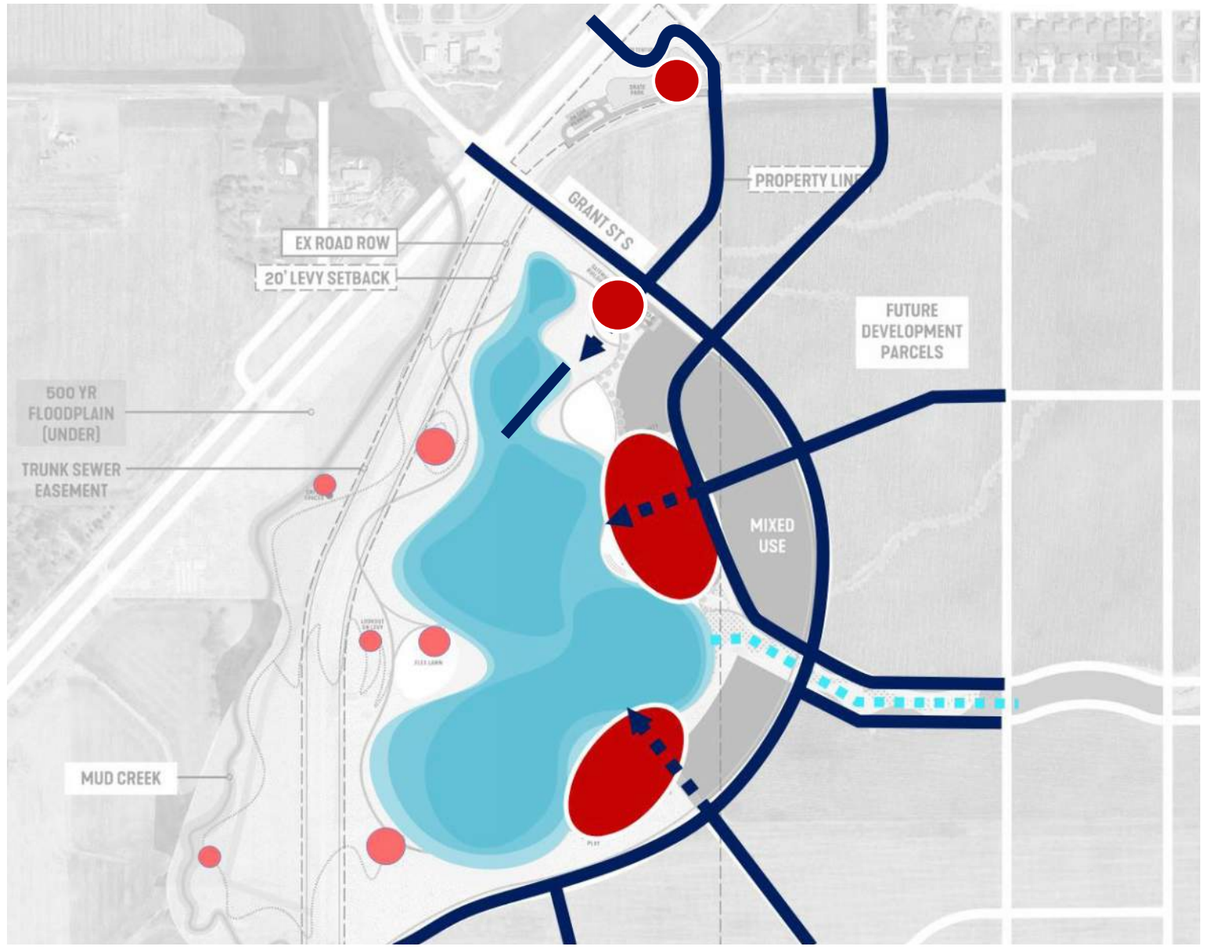
There are three main gateways planned for the park from Grant St S and another at the skate park. Each gateway includes a parking lot and is a trail head to the more than 3 miles of trail planned for the park.

The north gateway is the smallest of the three gateways. A smaller open-air structure is proposed for this gateway and parking lot is planned at this gateway. In addition, this gateway is expected to connect to the skate park along a proposed road to the north.

The central and main gateway is aligned as the terminus to the primary crossroads expected in the mixed-use development commercial area. This gateway includes the Community Building and main parking area, event plaza, splashpad, and adjacent to the main flex lawn spaces planned for the park.

The south gateway includes a planned boathouse with quiet boat launch, beach, and regional destination playground. Throughout the park are destination nodes, portions of the park that can be viewed from the gateway spaces but access by trail or from a boat, across the basin. These nodes include a perched flex lawn on the west side of the basin, the boardwalk through the archipelago islands, and beach island.





Playgrounds

A desire for a variety of playground experiences was expressed at all the public input meetings. Interests ranged from larger, regional park attractions to smaller age-specific experiences. Unique, challenging and fun were terms used to describe the desired outcome.

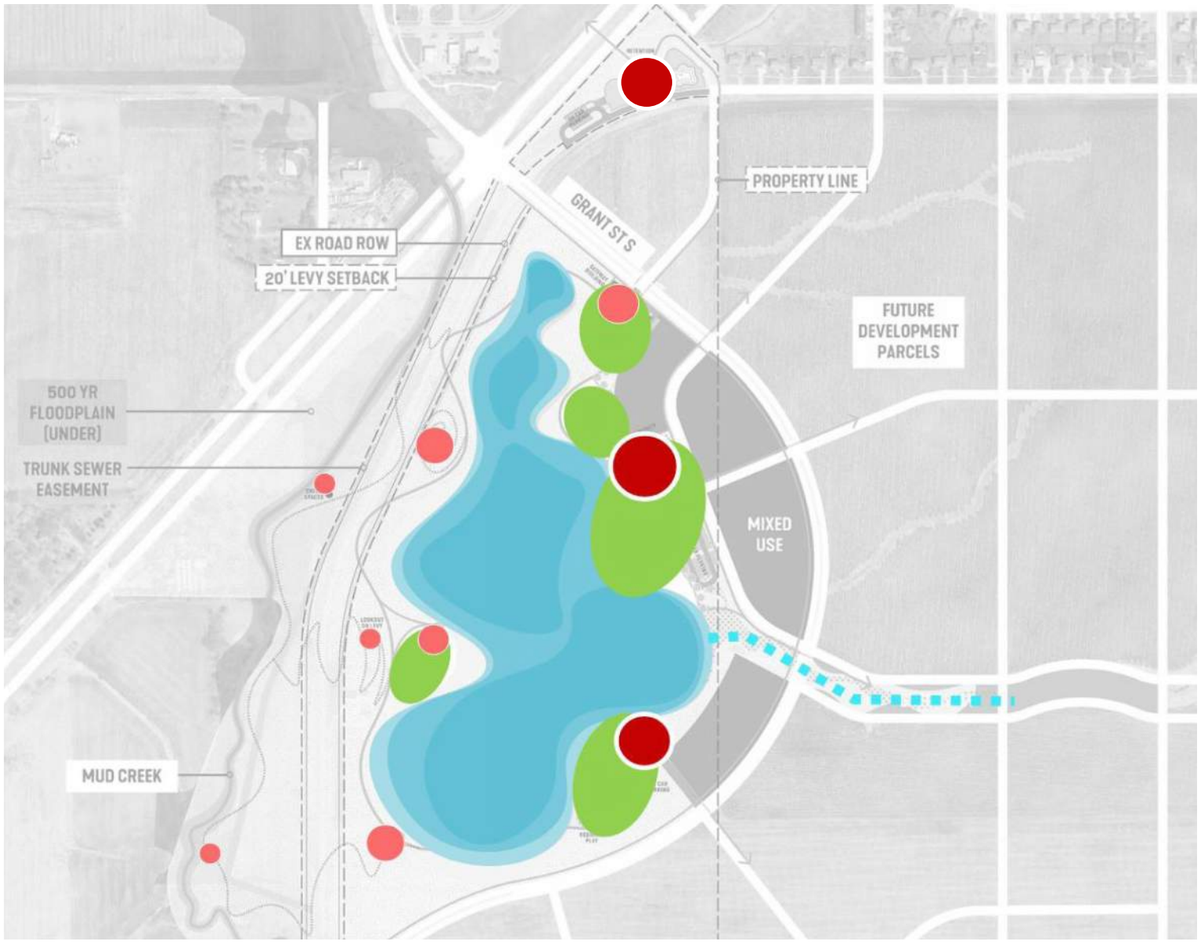
Three different play experiences are proposed at the park. A splash pad and smaller nature-based playground are proposed south of the Community Building at the main gateway. A larger regional-destination playground with a nature theme is proposed south and west of the boathouse adjacent to the beach at the south gateway.

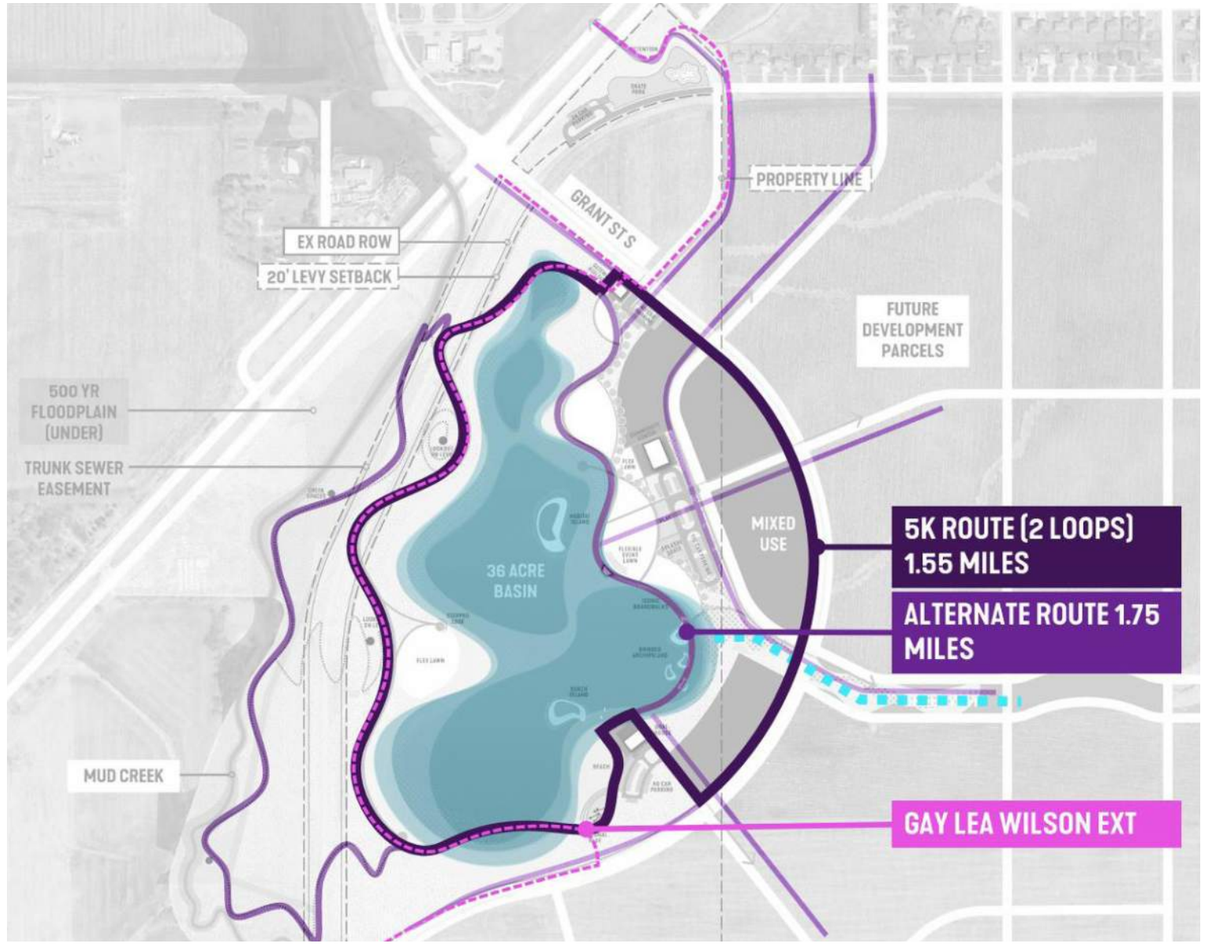
Recreational fields are not planned for Central Park; however, several flexible lawn spaces are proposed throughout the park. The lawns are sized for pick up games such as soccer or frisbee or other forms of unprogrammed play. The two largest flex lawns are located between the Community Building the Basin.

A Network of Paths and Trails

Trails, especially looped trails that provide options for organized run and walk events were an important design element. Trails extended the feel of the park westward creating individualized pockets of activity along Mud Creek with a scenic walk through the woods experience unique to this park. The park incorporates over 3 miles of paths and trails with a range of loop options for hosting 5k walks and runs with a variety of scenery depending on the chosen course.

The internal park loop will connect to and become part of the regional Gay Lea Wilson Trail from Altoona through the park to the Chichaqua Valley Trail in Bondurant just north of the project site. This extension is 4.5 miles in length total, with about a mile of trail running through the project site.



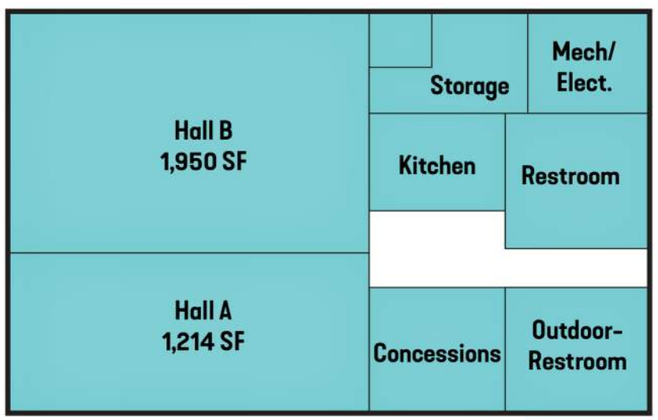


Community Building

An elegant, flexible-use community building to host events for 150-200 people including public meetings, weddings, reunions, and corporate picnics while also accommodating more than one smaller event at one time is a top priority. The structure includes restrooms, storage, park offices, catering kitchen, and perhaps concessionary services.

The community building is proposed on the east edge of the park, between the planned mixed-use development and the lake. The community building is expected to have an overlook of the lake as well as serve as a visual terminus for the future development. The community building is a first step in the development of the future mixed-use development as it is a part of the park. The community building, as well as the outdoor event space, serve as a community anchor for a pop-up coffee shop, food trucks, or other commercial or entertainment experiences.

The community building is separated from the lake by a plaza and a small lawn area. Bookending the west side of building at its north and south are additional, larger flexible lawn areas. Parking is provided on site for roughly 100-120 cars.

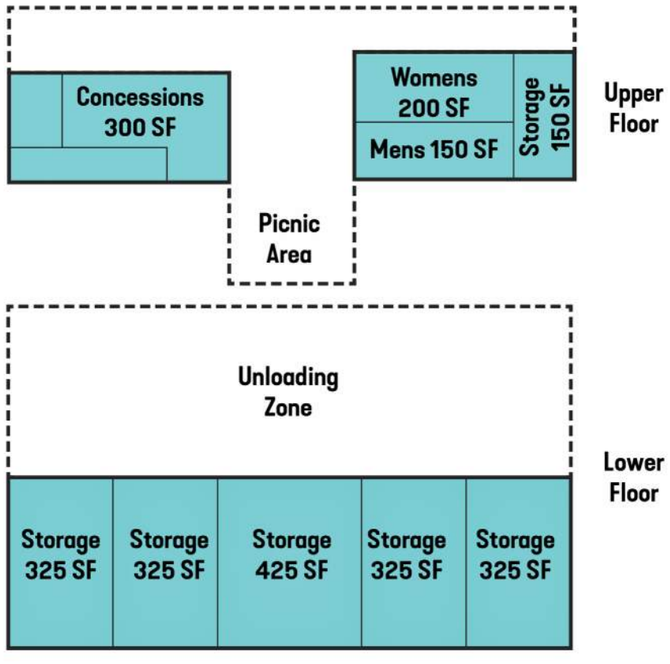


Precedent Floor Plan- Windsor Heights Community Center

Beach and Boathouse

In addition to the community building, the master plan proposes a boathouse at the south end of the lake. The boathouse will have additional restroom facilities, public changing rooms to support beach use, general storage, rental boat storage, an alternative meeting/event space on the second floor of the boathouse and may include a concessionary space.

Additional features include parking for 50 cars, paddlecraft storage and access, a perched beach, and a destination playground. A rough floor plan is provided below with dimensions consistent with similarly programmed boathouses. Final design and program will be refined in future, more detailed design phases



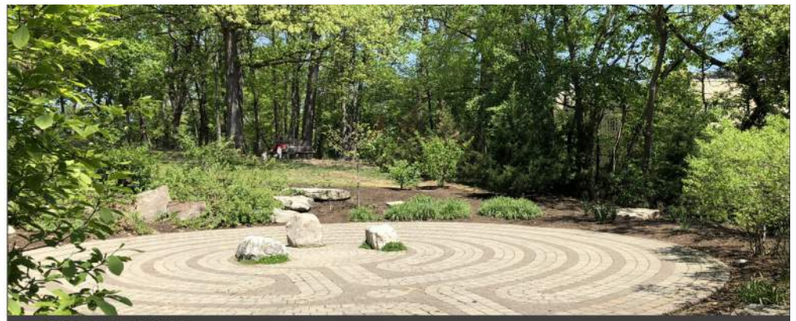
Precedent Floor Plan- Raccoon River Boathouse

Site Character

Appreciating the durability, adaptability, and resilience of the native ecology and geology, a natural prairie environment drives the site's aesthetic. Tall grass prairie meadows roll over the landscape as they would have pre-settlement; thoughtful integration of limestone in signature areas serve as metaphorical outcroppings; riparian wetland edges provide habitat to endemic mammals and waterfowl of central Iowa. These subtle symbols ground the park in the natural landscape and provide intrinsic cues that are relateable to park goers.

BRIDGED WETLAND

AMPHITHEATER WITH PAVILION



CREEKSIDE SPACE

LOOKOUT HILL

WATER SPACES

REGIONAL PLAYGROUND

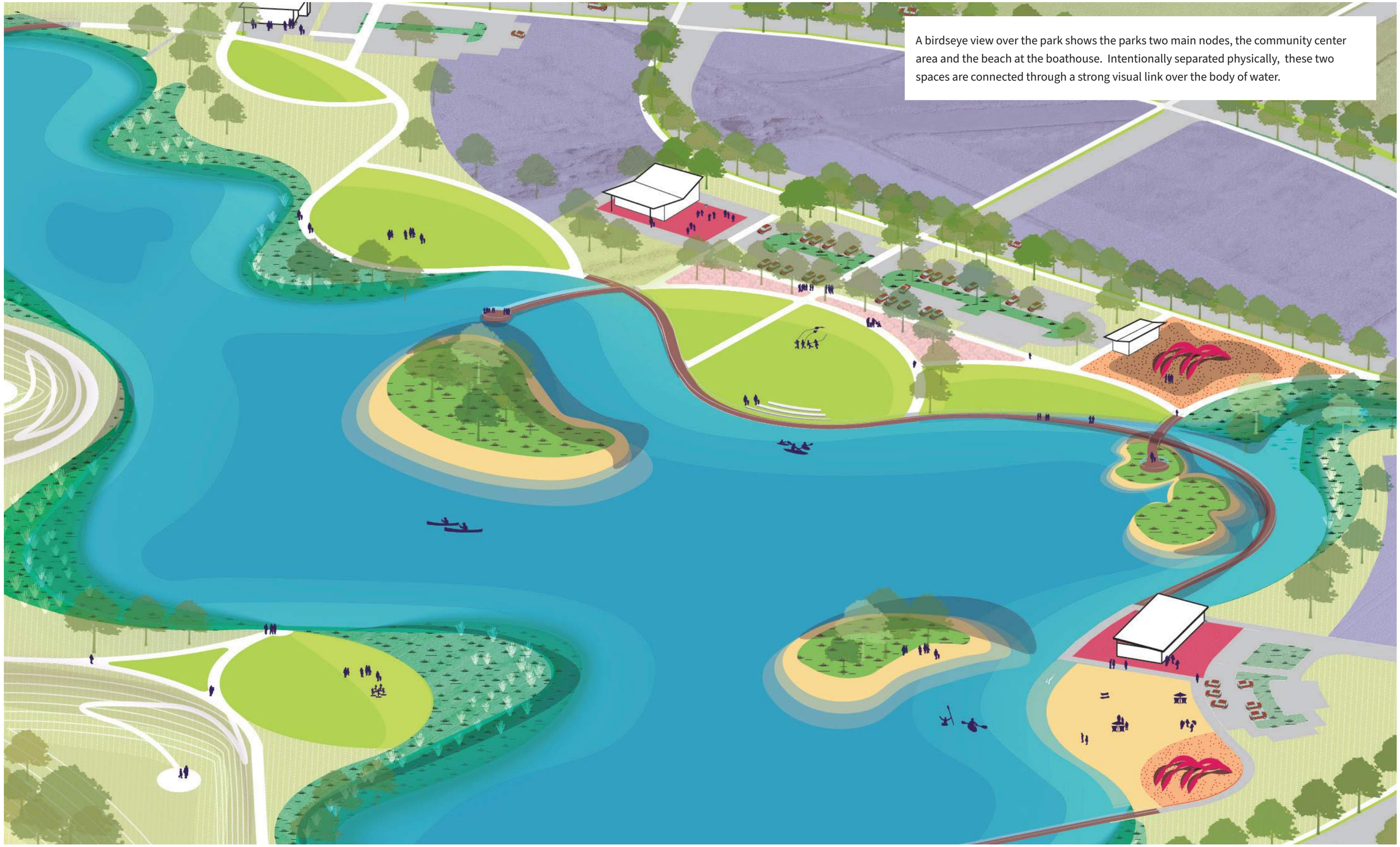
BEACH + BOATHOUSE

REVETTED EDGE AT COMMUNITY CENTER

REVETTED LAKE EDGE

TYPICAL SHORELINE CONDITION

NATIVE TALLGRASS PRAIRIE



A birdseye view over the park shows the parks two main nodes, the community center area and the beach at the boathouse. Intentionally separated physically, these two spaces are connected through a strong visual link over the body of water.

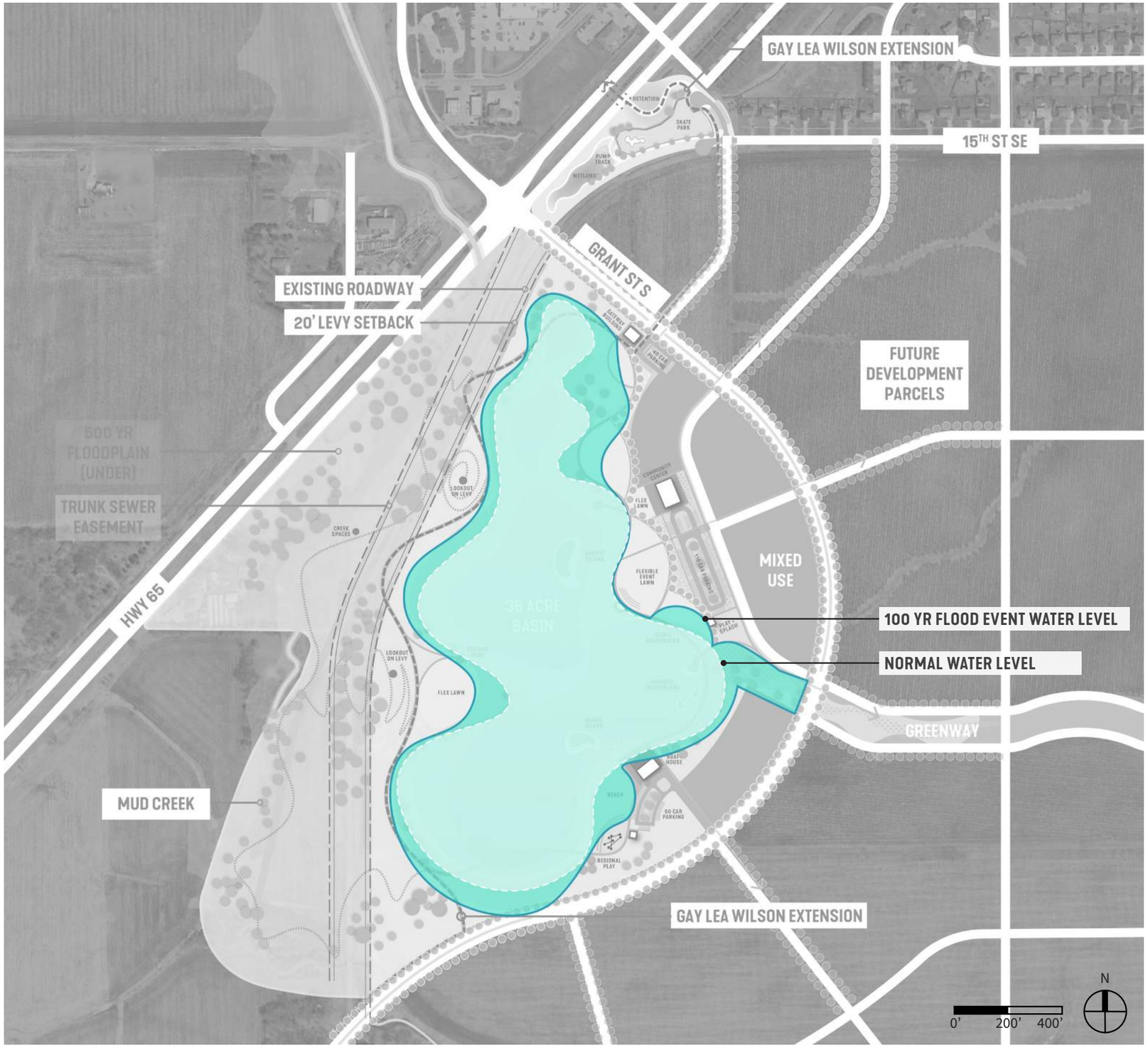
Stormwater Management

The basin is conceptually designed to provide stormwater control for approximately 100-150 acres. The diagram below illustrates the anticipated, approximate area for which the basin will provide stormwater control. A more detailed determination of the contributing area will be developed with engineering design and modeling of the basin.

The basin is expected to have a normal water elevation that maintains approximately a 36-acre surface area. However, because the basin is designed to provide stormwater control for 100+ acres it will bounce (flood) during larger events. The anticipated bounce is not expected to exceed 5', depending on the storm event. Outlet structures, that will be designed as part of future design phases, will meter the bounce of the basin. The diagram on this page illustrates where flooding might occur after a large event.

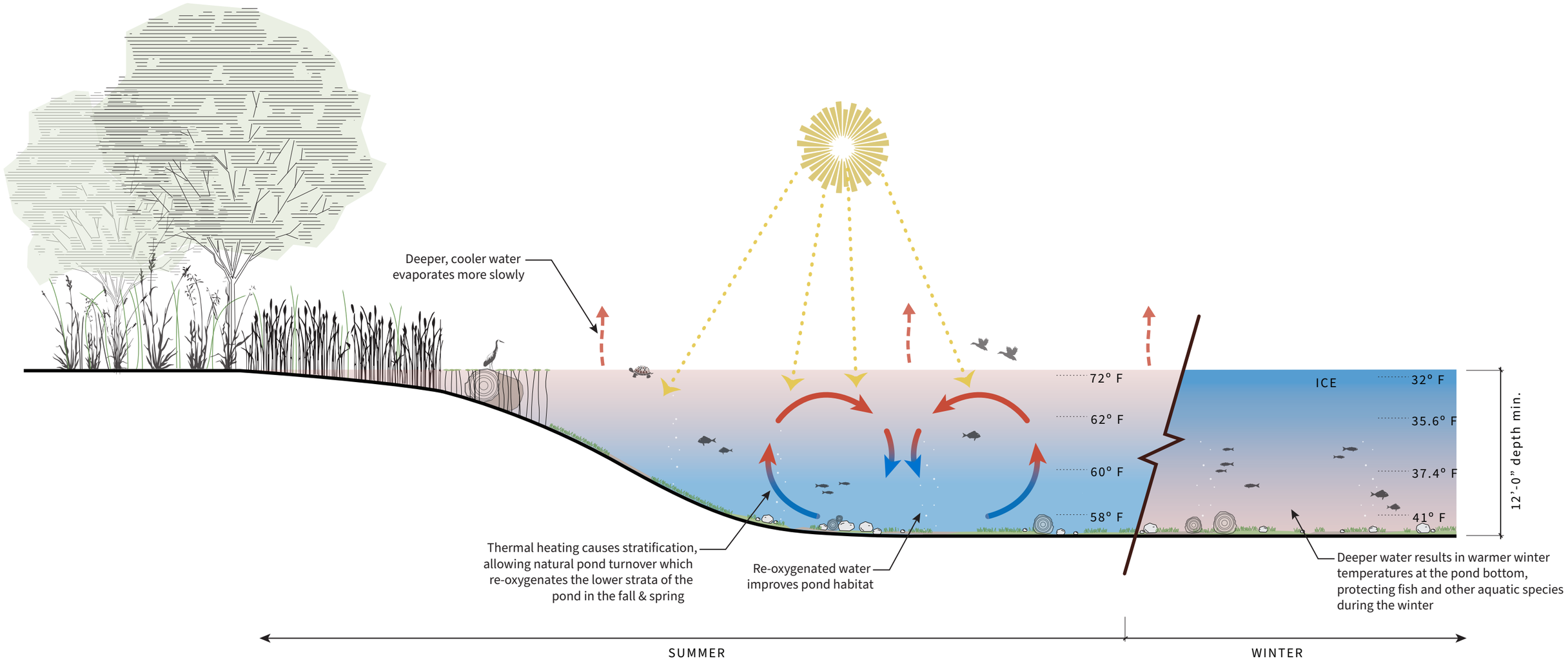
Excavation for the lake should be coordinated with the realignment of Grant Street to reduce trucking costs if the material is deemed suitable.

Approximate Area of Contributing Watershed



Approximately 10 acres, a little more than a quarter of the surface area, of the basin will need to be a minimum of 12 feet deep in order to achieve a desirable seasonal flip of surface and deep water. The flip occurs two times a year in the fall and spring, pulling oxygenated surface water to the bottom of a water body and nutrient-rich water to the surface.In addition to helping control some types of algae, the flip is also important for supporting sport fish that may be desired in the basin.

Wide fans of shallow, gently graded benches are expected to ring the shoreline to promote emergent wetland habitat at the basins edges. The benches are expected to be a minimum of ten feet wide, though benches wider than ten feet are to be expected, and vary from 0-18" deep before dropping off at a steeper grade. In addition to providing beneficial emergent wetland areas that help to control nitrogen and some other expected pollutants, these benches serve as safety shelves that allow someone who may fall into the basin unexpectedly to reach a place where they can stand up and exit the water with reduced difficulty.



* Temperatures shown are estimates for diagrammatic purposes. They reflect realistic expectations, not measured values.

PROPOSED POND TURNOVER

N.T.S.

Local Skatespot (18,000 sf)

Municipal Skate park (30,000 sf)

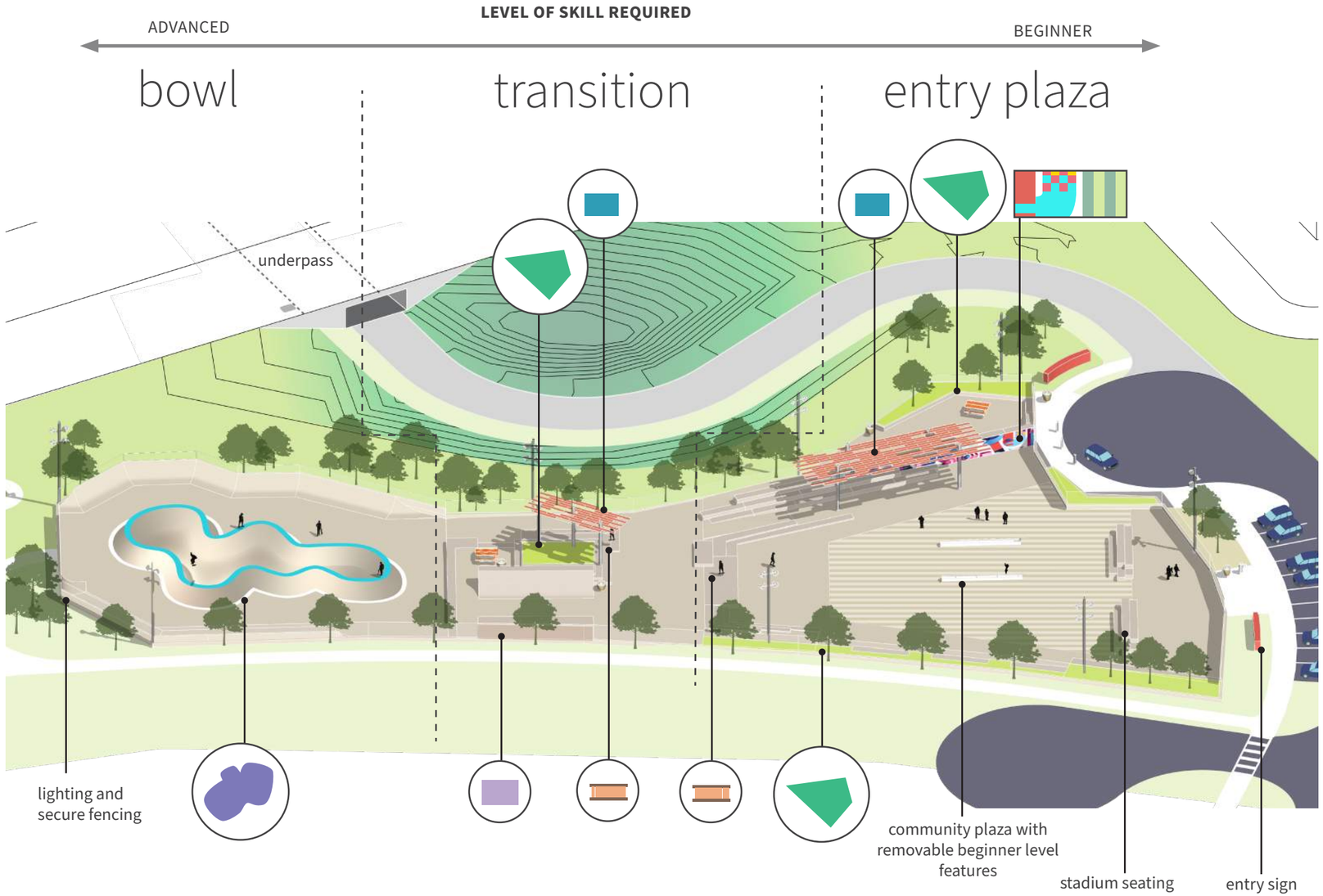
Regional Skate park Option (38,000 sf)

Regional Skate park

A component of Central Park is a regional skate park, located north of the former Grant St S alignment immediately adjacent to the future Gay Lea Wilson regional bike trail extension at the planned Highway 65 underpass and small stormwater detention facility.

Ideas and programmatic experiences for the skate park were tested at PIM #2. Following this meeting, an initial concept was developed and shared with the community. A skate park-specific stakeholder meeting was held to review the concept and discuss the types of features and skate experiences desired in the park. This meeting resulted in the modified concept shown in the master plan document. The programming recommended for the skate park following the stakeholder meeting included: a skate bowl/ pool, mini-vert/half pipe, graffiti surface, covered open-air structures, rails, stair and transitional zones between riding pieces. Room for learning and practicing skating skills and opportunities for beginners to more advanced riders were also added to the revised concept. A proposed parking lot with drop off serves as a trailhead to the Gay Lea Wilson bike path and buffers the park from the existing neighborhood to the east. Other features were added to the refined concept to make the space more appealing for skaters and those at the park with skaters including WiFi, trails internal to the skate park area and around the stormwater basins planned at the park, and a variety of seating.

The skate park is designed in a series of interconnected, but independent rooms with features accommodating a variety of skill levels from an open hardscape plaza for street-oriented tricks and beginner level features such as low rails, a transition area with vert features including a mini vert, and lastly the bowl feature for advanced skaters. Each of these rooms can be phased depending on funding opportunities or popularity and use. Parking and one or two significant riding experiences are envisioned as part of the first phase of work.



ELEMENTS INCLUDED

STRUCTURES + CANOPIES

RAILS + STAIRS

STORMWATER PLANTERS

MINI VERTS RAMPS + PIPES

POOLS/ BOWLS

GRAFFITI WALL

The entry plaza serves as a key feature of the skate park for hosting events, vendors, or community functions. The plaza area is composed of small, beginner-level elements that can potentially be removed during community functions. Informal concrete plinths edges the plaza as a skate feature while doubling as seating during skate demos, lunches, or just taking a break from skating. Built canopy, trees, water fountains, and planted areas are integrated to regulate ambient temperatures in this expanse of hardscape.

Reminiscent of the detention basin on site, the main feature of the skate park is the raised bowl feature. The bowl is raised, contrary to more common sunken bowls, to create a prominent feature at eye-level to draw skaters to the western edge of the park.

Come on down, friends! It's vendor Saturday at the skatepark!

Entry Plaza

Raised Bowl

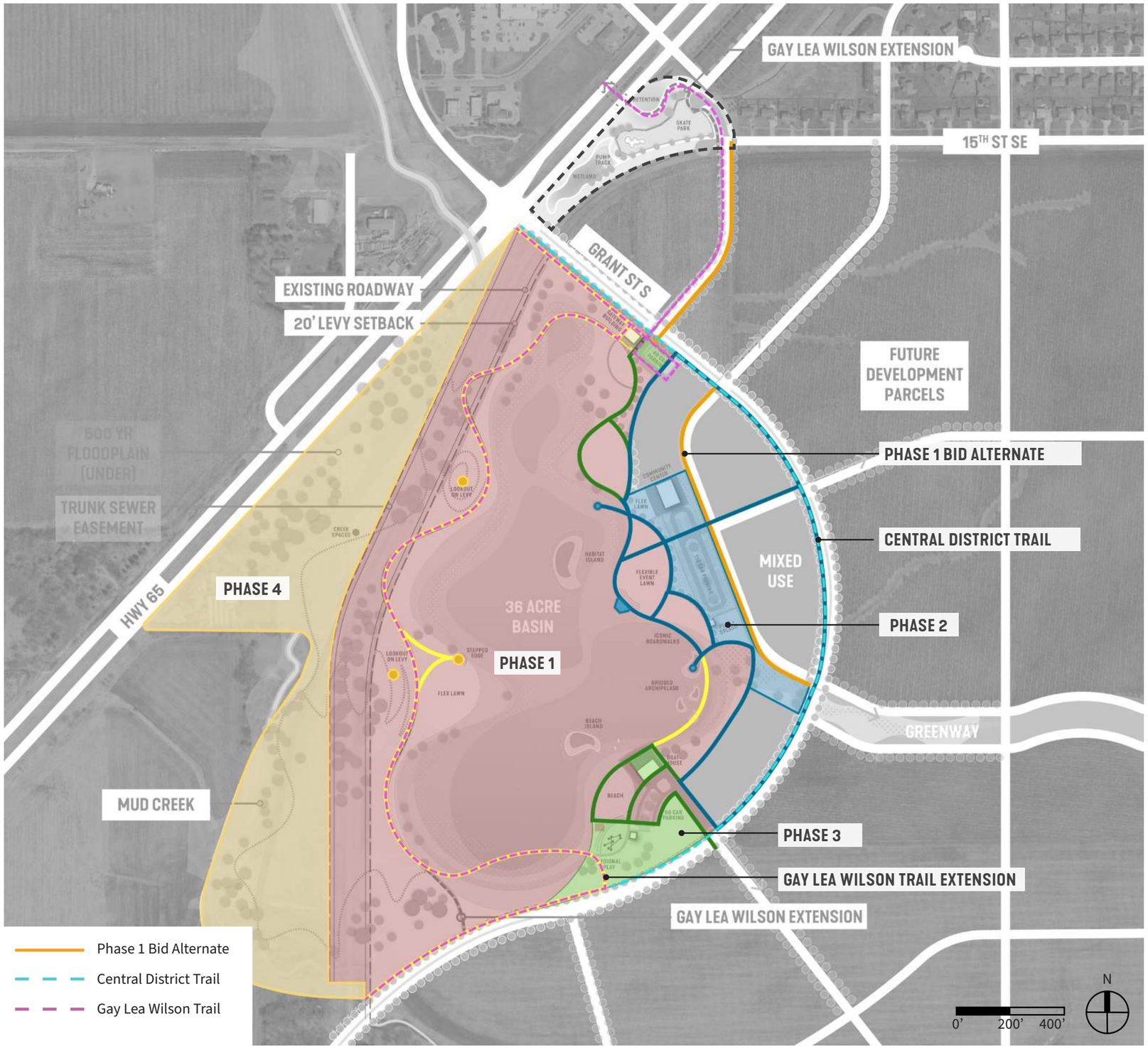
Integrated Stormwater Management

Phasing Plan

Legend

- **Phase 1**: Central Park basin, levee, loop trail, north gateway and parking, flexible lawns, boardwalk
- **Phase 2**: Community Blvd and parking, splash/play, greenway gateway, amphitheater
- **Phase 3**: boathouse and parking, beach and additional trail and prairie restoration, regional destination playground,
- **Phase 4**: boardwalks, gateway building, look outs and lookout trails, Mud Creek restoration

The skate park component is a project that has its own prospective phases and can move independent of the phasing of the rest of Central Park.



Opinion of Probable Cost

The attached opinion of probable cost for construction describes the order of magnitude for anticipated costs for construction of the improvements shown in the master plan. Costs are based on construction costs from recently completed construction projects designed by SmithGroup and Veenstra & Kimm.

The costs are presented as the total cost for constructing all proposed improvements if built all at once in the 'Extended' column and also as they could be broken down over four phases.

The cost presented does not include cost for construction of Grant St S or other adjacent roads. There may be some cost 'sharing' between the Grant St S realignment project and this project that are NOT reflected in this estimate

Permitting

The following permits are expected for development of Central Park. Permitting would be part of future design. Most permit applications are developed when design of a site is roughly 50-60% designed.

Anticipated permitting includes:

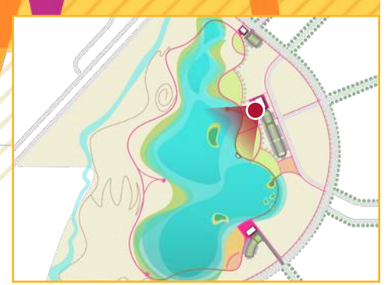
1. Polk County Permits for Stormwater Control
2. City of Bondurant Building Permits
3. Iowa Department of Natural Resources, Floodplain Development
4. US Army Corps of Engineers.

The IDNR and USACOE permits will be prepared as a joint permit application. Additional reviews may be required depending on funding sources.

In addition, the following studies will be needed for the preparation of additional and final design:

1. Wetland Delineation
2. Identification of on-site and nearby State and Federally Threatened or Endangered species
3. Cultural and Archaeological Resources survey
4. Professional land survey to include topography, structures, waterways/floodways, delineated wetlands, above and below ground utilities, major or significant existing vegetation, easements or other legal accesses.

					Phase 1	Phase 2	Phase 3	Phase 4	Skatepark
		Quantity	***Unit Price***	***Extended***					
Generals	Mobilization	1	$ 4,090,000	$ 4,090,000	$ 1,000,000	$ 1,500,000	$ 1,000,000	$ 500,000	$ 90,000
	Staking	1	$ 222,000	$ 222,000	$ 100,000	$ 40,000	$ 40,000	$ 30,000	$ 12,000
	Erosion PPP Management	1	$ 412,000	$ 412,000	$ 250,000	$ 50,000	$ 50,000	$ 50,000	$ 12,000
Demo	Pavement Removal	12,500	$ 10	$ 130,000	$ 120,000			$ 10,000	
	Topsoil Strip/Salvage	150,000	$ 5	$ 770,000	$ 600,000	$ 50,000	$ 50,000	$ 50,000	$ 20,000
	Topsoil Spread	75,000	$ 7	$ 501,000	$ 375,000	$ 30,000	$ 30,000	$ 50,000	$ 16,000
	Clear and Grub	1	$ 50,000	$ 50,000	$ 50,000				
	Pond Excavation	650,000	$ 7	$ 4,225,000	$ 4,225,000				
	Islands	2	$ 50,000	$ 100,000	$ 100,000				
	Levee Grading	1	$ 100,000	$ 100,000	$ 50,000			$ 50,000	
Site Prep	Sanitary Sewer	3,000	$ 156	$ 468,000	$ 450,000				$ 18,000
	Sanitary Manholes	6	$ 15,000	$ 90,000	$ 90,000				
	Water Main	1	$ 218,000	$ 218,000	$ 200,000				$ 18,000
	Storm Sewer	1	$ 540,000	$ 540,000	$ 300,000	$ 100,000	$ 100,000		$ 40,000
	Electrical System	1	$ 340,000	$ 340,000	$ 200,000	$ 50,000	$ 50,000		$ 40,000
	Bank Stabilizations	5	$ 60,000	$ 300,000	$ 250,000			$ 50,000	
	Creek Grading	15,000	$ 55	$ 820,000	$ 300,000			$ 300,000	$ 220,000
	Wetland Development	2	$ 20,000	$ 30,000	$ 30,000				
Site	River/Water Edge Seating	6	$ 50,000	$ 300,000		$ 100,000	$ 100,000	$ 100,000	
	Rock Outcroppings	1	$ 300,000	$ 300,000	$ 300,000				
	Boardwalk	36,000	$ 211	$ 7,600,000		$ 2,400,000		$ 5,200,000	
	Kayak Access	225	$ 200	$ 45,000	$ 45,000				
	Plaza	45,000	$ 82	$ 3,675,000	$ 500,000	$ 2,375,000	$ 500,000		$ 300,000
	Seating	25	$ 4,160	$ 104,000	$ 15,000	$ 40,000	$ 30,000		$ 19,000
	Multi Use Trails	20,000	$ 85	$ 1,700,000		$ 500,000	$ 500,000	$ 700,000	
	Pedestrian Bridges	2	$ 600,000	$ 1,200,000	$ 600,000			$ 600,000	
	Parking	16,000	$ 112	$ 1,795,000	$ 400,000	$ 700,000	$ 400,000	$ 100,000	$ 195,000
	C/G	6,000	$ 50	$ 300,000	$ 100,000	$ 100,000	$ 100,000		
	Crushed Stone Surface	15,000	$ 80	$ 1,200,000	$ 400,000		$ 400,000	$ 400,000	
	Paved Access	10,000	$ 170	$ 1,700,000	$ 500,000	$ 1,000,000		$ 200,000	
	Retaining systems	3	$ 100,000	$ 300,000	$ 50,000	$ 100,000	$ 100,000	$ 50,000	
	Playground surfacing	45,000	$ 37	$ 1,650,000		$ 700,000	$ 950,000		
	Play Area 1	1	$ 900,000	$ 900,000		$ 900,000			
	Play Area 2	1	$ 2,500,000	$ 2,500,000			$ 2,500,000		
	Beach	2,500	$ 100	$ 250,000	$ 250,000				
	Lighting/accent	1	$ 523,000	$ 523,000	$ 100,000	$ 250,000	$ 100,000	$ 50,000	$ 23,000
	Landscaping	1	$ 600,000	$ 600,000	$ 150,000	$ 250,000	$ 200,000		
	Swings	4	$ 20,000	$ 80,000		$ 40,000		$ 40,000	
	Native Grasses	19	$ 12,211	$ 232,000	$ 190,000				$ 42,000
	Lawn Areas	5	$ 15,000	$ 75,000	$ 40,000				$ 35,000
	Irrigation	2	$ 109,000	$ 218,000		$ 200,000			$ 18,000
	Gateway Building	1	$ 700,000	$ 700,000				$ 700,000	
	Community Center	1	$ 6,000,000	$ 6,000,000		$ 6,000,000			
	Boat House	1	$ 3,750,000	$ 3,750,000			$ 3,750,000		
	Rest Rooms	1	$ 250,000	$ 250,000	$ 250,000				
	Skate Equipment	1	$ 1,300,000	$ 1,300,000					$ 1,300,000
	Subtotal			$ 52,653,000	$ 12,580,000	$ 17,475,000	$ 10,950,000	$ 9,230,000	$ 2,418,000
	Contingency 20 percent			$ 10,530,600	$ 2,516,000	$ 3,931,875	$ 2,737,500	$ 2,538,250	$ 664,950
	Engineering, 20 percent			$ 12,636,720	$ 3,019,200	$ 4,281,375	$ 2,737,500	$ 2,353,650	$ 616,590
	Total*			:0	$ 18,115,200	$ 25,688,250	$ 16,425,000	$ 14,121,900	$ 3,699,540
	*Does not include acquisition costs.								$ 78,049,890



Appendix

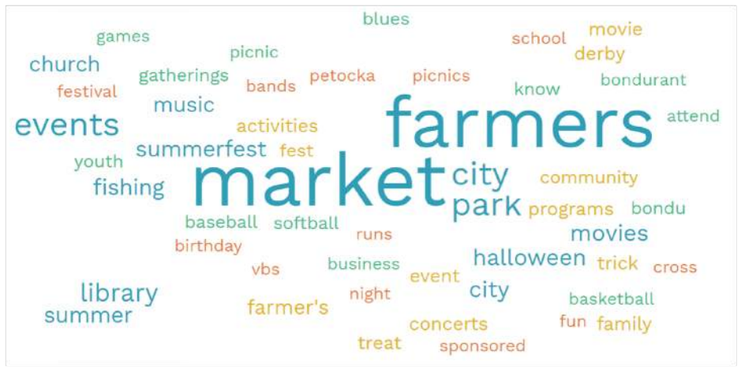
Feedback from Surveys and Public Input Meetings

Online Survey 1

Of the nearly 250 respondents to the online survey, nearly half are between 31-40 years old and live within 2 miles of the project site. This indicates walkability and providing recreational opportunities for this demographic and their young children will drive park success. 'Walking' and 'playgrounds' were identified as primary uses of existing parks which supports the desire for safe pedestrian connections and a need for playgrounds.

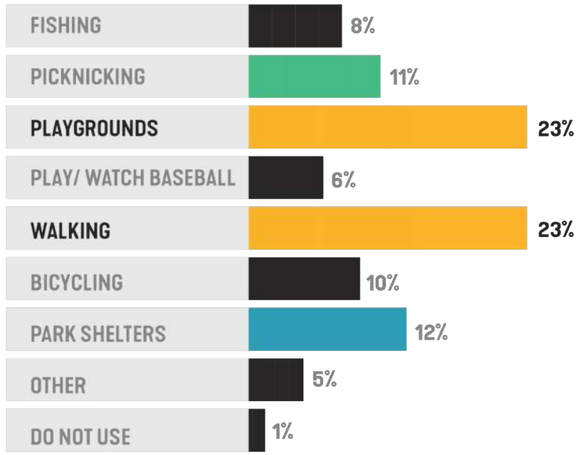
TOTAL SURVEY RESPONSES:
246

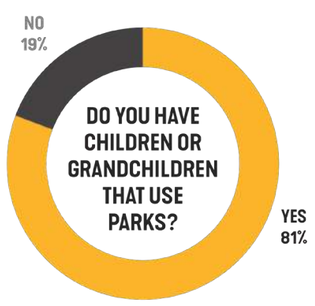
WHAT ARE THE EXISTING EVENTS THAT TAKE PLACE IN BONDURANT PARKS TODAY?

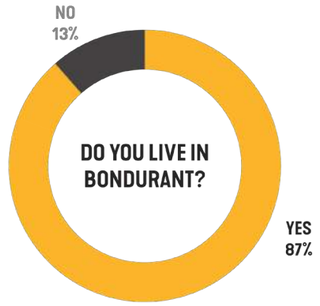


96% OF RESPONDENTS SAY THESE EVENTS ARE HELD IN THE RIGHT LOCATION.

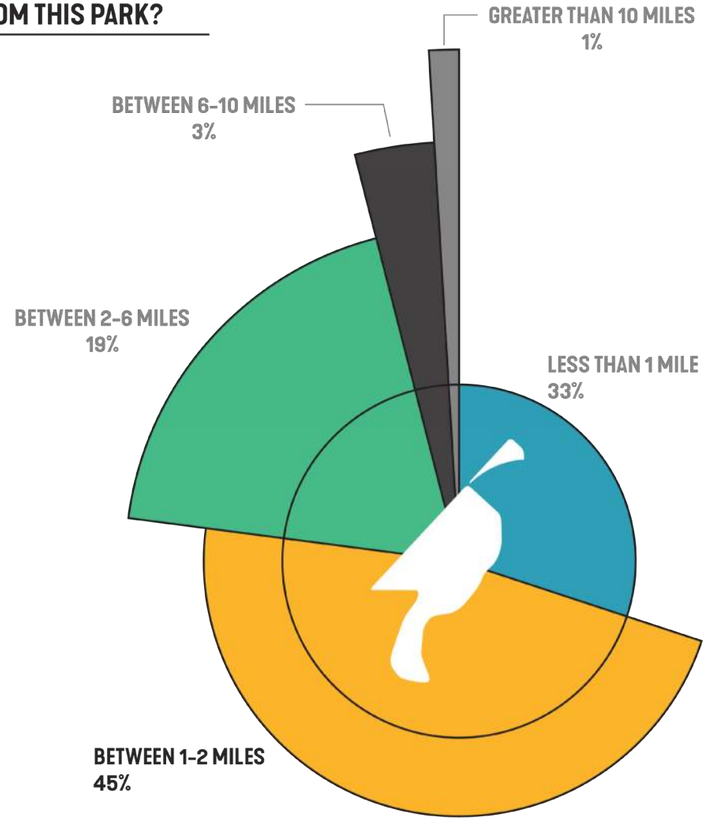
HOW DO YOU USE THE EXISTING PARKS?

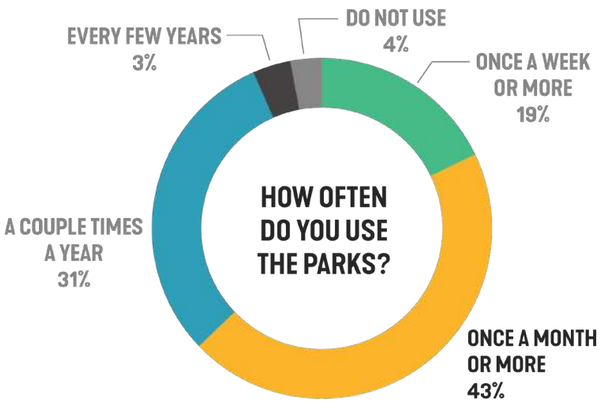


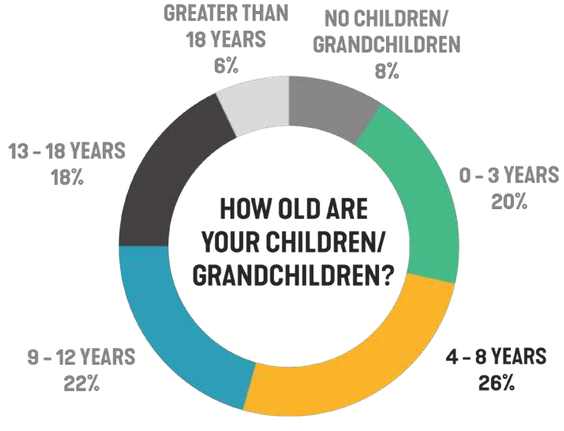


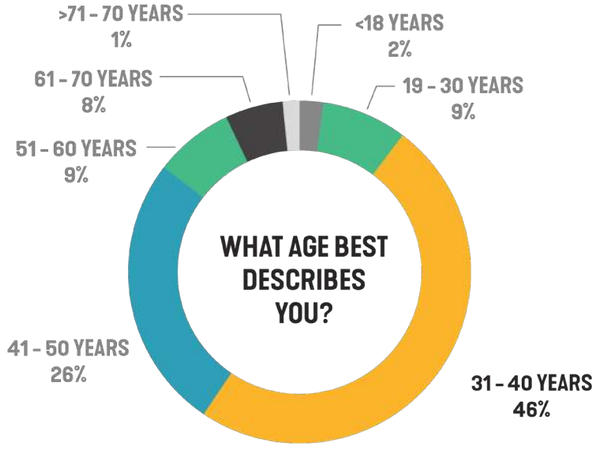


HOW FAR DO YOU LIVE FROM THIS PARK?









HOW DO YOU USE THE EXISTING PARKS?

ARE THERE EVENTS YOU WOULD LIKE TO SEE IN BONDURANT THAT ARENT AVAILABLE TODAY?

OUTDOOR CONCERTS

HOLIDAY FESTIVITIES

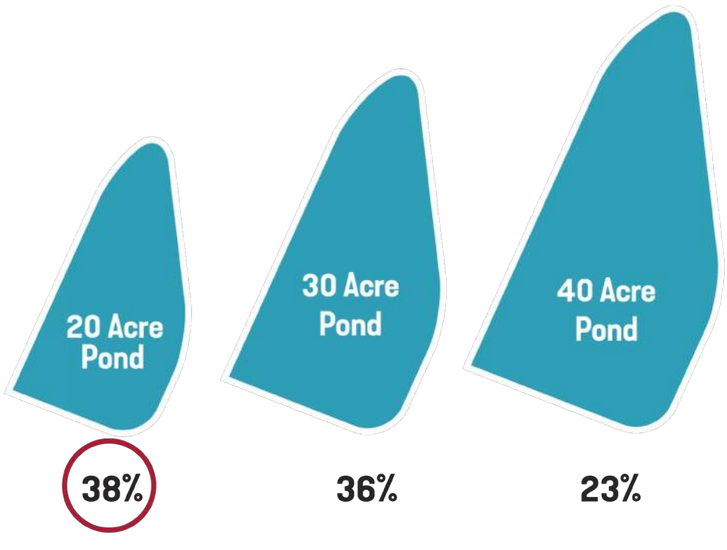
HIKING TRAILS

WHAT PROGRAMMATIC FEATURES ARE MOST IMPORTANT ON SITE?

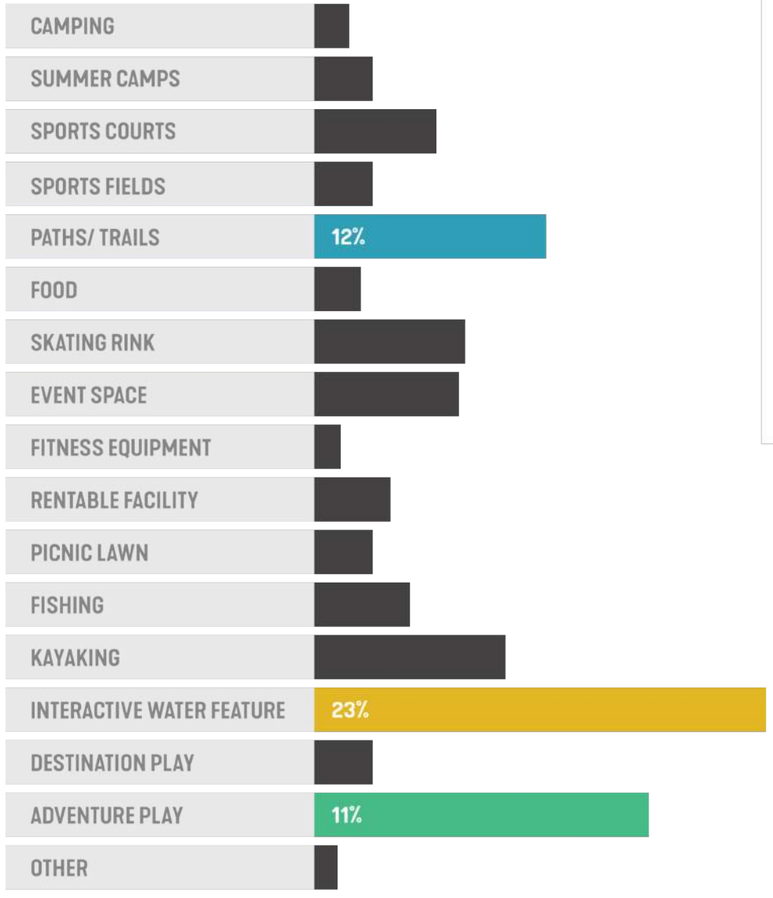
COMMUNITY CENTER
~100 PEOPLE

ACTIVE
WATER REC

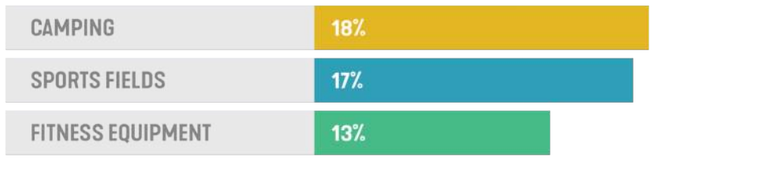
SEASONAL EVENTS



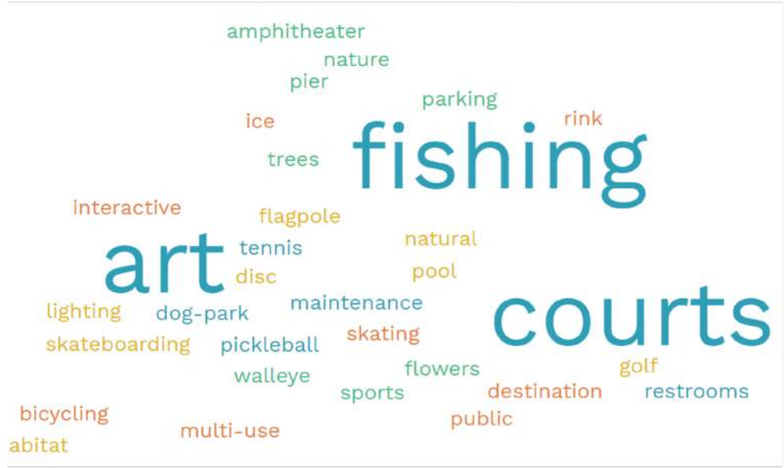
I WOULD LIKE TO SEE...



I DO NOT WANT TO SEE...



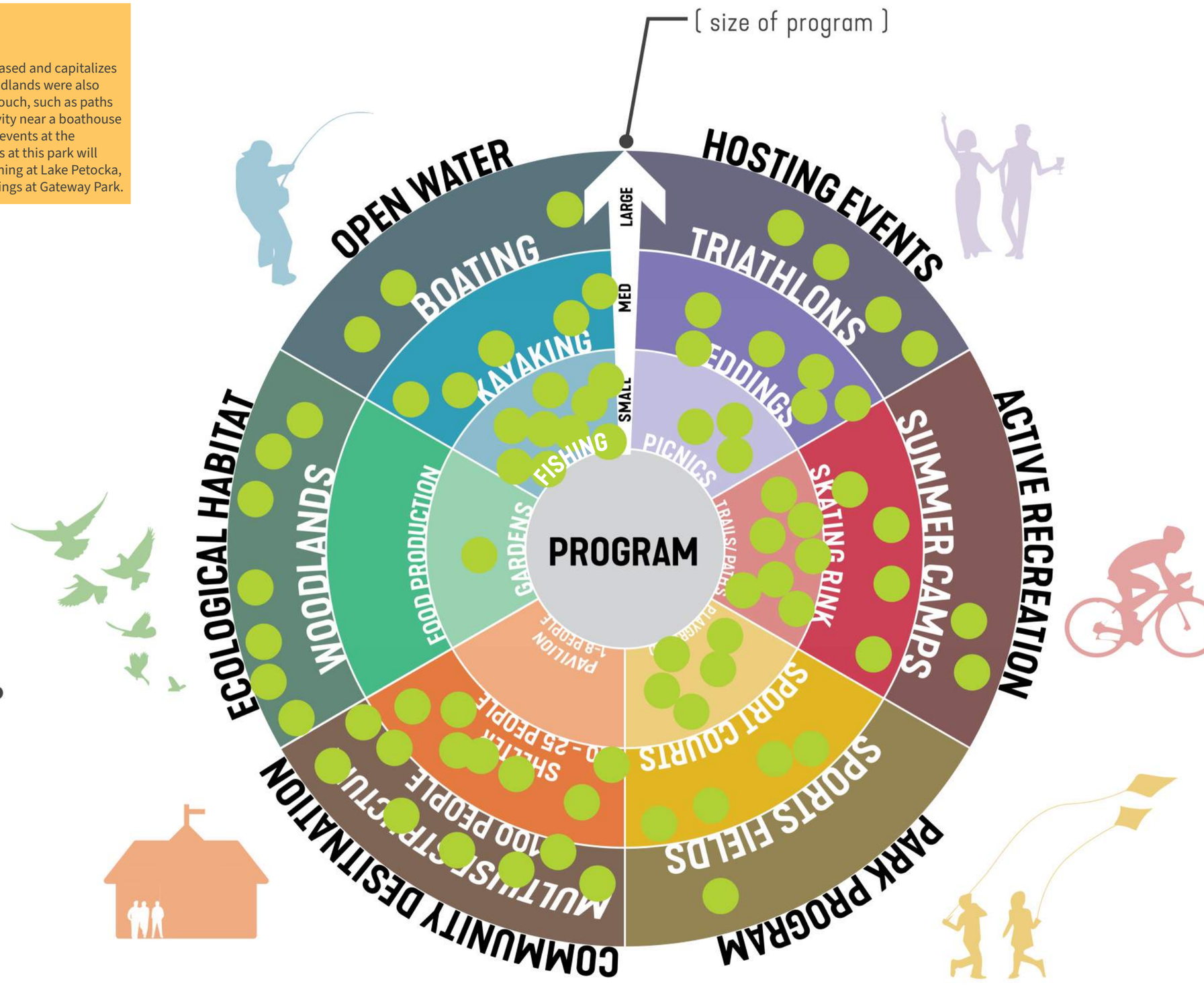
WHAT DID WE MISS?



THIS PROJECT WILL BE SUCCESSFUL IF...

Public Input Meeting I

The public gravitated toward park programming that is seasonal based and capitalizes on Bondurant's scenic beauty such as ice skating and fishing. Woodlands were also selected to provide ecological habitat. Programming with a light touch, such as paths and trails, are preferred park-wide with concentrated areas of activity near a boathouse or community center. The future community center will host civic events at the park or be rented for private functions for 150-200 people. The uses at this park will complement the uses of other public spaces in Bondurant such fishing at Lake Petocka, active sports in the complexes, and small-scale community gatherings at Gateway Park.



WHAT IS MOST IMPORTANT?

Each segment of the circle depicts a potential programmatic activity on site. They are arranged by program type and size of activity. Activities requiring a small amount of space are near the center and larger activities are on the outside ring.

VOTE FOR YOUR PREFERENCE

Record your vote by placing a dot on the programmatic element you most want to see on site.

Public Input Meeting I

Programs that are non-intensive are preferred, such as trails and adventure based recreation. The community also desires a well-connected path system for 5K events, flexible plazas that could be converted to skating rinks in the wintertime, and a rentable facility.

I WOULD LIKE TO SEE
I DO NOT WANT TO SEE

Place a green dot for programmatic elements you would like to see on site.

Place a red dot for items you do not want to see on site.

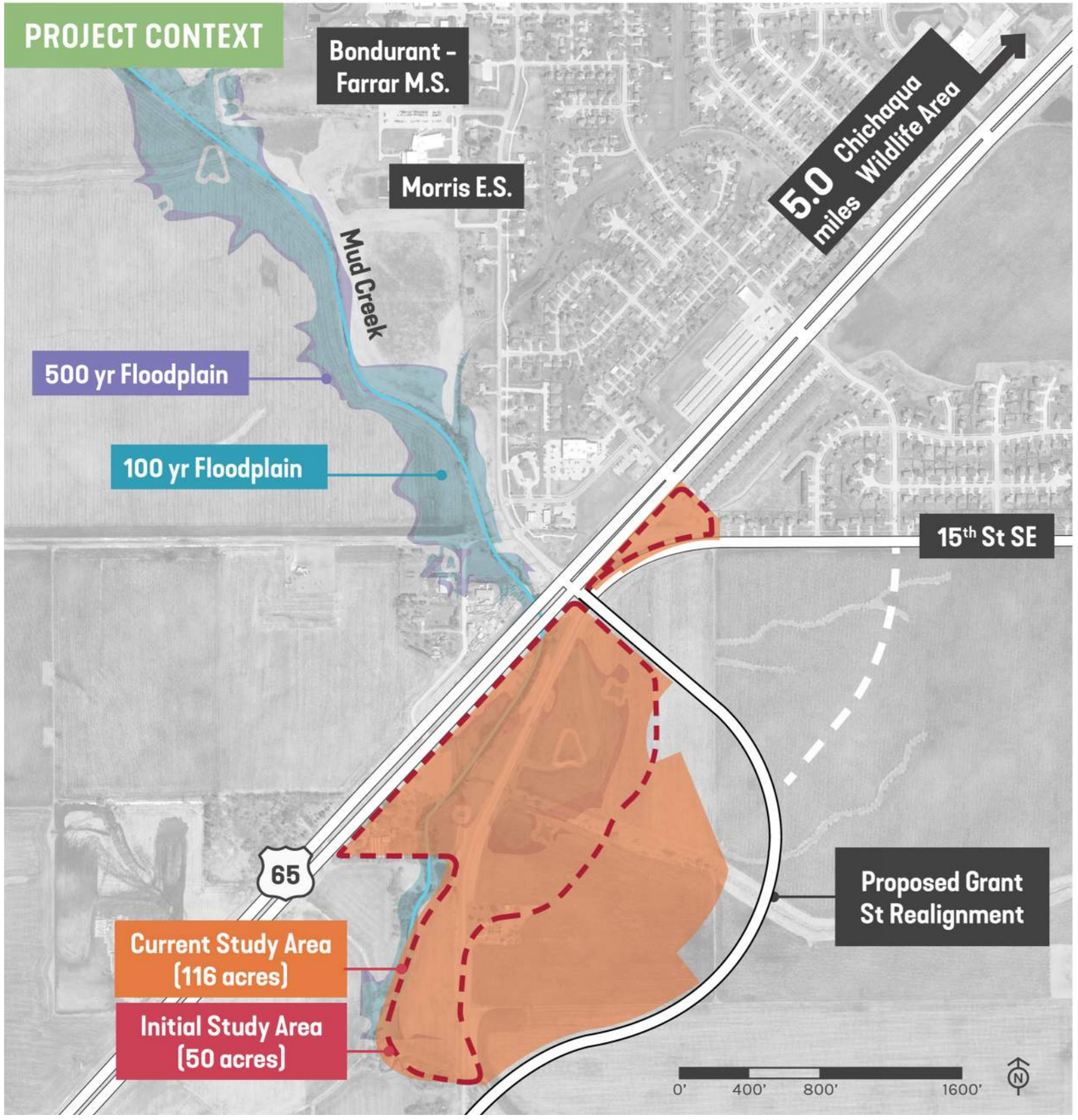
additional thoughts?

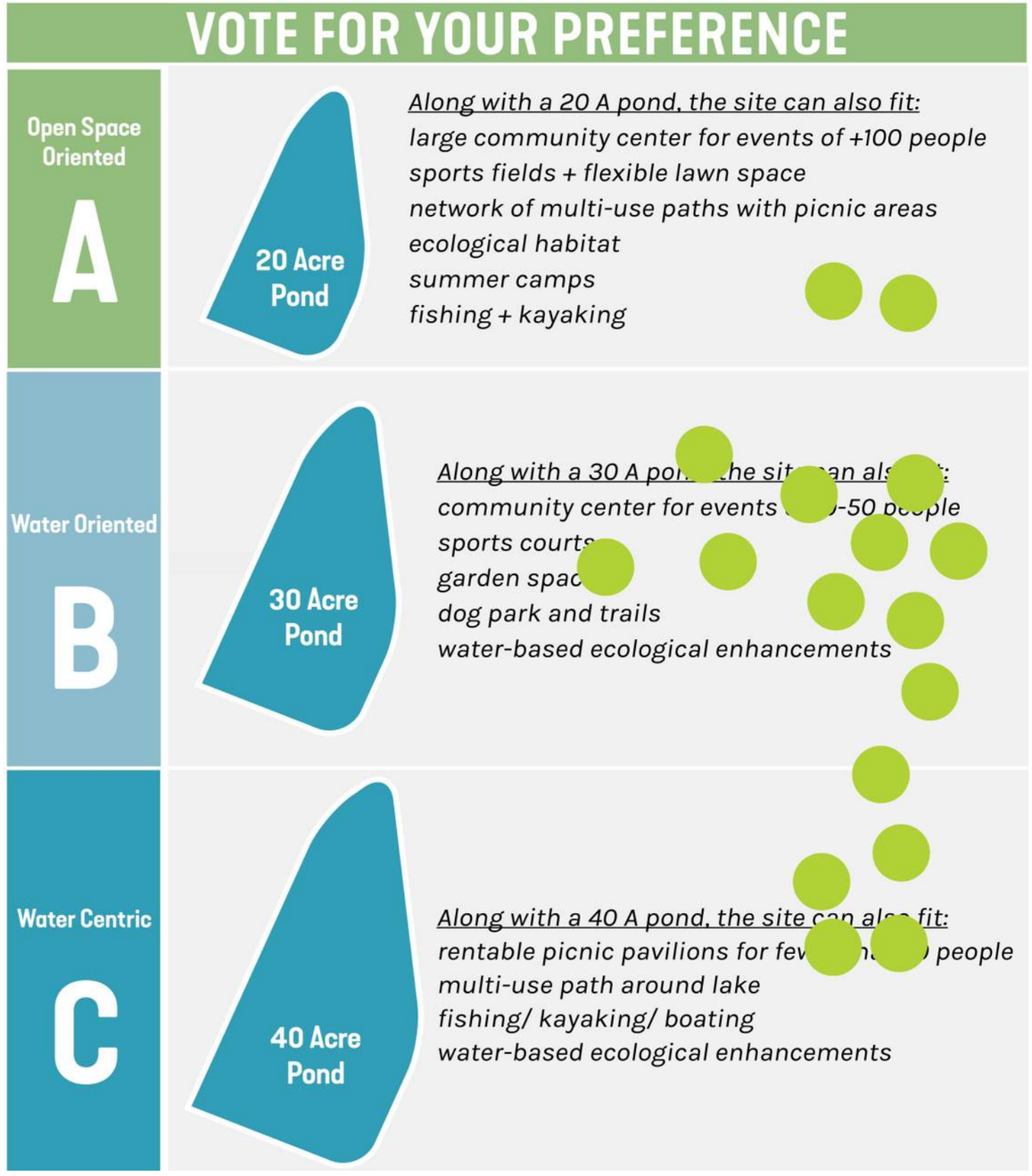
write them here

SLEDDING HILL
FUTSAL
HANDICAP PLAY EQUIPMENT
PERMANENT RESTROOMS
BUILDING TO HOST EVENTS
PRESERVE MATURE HEALTHY TREES
SWIMMING AREA
RUNNING TRAILS
FOOD TRUCK AREA
HABITAT

Public Input Meeting 1

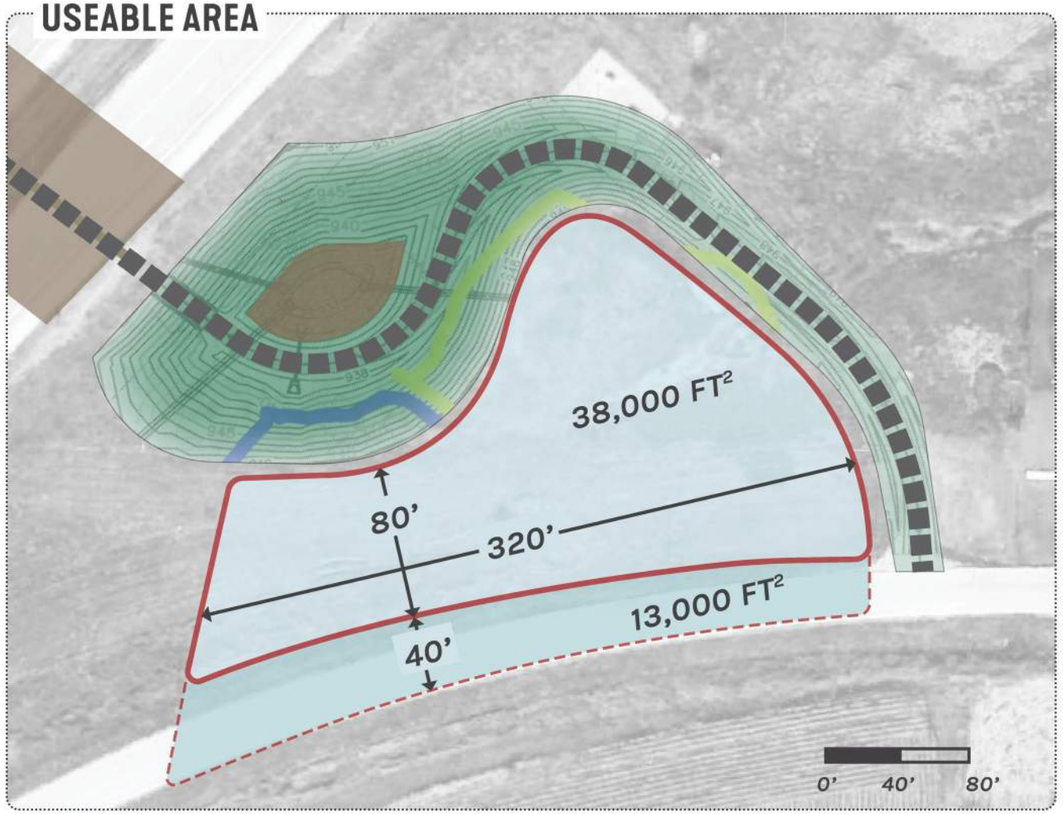
Project context and initial project drivers were presented at the first public meeting. The participants voted on what scale of water body they would like to see, with most preferring a 'large, but not too large' approach so the park had room for other activities such as play and plaza space. Water-based recreation is a favorite including paddleboarding, kayaking, and fishing. A beach, boathouse, and community center are also among the favorite programs selected by the community.





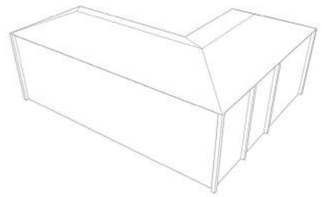
Public Input Meeting I

To start the discussion on the future skate park, the design team prepared playing pieces with typical elements found in a skate park such as ramps, pipes, stair sets, and pools. The public were asked to vote for their favorites, and if inclined, lay the pieces out to compose a skate park design. Most participants liked the idea of including some, if not all, of these elements, but suggested to visit with the skateboarding community to specifically understand what a successful skate park looks like here.

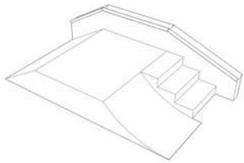


TYPICAL ELEMENTS

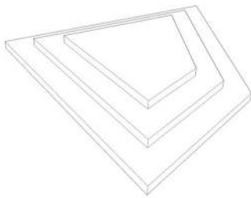
STRUCTURES



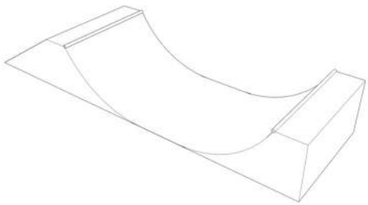
RAILS + STAIRS



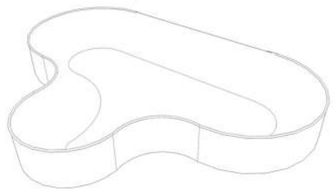
PLANTERS



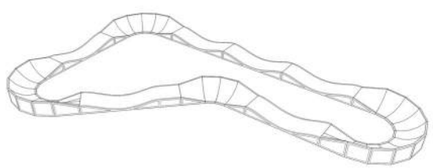
RAMPS + PIPES



POOLS/ BOWLS



PUMP TRACK

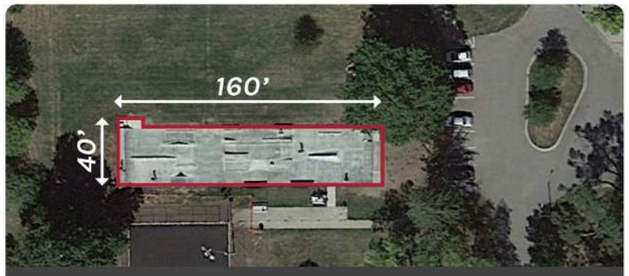


Public Input Meeting 1

Skate park precedents were presented to the public to solicit feedback. Major takeaways include 1) identifying a unique, signature piece to define this skate park, 2) integrating stormwater management to create a consistent them with the overall park, 3) creating an accessible, inclusive place for a variety of skill levels

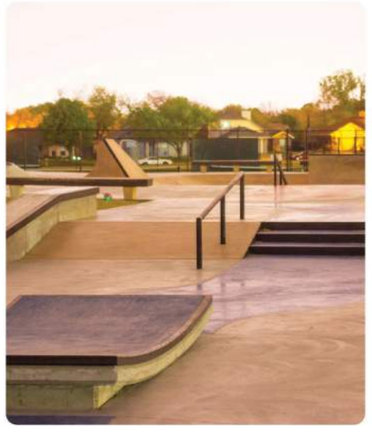
SKATEPARK PRECEDENTS

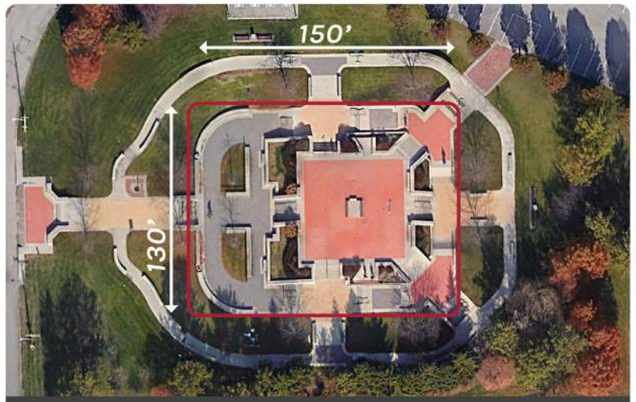
GRINNELL SKATEPARK: 5,500 FT²



AMERICAN LEGION (WDM, IA) : 6,400 FT²

OAKLAND PARK (PONTIAC, MI): 18,000 FT²





DC SHOES (KETTERING, OHIO): 20,000 FT²

ANN ARBOR SKATEPARK (MI) : 23,000 FT²

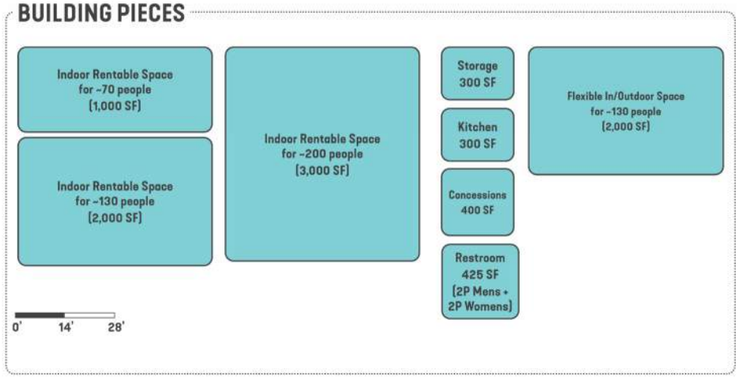
MCPIKE PARK (MADISON, WI) : 24,000 FT²

Public Input Meeting I

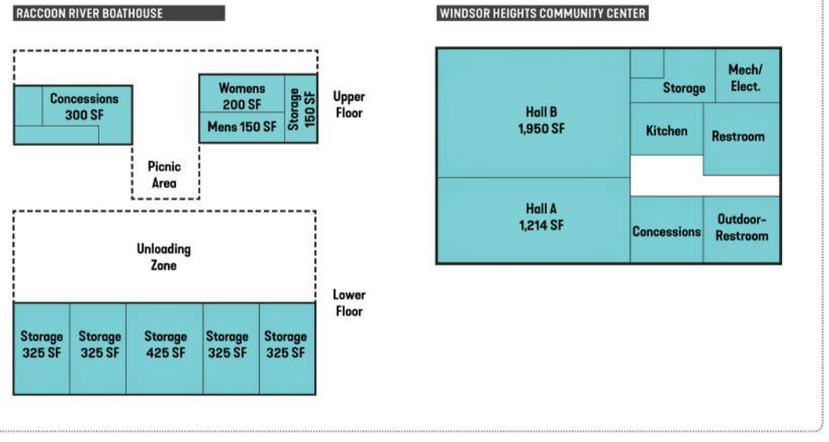
The notion of a community center was explored in both form and function. A modern, elegant, performance-based building that supports ecology with green roofs, energy generation, and water reuse is preferred. Buildings with glassy facades and flat roofs that extend over an outdoor plaza supports the community's vision. The building will also serve as a social generator hosting community-wide events or a smaller, private gatherings, such as weddings or graduations.

DESIGN YOUR COMMUNITY CENTER

BUILDING PIECES



PRECEDENT FLOORPLANS



Additional Thoughts?

Write them here

SLEDDING HILL

PERMANENT RESTROOMS, NOT PORTAPOTTIES

TREES, KEEP THE MATURE HEALTHY TREES

SWIMMING AND KAYAKING AREAS

MAKE THIS A DRAW FOR SURROUNDING COMMUNITIES

ATTRACT WILDLIFE

FUTSAL-SIZED MINI PITCHES

HANDICAP PLAY EQUIPMENT

INDOOR BUILDING TO HAVE SMALL EVENTS

LOTS OF RUNNING AND WALKING TRAILS

FOOD TRUCK AREA

Public Input Meeting 2

Alternatives were presented to the public in the second input meeting. Overwhelmingly, the community supports the idea of a series of small, but interconnected lakes composing a blue trail over the idea of a singular, expansive body of water. The town center development pattern facing the water with public spaces tucked into the waters eddies is an intriguing idea that was taken forward to drive the preferred site plan.

Beyond the concepts, park composition was explored through a 'build-a-park' exercise were stakeholder and the public were asked to arrange their preferred park scheme using a kit-of-parts of park features including various shaped water bodies, playgrounds, community centers, and parking lots.

This concept is composed of a single-part water body fronting mixed use with primary open space to the south.

Concept B shapes the water into two main bodies with primary gathering space linking the mixed use development.

The third concept forms a multi-part water body with uses and open space nestled around the water.

Public Input Meeting 2

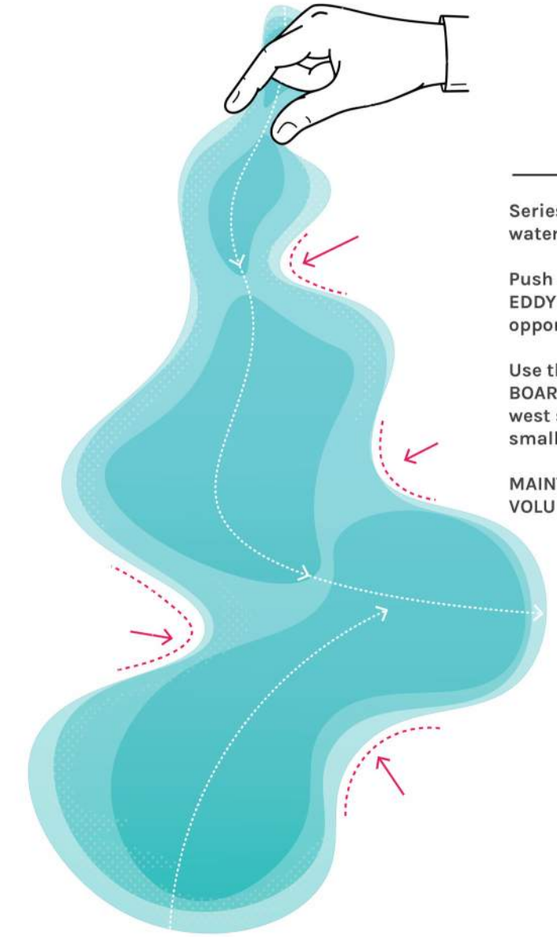
Quickly in the second public meetings, an idea to keep the park naturalized and have two nodes of activity arose. The first node at the community center will have the most intense usage and accommodate the most parking. This will serve as the front door to the park and will face future development. Physically separate, but visually linked, will be a second node with recreation-based activities including a boathouse, beach, and nature play. The boathouse will include flexible space that can used for learning sessions or small group activities.

WHAT PROGRAMMATIC FEATURES ARE MOST IMPORTANT ON SITE?

COMMUNITY CENTER ~175 PEOPLE

ACTIVE WATER REC

SEASONAL EVENTS



WATER BODY

Series of SMALL, CONNECTED water bodies forming a blue trail

Push and pull edges to CREATE EDDY SPACES for programmatic opportunities

Use the PINCH POINTS FOR BOARDWALKS + BRIDGES to the west side of the park to create smaller loops

MAINTAIN 30 acres for adequate VOLUME for water storage

COMMUNITY CENTER

FORMAL NODE that relates to commercial development and DISTINCT from the BOATHOUSE NODE

Include MULTIPLE HALLS that can be combined to accommodate both small and LARGE EVENTS.

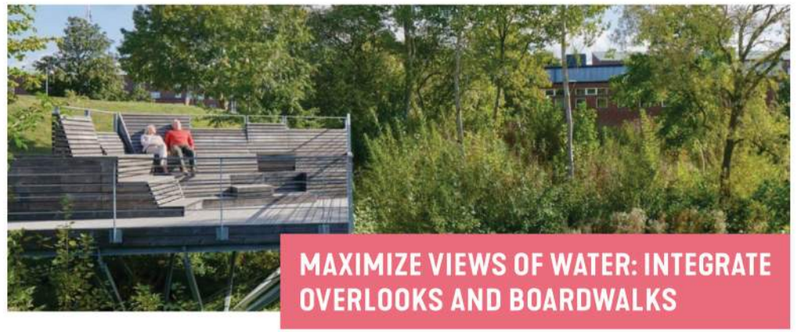
FLEXIBLE SPACE with the ability for INDOOR events to EXPAND OUTDOORS with covered space

SUSTAINABLE and forward focused in style and function

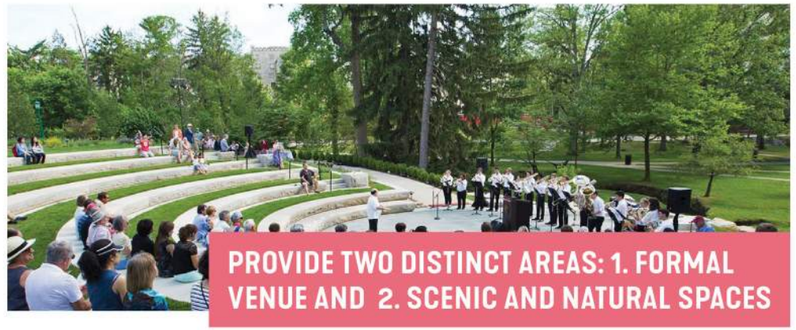
Grand, PROMINENT STRUCTURE with patio space and overlooks

ENGAGE THE WATER: ADD A BEACH!

PROVIDE SEASONAL INTEREST: SPLASH TO ICE SKATING



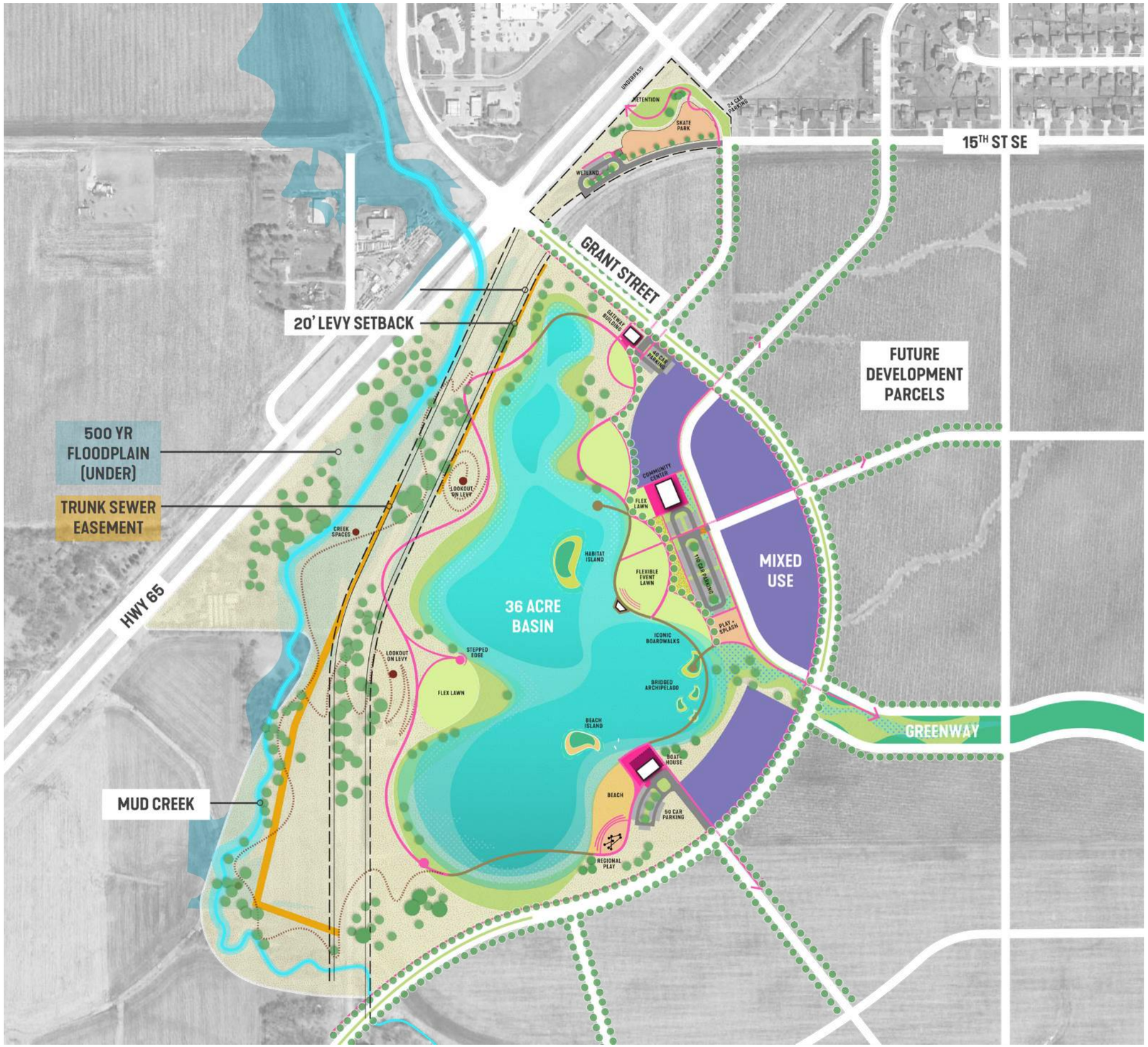
MAXIMIZE VIEWS OF WATER: INTEGRATE OVERLOOKS AND BOARDWALKS



PROVIDE TWO DISTINCT AREAS: 1. FORMAL VENUE AND 2. SCENIC AND NATURAL SPACES

Public Input Meeting 3

The preferred site plan was presented at the third public meeting.

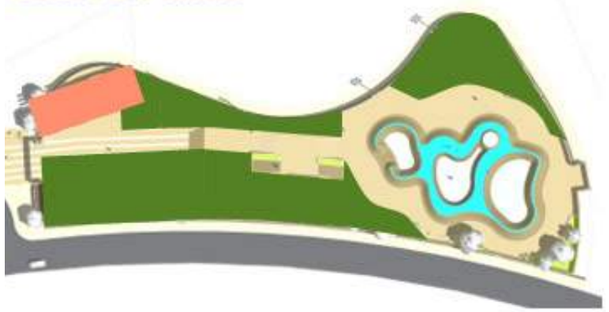


Public Input Meeting 3

The skate park concept was presented at the third public input meeting. The public liked the series of three rooms to accommodate a phased approach and to create flexibility in the scheme to adapt if community thoughts around the skate park shift.

The bowl was the favorite skate feature and serves as the distinguishing feature in the park. This feature is strong enough to draw skaters to the park and provide a complete experience without other features. It could be coupled with planting and be successful. Other well-received features include a transition area and a civic plaza. These add to the flexibility and variety offered in the skate park and welcomes a wider-variety of citizens.

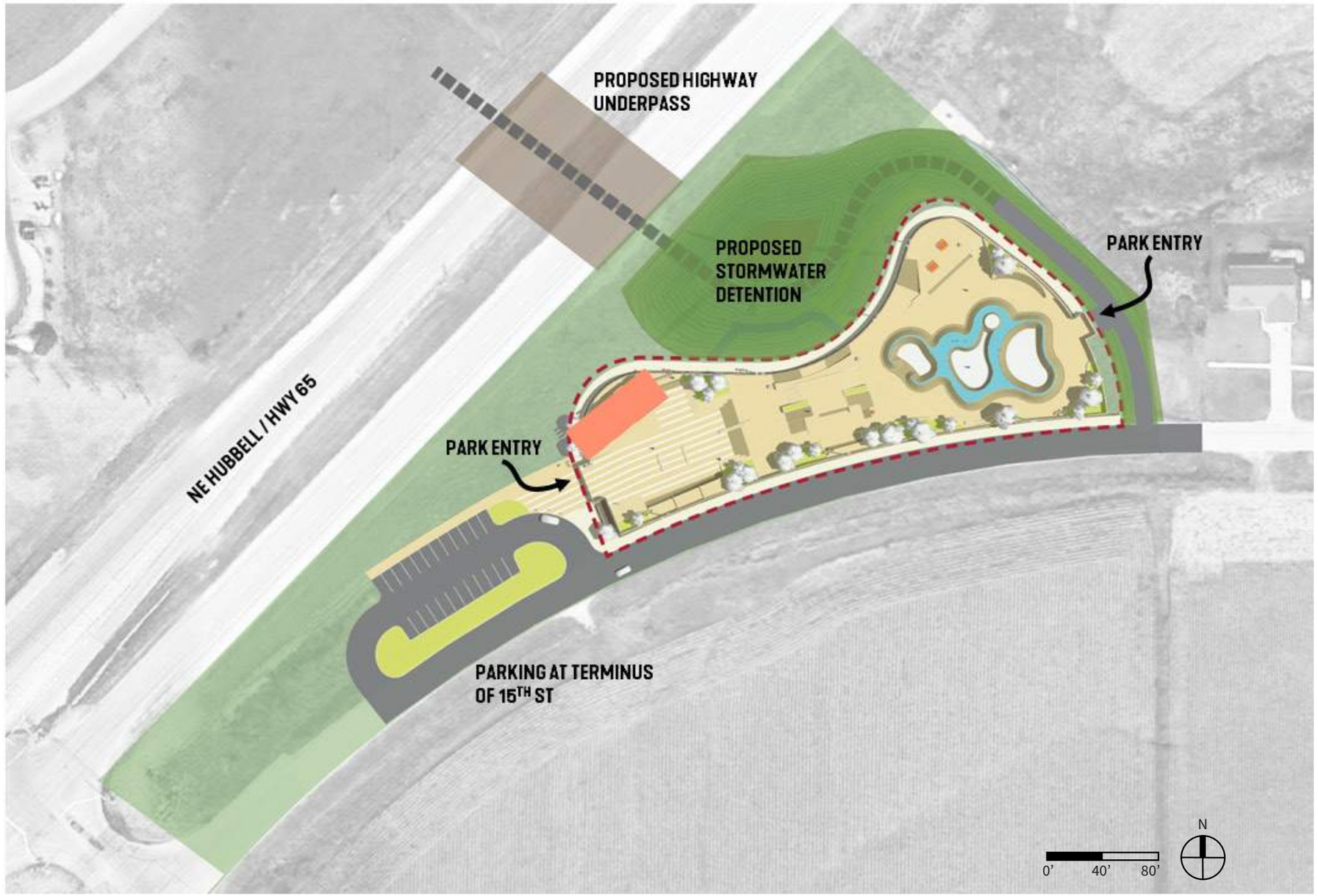
SKATE PARK



Local scale

Community scale

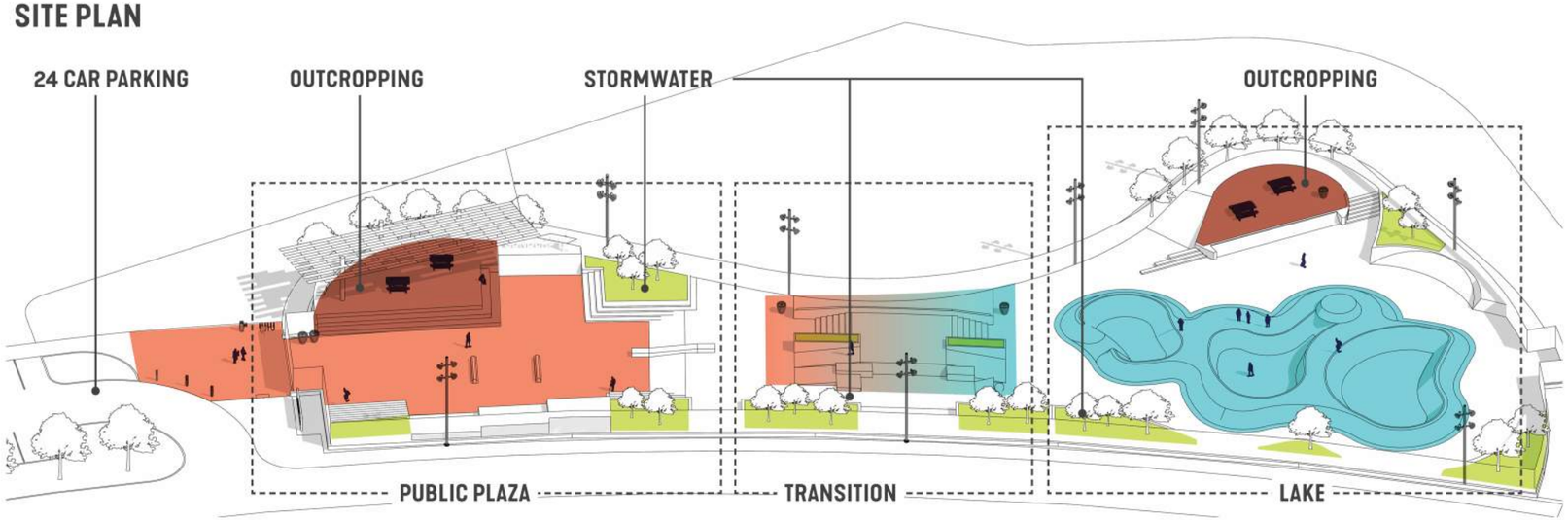
Regional scale



Public Input Meeting 3

A site plan concept was presented during the third public meeting which included three distinct rooms. This idea was carried forward to the preferred plan with a few adjustments. The skate community specifically wants a minivert and graffitii walls in the park. Vehicular parking on the eastern side of the park allows 15th Street to be terminated earlier and to avoid wetlands and utilities. The park entry faces the parking on the east, thereby mirroring the skate park elements so the pool is on the west and entry plaza on the east. Accommodate 12' minimum around the park for maintenance vehicles. All roadway designs are to accommodate a fire-truck. Other elements to include: site lighting, perimeter fence, entry sign, site furnishings (tables, water receptacles, recycling, bike racks, water fountains).

SITE PLAN



MAIN FEATURE - WATER BODY POOL

ENTRY PLAZA

MAIN FEATURE - WATER BODY POOL

CIVIC PLAZA

RAISED BOWL

INTEGRATED STORMWATER

PRECEDENT IMAGERY

Bondurant
Life Connecting

SMITHGROUP