



*Image credit: Adams County*

# MASTER PLAN

The master plan is a culmination of public, stakeholder and staff input. The site plan stitches together all of the adjacent county land holdings which have been acquired, creating immense opportunities for the Regional Park and visitors. This section describes the future development goals of the Riverdale Regional Park, summarizing desirable uses and facilities. The themes that follow are the guiding principles that formed the master plan and remain paramount throughout.

## MASTER PLAN THEMES

Enhance the Quality of Life through Recreation, Nature, Agriculture and Science

- Become a place where innovation, creativity and curiosity come together for all ages
- Develop regional partnerships to strengthen the park's offerings of educational, environmental and recreational services
- Develop a strong brand for the Regional Park and Fairgrounds, defining its intentions in the fields of Recreation, Nature, Agriculture and Science

### Healthy and Continuous Habitat Corridors

- Provide healthy and continuous habitat corridors along the South Platte River, Brantner Gulch and other connected aquatic and terrestrial resources
- Support wildlife and habitat (birds, wildlife, pollinators, fish, riparian/aquatic)
- Become a refuge for wildlife as development pressures push them towards undeveloped areas
- Restoration activities should work to provide an unencumbered corridor of native trees and understory shrubs for bird habitat and migration
- Restoration activities should work to provide fish habitat and fish passage (where appropriate) in accordance with accepted best practices
- Promote recreational activities such as fishing, bird watching and passive nature experiences
- Utilize open space resources to treat runoff before it returns to the River

### Trail Connectivity and Experiences

- Celebrate the connection of the Front Range Trail through the site
- Provide trail amenities
- Create an internal trail system that supports a variety of user types
- Use trail linkages to connect to other regional amenities

### Community

- Serve Adams County residents
- Be right-sized to serve the community without endeavoring to grow too large
- Serve long-standing historical clients
- Remain affordable
- Be a Fair of today – cater to the community
- Celebrate and cultivate diversity through programming

### Agricultural Heritage

- Educate the public on food sources and growing practices
- Support and promote CSU Extension/4-H programming
- Highlight regional heritage connections to working and/or historic farms, dairies and agrarian sites
- Populate the Park with rotating displays that educate the public
- Reorganize, enhance and construct quality facilities for livestock and user groups
- Protect and maximize the water rights and stewardship of historically irrigated agricultural lands

# MASTER PLAN OVERVIEW

The plan has been organized in the following pages for more detailed description notated as Regional Park North, Regional Park South, the Fairgrounds and Water Resources.

The goal of the northern portion of the park remains to accommodate large events at the fairground facilities, as well as support heavy weekend use and activities. A focus on the structures identifies how best to plan for the maintenance and/or renovation of existing facilities and where to accommodate growing needs in new facilities. The master plan analyzed the existing buildings and facilities and provides recommendations for their treatment within the “Assessment of Existing Facilities” in the Appendix B.

The southern portion of the park is anchored by day use amenities and passive recreational opportunities. The master plan diagram describes these critical use relationships.

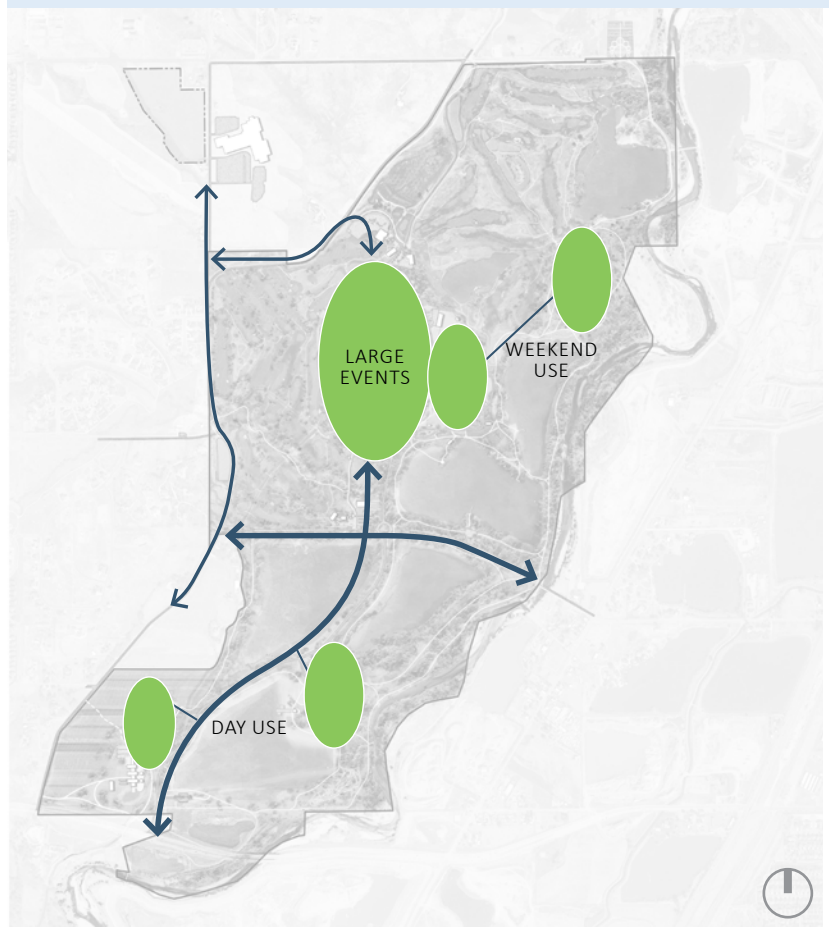
This master plan does not include future planning for the Riverdale Knolls Golf Course or the Riverdale Dunes Golf Course. The Adams County Historical Society and Museum areas were also not studied in detail for this effort.

For more information, refer to Appendix C for Previous Plan Concepts and Appendix D for Concept Development.

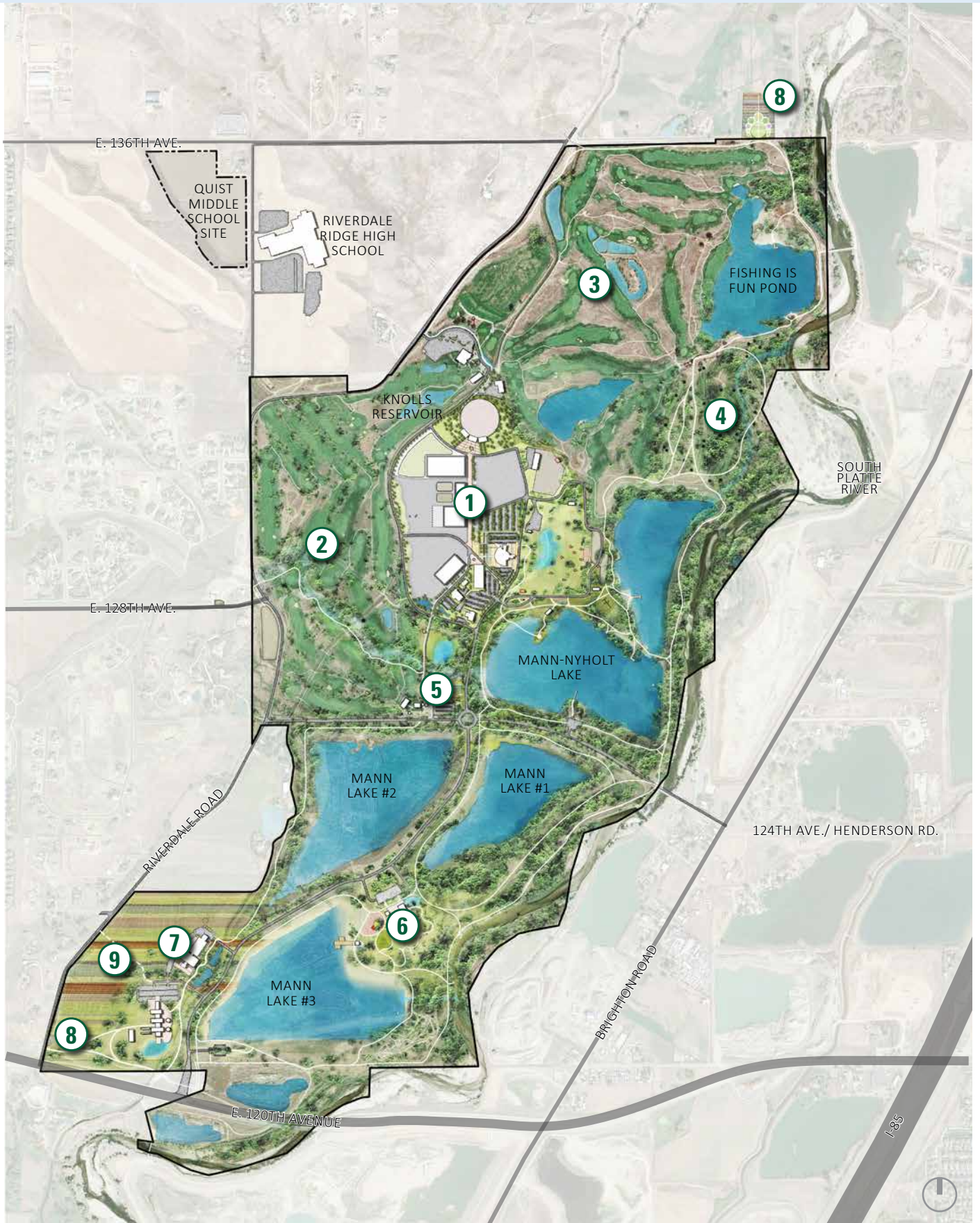
## MASTER PLAN LEGEND

- ① Fairgrounds
- ② Riverdale Knolls Golf Course
- ③ Riverdale Dunes Golf Course
- ④ Adams Hollow Disc Golf Course
- ⑤ Adams County Historical Society and Museum
- ⑥ Mann Lakes and Nature/Science Center
- ⑦ Animal Shelter/ Cultural Facility
- ⑧ Agricultural Programming
- ⑨ Future Roadway Connection

## MASTER PLAN DIAGRAM



# RIVERDALE REGIONAL PARK MASTER PLAN



# REGIONAL PARK SOUTH

The southern park area features amenities for day visitors and strives to be a destination for visitors to spend many hours. Mann Lakes #1, #2 and #3, trails, a proposed Nature and Science Center, adventure playground, bike course and water access will activate the use of this portion of the park.

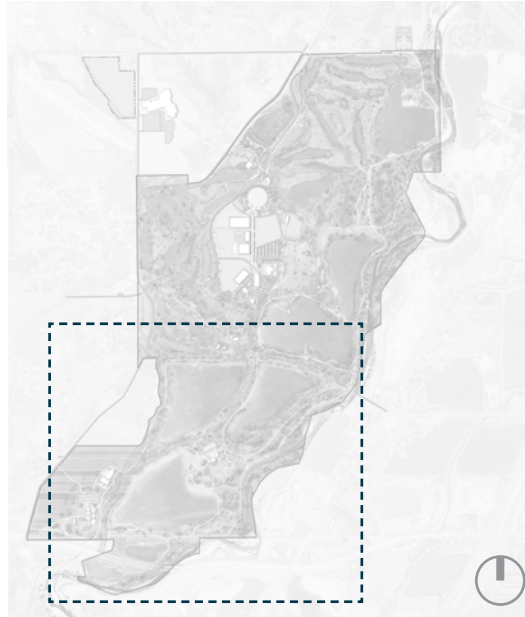
The new Adams County Animal Shelter is planned, and adjacent to these facilities is land allotted for future cultural facilities such as a Butterfly Pavilion, Botanic Garden Facility, or library. The main park entrance relocates to 120th Avenue, leading visitors north through the site.

The Adams County Regional Park hosted a campground facility in years past in the proximity of the current Adams Hollow Disc Golf Course. Management of the site proved troublesome, as campers set up more permanent accommodations than what was intended, conflicts with golfers occurred, lighting was problematic, accessibility was an issue, wildlife conflicts existed and the South Platte River Trail (now CFT) has since come to extend through the site. These factors all lead to the disassembly of the campground.

The public process indicated a desire to have the ability to provide camping opportunities, primarily for groups of children, on the site. This is currently allowed with administrative permission to those user groups and is considered in this master plan.

The following will introduce each amenity proposed for the southern park area.

## REGIONAL PARK SOUTH LOCATION



## NATURE CENTER



Image credit: San Antonio Express-News (Urban Ecology Center at Phil Hardberger Park)

## REGIONAL PARK SOUTH RECOMMENDATIONS

### *Nature/Science Center*

- Establish a Nature/Science Center that will also function as a site welcome center
- Provide rotating displays and interpretive information on the region's ecological systems and more
- Provide a space for a small outdoor classroom or amphitheater
- Provide a restroom and pavilion combination facility

*Note: Recommendations are summarized in Appendix A.*

## REGIONAL PARK SOUTH



### SOUTH PARK LEGEND

- |                                |                                  |                                    |
|--------------------------------|----------------------------------|------------------------------------|
| <b>1</b> Nature/Science Center | <b>6</b> Pier                    | <b>11</b> Agricultural Programming |
| <b>2</b> Parking/ Trailhead    | <b>7</b> Water Recreation Access | <b>12</b> Cultural Facility        |
| <b>3</b> Restroom              | <b>8</b> Bike Course             | <b>13</b> Main Park Entrance       |
| <b>4</b> Adventure Play        | <b>9</b> Animal Shelter          |                                    |
| <b>5</b> River Access          | <b>10</b> Water Quality Ponds    |                                    |

## NATURE/SCIENCE CENTER

The Nature/Science Center area is the hub of activity in the southern portion of the park. This area is envisioned to include such amenities as an educational facility, outdoor classroom, an adventure playground and water access on Mann Lake #3.

The Nature/Science Center is envisioned to be a research hub for the Adams County Parks system as well as a node for natural systems education for students and learners of various ages.

The concept of the Nature/Science Center may be a building with welcome and park support services, a pavilion with space for group gatherings, a kiosk with educational displays and perhaps a living wall demonstration. Rotating displays might include the educational interpretation of water systems, agrarian history, wildlife, plants, etc.

## WATER RECREATION AREA

Improvements to water quality and the edge conditions of Mann Lake #3 may allow the opportunity for additional water-based programming at the park. If appropriate water quality parameters are met, visitors could possibly have access to a public beach, pier and access point for small non-motorized watercraft such as belly boats, paddle boats, canoes, kayaks and stand up paddle boards.

Lakes #1 and #2 are slated to remain fenced to keep visitors away from the water. Visually, berming and trail alignment should be explored to allow a vantage point over the water while maintaining no access to the lakes. Berming may not be feasible due to floodway conflicts, but it should be studied further as a visual screening method. It is encouraged that Lakes #1 and #2 provide for bird and wildlife habitat as appropriate and possible. Fish habitat is not likely within Lakes #1 and #2 due to the intended use of the lakes for water storage and release into the South Platte River.

## NATURE/SCIENCE CENTER AREA DETAIL



## NATURE CENTER AREA LEGEND

- ① Nature/Science Center
- ② Parking
- ③ Restroom
- ④ Adventure Play
- ⑤ River Access
- ⑥ Pier
- ⑦ Water Recreation Area

## BIKE COURSE

A BMX bike course, or pump track, is proposed to provide skill development for park users. Pump tracks are gaining in popularity throughout the state and region. A beginner course is envisioned for youth and cyclists new to the sport with potential for some intermediate skill development. The distinct setting between the South Platte River and Mann Lake #3 will offer a memorable experience. In addition, this site can help prepare and link cyclists for future nearby trail opportunities, as has been proposed by some stakeholders at the Riverdale Bluffs area. Spoils from the Brantner Gulch, Mann Lakes, Animal Shelter and/or other nearby project could be used here to create the topography needed for land formation. Berming may create some challenges due to floodway conflicts and should be studied further to insure improvements do not impede flood flows.

## ADVENTURE PLAYGROUND

An adventure playground is conceived in proximity to the Nature/Science Center, water access and other adventure facilities in the Regional Park South. Concepts for the playground could include nature play, sensory vegetation, challenge/team building obstacles and messy play for imaginative interaction with nature. Adventure playgrounds have grown in popularity because they offer both active and creative opportunities integrated for users of all ages.

The adventure playground at the Nature/Science Center area will offer active-play structures for climbing and challenging physical abilities. The physically-demanding play equipment is balanced with flexible building blocks for exploration that fosters creativity and cooperation among children.

Also appropriate for this play location would be an educational water play area that would engage children and visitors in shallow water and sand play that could illustrate stream processes, the watershed, agrarian practices and more. The interactive and fun play features would provide a sensory experience while telling compelling stories of the Regional Park and Adams County. The playground should provide ample ADA accessible opportunities for all users to enjoy.

## BIKE COURSE



Image credit: Singletracks.com (Valmont Bike Park)

## ADVENTURE PLAYGROUND



Image credit: divisare.com (Erect Architecture)

## REGIONAL PARK SOUTH RECOMMENDATIONS

### *Lake 3 Water Recreation Area (subject to favorable water quality)*

- Introduce non-motorized boating recreation to Lake 3 and include an access ramp and docking areas
- Incorporate public access and pier facilities if water quality allows
- Coordinate with Colorado Parks and Wildlife to establish aquatic habitats prior to completion of Lake 3
- Introduce fishing to Lake 3 and provide accessible fishing docks, annual stocking and signage.

### *Bike Course*

- Introduce a BMX bike course or pump track for skill development

### *Adventure Playground*

- Integrate a nature play area into the park

*Note: Recommendations are summarized in Appendix A.*



## FUTURE CULTURAL AMENITIES

The goal to “enhance the quality of life through recreation, nature, agriculture and science” comes together on the south-west corner of the site. This area is reserved for cultural facilities and community partnerships that promote curiosity, innovation, creativity and education through a campus of supporting facilities. This location provides visibility and easy access from 120th Avenue. The facilities will be designed to accommodate water quality ponds that filter runoff before re-entering the South Platte River watershed. A future connection to Riverdale Road may be necessary for local traffic and emergency access.

## ANIMAL SHELTER

An animal shelter facility is planned along Park Boulevard and across from Mann Lake #3, west of Brantner Ditch. The animal shelter will provide veterinary, boarding and shelter services. Planning work for the Animal Shelter is occurring separately, but concurrent to this park master plan.

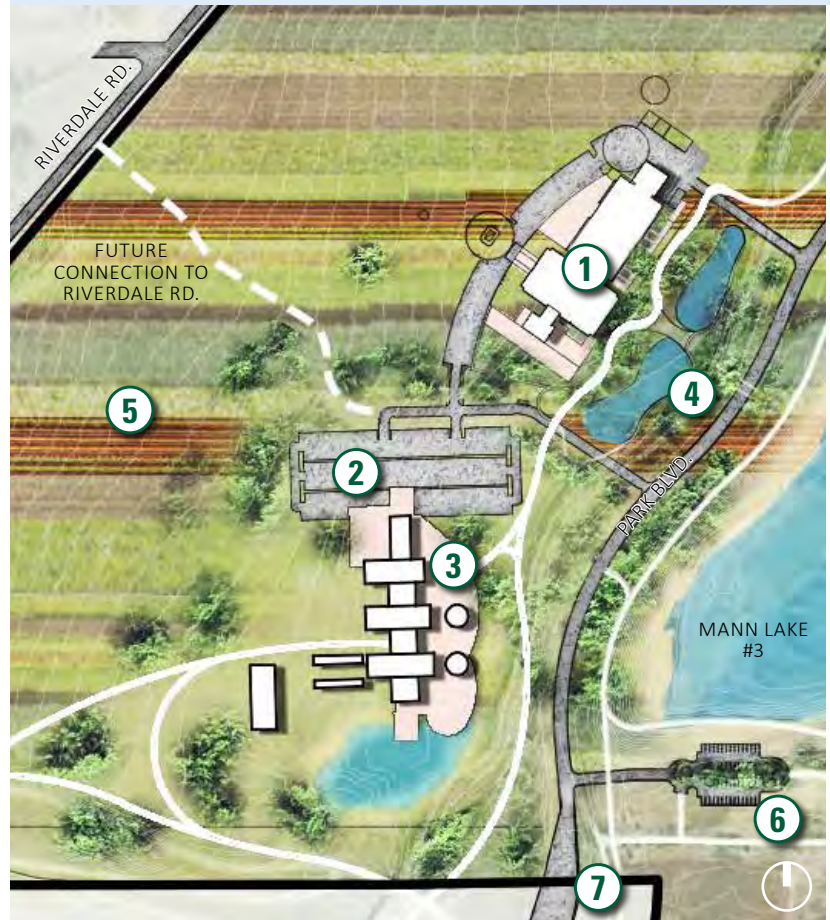
## DOG PARK

A fenced dog park facility area was explored with the proposed animal shelter. It was decided that a dog park would not accompany the shelter. Therefore, if a future dog park is found to be desirable to the community, suitable locations within the Regional Park or alternative areas should be explored. A dedicated dog park area will bring regular users to the facility and can support activities being carried out with dog show events and their organizers.

## AGRICULTURAL PROGRAMMING

Existing agricultural fields in the southern parcel will be utilized for demonstration gardens. During the growing season, the colorful fields will greet park visitors at the main park entrance along East 120th Avenue. These will be programmed utilizing local partnerships.

## CULTURAL AMENITIES



## CULTURAL AMENITIES LEGEND

- ① Animal Shelter
- ② Cultural Facility Shared Parking
- ③ Cultural Facility
- ④ Water Quality Ponds
- ⑤ Agricultural Programming
- ⑥ Trailhead Parking
- ⑦ Primary Park Entrance

## PARTNERSHIPS

Developing the Regional Park as a hub for recreation, nature, agriculture and science benefits the strength of a diversity of current and future partnerships. These may include the Denver Museum of Nature and Science, Denver Botanic Gardens, Anythink Library, Adams County Historical Society, Bird Conservancy of the Rockies, Colorado Master Gardeners, Colorado State University Extension, 4-H, Gaylord Rockies, City of Thornton, Commerce City and Brighton.

### *School Partnerships*

The proximity of the new Riverdale Ridge High School and Quist Middle School provide a greater opportunity to share the resources and mission of the park with students and educators. Similarly, other school partnerships should be promoted, such as 27J, Brighton School District, Adams 12 and Brighton Charter Schools, to benefit from the services provided at the Regional Park and Fairgrounds. Science, Technology, Engineering, Art and Math (STEAM) programs are becoming increasingly popular with schools, and a demand for space is becoming apparent within the fairground facilities. There is a great opportunity to develop educational partnerships to facilitate STEAM programming within the park.

Similarly, the Riverdale Regional Park could be a meaningful partner with schools in providing a platform for nature education on plant communities, water systems, wildlife and fisheries, and more. Recreational outlets also provide a resource for schools, from trails to ropes courses to boating.

### *Public-Private Partnerships*

Public-private partnerships provide an opportunity for private partners to operate concessions or services within the Regional Park and Fairgrounds while assuming responsibility, providing staff and creating opportunities for specialized programming. Public-private partnerships may provide funding, operation, programming, concessions, services, materials, management and more. A separate study should be undertaken by the county to explore the potential of incorporating a range of partnership opportunities.

Examples of a public-private partnerships that may be successful within Riverdale Regional Park would be a high ropes or adventure course facility operator; a promotor for events held at the amphitheater and/or grandstands; dog show or advocate groups funding a dog park or facilities; a local volunteer group fundraising for play spaces for children; recreation providers holding programs on the site; the disc golf community organizing to provide maintenance, expansion or programming on the site; and programs such as Vets to Farmers utilizing a portion of the site. A cultural facility that could provide a civic amenity may request land to lease and has a mission that is compatible with the park. This might include natural or cultural facilities and educational facilities.

Today, the CSU Extension, 4-H, Tri-County Health, Colorado Parks and Wildlife, and Todd Creek all have partnerships with the Adams County Parks and Open Space Department.

## PARTNERSHIP OPPORTUNITIES



Image credit: [tinyhouseblog.com](http://tinyhouseblog.com)



Image credit: [makerbolder.com](http://makerbolder.com) (STEAM Fest)

## REGIONAL PARK SOUTH RECOMMENDATIONS

### *Partnerships*

- Foster regional collaboration and partnerships with non-profit and for-profit entities
- Partner with the Schools to offer STEAM and other educational programming

### *Agricultural Programming*

- Tell the story of the site's agrarian past through agricultural demonstration fields

*Note: Recommendations are summarized in Appendix A.*

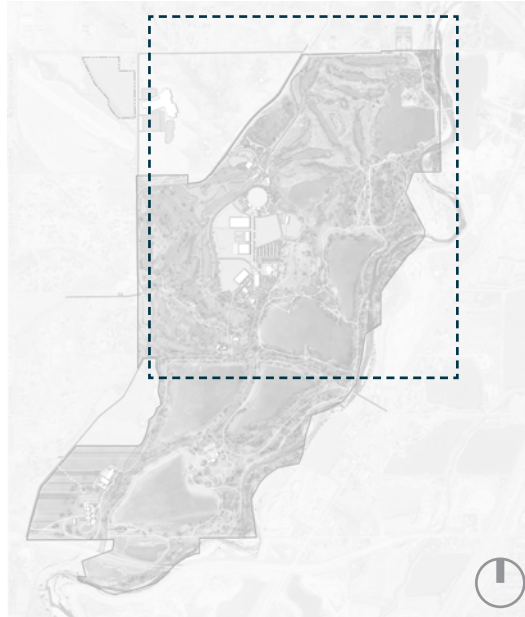
# REGIONAL PARK NORTH

The northern portion of the park is defined by the fairgrounds situated between the Riverdale Knolls Golf Course to the west and the Riverdale Dunes Golf Course to the northeast. Additionally, a disc golf course is located between the Fishing is Fun Pond to the north and the Mann-Nyholt Lake to the south. No improvements are planned to the golf courses or the disc golf course in this master plan.

The park area east of the fairgrounds will be significantly enhanced with a combination of improvements to existing facilities such as the playground and new park features like a ropes course.

The following sections will provide additional descriptions and information about each park recommendation.

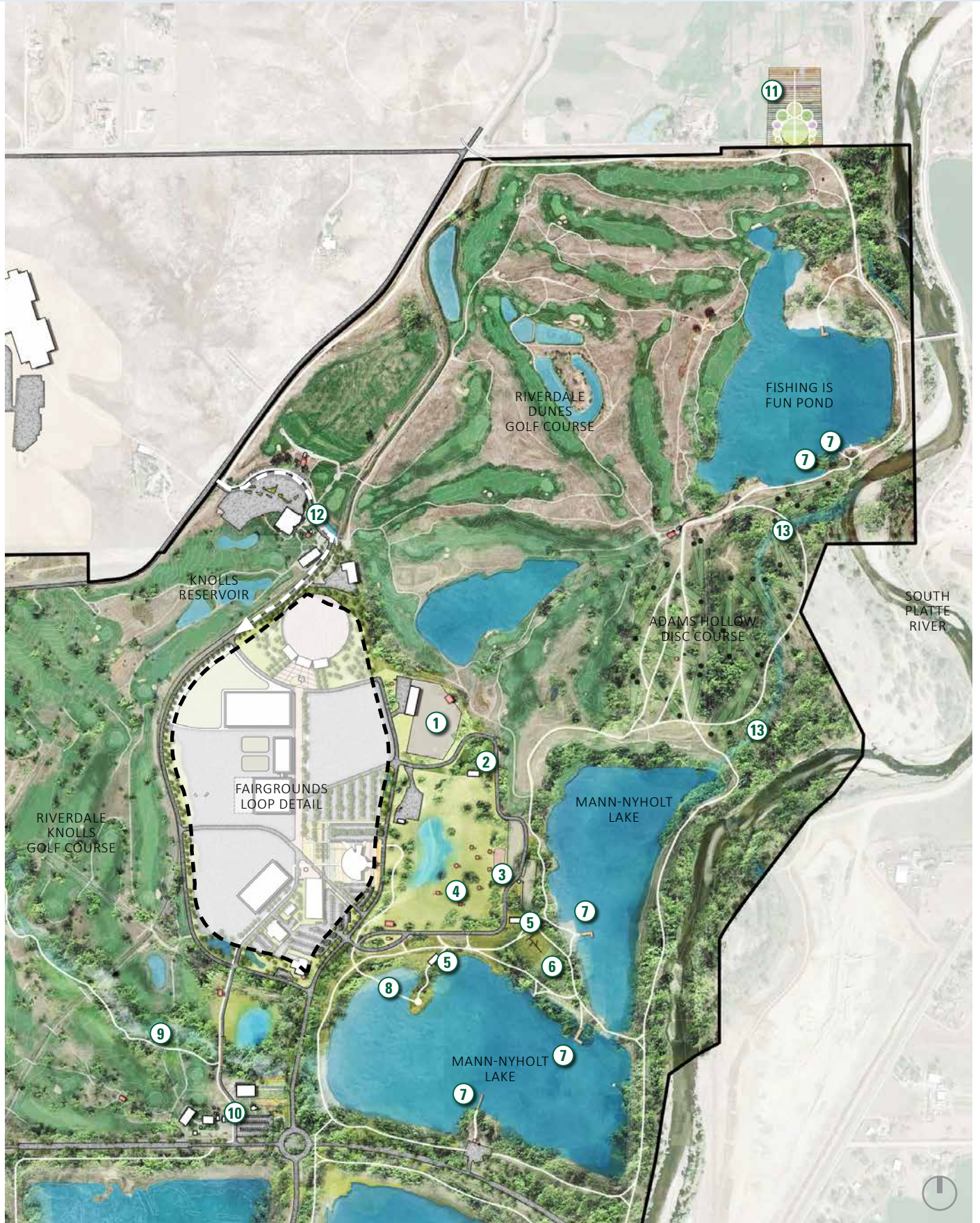
## REGIONAL PARK NORTH LOCATION



### NORTH PARK LEGEND

- ① Expanded Maintenance Facility
- ② Amphitheater
- ③ Expanded Playground
- ④ Open Space and Shelters
- ⑤ Pavilions
- ⑥ Ropes Course
- ⑦ Fishing Pier
- ⑧ Water Crossing
- ⑨ Brantner Gulch Project
- ⑩ Adams County Historical Society and Museum
- ⑪ Agriculture Demonstration Area
- ⑫ Special Event Access Route
- ⑬ Brantner Gulch (Historic Stream) Restoration

REGIONAL PARK NORTH



## SHELTERS AND RESTROOMS

Future pavilions should accommodate a range of party sizes, from small gatherings to larger events. The pavilions provide an opportunity to integrate architectural consistency to the vision at Adams County Regional Park. Pavilions are adaptable to a range of materials. Wood structures are generally perceived as warm and natural, while steel or concrete structures, through careful design and quality construction, can be equally compelling and memorable.

As the park improves existing amenities, introduces new amenities and creates a more connected network of roads and trails, basic services must be considered. Currently, the available restrooms are located within other buildings on site. A more decentralized approach to restrooms, drinking fountains and food and beverage retail will encourage people at the site to linger longer throughout the day. Where water and sewer services aren't possible, san-o-lets and composting toilets can fulfill the park needs.

A designated space for weddings and events is desired along the waterfront. This pavilion should include adequate parking, access to power, quality restrooms and areas for loading/unloading.



## PAVILION ARCHITECTURAL CHARACTER



Image credit: poligon.com



Image credit: Muse Architects



Image credit: dom.ngs.ru



Image credit: scottcountyiowa.com/conservation/scott-county-park/campgrounds/pine-grove-campground

## SHELTERS AND PAVILIONS RECOMMENDATIONS

- Add one (1) large pavilion near the existing playground area. The pavilion should be located in proximity to parking, power connections and restrooms
- Designate one large pavilion at the peninsula for Mann-Nyholt Lake. This pavilion should be designed and used for celebratory events, like weddings. The pavilion should be located in proximity to parking, areas for loading, power connections and restrooms.

Note: Recommendations are summarized in Appendix A.

## AMPHITHEATER

Exploration into the existing amphitheater for this master plan and the potential for the facility to host more successful events into the future yielded some key takeaways. The location of the stage, the existing utilities in place and loading and service area that abuts the stage are generally desirable. However, through public comment, it was noted that the facility is not used to its fullest potential and that the facility would be better rotated to maximize the efficient use of the lawn. There is a desire for the county to host more small to medium scale performances. It is assumed that larger event may occur within the Grandstands. In order to attract performers and the audience, some upgrades to the facility are proposed.

As the focal point for a performance venue, the stage cover at an amphitheater provides a great design opportunity to draw attention to the facility. Often modern in appearance with a column-free stage area, these structures can be softened using wood, lighting, and graphics. As the backdrop for productions, the back wall requires careful thought as well.

From a site standpoint, great sight lines, ease of access, comfortable seating areas, and great acoustics are necessities.

In 2015, Colorado University students explored design concepts for the amphitheater. Concepts are available through the county.



## AMPHITHEATER ARCHITECTURAL CHARACTER



Image credit: [tms-team.lt/galerija.html](http://tms-team.lt/galerija.html)



Image credit: [mcluskeyeng.com](http://mcluskeyeng.com) (Centennial Park Entertainment Stage)

## AMPHITHEATER DESIGN CONCEPTS FROM COLORADO UNIVERSITY STUDENTS, 2015



Image credit: Colorado University students

## AMPHITHEATER RECOMMENDATIONS

- Increase the seating capacity at the amphitheater to 2,000 and 3,000 people
- Introduce an outdoor stage with a limited permanent structure and required supporting infrastructure (water, lighting, internet, electric) that could be used for special events, festivals and community uses as well as to augment fair activities.
- Include human comfort elements at the amphitheater such as shade, nearby restrooms, drinking water, etc.
- Rotate the orientation of the amphitheater to north-south to accommodate greater seating efficiency

Note: Recommendations are summarized in Appendix A.

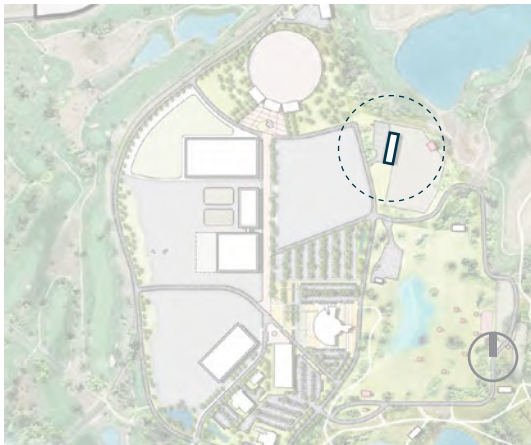
## MAINTENANCE FACILITY

The architectural character of maintenance structures includes utilitarian and highly functional elements. Large roof heights and garage doors are commonly found in maintenance building architecture. Besides design elements, a simple material palette will allow these buildings to convey their purpose. The maintenance structures can be integrated with the rest of the park character by employing the use of materials that are found in other new or renovated buildings.

Future maintenance facility considerations should seek to raise the building out of the floodplain. New or renovated structures need to assign better storage capabilities and provide the ability to store hazardous chemicals properly. The maintenance facility should also explore and integrate energy efficiencies, such as solar power, natural light and building orientation to capitalize on passive solar. Employee amenities such as showers should also be considered.

As new maintenance facilities develop, or the old renovates, the indoor shop areas should be provided with a floor drain connected to a sand/oil separator prior to discharging into the sanitary sewer in order to reduce negative impacts to water quality. In addition, any outdoor areas should have similar drain systems.

The expanded maintenance facility will benefit the park maintenance team as they work toward operational efficiencies, obtaining new equipment and anticipate other maintenance needs for the future of the park.



## MAINTENANCE STRUCTURES ARCHITECTURAL CHARACTER



Image credit: jordanconstructionco.com



Image credit: hooverbuildings.net/projects/agricultural/hougar-farms



Image credit: pinterest.com

## MAINTENANCE FACILITY RECOMMENDATIONS

- Expand the maintenance facility to provide more functional space and storage
- Seal the existing building for water penetrations and weather insulation
- Add designated office work stations
- Integrate energy efficiencies into the building system

Note: Recommendations are summarized in Appendix A.

## AGRICULTURAL HERITAGE

Educating the public on food sources and growing practices remains a hallmark of the importance of this site to the residents of Adams County. Opportunities exist to support and promote CSU Extension programming and highlight regional connections to working farms, dairies and agrarian sites. This can be done in a variety of ways.

## DEMONSTRATION SITES

A demonstration garden is proposed in the north of the Regional Park, above 136th Avenue. This parcel of land will advance the park's commitment to agricultural heritage and education. The mix of production gardens has the potential to form enjoyable public gardens throughout the growing season that educate visitors on food sources and growing practices. As a demonstration garden, community supporting agriculture could also be organized with partner agencies to provide local produce for subscribers or local food banks or service programs. Other opportunities for the gardens include xeriscape demonstrations, children's sensory gardens, forest management, tree or plant nurseries, etc. This could support and promote CSU Extension programming or other regional nonprofit partners.

## INTEGRATION OF HISTORIC MUSEUM

Despite being the welcoming iconic entry feature, the Adams County Historic Museum is currently disjointed from the rest of the Regional Park. The master plan proposes to create a front for the museum facing into the park and allowing the cross movement of visitors to either site.

Another means to integrate the mission of the museum and the Adams County Historic Society is to populate the park with rotating displays of agricultural implements or other historic artifacts that interpret the local history.

## AGRICULTURE DEMONSTRATION



Image credit: John Golling



Image credit: lopezislandkitchengardens.wordpress.com

## AGRICULTURAL HERITAGE RECOMMENDATIONS

- Incorporate a demonstration garden north of 136th Avenue
- Integrate the historic museum into the site by creating a secondary front onto the park. Coordinate with the Brantner Gulch Project to protect from flooding.
- Rotate displays of agricultural implements and historic artifacts that interpret the local history throughout the park
- Protect water sources including wells and ditch rights
- Celebrate agricultural heritage with a Cultural Trail loop

Note: Recommendations are summarized in Appendix A.



## RECREATION FACILITIES

### EXPANDED PLAYGROUND

The existing park playground is nearing 20 years in age and is recommended for replacement. A new playground can expand within the existing footprint, as this popular component is important to the adjacent uses of picnic pavilions, the amphitheater, fair facilities and more. An adventure playground is proposed in the south portion of the regional park. As such, the replacement playground here in the north should accommodate different play experiences. The playground to the south may want to be constructed prior to upgrading the existing playground.

A more traditional playground is envisioned with play pieces that appeal to multiple age groups and physical abilities. Inclusive playgrounds are in high demand, providing opportunities for children of different physical and mental capabilities to interact in a safe and stimulating setting for all. In addition, multi-generational play features are also popular and should be considered in this location. These provide opportunities for children and parents or care-givers to participate in play activities together.

The playground should consider a theme relevant to the Regional Park and Adams County, such as imaginative agriculture (i.e. tractors, barns, haybales) or imaginative natural features (i.e. climbing boulders, vegetation, animals, tree houses).

### ROPES COURSE

As a means to expand opportunities for the fairground facilities to host more corporate events and retreats, and also to introduce more recreational opportunities into the park that appeal to a range of users, a ropes course is proposed near Mann-Nyholt lakes. Ropes courses are used for team building and leadership exercises and for personal challenge and fun within a safe and supervised setting. They may be a combination of high ropes course challenges (requiring safety harnesses and hands-on supervision such as zip-lining, repelling and climbing), and low ropes courses that typically offer team challenges at or close to grade for team-building. A second party lease would likely be required to operate the ropes course.

### ROPES COURSE



*Image credit: bccymca.org/boc/facilities-meals/challenge-courses*

### FISHING PIER



*Image credit: Adams County*

## RECREATION FACILITIES RECOMMENDATIONS

- Replace the playground
- Incorporate a ropes course to support opportunities for corporate events and retreats, along with the recreation appeal of visitors
- Connect park visitors to Mann-Nyholt Lake better through artful crossing structures and/or platforms that also would be desirable for hosting celebratory events such as weddings
- Introduce shade to the volleyball courts area with a tree planting strategy or a shade structure

*Note: Recommendations are summarized in Appendix A.*

## WATER CROSSING



*Image credit: johnpawson.com*



*Image credit: landscapeaustralia.com/articles/saltwater-coast-1/#img=3*

## FISHING PIER

Accessible fishing platforms exist around the “Fishing is Fun” pond and on Mann-Nyholt. Colorado Parks and Wildlife support the integration of ADA accessible fishing piers in order to increase public access and angling opportunities within the state. This includes providing accessible means to participate in the sport for individuals with mobility limitations as well as the general public. Additional fishing piers have been indicated within the master plan and should all similarly be designed to meet accessibility standards.

## WATER CROSSING

Mann-Nyholt Lake currently resembles two separate lakes despite their connectivity. The master plan proposes to create more engagement with the lakes through the inclusion of a water crossing structure. The crossing, located at the northwest edge of the southern water body would bring visitors into a peninsula with an overlook and pavilion. This would be an ideal location for a celebratory event such as a wedding and is close to other park facilities. It would also function for wildlife watching and could enhance trail events and activities.

## WATER ELEMENTS



*Image credit: hintonchamber.com*

# FAIRGROUNDS

## AREA VISION

The fairgrounds area has been reconfigured according to facility replacement needs, phasing strategies and care in creating memorable and functioning spaces for visitors and events. The arrangement prioritizes the organization of structures along a central pedestrian spine oriented north to south along an existing utility corridor. The spine terminates at the new Grandstands. As possible, structures are moved further north and west to avoid some floodplain impacts.

Compatible and complementary uses are grouped together for ease in programming and to reduce opportunities for conflicts. The exposition and educational facilities generally remain to the south amongst the existing Administration Building, Exhibit Hall and Waymire Dome. Active animal-focused facilities gravitate to the north with a series of proposed indoor, outdoor and covered arenas, stalling and the Grandstands.

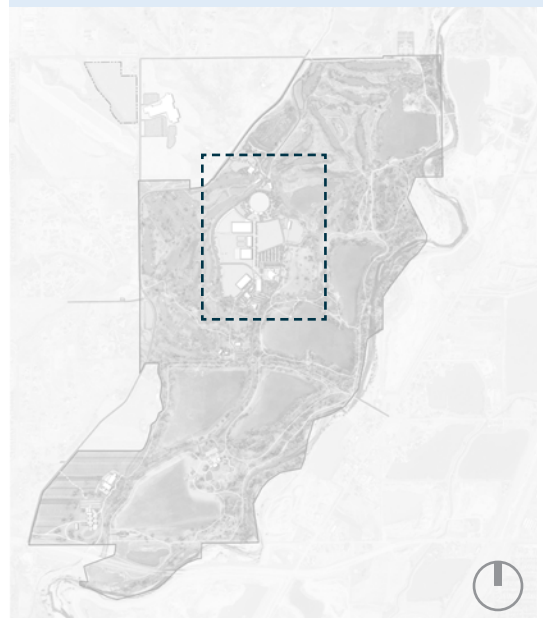
The master plan seeks to embrace the Regional Park North into the functioning of the fairground facilities during event times. The expanse of lawn and amphitheater provides great opportunities to grow the fair to the east and provide a diversity of experiences, drawing people into lawn and shaded spaces.

The following sections will further introduce each structure and major element within the fairgrounds campus.

### FAIRGROUNDS LEGEND

- ① Grandstands
- ② Stalling Building
- ③ Covered Arena and Outdoor Arena
- ④ Multi-Purpose Facility
- ⑤ Expo Building
- ⑥ Waymire Dome
- ⑦ Exhibit Hall
- ⑧ Good Luck 4-H Building
- ⑨ AI Lesser Building
- ⑩ Expanded Administration Building
- ⑪ Pedestrian Spine
- ⑫ Shuttle Drop-Off
- ⑬ Water Quality/Detention Ponds

### FAIRGROUNDS AREA LOCATION



FAIRGROUNDS MASTER PLAN



# FAIRGROUNDS LOOP BIRDS EYE OVERVIEW



Source: KO Architects

## GRANDSTANDS

For most fair and rodeo venues, the grandstand is less than memorable. After all, the event should be the focus. Rodeo grandstands have a distinct design opportunity in the sun shade/weather canopy that usually extends above the seats. This feature can be expressed in wood, PVC, teflon, steel, canvas or a combination of materials.

The facility should:

- Seat 3,000 in covered bleachers for outdoor events
- Be flexible enough to host concert, rodeo or motor sport events
- Include a plaza to be located outside of the grandstands for pre/post event activities
- Have easy in/out loading for performers
- Locate toilet building with showers nearby grandstand seating
- Locate concession building with VIP deck nearby plaza
- Provide storage under grandstands



## GRANDSTANDS ARCHITECTURAL CHARACTER



Image credit: [engenium.co.nz/projects/stadiums](http://engenium.co.nz/projects/stadiums)



Image credit: [istockphoto.com](http://istockphoto.com)



Image credit: [archiexpo.com/prod/fabritec-structures/](http://archiexpo.com/prod/fabritec-structures/)

## GRANDSTANDS RECOMMENDATIONS

- Construct new 3,000 seat Grandstands and concession area
- Include a structure housing restrooms, ticketing and concessions
- Incorporate a rental space that can serve the Grandstands, or, that is accessible from the park side for private event rentals

Note: Recommendations are summarized in Appendix A.

## STALLING BUILDING

Stall buildings are synonymous with livestock for many fair-goers. Architecturally, their scale and repetition are assets. Traditional forms and materials reinforce the legacy of agriculture and ranching.

The plan calls to replace the existing stalling barns with a single stalling building to accommodate a minimum of 400 12' X 12' portable stalls. Recommendations include:

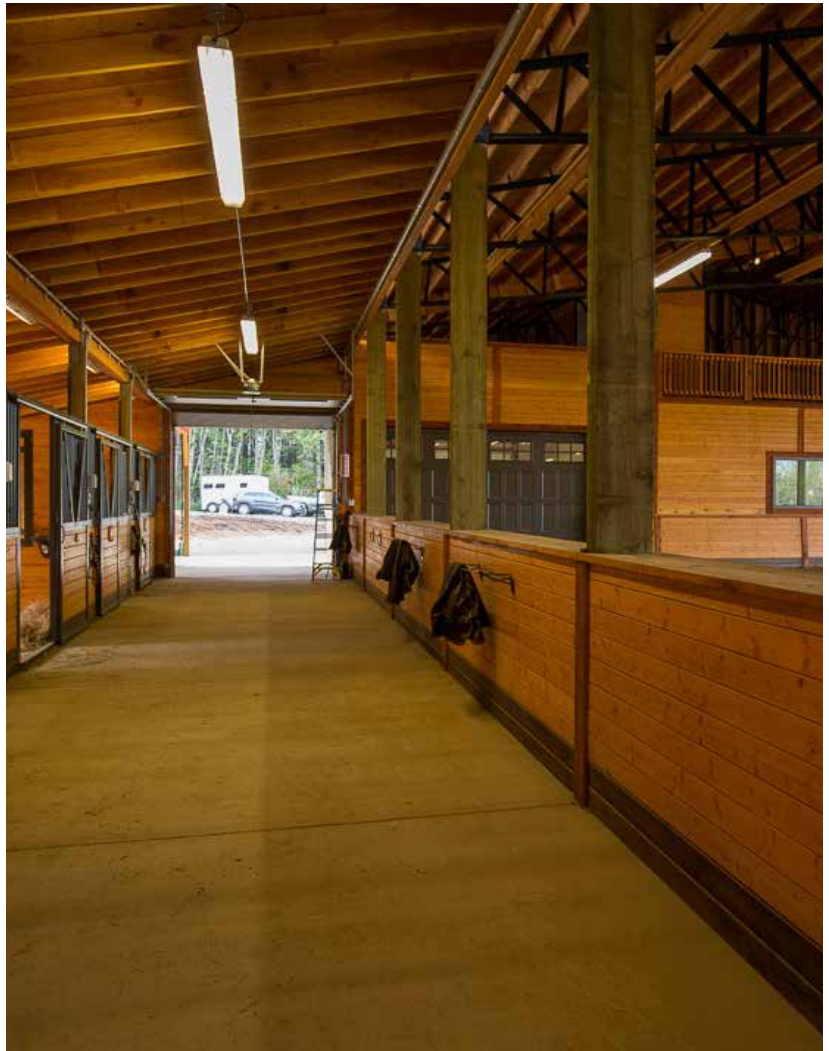
- Building shall have four (4) foot high knee walls minimum constructed of concrete or masonry and open sided to roof above
- Building layout should have a column grid to accommodate reconfiguration into smaller 5x5 or 5x10 pens or open ties
- Ideally locate to have a covered connection to covered arena
- Other support elements shall be located in stalling building such as space for tack, wash racks, show offices, restrooms/showers
- All floor drains, including wash racks and indoor floor drains, shall drain into the sanitary sewer to eliminate stormwater pollution. Wastewater from stalls should also be collected and rerouted to the sanitary sewer.



## STALLING BUILDING ARCHITECTURAL CHARACTER



*Image credit: dcstructures.com*



*Image credit: dcstructures.com*

## STALLING BUILDING RECOMMENDATIONS

- Remove existing stalling buildings and construct a new stalling facility
- Consider the use of portable stalls to adjust the stall sizes as needed

*Note: Recommendations are summarized in Appendix A.*

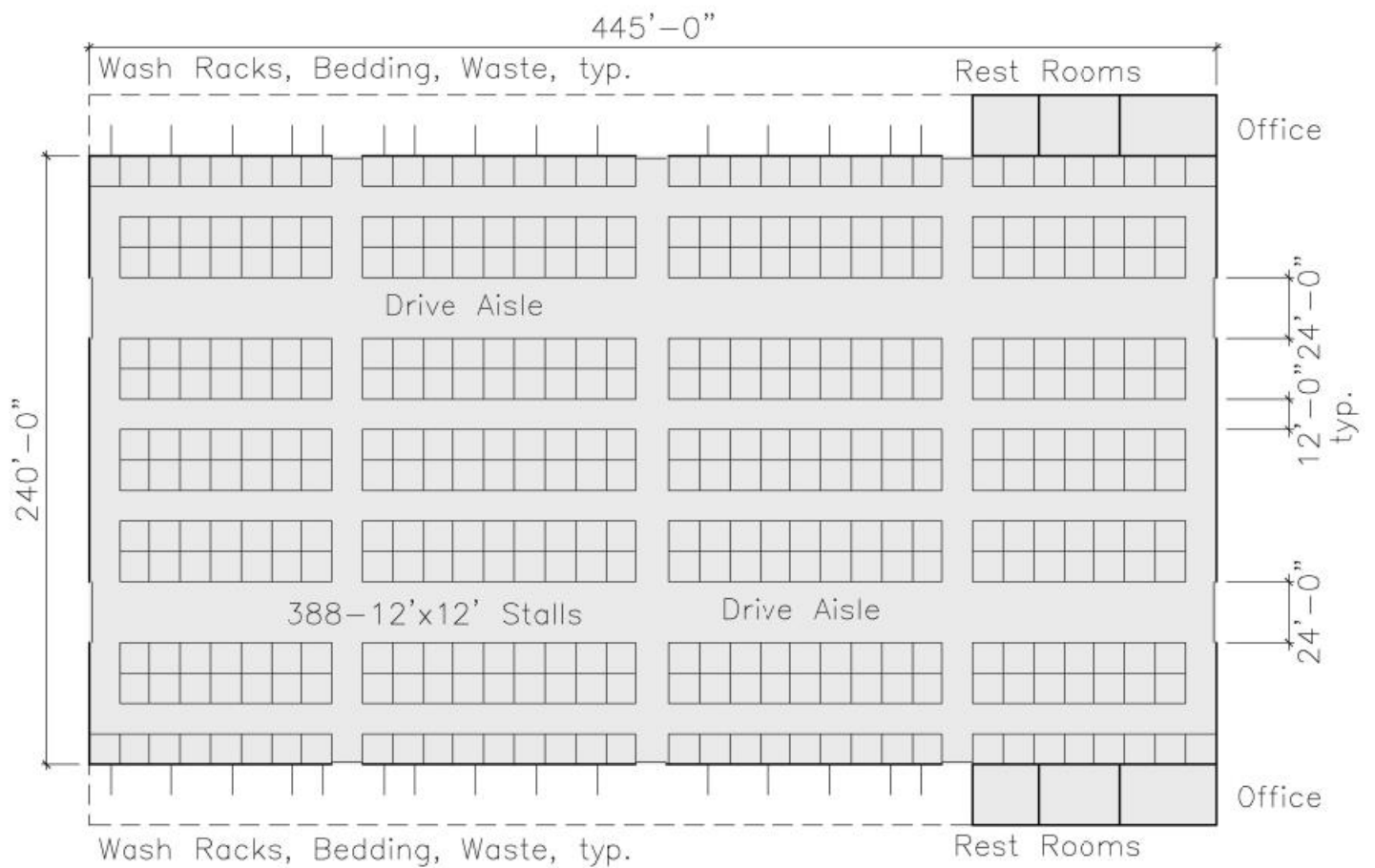


Image credit: Classic Equine Equipment



Image credit: Classic Equine Equipment

## STALLING BUILDING FLOOR PLAN





## MULTI-PURPOSE FACILITY

Multi-purpose facilities and indoor arenas are similar in nature to expo buildings. They are usually large and feature a straightforward circulation plan. However, with their size and height, they can often dominate a fairground campus. Public entries and support areas often offer opportunities to introduce a friendlier scale and greater architectural detail.

The plan calls for a 52,000 SF building with 150' X 250' multi-purpose performance arena with a concrete floor (with dirt storage located nearby for events requiring a dirt floor). Support elements should include the following:

- Show offices, concessions areas, restrooms and limited expo space for vendors
- Building shall be steel framed metal building type with four (4) foot high minimum concrete or masonry knee walls
- Include collapsible bleacher seating ranging from 1,500 to 2,500 that can accommodate multiple event types
- Multi-purpose space should have a source of natural light either through a clerestory or skylight system
- Include radiant heating around perimeter, gravity air ventilators on roof, and air movement with large barn fans
- Provide adequate load-in/out overhead doors around perimeter
- The multi-purpose building roof shall extend (additional 32,000 SF) to an open sided covered area to that shall include enough space for staging or performance (minimum of 80' X 125')

- The covered arena shall provide lighting, fan ventilation, bleacher seating and a reviewing stand. This shall be connected to the multi-purpose space – ideally for covered loading/unloading.
- Seating capacity in the covered arena is anticipated at 200 for use as a warm-up facility. If additional seating is desired in order to use the facility as a secondary performance arena, then seating capacity can be up to 500.
- Provide WiFi and PA system
- Stalls should include separation for animals to minimize agitation and also decrease the potential transfer of disease. Box stalls are typically best for equine, but a portable stall system that considers this separation can also accommodate these needs.
- All floor drains shall drain into the sanitary sewer to eliminate stormwater pollution



Image credit: bestofvegas.com



Image credit: arsenalsteel.com



Image credit: aiachicago.org

## MULTI-PURPOSE FACILITY RECOMMENDATIONS

- Add a multi-purpose facility (52,000 SF) to meet the needs and demands of site users and should include a climate-controlled arena that is flexible for use by multiple events
- Attach a covered arena to the multi-purpose facility for expansion of warm-up facilities and shared structural and support efficiencies

Note: Recommendations are summarized in Appendix A.

## MULTI-PURPOSE FACILITY ARCHITECTURAL CHARACTER



Image credit: dutchmasters.on.ca



Image credit: chickensmoothie.com

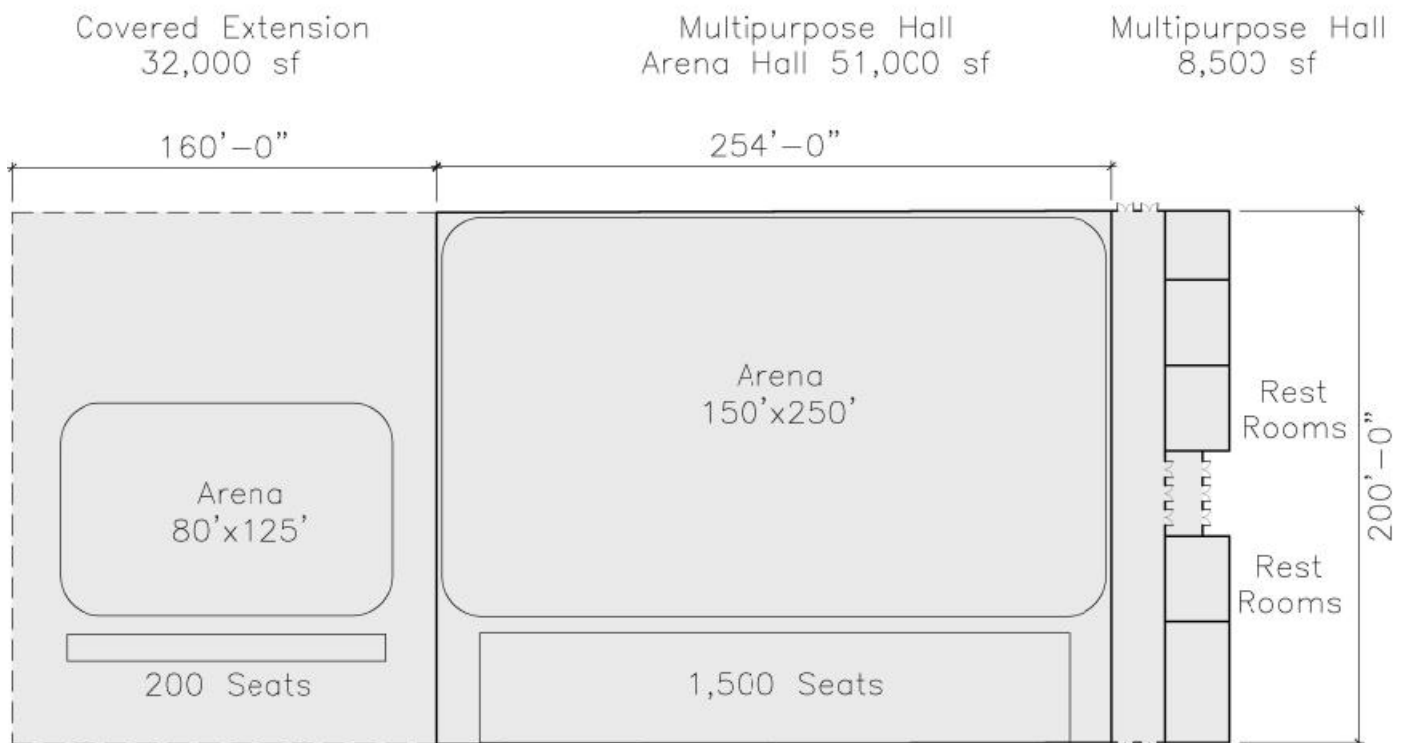


Image credit: nolanc.com



Image credit: oblcc.com

## MULTI-PURPOSE FACILITY FLOOR PLAN



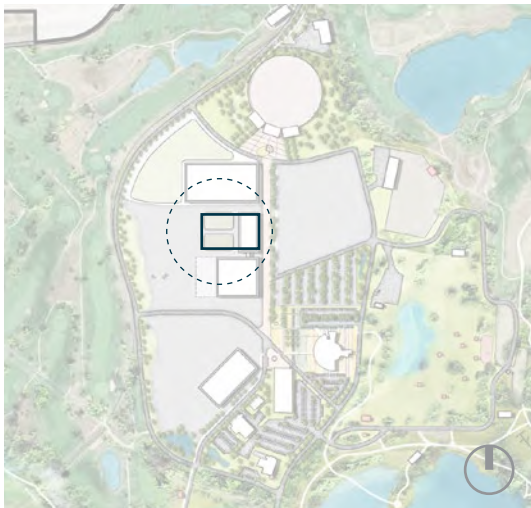
Source: KO Architects

## ARENAS

Covered arenas may be the simplest of fair and equestrian buildings. From an architectural perspective, the simplicity of the structure can contribute character to the fairgrounds campus. By grouping them carefully, the spaces between these simple buildings can be functional and an important component of the outdoor experience at a fair.

Provide an additional covered arena facility (29,000 SF) nearby the extended covered arena with the Multi-Purpose Facility that can be utilized for a variety of event activity, and include the following features:

- Ideally locate to have a covered connection to the multi-purpose building
- Provide lighting, fan ventilation, perimeter IR heating, bleacher seating for 200 and a reviewing stand
- Provide fencing around perimeter of arena
- Provide WiFi and PA system
- Building shall be steel framed metal building type, open sided. If desired, curtains could be dropped on the sides facing prevailing winds where not otherwise protected by adjacent structures or vegetation.
- All floor drains shall drain into the sanitary sewer to eliminate stormwater pollution



Provide two additional open arenas with lighting and bleacher seating for 100 each and a shared reviewing stand.

- Provide fencing around perimeter of arenas. Fencing specifications should be stalling panels as indicated in the adjacent imagery.

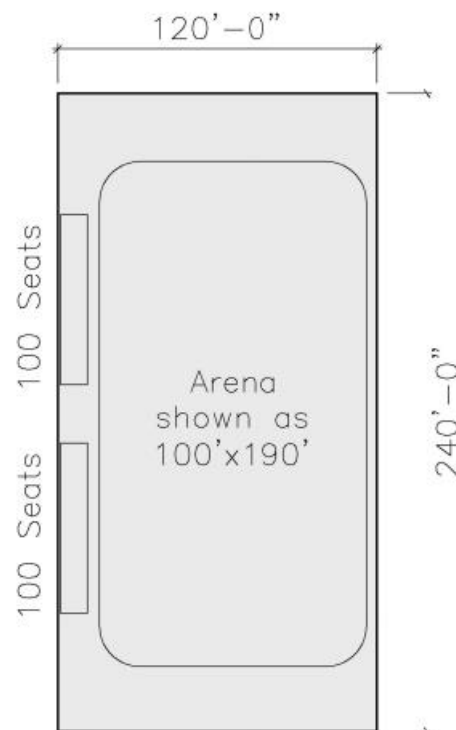
Use "Classic Panels," like the fence on the left for the outdoor warm-up, covered and open arenas. Use "Classic Panels-Half Sheeted" for the large indoor arena in the multi-purpose facility, as illustrated in the image on the right (See fencing images to below).

## FENCING



Source: [www.manufacturing.com](http://www.manufacturing.com)

## COVERED ARENA ARCHITECTURAL FLOOR PLAN



Source: KO Architects

## COVERED ARENA ARCHITECTURAL CHARACTER



Image credit: ...



Image credit: mccarch.com



Image credit: fiolnabigwood.com



Image credit: directindustry.es



Image credit: pinterest.com



Image credit: dcstructures.com

## ARENA RECOMMENDATIONS

- Add two outdoor arenas in proximity to stalling and the multi-purpose facility
- Add lighting to new arenas to extend the use of the facilities
- Add one covered arena (29,000 SF) in proximity to the multi-purpose facility

Note: Recommendations are summarized in Appendix A.

## EXPO BUILDING

The workhorse for most fairgrounds is the expo building, which must be efficient, cost-effective and durable. Pre-engineered metal building systems are the typical approach for Expo Buildings. With thoughtful use of materials, window placement, detailing, and scale, these large, simple buildings can present as welcoming architecture.

Recommendations for an Expo Building include the following:

- Total of 50,000 SF of divisible, flexible multi-purpose space (ideally contiguous and column-free); with concrete floor
- Six (6) to eight (8) meeting rooms that could accommodate various configurations and capacities and potentially be combined to form a junior ballroom
- Include moveable walls to reconfigure rooms
- Modern technological and audio/visual/ internet capabilities
- Include support space for restrooms, show office, storage and pre-function activities
- Commercial kitchen that could potentially double as an educational component
- This space is intended to supplement the existing Exhibit Hall (which is to be renovated/enhanced) and Waymire Dome (refurbished)
- Rustic agricultural architectural character to tie into existing buildings
- Ample natural light
- Include a permanent stage for use by 4-H and others

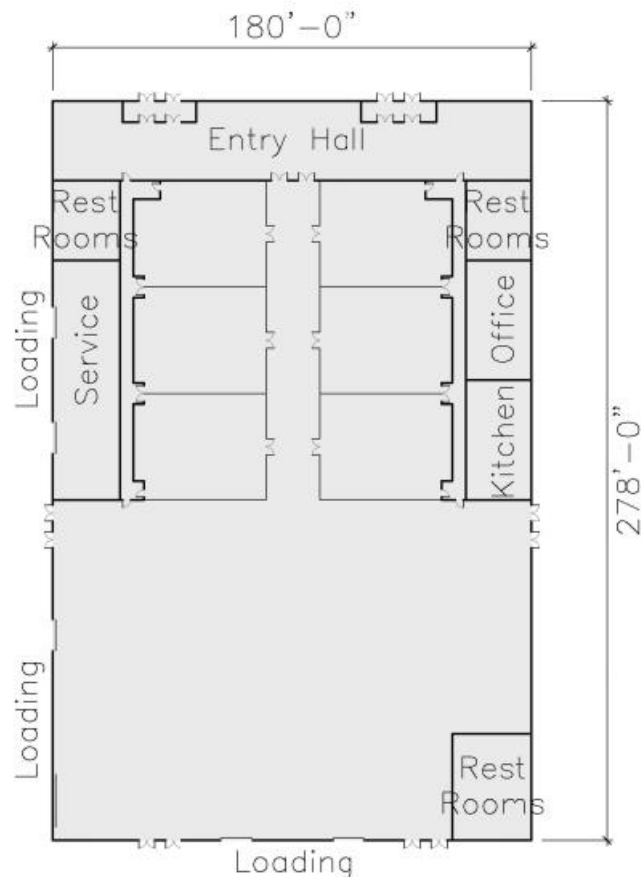


## EXPO BUILDING ARCHITECTURAL CHARACTER



Image credit: Jensen Architects

## EXPO BUILDING FLOOR PLAN



Source: KO Architects

## EXPO BUILDING RECOMMENDATIONS

- Add an Expo Building (50,000 SF) of divisible flexible space

Note: Recommendations are summarized in Appendix A.

## EXPANDED ADMINISTRATION BUILDING

Given its prominence, the Administration Building is important in establishing the architectural character of the fairgrounds.

The Administration Building receives an addition within this master plan, providing more space for meeting rooms and conference space. As such, the building should be equipped with modern technological and audio/visual/internet capabilities. Access to natural light and well lit spaces is important to the spaces. It should be noted that significant utilities exist within the line of expansion, and will need to be studied and/or relocated with future expansion.

## ADMINISTRATION BUILDING ARCHITECTURAL CHARACTER



Image credit: ecadinc.us

## EXISTING SILO FEATURE



## ADMINISTRATION BUILDING RECOMMENDATIONS

- Expand the Administration Building to accommodate additional meeting and conference room space

## OTHER FAIRGROUND STRUCTURE RECOMMENDATIONS

### *Al Lesser Building*

- Increase electrical access and supply by adding an overhead power grid for drop-downs for exhibit uses
- Add fire sprinklers to improve overall flexibility and life safety of the building
- Add an automatic overhead door and opener

### *Exhibit Hall*

- Relocate the attached shower/restroom facility to a more functional and less public location
- Increase electrical access and supply by adding an overhead power grid for drop-downs for exhibit uses
- Update finishes

### *Waymire Dome*

- Replace the roof
- Assess potential to mitigate noisy mechanical equipment in rental spaces

### *Former Red Cross Building*

- Reconfigure interior to serve one main purpose – either public meeting spaces or facility offices

Note: Recommendations are summarized in Appendix A.

## PEDESTRIAN SPINE

A pedestrian spine runs north-south and concentrates pedestrians along the main thoroughfare through the facilities for event times. The spine terminates at the iconic new Grandstands to the north. The treatment of this spine should favor the pedestrian, including site amenities such as benches, trash receptacles, water stations, and the like, as well as shade, electrical hookups for vendors, wayfinding signage, human-scaled lighting, art, and more. During non-event times, this thoroughfare should allow vehicles to circulate through the site.

Showcasing sustainable practices is appropriate along the pedestrian spine. Pervious pavers and semi-permeable pavements reduce peak flow stormwater runoff during warm months while also promoting geothermal exchange that may minimize the need for snow removal during winter months. Other elements like LED lighting features and rain garden displays further emphasize the importance of sustainable practices with the potential for protecting natural resources and improving the bottom line.

The pedestrian spine, or main thoroughfare that organizes the fairgrounds core, provides an ideal place for vendors, food trucks, tents and outdoor events to take place. Fitting the spine with electrical connections and dispersed water hook-ups will allow flexible staging for a range of uses. This space could serve as a weekly market or incubator for food trucks and/or restaurateurs.

## GATHERING SPACES

Gathering spaces are dispersed through the facility core and focused upon the pedestrian spine. A plaza west of the Waymire Dome and north of the Exhibit Hall creates opportunities for events to spill out, or staging of activities during fair time. The main plaza is located to the north at the entry to the Grandstands. This location, and its proximity to the Midway lot, would draw visitors through the entire fairground facility during the fair.

## VIEW OF PEDESTRIAN SPINE



Image credit: KO Architects

## PEDESTRIAN SPINE CHARACTER



## PEDESTRIAN SPINE AND GATHERING SPACES RECOMMENDATIONS

- Orient new buildings along a pedestrian spine with gathering spaces to be used during special events
- Install electrical connections and water hook-ups along the Pedestrian Spine as infrastructure to support vendors and food trucks

*Note: Recommendations are summarized in Appendix A.*

# SITE DESIGN AND PLACE-MAKING

## VISITOR HEALTH

Health opportunities were explored with stakeholders, including the topics of healthy eating, access to drinking water, recreation, wayfinding and visitor safety.

Tri-County Health was identified as a willing partner with the fair, and would provide input into concession options, vending machine alternatives and education on food choices and accessibility. Events should maintain improved access to water fountains and filling stations. Additional filtration for water stations could enhance the water quality for visitors.

Promote the concepts of sun safety through signage and free product partnerships during events. Event signage can help remind visitors to apply and reapply sun protections, wear sunglasses, hydrate, or take relief in shady areas. Product partnerships provide a way to share products like sunglasses or sunscreens with visitors.

## SITE DESIGN AND PLACE-MAKING RECOMMENDATIONS

### Visitor Health

- Introduce healthy food and beverage options at the Park vending machines and concessions stations
- Partner with Tri-County Health for the County Fair as a strategy to promote healthy living to the fairgoers
- Implement a series of water stations to provide access to drinking water for visitors and dogs recreating throughout the park, especially along trails
- Introduce a park wayfinding system with supplemental information about health such as distance to destination, minutes to walk to destination, and/or calories burned during walk to destination
- Promote the concepts of sun safety through signage and free product partnerships during events
- Develop a preferred list of event caterers that align with the agricultural heritage at the park and fairgrounds by offering farm-to-table menu selections

*Note: Recommendations are summarized in Appendix A.*

## PLACE-MAKING CHARACTER



*Image credit: Janet Rosenberg and Studio*



*Image credit: Dan Ballard via Flickr*



## LANDSCAPING

The park's assets in a great lawn, mature trees, meadows and a diversity of landscape typologies are great. The lawn provides flexible space for both everyday park uses and events and event staging. Future landscaping goals should seek to bolster the ability of the lawn east of the facilities to support expanded use. Bioswales, rain gardens and stormwater detention areas can be incorporated into areas of higher development to help filter runoff and improve stormwater quality.

Maintaining a good portion of the site with native grasses, sedges, forbs, meadow and riparian planting is important to limit the intensity of maintenance and irrigation and maintain the naturalized character that promotes an experience of being in nature while close to the city.

Successional planting and forestry management should also be a priority. The park could host a tree nursery on site in order to maintain the long-term park character, transplanting species yearly to places in need. Currently, the site has approximately 116 ash trees which will require replacement in time. Tree diversity can be planned for in a nursery and used to mitigate future conditions that may arise.

In addition, the facility core requires a great deal of parking. As possible, trees should be strategically planted within and around the parking areas to reduce heat island effect and contribute to the comfort of park visitors.

Adjacent site uses that are not as compatible with one another should incorporate a vegetated buffer for screening, as well as utilize spoils from nearby and on-site projects to create topographical berming. An example is between the golf courses and the rest of the site.

Pollinators, such as butterflies, bees and other insects, are invaluable to Colorado's agricultural and native ecosystems. As such, during the 2017 session, the Colorado State Assembly has designated the I-76 corridor as a "Pollinator Highway." The intent is to provide healthy and diverse habitats for

## SITE DESIGN AND PLACE-MAKING RECOMMENDATIONS

### Landscaping

- Initiate an on-site tree nursery as part of the forest management strategy. A significant number of ash trees exist on site and will need to be protected or replaced. A nursery can serve as a good resource for replacement plant material.
- Incorporate vegetated buffers between conflicting uses, such as between the fairground and event core and the adjacent golf courses
- Support the I-76 Pollinator Highway by providing plant communities recommendations and explore partnership opportunities

*Note: Recommendations are summarized in Appendix A.*

## LANDSCAPING CHARACTER



## SIGNAGE CHARACTER



*Image credit: G-Squared*

pollinators during three seasons of flowering within native-plant communities, supporting foraging, nesting, breeding and migration. The Riverdale Regional Park will supplement the intents and efforts of the Pollinator Highway by emphasizing native plant communities that act as attractants for pollinators, among other wildlife species.

### SIGNAGE

Creating a distinct character for the Adams County Fairgrounds has benefits for recognition and connection to place. A branding strategy could emerge through a combination of design guidelines for architecture in addition to a well-designed signage and wayfinding system. With so many facilities requiring replacement or improvements, and with a need for an updated wayfinding system, coordinating these two objectives will result in a memorable sense of place.

Announcing the Regional Park and Fairgrounds to visitors arriving for the first time, as well as notifying passersbys of upcoming events is a critical first step in the signage program. The existing electronic sign located on Highway 85 should be relocated to direct visitors to the new main park entrance at 120th Avenue. Additionally, all vehicular and trail gateways into the park should be marked with iconic features such as archways and signage, welcoming visitors in and establishing some orientation through directional wayfinding.

Park branding begins with advertising campaigns that reach to a greater regional population including billboards, social media, media advertisement and more. The entry arrival that includes signage and gateway features takes the first step in defining an easily recognizable first impression. It is continued through the guests' experience on-site, with the generous use of logos on consistent wayfinding and signage.

Park signage should be incorporated with a range of hierarchy. This includes wayfinding and directional signs, internal circulation signs, interpretive panels, banners, instructional signage, amenity markers or identification signs and more. The branding platform must be sensitive and appropriate to the site's natural conditions and visitor's experience. Directional signage amongst the fairground core is appropriate in greater amounts than within the passive natural areas, which should be limited to smaller trail signs and interpretive panels. The design must be timeless and implemented with durable materials that can withstand extreme sun exposure and environmental conditions of Adams County. The signage program must consider value, maintenance and adaptability for the future so that it can be easily added to or replaced.

The signs that represent Riverdale Regional Park must be innovative and deliberate with colors, fonts, logos and material selections that are authentic to the place.

## SITE FURNISHINGS

Site furnishing such as benches, bicycle racks and trash/recycling receptacles should be standardized and made of hearty materials that can withstand intense sun, heat, moisture and cold temperatures such as pre-cast concrete. It is important that the entire Regional Park share a language of materials and aesthetic character, while variations in color or detailing may occur between park sectors, such as the fairgrounds, the trail/nature preserve and the overall park. Trash and recycling receptacles should comply with wildlife safety, preventing animals from foraging within or causing injury.

## ART

Using “Artfully Adams,” the 2017 Arts and Culture Master Plan, as a guide, implement an “art in the park” program that brings art to park visitors of various quality and scale. This includes arts and culture activities, events and displays promoting the Regional Park as a arts and culture destination. Art can be displayed along trails and within the framework of new facilities. Public art displays demonstrate the importance of the arts to the County and helps in place-making. The facilities also promote cultural events, concerts and festivals. Work with the Scientific and Cultural Facilities District (SCFD) to fund projects, as well as apply a percent of development project fees to fund art in public places. “Artfully Adams” is available online here: [www.adcogov.org/cultural-affairs-0](http://www.adcogov.org/cultural-affairs-0).

## VETERANS MEMORIAL

A veterans Memorial to honor Adams County service persons can be incorporated in the fairgrounds core area as improvements and new facilities are introduced. The scale and design will be decided upon at a later time.

## LIGHTING

Upgrade lighting to fixtures with greater footcandles to limit the number of poles and decrease obstacles within parking areas. Increase energy efficiency through LED technology to reduce costs. Utilize solar or other energy efficiency methods to provide power to lighting fixtures.

## LIGHTING CHARACTER



## SITE DESIGN AND PLACE-MAKING RECOMMENDATIONS

### Signage

- Create an educational signage system that provide information and displays regarding the historic and natural character at the Park
- Replace or relocate the primary entrance sign located on Highway 85 to direct visitors to the new main park entrance at 120th Avenue
- Mark the gateways into the park with iconic gateway features
- Recruit a marketing and branding consultant to refine the brand, messaging and outreach strategy for the park

### Art

- Encourage an “art in the park” program that brings art to park visitors of various quality and scale

### Lighting

- Upgrade parking lot fixtures with greater footcandle spreads to limit number of poles, and higher energy efficiencies to reduce energy costs over time
- Incorporate pedestrian level lighting for added pedestrian safety in high trafficked areas
- Transition to LED lighting fixtures
- Balance the priorities for public safety and dark sky values with lighting solutions

### Emergency Management

- Ensure a high level of modern technology available to aid in communications (WiFi, PA system, warning alarms)
- Identify locations on site to shelter in place
- Regularly update and review a site emergency plan with staff and volunteers
- Separate animals to minimize the potential transfer of disease

*Note: Recommendations are summarized in Appendix A.*

Balance the priorities for public safety and dark sky values with lighting solutions. Incorporate pedestrian-scaled lighting along the pedestrian spine of the facility core and other areas determined to require additional pedestrian safety in evening hours.

The International Dark-Sky Association identifies five major tenants to achieve dark sky lighting successfully:

- Only be on when needed
- Only light the area that needs it
- Be no brighter than necessary
- Minimize blue light emissions
- Be fully shielded (pointing downward)

## EMERGENCY MANAGEMENT

The fairgrounds and its public facilities hosts animals and livestock during natural emergencies in the region, such as wildfires. The facility will continue to function in a way to provide these vital services. Flooding poses other regional risks, and due to its location within the South Platte River floodplain, the fairgrounds is not appropriate for use during emergencies in instances of flooding.

Future safety concerns should ensure a high level of modern technology available to aid in communications, from WiFi to PA system upgrades and site warning alarms.

Locations within structures that are appropriate for sheltering during events should be identified and signed for site users. A site emergency plan should be updated regularly and reviewed with staff and volunteers.

Animal safety is another concern. Stalls should include separation for animals to minimize the potential transfer of disease.

## WASTE MANAGEMENT

Solid waste management planning is needed at the facility, particularly as the site expands uses to the south. A solid waste plan should be developed considering existing facilities, proposed new facilities in the north and the expansion of use to the south. Once hydrologic modeling is completed after the Brantner Gulch project is implemented, areas for solid waste collection, composting, etc. should be re-examined. The Maintenance Shop and compound would offer an ideal location if conditions allow in the future.

# WATER RESOURCES

The immense water resources found within the parkland provide great opportunities for site ecology, education and interpretation, recreation and a celebration of the site's natural assets. The South Platte River, the many lakes captured from previous gravel pit operations and future plans to reroute Brantner Gulch make up this network of water resources. The master plan seeks to enhance these amenities, providing healthy and continuous habitat corridors and connections for aquatic and terrestrial resources, promoting recreational opportunities such as non-motorized boating and fishing where appropriate and responsibly treating runoff before it exits the site.

## ECOLOGY

Adams County Regional Park supports a host of wildlife such as birds, pollinators, fish, mammals and more. As development pressures encroach into the area, the park is able to provide a refuge for many of these species. The opportunity exists to promote birding, fishing and passive nature experiences through the maintenance and enhancement of riparian edges, diversity in vegetation and the careful consideration of the locations of conflicting uses. Riparian restoration demonstration areas can educate visitors about the diversity of the system.

Restoration activities should work to provide fish habitat and fish passage where appropriate in accordance with accepted best practices. Aquatic management will be necessary to ensure that species such as carp do not compromise the habitat of other fish. Continued partnership with Colorado Parks and Wildlife will ensure healthy fish habitat and allow fishing in more of the site's ponds. In addition, alluvial flow and settlement will become evident in the lakes, and nutrient loading remains a concern.

## EXISTING SITE WATER RESOURCES



*Image credit: 5280.com/2014/11/the-slow-rebirth-of-south-platte-river/*

## BRANTNER GULCH RESTORATION



## CONNECTIONS

Restoration activities should work to provide an unencumbered corridor of native trees and understory shrubs for bird habitat and migration. Utilizing the South Platte River Corridor, but also systematically connecting the lakes through channels to the river will increase the habitat potential and diversity.

## RECREATION

The river, canals and lakes provide an opportunity to introduce water more recreation to the site. Stand up paddle boarding, kayaking, belly boating and similar non-motorized activities have proven to be a popular recreation activity in the area. Lake #3 and Mann-Nyholt could support these activities with adequate access and “put in” and “take out” infrastructure. A water course connection could traverse all the way to Willow Bay, going up the South Platte River and traversing down through the ponds with only short portages. A waterway trailhead could be installed at Willow Bay. Summer workshop training could be accommodated within the site.

## RESTORED CHANNEL CHARACTER



Image credit: miriadna.com

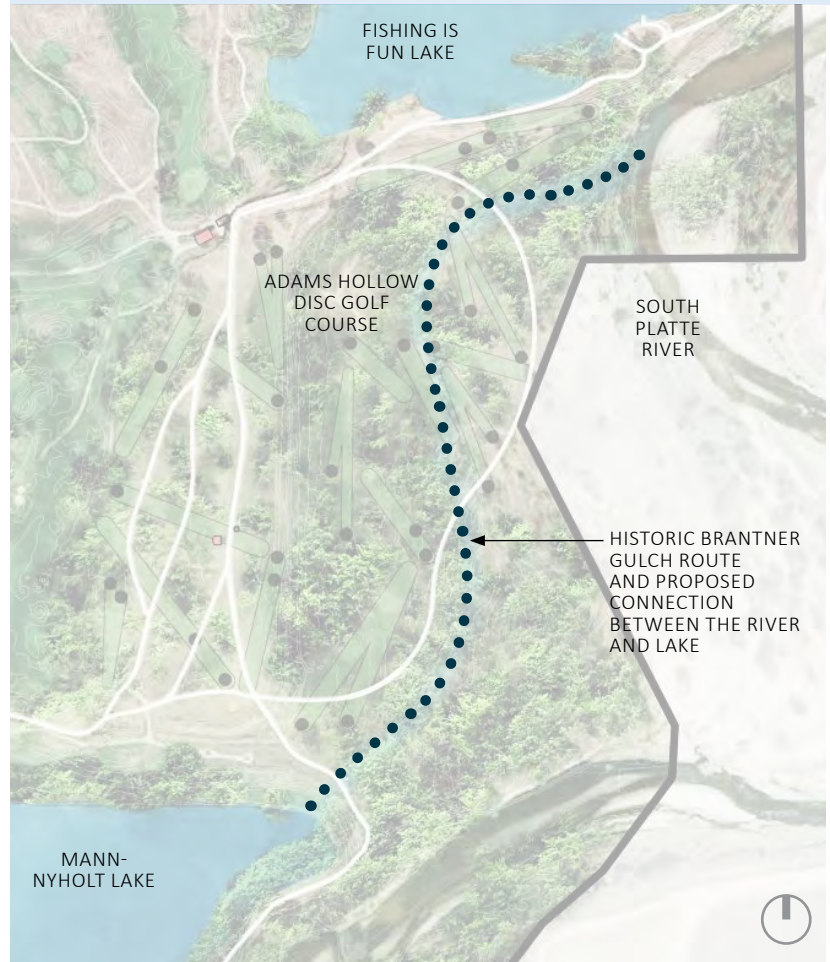
## BRANTNER GULCH PROJECT

The Brantner Gulch project is being studied and conducted by the Urban Drainage and Flood Control District to stabilize the health and water quality of the Brantner Gulch and reduce damage and velocity in the area during flood events. Future plans will improve the performance of the drainageway and provide an opportunity to create an amenity for park users, through a trail alignment and educational interpretation.

## HISTORIC BRANTNER GULCH (HISTORIC STREAM)

A dried up meander along the South Platte River once contained the Brantner Gulch. Restoring the channel and its vegetation would serve as a water quality project and provide an opportunity to carry recreationalists along a path from the river to Mann-Nyholt Lake. In order for this to occur, water will be fed from Mann-Nyholt Lake and re-routed in the historic meander to the South Platte River. The hydrology of this proposed use will need to be studied in further detail in order to determine flow rates, water course design and hydrologic conditions required for recreational uses.

## HISTORIC BRANTNER GULCH MAP (HISTORIC STREAM)



## WATER RESOURCES RECOMMENDATIONS

- Incorporate bioretention facilities in parking lots in landscaped areas, medians, and roundabouts (Refer to EPA's "Green Parking Lot Resource Guide" to understand the benefits of a sustainable approach as well as specific design and material considerations)
- Introduce green infrastructure demonstration projects at the entrance to high-profile buildings, such as a visitor center. Facilities to consider include: rain gardens, pollinator gardens, permeable/porous pavements, and green roofs.
- Create multiple partnerships with elected officials, stormwater utility manager, water regulatory agency, or the department of conservation or natural resources as a means to implementing and maintaining green infrastructure projects. Other ideas for partnerships include CSU Extension, Audubon Society or local watershed groups.
- Explore the feasibility of a connected water trail utilizing the South Platte River, lakes and a small portage
- Educate visitors of the natural processes of the site through interpretative signage or messaging
- Work with local partners, such as Colorado Parks and Wildlife, to establish and maintain healthy fish habitat within the site
- Establish a water buffer protocol around park water assets where artificial fertilizers and pesticides are restricted

*Note: Recommendations are summarized in Appendix A.*

## STORMWATER STRATEGIES

Numerous options are available to mitigate and purify stormwater. The following are some strategies that can be integrated into the future improvements at the park and fairgrounds.

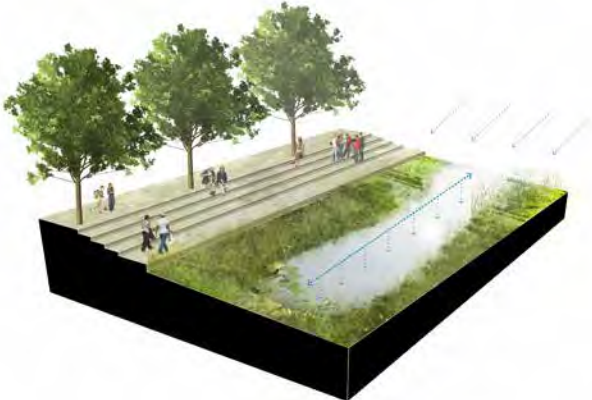
### RAIN GARDEN

A rain garden captures stormwater in small vegetated basins where water is mitigated, filtered and infiltrated.



### WATER QUALITY BASIN

This strategy captures a larger volume of stormwater compared to the rain gardens. These are vegetated basins that mitigate water and allow for infiltration.



### PERMEABLE PAVEMENT

Permeable pavement is a stormwater strategy that can be employed nearly anywhere pedestrian pavement is located. This technology allows stormwater to filter through the pavement, collect within a buried reservoir before overflowing to traditional stormwater infrastructure.



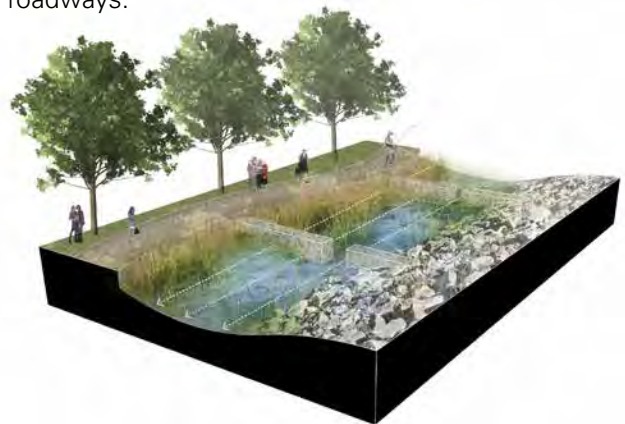
### GREEN ROOF

A green roof offers many benefits including pollinator habitat, energy efficiency gains and stormwater mitigation.



### BIOSWALE

This linear vegetated basin conveys stormwater. This strategy is effective as an element alongside walkways or roadways.





## WATER BUFFERS

Buffers are good practice along water bodies. The benefits of buffer areas include the protection of riparian and aquatic habitats and the promotion of water quality when native vegetation is present. Regulatory buffers may restrict building and development in close proximity of the water.

According to the Adams County Development Standards and Regulations document (August 15, 2017; page 4-179), minimum setback and buffers are indicated as follows:

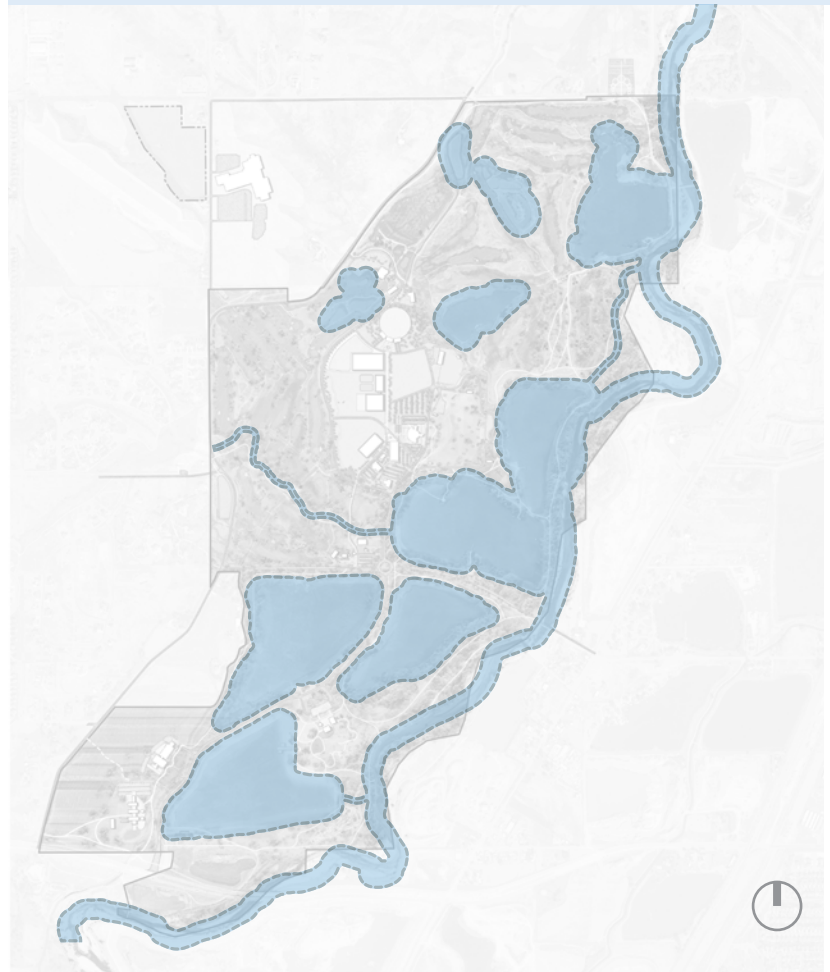
- Rivers: minimum 150 feet
- Streams: 50 to 150 feet
- Natural Lake and Ponds: 50 to 150 feet
- Wetlands: minimum of 50 feet

According to a “Planner’s Guide to Wetland Buffers for Local Governments” (2008), the concept that wetland buffer areas serve different functions is considered. Buffer distance recommendations are as follows:

- Sediment and phosphorous removal: 100 to 160 feet
- Nitrogen removal: 100 to 160 feet
- Wildlife protection: 100 to 300 feet, up to 1,000 feet depending on species

Although it is recommended that the Riverdale Regional Park transition away from using artificial fertilizers, and pesticides entirely, the water buffer diagram illustrates areas where these materials should be avoided.

## WATER BUFFER DIAGRAM



### LEGEND

- Water buffer area (150 feet buffer for South Platte River and lakes, 50 feet buffer for streams)



# VEHICULAR ACCESS AND PARKING

## ACCESS CIRCULATION

The park master plan has four (4) vehicular park entrances - north from 120th Avenue; north or south from 124th Avenue; and emergency access through the Riverdale Golf Course parking lot, from Riverdale Road.

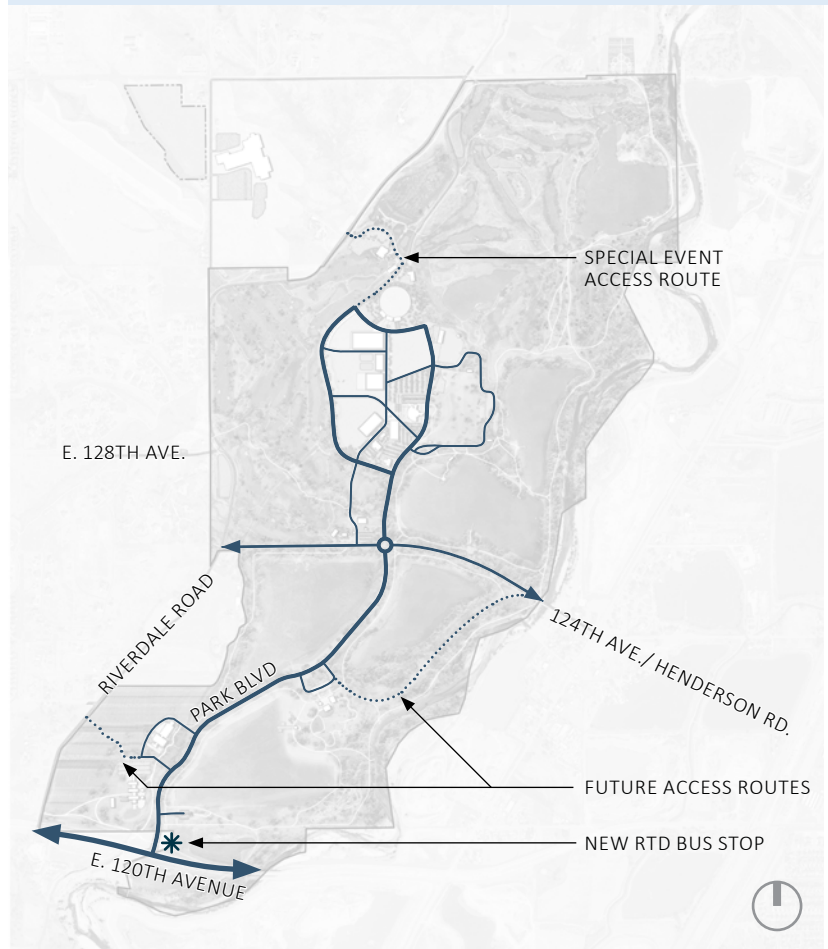
Future plans intend for the modification of the existing 124th and Highway 85 intersection to be a right-in and right-out turning motion. This will have a great impact on the existing traffic patterns on 124th Avenue, and supports the main park access point moving to 120th Avenue. The 120th Avenue intersection is defined as the future main regional park gateway and will have a traffic signal to facilitate the regional park traffic. A strong north-south access road, Park Boulevard, provides a visitor experience through the park, slowing traffic and engaging the visitor with the park.

A roundabout is introduced at the intersection of Henderson Road and Park Boulevard to slow traffic on 124th Avenue, effectively improving traffic flow and reducing faster speeds of travel through the center of the park. The reduction of vehicular speed will increase the safety and comfort of park users traversing across 124th Avenue and Park Boulevard, and it will also change the character of 124th Avenue from a bisecting through-way to a park road.

Per the US 85 Planning and Environmental Linkage (PEL) Study, the connection of 124th Avenue at US 85 is recommended to be closed in the future. A grade-separated interchange is recommended for the intersection of 120th Avenue & US 85, which will accommodate US 85 access for drivers that historically have used 124th Avenue. With the closure of 124th Avenue at US 85, the volume of traffic accessing the park via Henderson Road/124th Avenue will reduce significantly as well.

A connection is developed through the golf course parking lot for secondary ingress/egress for emergency personnel and

### ACCESS CIRCULATION DIAGRAM



### CIRCULATION AND PARKING RECOMMENDATIONS

- Establish a new vehicular ingress/egress point for emergency personnel and maintenance at the golf course
- Create a roundabout on Henderson Road to slow traffic through the park
- Accommodate parking through a series of reconfigured and new parking lots
- Introduce a shuttle route for events, with a drop-off located centrally to the fairground facility area
- Create a partnership with the new 27J high school (Riverdale Ridge) and middle school (Quist Middle School) to the north for shared parking during events
- Impose a higher parking fee to encourage visitors to utilize the free shuttle satellite parking lots. On site parking fees should be increased incrementally through an experimental process to determine the right fee structure to discourage on site parking while not discouraging visitation. Promotional material and website information can be utilized to communicate to the general public of the free shuttle parking lots prior to patrons visiting the park during large events. Deploy event signage to provide adequate wayfinding on event days.

*Note: Recommendations are summarized in Appendix A.*

maintenance. VIP attendees may also be accommodated here. This access point will serve to relieve some of the traffic pressures during large events. Additionally, an event-time only route is envisioned west of the historic museum for shuttle access. This alignment will need to be coordinated with the future Brantner Gulch project

With more access points and a viable connection to 120th Avenue, daily and event traffic is anticipated to be accommodated more efficiently than existing conditions.

## CIRCULATION EVERYDAY

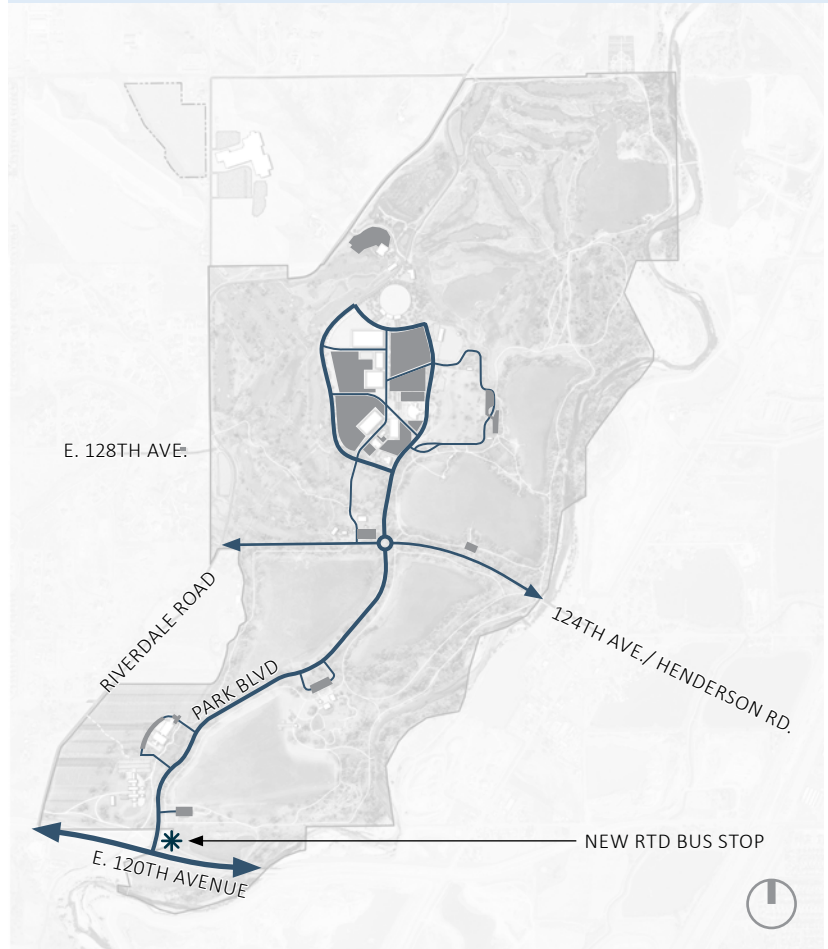
Vehicular circulation within the park is organized with a north to south corridor, Park Boulevard, bisected by the east to west corridor, 124th Avenue/Henderson Road.

The expansion of Park Boulevard south of Henderson Road allows for north to south circulation through the park to 120th Avenue and provides access to new day-use park areas and a proposed animal shelter and other future cultural facilities.

The fairgrounds area features an outer loop road that provides access to the parking lots situated along the periphery. An additional access between Henderson Road and the fairgrounds is proposed west of the existing Historic Society.

Parking for everyday use is concentrated on the North side of the park, where many destinations are located. Other parking areas can be found throughout the site, providing access to all major amenities.

## CIRCULATION EVERYDAY DIAGRAM



■ Parking Lots

<i><b>EVERYDAY PARKING</b></i>	<i><b>EXISTING</b></i>	<i><b>PROPOSED</b></i>
Animal Shelter	na	120
Trailhead Parking (120th)	na	44
Nature/Science Center Parking	na	90
Historical Society Parking	106	100
Trailhead Parking (124th/Henderson)	25	25
Mann-Nyholt Lake	75	75
Golf Course Parking Lot	310	247
124th Ave./ Henderson Road On-street Parking	na	241
Fairgrounds Loop	2,409	3,143
<b>TOTAL</b>	<b>2,925</b>	<b>4,085</b>

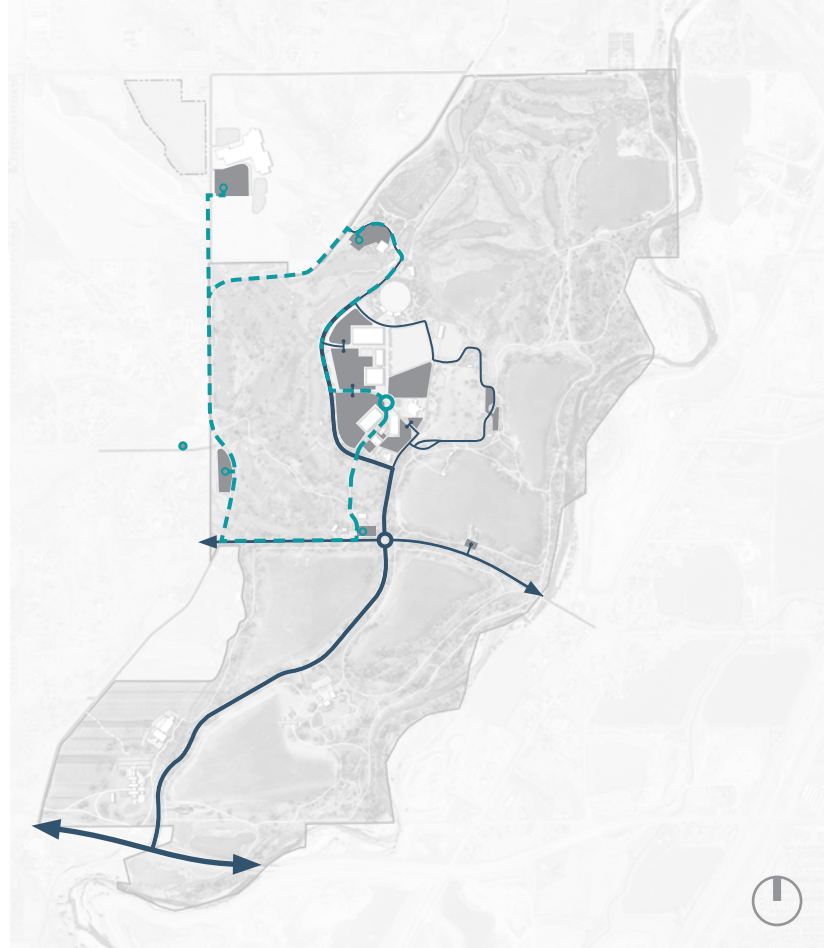
## CIRCULATION DURING EVENTS

During events, circulation is slightly altered in order to provide a larger area within the fairgrounds without vehicular conflicts.

The major access in the North Park follows Park Boulevard with a primary route to the west of the fairgrounds, where many parking opportunities are available. The secondary route around the fairgrounds extends toward the existing playground area and then connects back to Park Boulevard just to the south of the Grandstands.

Satellite parking lots and a convenient event shuttle further defines event circulation. Event parking is proposed to increase in the fairgrounds area. Approximately 1,200 free parking spaces will be provided off site at several nearby parking lots, including the proposed Riverdale Ridge High School along Yosemite Street and the Quist Middle School west of the high school, the West Event Lot, 128th & Riverdale, the Historical Society parking lot and the Riverdale Golf Course parking lots. These lots will be served with several shuttles along a looped shuttle route that runs along Riverdale, Henderson Road and along the western edge of the fairgrounds.

### CIRCULATION DURING EVENTS DIAGRAM



↔ Vehicular Circulation

↔ Shuttle Circulation

■ Parking Lots

<i><b>EVENT PARKING LOTS</b></i>	<i><b>TOTAL</b></i>
Fairgrounds Loop Parking Lots	2,293
Historical Society Parking Lot	100
Trailhead Parking (124th/Henderson)	25
Mann-Nyholt Lake Parking Lot	75
Golf Course Parking Lot	390
High School Parking Lot	400
West Event Parking Lot	315
128th Parking Lot	13
124th Ave./ Henderson Road On-street Parking	241
<b>TOTAL</b>	<b>3,852</b>

## SHUTTLE ROUTES

The proposed Riverdale Ridge High School to the north offers the largest satellite parking lot with 400 parking spaces, and the future adjacent middle school, Quist, will increase that amount. The golf course clubhouse can accommodate 390 vehicles during non-peak golfing times.

The West Event Lot is only open during large fairgrounds event. This grass surfaced parking lot offers approximately 315 parking spaces. Just to the south of the fairgrounds, the Historical Society and Museum invites up to 100 vehicles to park.

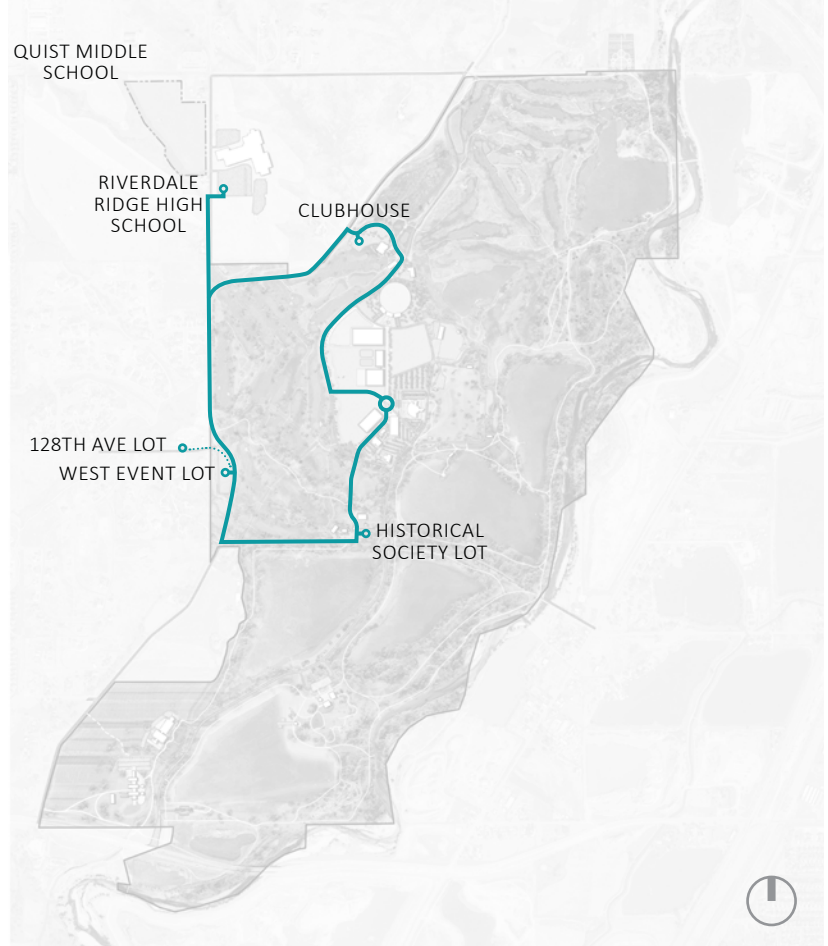
These satellite parking lots are served by the event shuttle, but some visitors might opt to walk or bicycle to the fairgrounds.

The loop is planned to route through the fairgrounds to satellite parking lots to the south, west, and north. This short loop would ideally route every 10 to 15 minutes during peak event times so that the convenience of the satellite parking lots is appealing for event guests.

The parking capacity of the fairgrounds during events is increased by 1,218 parking spaces by adopting this strategy.

These shuttle lots will be much closer compared to the existing shuttle lots utilized during the fair today, resulting in a shorter shuttle ride and reduced wait time. The shuttle route will be predominantly separated from the general vehicular traffic accessing the fairgrounds. The drop-off for the shuttle, which currently occurs at the Historical Society parking lot (a long walk from the core of the fairgrounds) will be shifted to a more centralized location near the fairgrounds entrance. The Museum lot may serve rideshare programs such as UBER or LYFT as those services become increasingly more popular.

## SHUTTLE ROUTES DIAGRAM



### SHUTTLE PARKING LOTS

SHUTTLE PARKING LOTS	TOTAL
High School Parking Lot	400
Golf Course Parking Lot	390
Historical Society Parking Lot	100
West Event Parking Lot	315
128th Ave Parking Lot	13
<b>TOTAL</b>	<b>1,218</b>

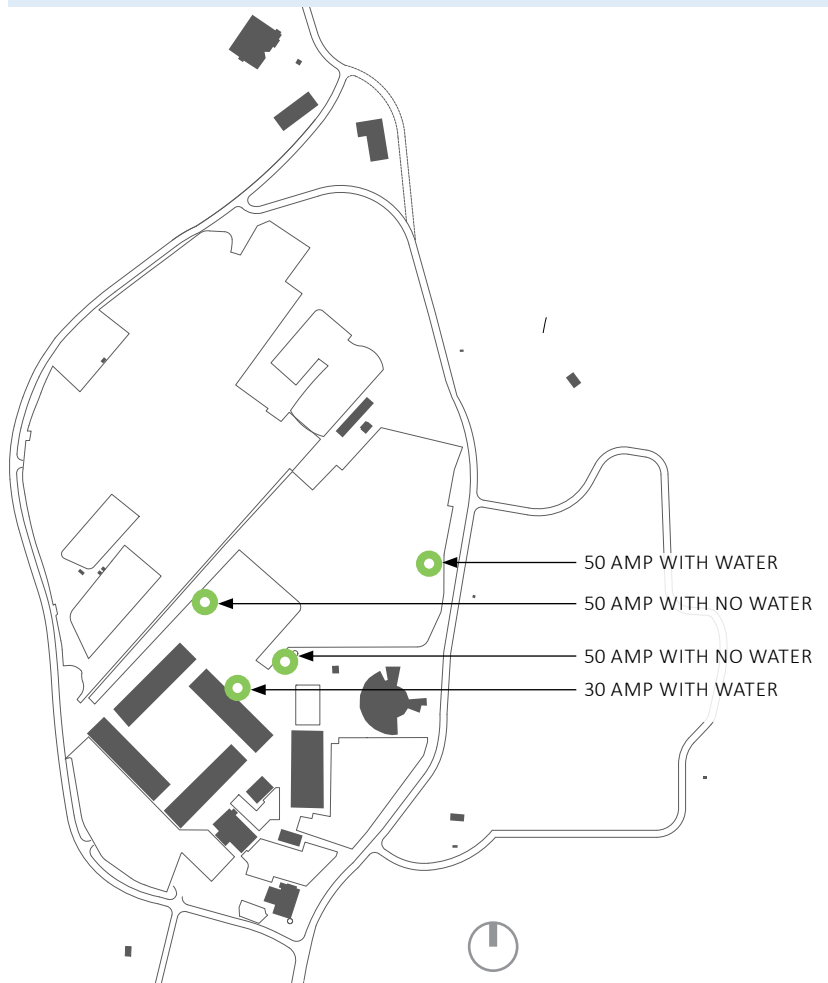
*Note: Quist Middle School is also a good candidate for a shuttle parking lot agreement when construction is complete.*

# RV PARKING PLAN

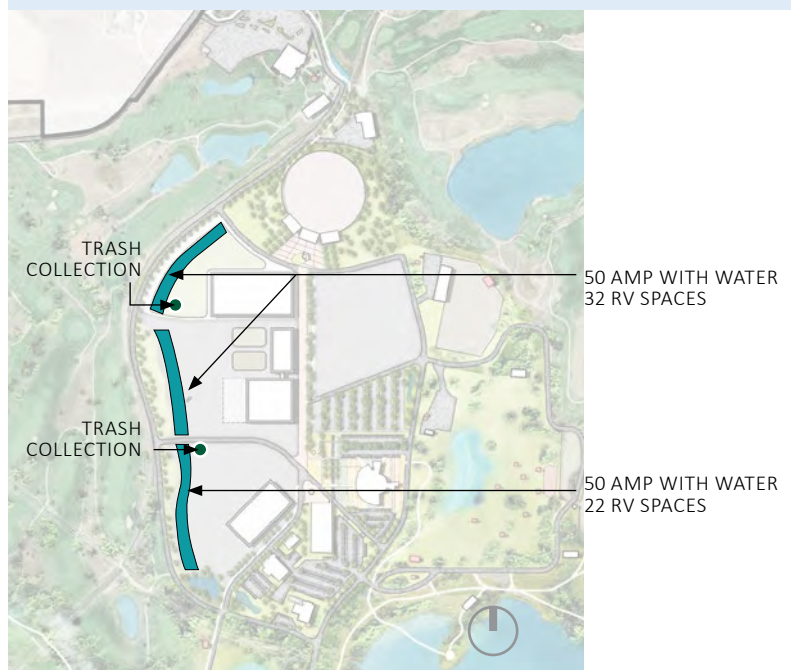
## EVENT RV CAMPING

RV parking for event attendees is popular, particularly amongst the fair and dog show events. A formalized RV Park was explored, but stakeholders and staff preferred to expand the accommodations that are available today – providing hookups along the perimeter of parking areas in close relationship to the facilities that host the events the attendees are there for, such as arenas and stalling. A past formalized campground within the park raised challenges and didn't necessarily appeal to the event users. The ability for event attendees to stay on-site at a reasonable cost makes the demand for hosting events and renting facilities greater. Where possible, sites should front onto grass and have access to shade for a more comfortable experience. Water and electrical hookups should be provided for each dedicated site and a centralized sewer dump station to be managed and maintained by Adams County Parks and Open Space staff should be considered. A dump station location should be sited out of the 100-year floodplain and easily connect to the sanitary sewer line. In the future, depending on floodplain modeling, individual sewer hook-ups for sites may be considered.

## EXISTING RV LOCATIONS



## PROPOSED RV LOCATIONS



## RV CAMPING RECOMMENDATIONS

- Accommodate RV camping in parking lots with the provision of electrical and water hookups and fronting onto grass where possible

*Note: Recommendations are summarized in Appendix A.*

# TRAILS

Located in the 5th fastest growing county in the state of Colorado, Adams County Regional Park must become a pedestrian and bicycle destination for the surrounding communities and the greater Front Range to encourage pedestrian connectivity at a regional level.

## REGIONAL TRAIL LINKAGES

### SCHOOL ROUTES

As adjacent regional destinations come to fruition, such as the new 27J High School (Riverdale Ridge) to the north of the site projected to open in 2018, and a new middle school (Quist Middle School) adjacent to the high school in 2020, trail connections through the Regional Park will become increasingly important for the safe travel of bicyclists and pedestrians. Safe Routes to School (SRTS) is a grant program administered by CDOT that can provide funds to support education and infrastructure connecting children and the community to schools.

### REGIONAL AND OPEN SPACE CONNECTIONS

The Adams County Open Space Master Plan identifies a trail link to the Riverdale Regional Park/South Platte River Trail from the Glen Eagle open space to the west.

Bike lanes are planned on both 128th Ave. and 136th Ave. that will be implemented over time as roads are resurfaced. The re-engineering of Brantner Gulch calls for a widened bridge to accommodate a bike path in an underpass beneath Riverdale Road. The trail system in this area will also be extended as new development comes along. Riverdale Bluffs Open Space and Barr Lake provide opportunities for greater regional connections.

### TRAILHEADS

The South Platte River Trail runs through the Riverdale Regional Park, creating an opportunity to support trail users and draw them into the county facility. A formalized trailhead would provide dedicated parking

and bicycle and pedestrian amenities such as signage, shade/shelter, water filling station, bicycle repair station, bicycle racks, trash/recycling receptacles, etc. Potential locations for trailheads are indicated in the Bike and Pedestrian Trails Diagram. The promotion of the South Platte River Trail and its related facilities would educate visitors to its existence and possibly promote increased use of the trail system during peak event times. For equestrian trail use, parking for trailers is already prominent and accommodated by the function of the fairground facilities.

Trailheads should include gateway enhancements to promote the overall trail system as an amenity and educate users to the corridor and its natural resources and enhancements that have been made. The South Platte River Heritage Corridor Plan identifies a key principle for guiding the plan to be “Changing the Public Image: Gateway Enhancements and Stream Corridor Improvements.” These should be located along the overall corridor at major junctions as a visual and educational amenity.

## SITE TRAILS

### TRAIL RECOMMENDATIONS

#### *Trails*

- Introduce trail entrances with trailhead amenities such as signage, shade and seating at Thornton, 120th, and 136th as access points to welcome pedestrians and cyclists to the Park
- Introduce a trail entrance from the new 27J high school (Riverdale Ridge) and middle school (Quist Middle School) to the north as an opportunity to bring additional youth to the park and provide access from a potential community satellite parking lot for park visitors interested in a park-and-bike approach to events like the Fair.
- Implement portal trails with signage and design character that exposes the agricultural themes and history
- Consider connections to future Adams County parcels, such as adjacent reclaimed gravel operations, Willow Bay, Riverdale Bluffs Open Space, and Ken Mitchell Open Space

#### *Interior Park Trails*

- Introduce a series of heritage trails of various lengths as way to provide active living and educational opportunities

#### *Accessibility*

- Make all trails ADA accessible using acceptable surface materials and grading. Clearly sign routes and distances for park visitors.

*Note: Recommendations are summarized in Appendix A.*



The overall pedestrian circulation of the park is envisioned as a sequential system of loops which increase in mile increments. A comprehensive signage and wayfinding system will provide guidance throughout the entirety of this pedestrian system.

The main sequential loops, numbered one through four, will be paved 10-foot wide trails with an adjacent 4 feet of soft surface for runners and equestrians. Loops one and two will be lit to provide for evening use during months of shorter daylight.

The Cultural Trail, encircling the entirety of the park, is envisioned as a 10-foot wide paved, destination loop for pedestrians, cyclists and equestrians. Through use of interactive signage and wayfinding, this trail will guide visitors through the cultural story of Adams County while connecting to internal park amenities, adjacent communities and the South Platte River and South Platte Trail, a regional connecting trail. These multi-modal trails will widen the appeal of the park, making it a true destination within Adams County.

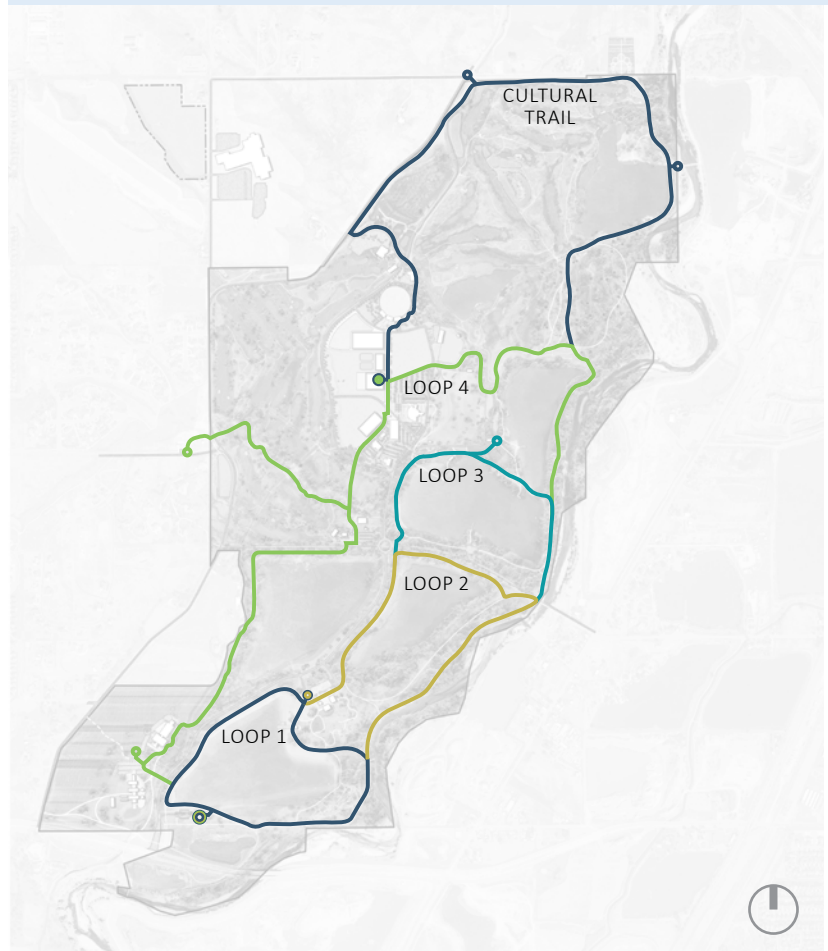
### BIKESHARE OPPORTUNITIES

Bike share programs are becoming increasingly popular across the nation and can provide multiple benefits, including reducing auto dependency and associated greenhouse gas emissions, reducing parking pressures and increasing the overall well-being and physical health of participants. A bike share program is proposed within the Riverdale Regional Park, providing an opportunity to move people through the large site, to reduce event pressures and to provide a handy means for recreation and trail use within the site. A private operator may minimize up front costs and allow the county to enter into a test-pilot program to test feasibility and staffing needs. The program would experience greater success with the collaboration of a broader regional program.

### BICYCLE PARKING

Bicycle parking spaces should be provided at a rate of at least 5% of parking spaces per the Adams County Development Code. Spaces should be located within

## BIKE AND PEDESTRIAN TRAILS DIAGRAM



- Loop 1 (1.5 mi)
- Loop 2 (2.5 mi)
- Loop 3 (3.5 mi)
- Loop 4 (4.5 mi)
- Cultural Trail (6.2 mi)
- Trailhead

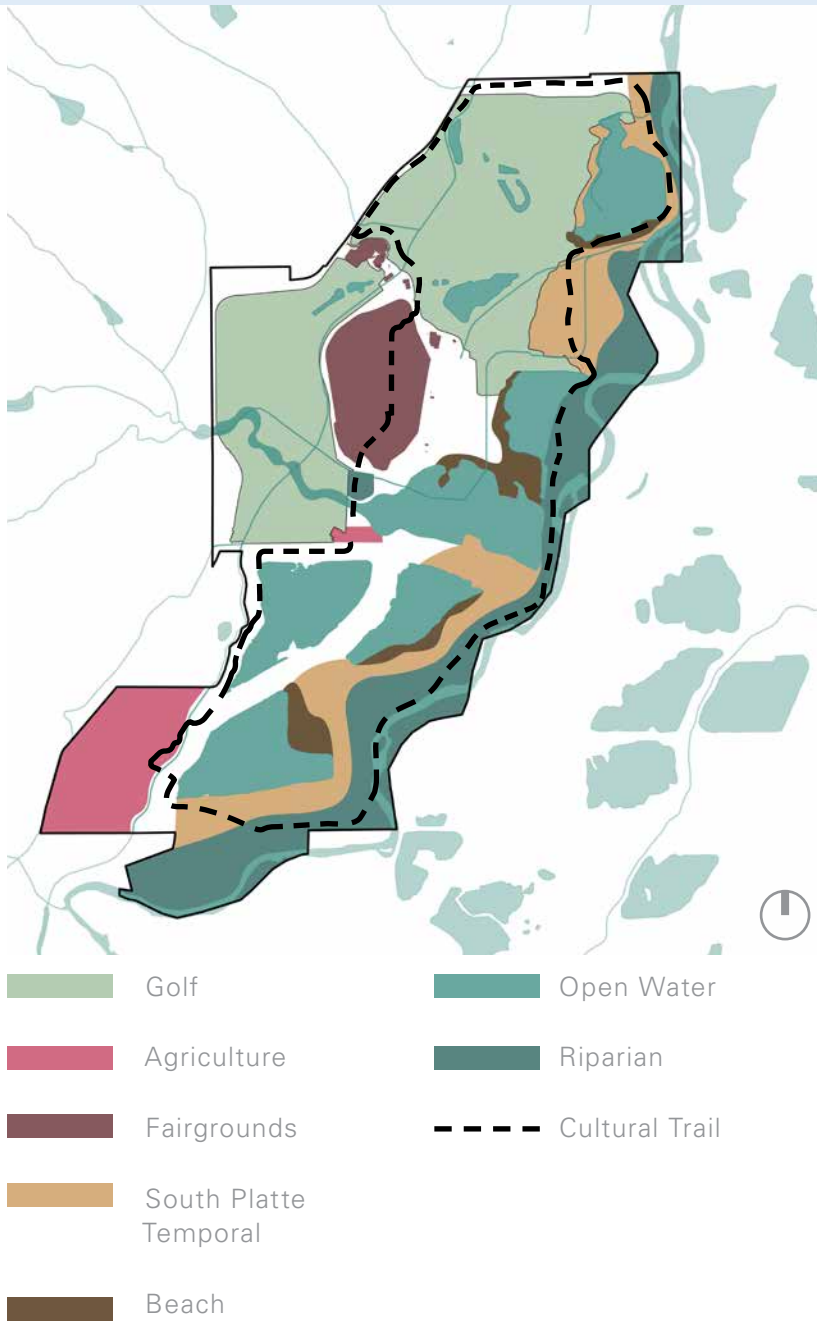
### TRAIL RECOMMENDATIONS (CONT)

#### Trails

- Embark on a bikeshare pilot test at the Regional Park scale and understand community-scale bikeshare opportunities.
- Provide bicycle parking spaces at a rate of at least 5 percent of the vehicular parking spaces in close proximity to building entrances, trailheads and park amenities.

*Note: Recommendations are summarized in Appendix A.*

## SITE PROGRAM WITH CULTURAL TRAIL OVERLAY



proximity of building entrances, and where possible, be sheltered by adjacent roof eaves. Bike facilities including bicycle racks, water stations and repair stations should be located at trailheads and other park destinations along the site's trail system.

## CULTURAL TRAIL

An experiential loop through the park, the Cultural Trail will immerse visitors in the historical, cultural and natural narratives of Adams County. By walking visitors through transects of flora and fauna which relate to different programmatic elements of the site, the trail will reveal and interpret multiple distinct historical and cultural conditions found within the park. Interactive signage and wayfinding will allow users to discover these distinct conditions. Sensory details, such as the deliberate curation of scented plants, textures, art and more should be considered with trail implementation to provide a broader range of experiences for children and individuals with disabilities.

## FLORA AND FAUNA TRANSECTS

### Fairgrounds

A man-made inland ecology, the fairground area is an introduced perennial grassland and forbland. This consists mainly of seasonally present, livestock type fauna and tree species intended to provide a high canopy.

### Agriculture

Another man-made ecology, agriculture in Adams County is compromised mainly of wheat, corn and millet which, predominantly, attract crows and grackles.

### Beach Edge

Beach ecologies line the lakes of the park and offer a collection of species rare to Colorado. The flora species present here include sedges, rushes, mesic grasses and cattails. These lower growing flora species are complemented by fauna species such as herons, skinks and snakes.

### Riparian

Rare riparian ecologies exist along the South Platte River and provide a dense, deciduous tree canopy and thick groundcover. This allows for a diverse collection of fauna ranging from semi-aquatic species to land mammals and birds.

### Open Water

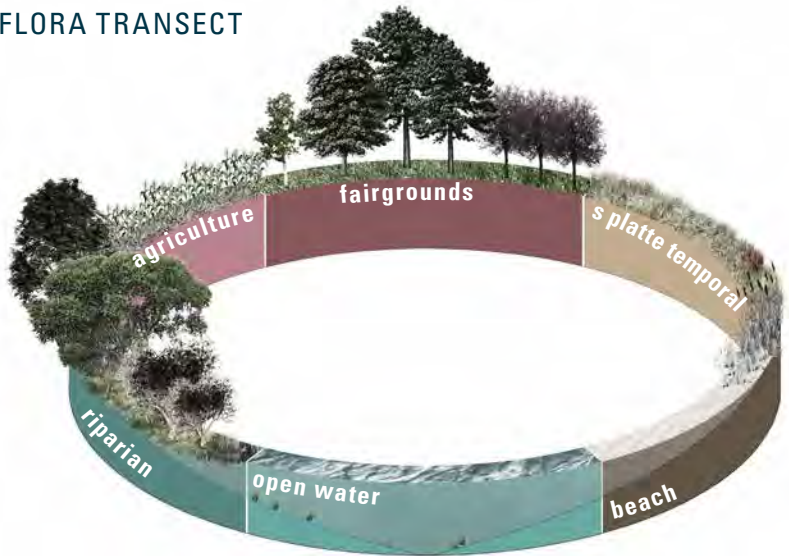
The collection of lakes and open areas of the South Platte River provide differing open water conditions within the park. Open water lake ecologies include black crappie, black bullhead, bass and bluegill. Open water river ecologies include common carp, white sucker, minnow and shiner species.

### South Platte Temporal

These areas of the park consist of shortgrass prairie, sandsage prairie and Southern Rocky Mountain pinyon-juniper woodland, three of the least conserved native ecologies in Colorado. A more arid landscape, the flora species supported here include blue grama grass, sagewort, yucca and a variety of native perennial wildflowers. These areas support a large variety of mammal and bird species including coyote, mule deer, raccoon, ferret, bald eagle, eastern cottontail, wild turkey and geese.

## CULTURAL TRAIL CONCEPT DIAGRAMS

### FLORA TRANSECT

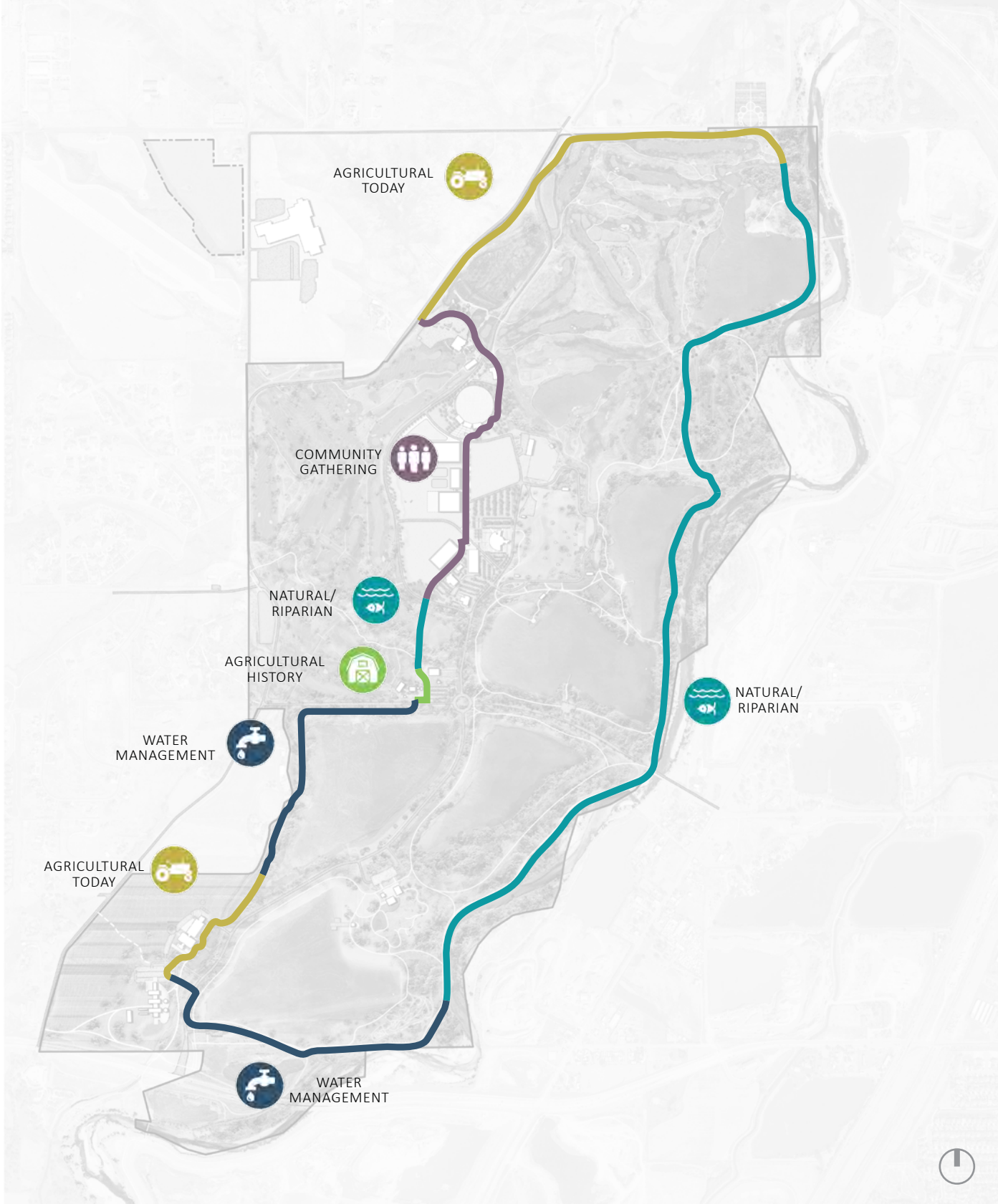


### FAUNA TRANSECT



Source referenced: Rondeau, R., K. Decker, J. Handwerk, J. Siemers, L. Grunau, and C. Pague. 2011. *The state of Colorado's biodiversity*. Prepared for The Nature Conservancy by the Colorado Natural Heritage Program, Colorado State University, Fort Collins, Colorado.

CULTURAL TRAIL ROUTE



## AGRICULTURE TRAIL SEGMENTS



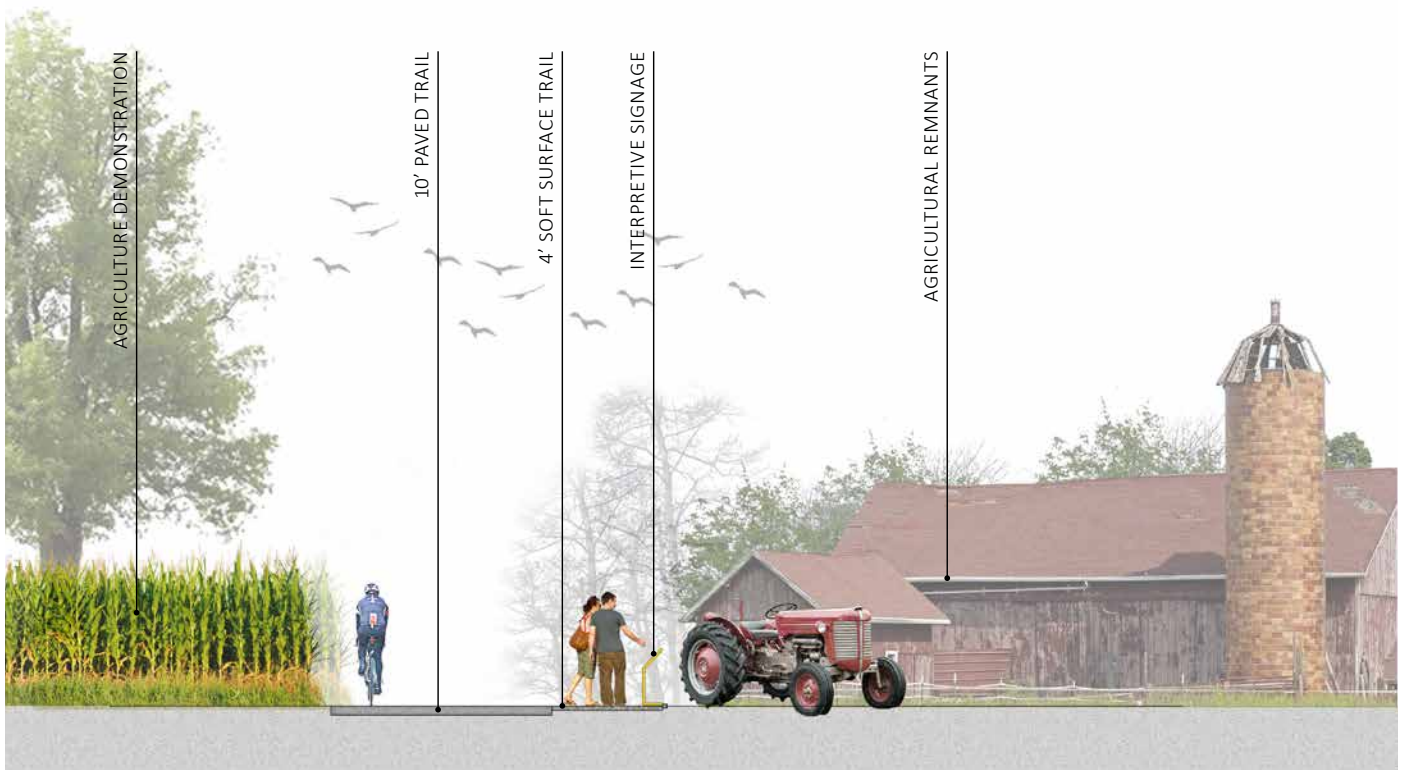
### AGRICULTURAL HISTORY

This trail segment will pass through the Adams County Historical Society and Museum which walks visitors through decades of county history. A system of interactive signage and wayfinding will pay homage to the agricultural and cultural history of the park. Topics may include crop management, truck farms, grazing dairy operations, Kuner Pickle Company regional influence, Japanese-American farms after World War II, hand labor, historic Americana, historic crops such as the sugar beet explosion in early 1900s and more.



### AGRICULTURAL TODAY

These segments of trail will walk users through a dynamic system of wayfinding and interactive signage which will comment on current dominant crops and agricultural practices in Adams County. This system of communication will also illustrate the story of conservation easements within the county. In future, the northern agricultural trail segment will connect users to an agricultural demonstration garden which will coordinate with agricultural schools and industry leaders to educate the public on new agricultural techniques and practices. Interpretation may focus on crop irrigation, machinery, conservation easements, current crops (wheat, corn, millet, livestock), demonstration garden for modern ag technologies and more.



## WATER MANAGEMENT TRAIL SEGMENTS



### WATER MANAGEMENT

Adams County Regional Park sits within the High Plains of Colorado, specifically, the flat to rolling plains ecoregion. These are the highest and driest plains in the nation, meaning water management plays a crucial role in providing fresh water to all user types. This trail segment's narrative will be told through signage and wayfinding elements designed to walk visitors through the story of water in this ecoregion, the use and ownership of the lakes within the park, western water law, watersheds, floodways, water quality, water consumption and the importance of maintaining a clear floodway through the park. Partnerships in educating the public may include South Adams County Water and Sanitation District and Todd Creek.



## NATURAL/ RIPARIAN TRAIL SEGMENTS



### NATURAL/ RIPARIAN

The diversion of water for agriculture has made natural riparian conditions extremely rare along the South Platte River. These trail segments will make this rare ecology accessible to visitors by offering river access in multiple locations. Interactive signage will also be provided to demonstrate the significance of human manipulation of the river as well as the importance of these ecologies in water quality. Interpretation along the riparian corridor may include water quality, historic water ecologies, economic development of the South Platte River and more.



## COMMUNITY GATHERING TRAIL SEGMENTS



### COMMUNITY GATHERING

Originating at the golf clubhouse, this segment of the trail will walk visitors through the historical and cultural significance of the fairgrounds. The main pedestrian thoroughfare of the grounds will be bookended by event spaces designed to emphasize the celebratory nature of fair events. Signage through this trail segment will illustrate the history of the fairgrounds and communicate the importance of community gathering venues in what was once a small agricultural community in Adams County. Organizations such as 4-H, which have significant ties to maintaining this small agricultural community, will continue to have their offices on-site. The trail segment may interpret fairground history, small agricultural communities, current Americana and more.





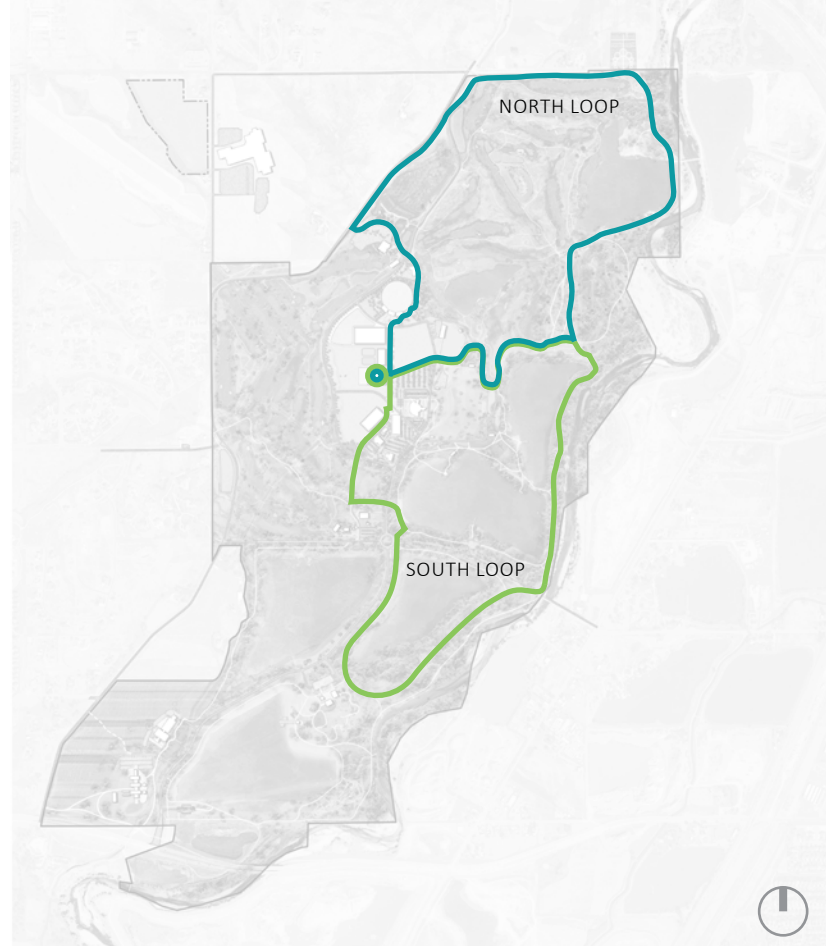
## EQUINE TRAILS




All county-managed trails are open to equestrian use. Since a great deal of park visitors participate in equestrian activities, designated equestrian trails will provide separated four (4) foot to six (6) foot soft surface trails of gravel or decomposed granite. It is recommended that these trails avoid shared use with cyclists and in situations where these uses are shared, a physical barrier be provided to separate these modes, or, trails are designated for equestrian use on certain days of the week. The system of equestrian loops originates at the fairgrounds for ease of access to fair participants and facilities and will be suitable for warm up and low speed riding.

A greater regional equine trail concept includes the connection of the fairgrounds to the National Western Stock Show in Denver. The Adams County Fairgrounds provides a great opportunity to stage, support, and board animals in relative proximity to the Denver site, which is approximately 15 miles away. The South Platte River Trail corridor creates this linkage, however, additional soft surfacing adjacent to the existing trail is desirable for equine use.

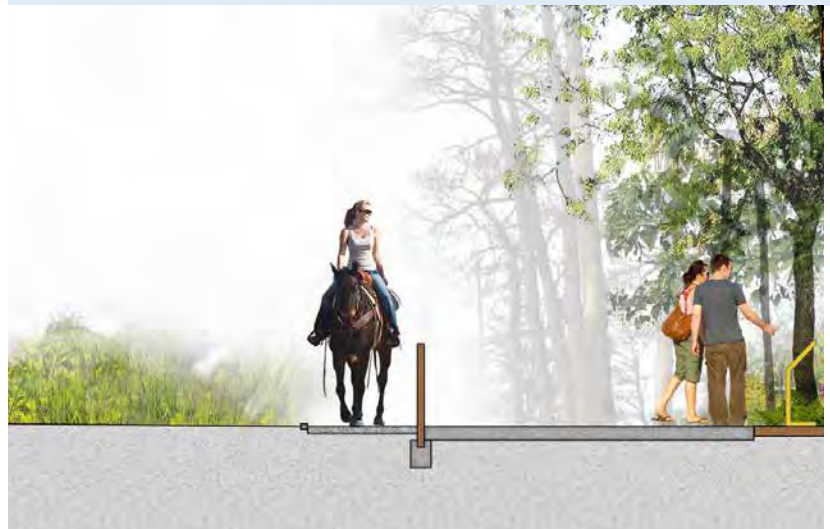
The US Forest Service recommends some considerations for planning and designing equestrian trail facilities. The park and fairgrounds have the opportunity to establish a policy regarding horse manure that may allow horse waste in designated areas, require owners to pick up and pack out, or may offer composting containers. In order to prevent potential noxious weed introductions, the park and fairgrounds can adopt a policy requiring trail stock to be fed certified weed-free straw and feed for a minimum of three days prior to a trail ride. Trail stock users should park in designated areas so the waste will not disturb other trail users. Another concept is to provide a short trail separation between stock riders and other trail users for the first half mile as a way to further reduce conflicts between stock manure and other trail users.

## EQUINE TRAILS DIAGRAM

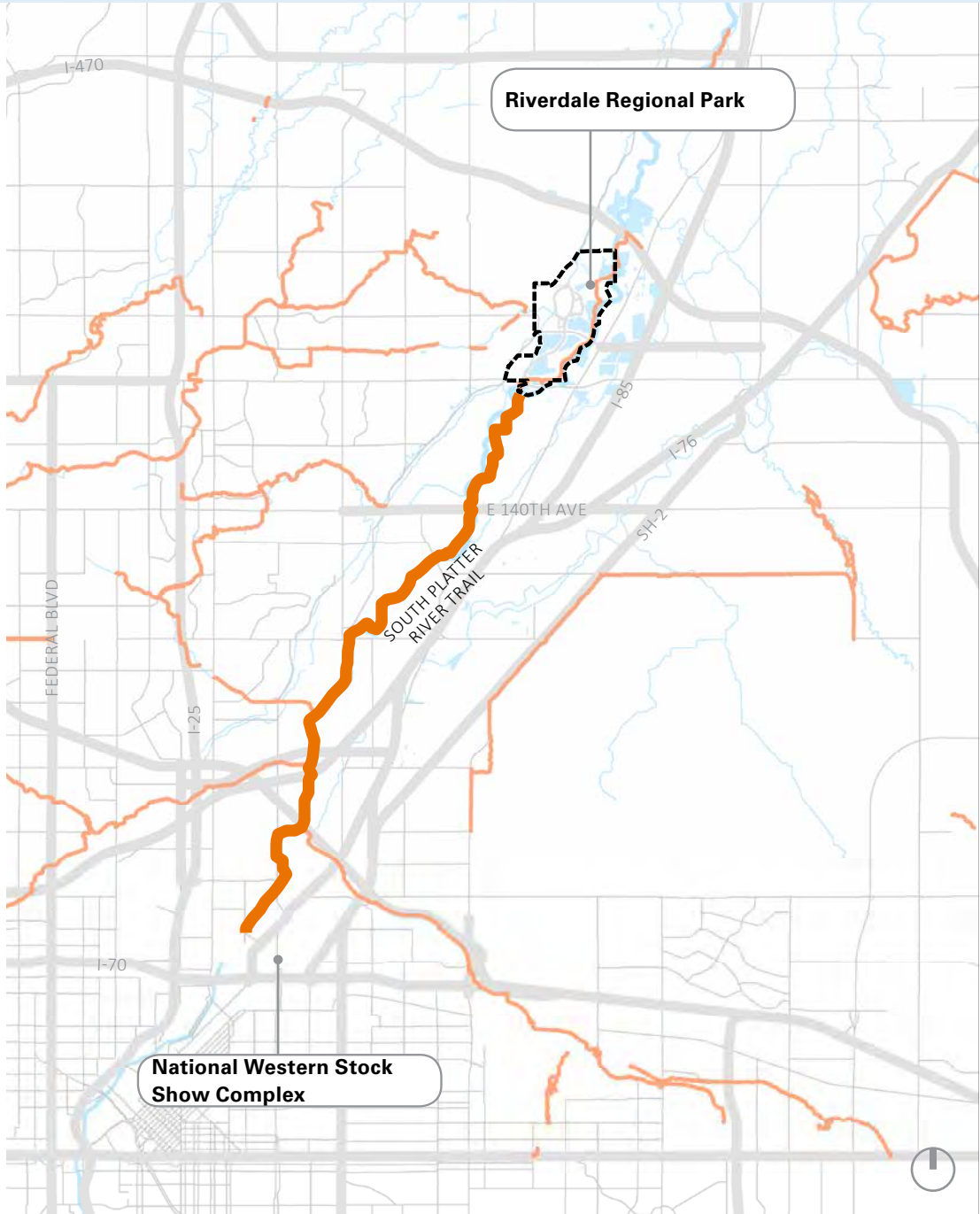


-  North Loop (3.1 mi/ 5 km)
-  South Loop (3.1 mi/ 5 km)
-  Trailhead

## PORTAL TRAIL



## CONNECTION TO THE WESTERN STOCK SHOW



Data Source: [adcogov.org/gisdata](http://adcogov.org/gisdata) "Trails SHP"

# UTILITIES AND DRAINAGE STRATEGIES

This narrative summarizes the existing utility infrastructure at the Adams County Regional Park, lists potential constraints that should be considered for future redevelopment, and summarizes utility infrastructure that is estimated to be required to support Master Plan improvements.

This narrative is not intended to be all inclusive; rather, it is intended to provide an overall summary of the existing utility infrastructure in and around the site, and potential utility constraints for the master plan development. In many cases, the sizes of the existing utilities are unknown. Therefore, the master plan effort reviewed general routing of utilities but did not include delivery or capacity analysis of either the existing or proposed systems. Proposed sizing was estimated based on the available information on the existing system.

In addition, water, sanitary, storm and communication facilities do not exist within the Park south of Henderson Road (120th). Therefore, utility review is focused on the facilities located north of Henderson Road and referred to as "North Utilities". Utilities to the south of Henderson Road will need to be evaluated based on proposed developments.

Currently, multiple sites are under consideration for development south of Henderson Road including the Adams County Animal Shelter and the Butterfly Pavilion. The Animal Shelter has developed scenarios to provide water and sanitary service for its own site under a separate contract. With the possibility of additional development of the Butterfly Pavilion and others, shared utility approaches should also be studied as information on the developments becomes available.

## SITE DESCRIPTION

The Adams County Regional Park is in Unincorporated Adams County. Adams County Fairgrounds is bounded by the South Platte River on the east, 120th Parkway on the south, Riverdale Road on the west and E-470 on the north.

The fairgrounds contain a wide variety of facilities including the Waymire Building (dome), CSU Extension Service Offices, indoor arena, outdoor arenas, barns, stalls and the exhibition hall. There are several known underground utilities on and adjacent to the Adams County Regional Park site that serve the functions of the existing building and the surrounding community. (See Existing North Utilities Plan and Existing South Utilities Plan)

Water resources on site include various lakes, the Brantner Ditch, Brantner Gulch, Clear Creek and the South Platte River.

## UTILITY INFRASTRUCTURE

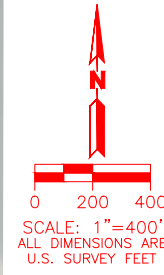
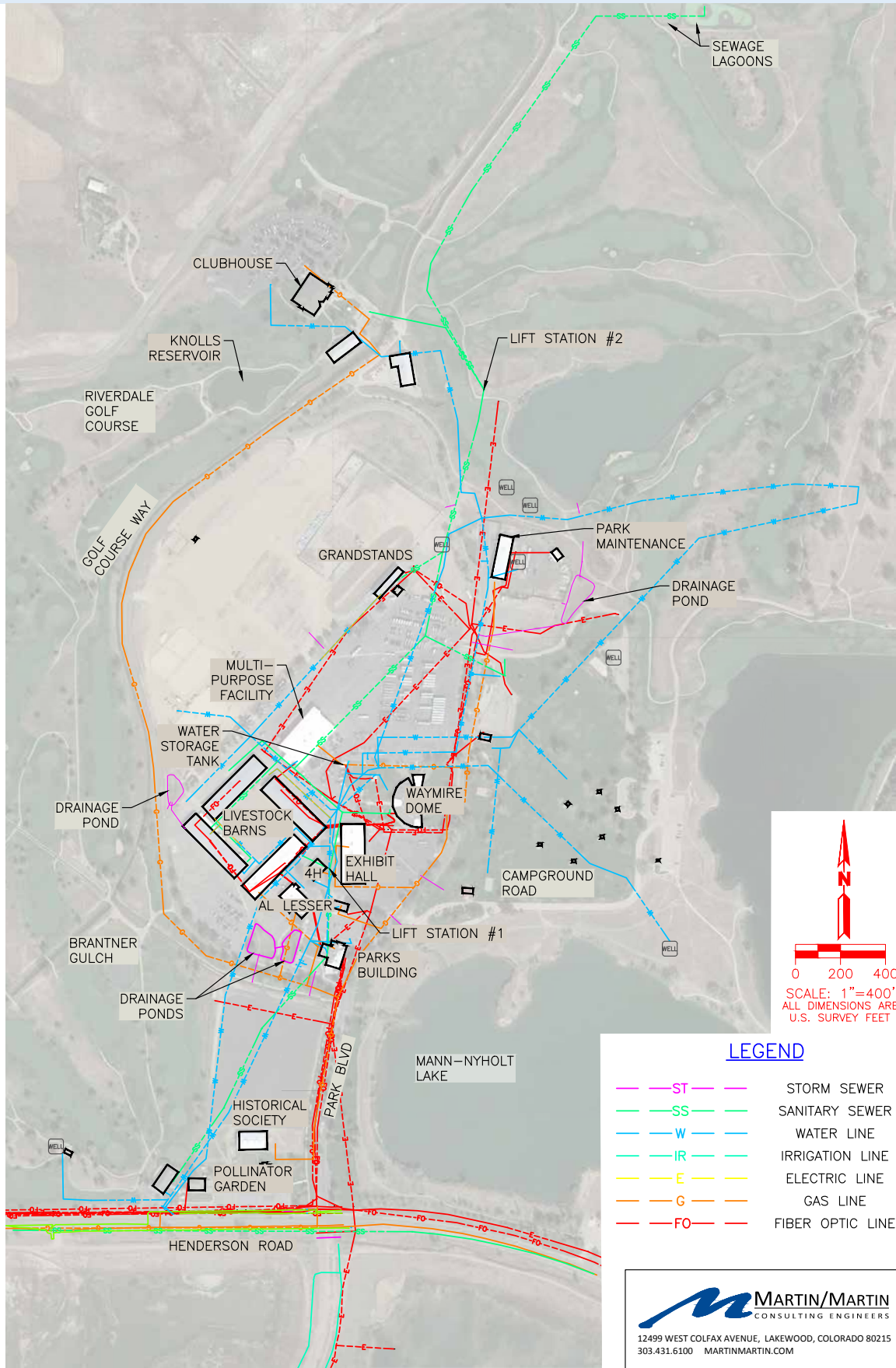
The existing utility infrastructure was compiled in ArcGIS using various utility maps, images, as-builts, Geographic Information System (GIS) files and AutoCAD files provided by Adams County as well as the Colorado Department of Water Resources (DWR) Well Permit Search website<sup>[1]</sup>. This data was then exported to AutoCAD and was used to create the existing utilities plan exhibits shown (Existing North Utilities Plan and Existing South Utilities Plan). As noted, sizing and materials are unknown in many cases.

## UTILITY RECOMMENDATIONS








- Relocate sanitary sewer line as needed within the facility core
- Add a new sanitary main line to the proposed buildings at the north end of the site
- Reroute domestic water lines to provide service to new structures as required, particularly to proposed buildings at the north end of the site
- Reroute gas distribution line as required to provide service to new structures
- Reroute electrical distribution as required to provide service to new structures
- Reroute and construct new fiber optic main line as required to provide service to new structures

*Note: Recommendations are summarized in Appendix A.*

# EXISTING NORTH UTILITIES PLAN



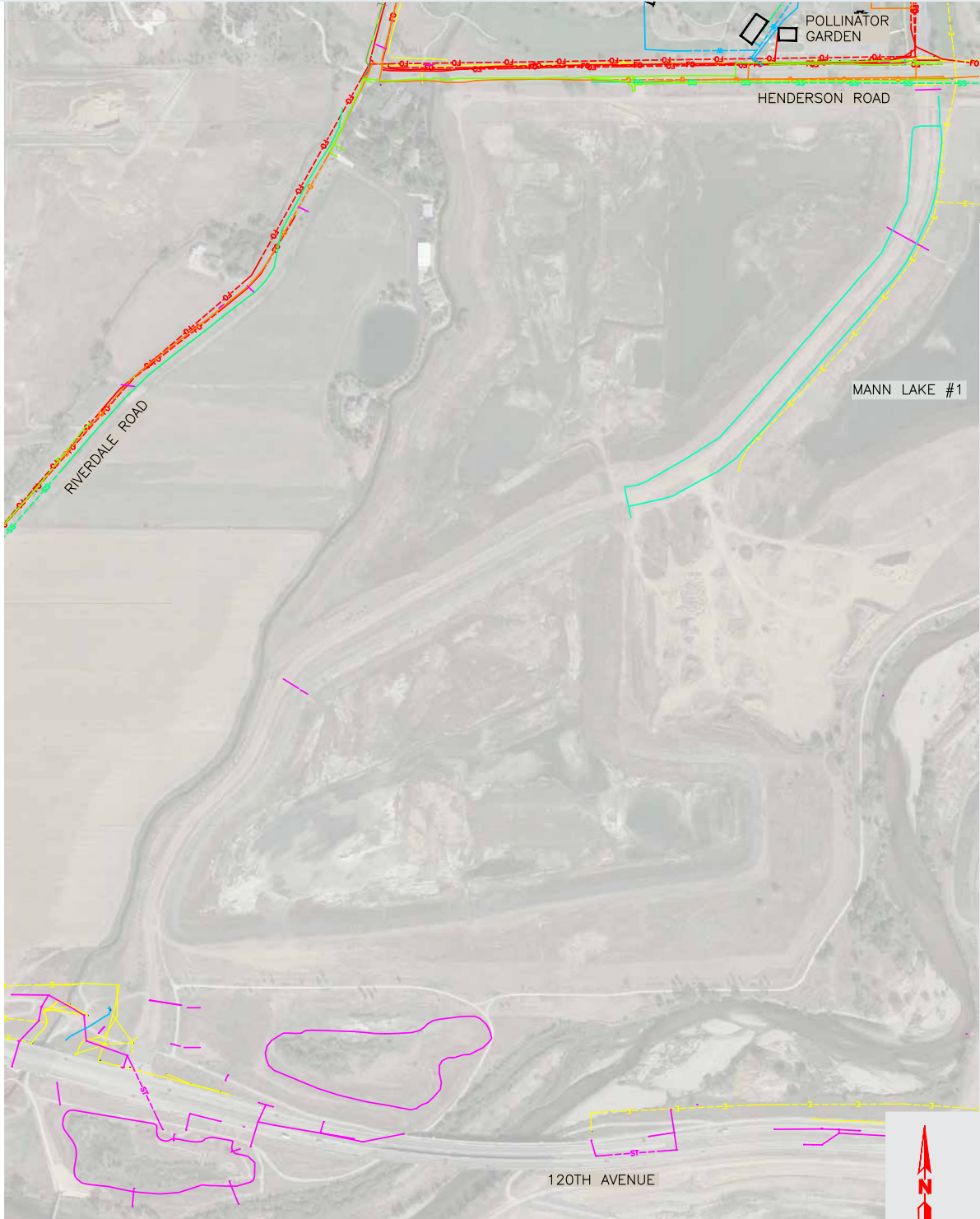
## LEGEND

	ST	STORM SEWER
	SS	SANITARY SEWER
	W	WATER LINE
	IR	IRRIGATION LINE
	E	ELECTRIC LINE
	G	GAS LINE
	FO	FIBER OPTIC LINE

 **MARTIN/MARTIN**  
CONSULTING ENGINEERS  
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215  
303.431.6100 MARTINMARTIN.COM

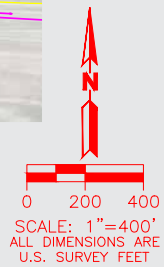
Source: Martin-Martin

# EXISTING SOUTH UTILITIES PLAN



**LEGEND**

- ST STORM SEWER
- SS SANITARY SEWER
- W WATER LINE
- IR IRRIGATION LINE
- E ELECTRIC LINE
- G GAS LINE
- FO FIBER OPTIC LINE



**MARTIN/MARTIN**  
CONSULTING ENGINEERS  
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215  
303.431.6100 MARTINMARTIN.COM

Source: Martin-Martin

The existing utility layout was then combined with the Master Plan to determine possible utility conflicts. For example, existing utilities underneath buildings which are going to be demolished (shown on Proposed North Utilities Plan and the Proposed South Utilities Plan as utilities to be abandoned) as well as utilities under proposed buildings (shown on the Proposed North Utilities Plan and the Proposed South Utilities Plan as utilities to demolish and be removed). Potential new utilities which are going to be needed to service the new buildings are included in the Proposed Utility Exhibits.

The following summarizes existing infrastructure and potential utility updates which are estimated to be needed to accommodate the Adams County Regional Park Master Plan:

### **SANITARY SEWER**

Gravity sewer mains convey collected wastewater to the two existing sanitary sewer lift stations. Lift Station # 1 is located near the Expo Hall and lift station # 2 is located approximately 400 feet northeast of the proposed Grandstands. Collected wastewater is then pumped through a ductile iron pipe (DIP) force main (portions of which are PVC due to repairs) to existing wastewater lagoons located approximately 2,000 feet north of the lift station. The lagoons are owned and maintained by Adams County. In the future (projected by the county to occur in the 4th quarter of 2018), wastewater will be pumped from lift station # 2 to the Metro Wastewater Reclamation District (MWRD) South Platte interceptor adjacent to Riverdale Road and conveyed to their North Treatment Plant.

Based on existing flow data for the sanitary lift stations from the County, the average day flow for a peak month is approximately 12,000-14,000 gal/day (approx. 25 gpm for a peak hour assuming a 5.0 peaking factor). Per correspondence with Nathan Worker at Jacobs on November 21, 2017, the Site Location approval from the State of Colorado for Lift Station # 2 dated November 27, 2012 indicates a peak hour design flow of 347 gpm, which is

approximately 7 times larger than the current measured flows.

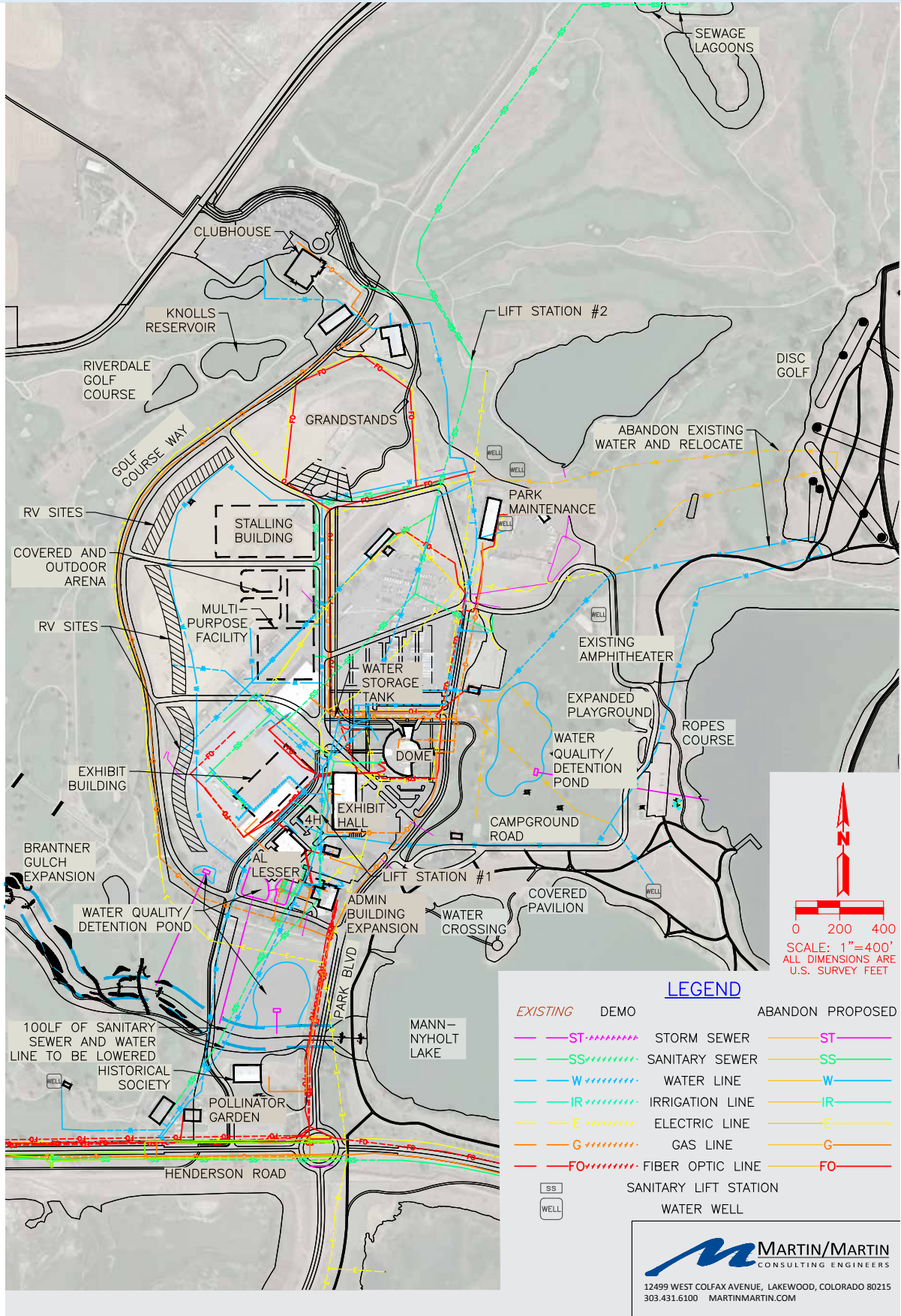
Using a commercial design flow of 1,000 gallons/acre/day for the "core" area to be redeveloped (core area: area of buildings to remain = approximately 75 acres) translates to 75,000 gpd average day flow x 2.5 peak factor = 187,500 gpd. Adding the existing flows to remain (approx. 10,000-12,000 gpd), is on the order of the approved lift station # 2 flow of 200,000 gpd. An area to be redeveloped of 75 acres is a conservative estimate. In addition, based on the current measured flows, 1,000 gpd/acre is also a conservative estimate. However, projected flows should be verified at the time of development to ensure adequate lift station capacity.

There are several 8-inch clay-tile gravity sanitary sewer mains running through the fairgrounds which provide sanitary service to the existing buildings. To extend the service life of the piping, the clay-tile lines could be slip lined. The lines were video recorded and are in good shape. A cost allowance to slip line the pipes is included in the utility cost estimate. The proposed parks building expansion conflicts with the current path of a sanitary main and the main will need to be relocated because of the expansion.

Existing sanitary lines will service the new exhibit hall and multi-purpose facility, but a new sanitary main line will need to be built to service the remaining proposed buildings towards the northern end of the site (see Proposed North Utilities Plan). Existing sanitary lines which will not be required for the proposed development will be abandoned in place.

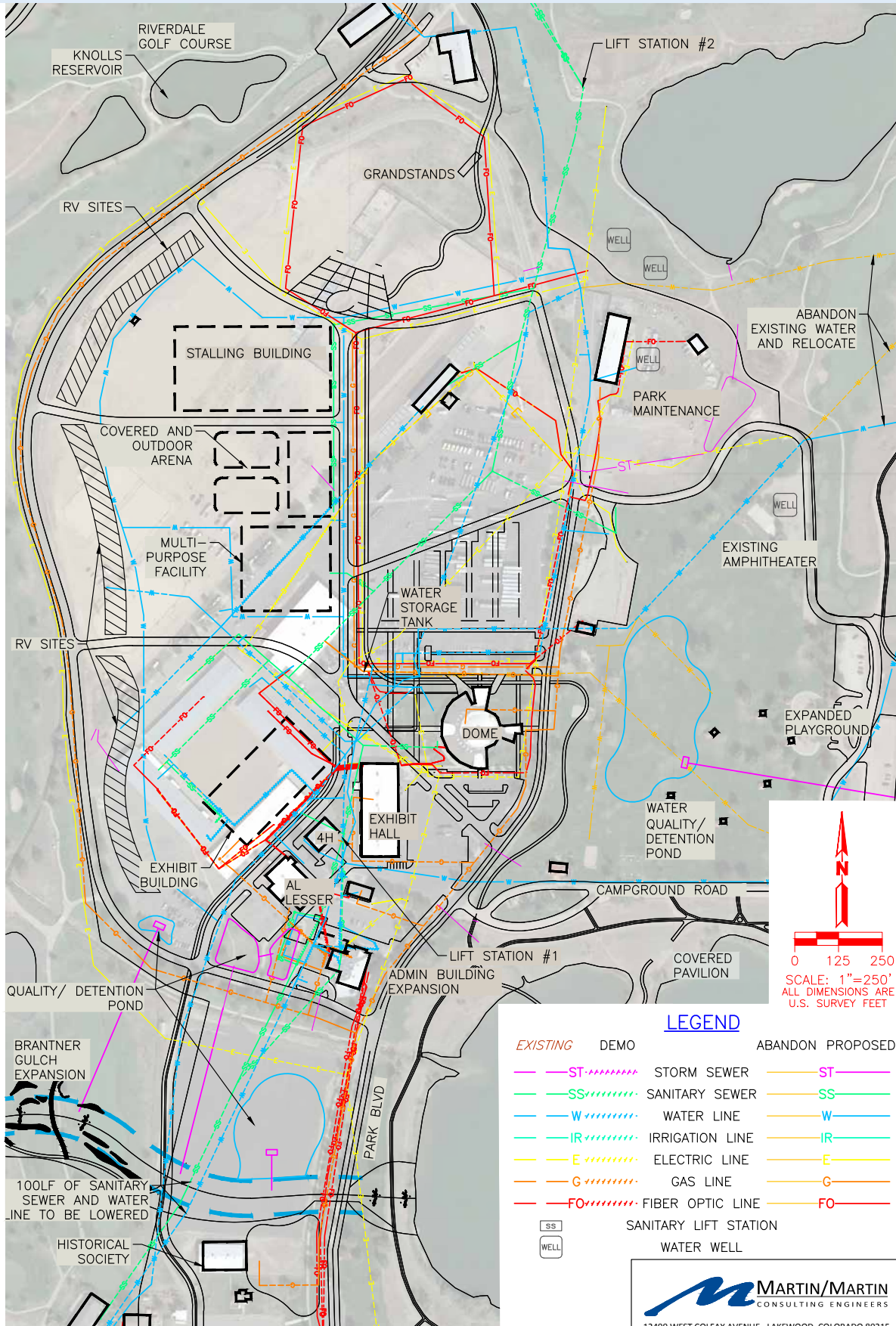
The master plan includes a series of RV campsites on the west side of the site. As described in a previous section of this report, in lieu of individual sewage hook-ups for each RV site, a sanitary dump station is envisioned. Since a majority of the Park site is within the 100-year floodplain, the dump station will need further study to place it outside of the floodplain and to locate it in a serviceable location out of the mainstream areas. An allowance for an 8-inch service

# PROPOSED NORTH UTILITIES PLAN



Source: Martin-Martin

# PROPOSED NORTH UTILITIES PLAN - CORE ENLARGEMENT



**LEGEND**

EXISTING	DEMO	ABANDON	PROPOSED
ST (dashed purple)	ST (dashed purple)	ST (solid purple)	ST (solid purple)
SS (dashed green)	SS (dashed green)	SS (solid green)	SS (solid green)
W (dashed blue)	W (dashed blue)	W (solid blue)	W (solid blue)
IR (dashed cyan)	IR (dashed cyan)	IR (solid cyan)	IR (solid cyan)
E (dashed yellow)	E (dashed yellow)	E (solid yellow)	E (solid yellow)
G (dashed orange)	G (dashed orange)	G (solid orange)	G (solid orange)
FO (dashed red)	FO (dashed red)	FO (solid red)	FO (solid red)

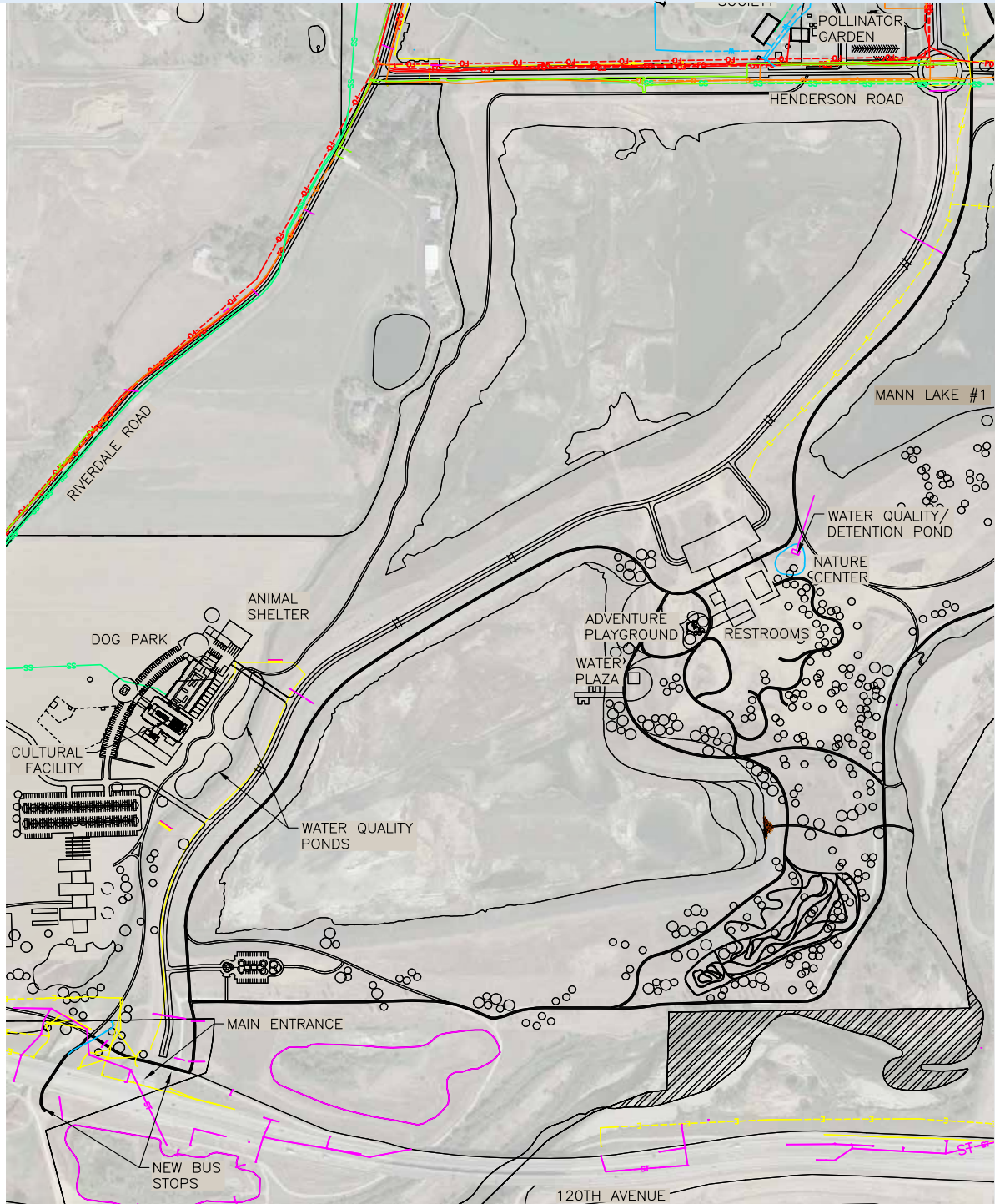
SS SANITARY LIFT STATION  
WELL WATER WELL

**MARTIN/MARTIN**  
 CONSULTING ENGINEERS  
 12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215  
 303.431.6100 MARTINMARTIN.COM

Source: Martin-Martin



# PROPOSED SOUTH UTILITIES PLAN

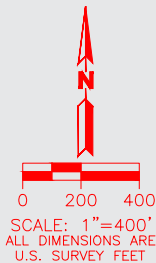


## LEGEND

EXISTING	DEMO	ABANDON	PROPOSED
ST (dashed purple)	ST (dashed purple)	ST (solid purple)	ST (solid purple)
SS (dashed green)	SS (dashed green)	SS (solid green)	SS (solid green)
W (dashed blue)	W (dashed blue)	W (solid blue)	W (solid blue)
IR (dashed cyan)	IR (dashed cyan)	IR (solid cyan)	IR (solid cyan)
E (dashed yellow)	E (dashed yellow)	E (solid yellow)	E (solid yellow)
G (dashed orange)	G (dashed orange)	G (solid orange)	G (solid orange)
FO (dashed red)	FO (dashed red)	FO (solid red)	FO (solid red)
SS (circle with SS)			SANITARY LIFT STATION
WELL (circle with W)			WATER WELL

## NOTE:

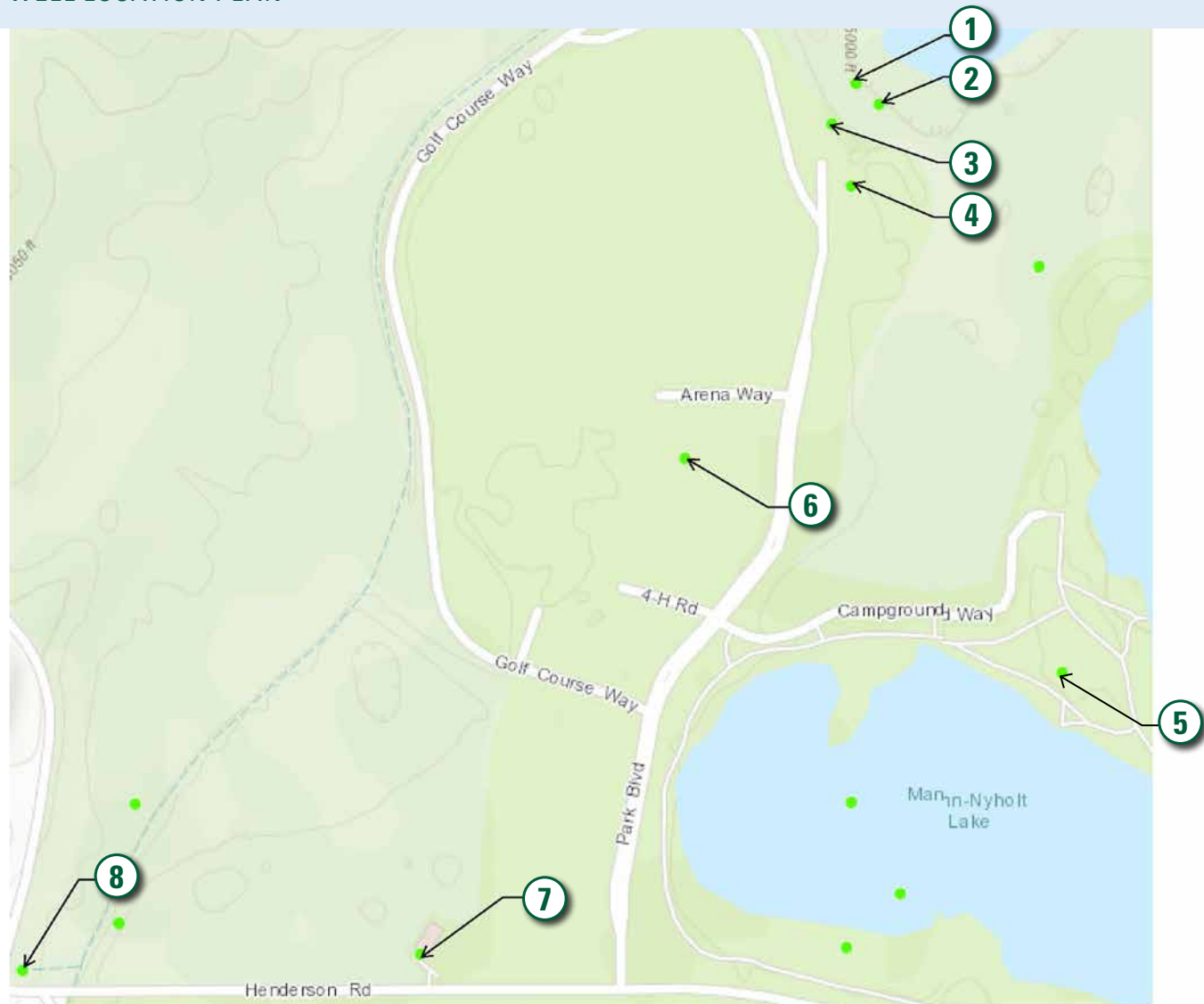
1. ANIMAL SHELTER UTILITIES ARE PROPOSED AS PART OF A SEPARATE PROJECT AND DO NOT EXIST AT THIS TIME.



**MARTIN/MARTIN**  
CONSULTING ENGINEERS  
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215  
303.431.6100 MARTINMARTIN.COM

Source: Martin-Martin

## WELL LOCATION PLAN



MAP NUMBER	WELL PERMIT NUMBER	WELL NAME	PERMITTED GPM <sup>(1)</sup>	PRODUCTION GMP <sup>(2)</sup>	USE	SUPPLY AREA
1	20007-F	Shallow Golf Course Well	853	Unknown/ Abandoned	Irrigation	Golf Course
2	57956-F	Shallow Golf Course Well	853	Unknown/ Abandoned	Irrigation	Golf Course
3	49856-F	Alluvial Well	190	Unknown	Irrigation	Golf Course Pond for Knolls Course
4	34083-F	Maintenance Shop Well	100	29	Municipal	Maintenance Shop
5	64012-F	Amphitheater Well	15	18	Municipal	Mann-Nyholt Lake
6	43231-F	Waymire Well	3.75	0	Municipal	Move to Abandon
7	43230-F	Museum/Clubhouse Well	30	39	Municipal	Potable Water Supply
8	20008-F-R	School House Well	19.5	4.5	Municipal	Potable Water Supply
Totals				90.5		

**Notes:**

(1) The Colorado Division of Water Resources (DWR) Permit Research Viewer was used as the source for the Permitted GPM.

(2) Production GPM were provided by Adam's County. Daily Maximum Production is 130,320.

## 2013 FLOOD AT RIVERDALE REGIONAL PARK



*Image credit: Adams County*

line to serve the RV dump station is included in the estimated costs.

A preliminary proposed sanitary sewer system for the Adams County Animal Shelter (south of Henderson Road) currently includes a lift station and 4-inch force main. The force main would tie into Metro Waste Water's South Platte Interceptor at 128th and Riverdale Road which ultimately discharges to the new North Metro plant located on US 85 and County Line Road on the northern side of Brighton. As the design for other sites south of 124th Ave progress, they could either tie into the Animal Shelter lift station (re-sizing may be necessary) or provide their own force main and lift station. Typically, the regional authority (DRCOG, Denver Regional Council of Governments) advocates for shared lift station facilities where possible.

### DOMESTIC WATER

Water is supplied to the Adams County Regional Park from various wells located on site. Based on information provided by Adams County, the average potable water demand for the site is 4.8 million gallons per year. The combined potable and non-potable usage for the site is, on average, 137,000 gallons per day which is also based on information provided by Adams County.

There are 6 existing wells on site according to the Colorado Division of Water Resources. Three of the wells are used for irrigation, two are for municipal uses, and one is an alluvial well (See Well Location Plan). Each well house will include a generator as requested by the county for redundant power sources.

The main source of potable water on site is from two operating municipal wells which produce approximately 130,000 gpd per the County. Water from the wells are piped directly to the water treatment and storage facility near the Waymire Dome. The system includes two 20,000 gallon buried steel tanks as well as a 100,000 gallon elevated storage tank. Water enters the system through raw water lines is then chlorinated and is held in the two 20,000 gallon steel tanks for additional contact time. The water is then pumped out of the underground tanks into the elevated storage tank where it is gravity fed to the operating system. A generator would also be provided for back-up existing power for the pump station associated with the buried water tanks as part of the Master Plan. To provide water supply for the master planned development, a new well is anticipated to need to be drilled.

The system is currently disinfecting through chlorination. Based on coordination with county personnel, this configuration allows for adequate water treatment and disinfection contact time. They report that the site experienced an improvement in water quality from these recently implemented improvements.

There is an 8-inch water line which provides service to the Historical Society Museum and is in the path of the proposed Parks building expansion. This water line will need to be removed from the area underneath the proposed building and relocated to continue serving the Museum.

A portion of the service lines providing service to the current animal barns can be abandoned and the portion of the service lines underneath the proposed exhibit hall will need to be removed. There is also a service line providing service to the existing grandstands which conflicts with proposed buildings. The portion of this line located under the proposed multi-purpose facility and covered arena will need to be removed and the remaining lengths can be abandoned.

A new 8-inch main line including 6-inch fire hydrant laterals will need to be built to service the proposed buildings towards the north. The main lines will run through the middle of the site and along the west side of the proposed stalling building, open arena, covered arena and multi-purpose facility (See Proposed North Utilities Plan). The main line will be connected to the existing water line running along the east side of the site. The new water lines will include approximately ten (10) new fire hydrants and may require additional water storage to meet fire flow demands.

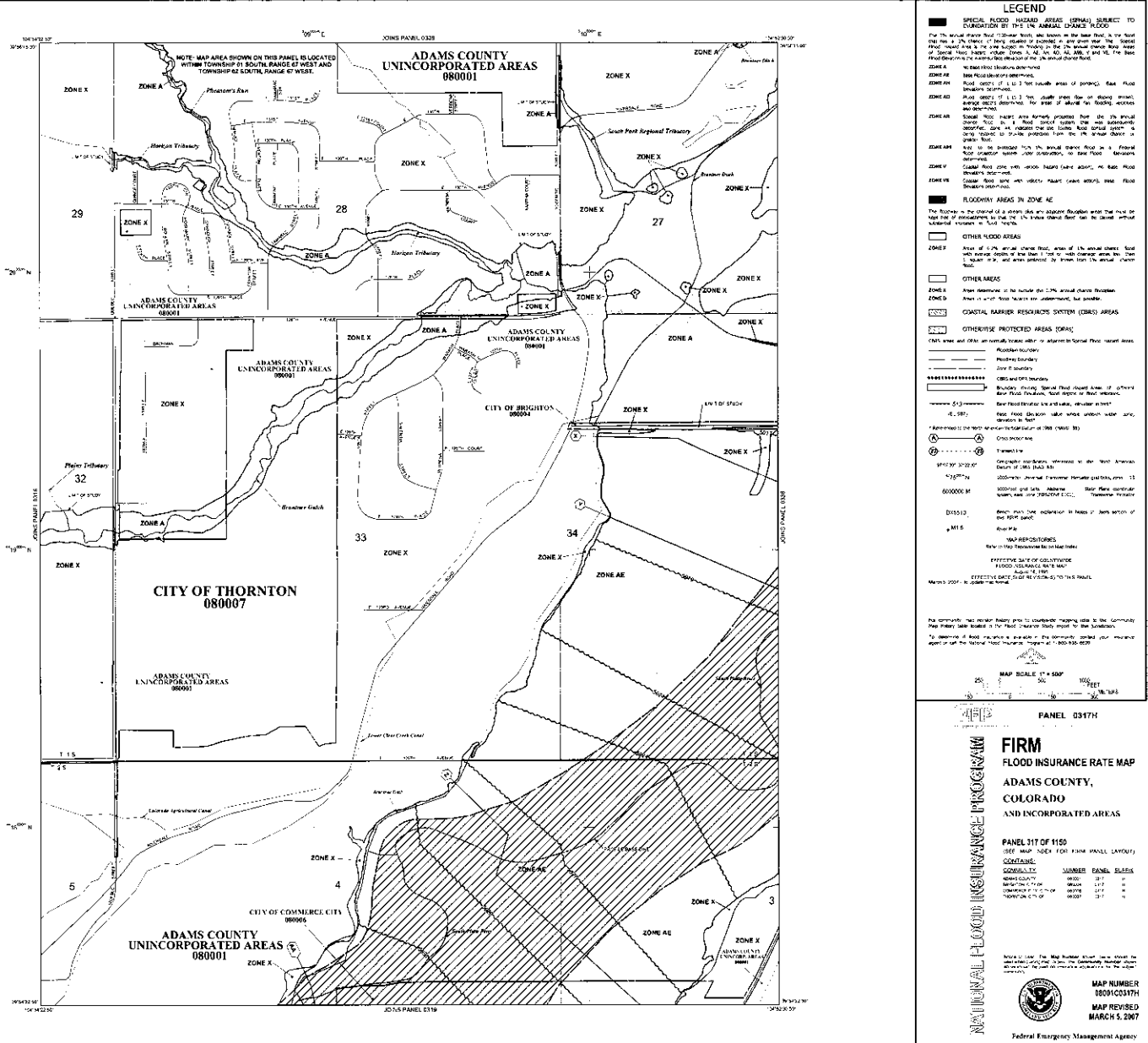
Required water demands and fire flows will be dependent on proposed building construction and total square footage. A rough estimate of total required volume is based on Greater Brighton Fire District criteria north of 124th Avenue and North Metro criteria south of 124th Avenue. This includes domestic demand as well as fire flow reserves. Using 1,651 gpd/acre for (commercial/industrial) domestic demand for approximately 83 acres (core area) and an industrial peaking factor of 1.32

results in 180,000 gpd. Commercial fire flow would typically require 2,500 gpm for two hours resulting in 300,000 gallons. However, since this is a somewhat rural setting with limited water availability, it is anticipated that a reduction in fire storage would be granted similar to the animal shelter site to the south. Therefore, total required storage is estimated to be 330,000 gallons (180,000 gallons domestic plus 150,000 gallons for fire). To provide this additional water storage, a new 200,000 gallon elevated or buried tank is included in the cost estimate with an associated pump station. Based on the existing measured sanitary flows, the Brighton criteria is estimated to be conservative for the Regional Park future demands. Tank and pump sizing would need to be studied at the time of building design. An allowance for a second 150,000 gallon water tank and pump station are included in the cost estimate in the event that the full fire storage is required.

Water to the existing disc golf is planned to be removed and replaced based on the County's desire to route the line under the service road. The rerouting will include multiple water service lines to the east playground and amphitheater that will be relocated due to the proposed water quality and detention pond east of the fairgrounds. For this reason and to avoid routing the water line under the golf course, see the Utility Exhibits for the new loop of the waterline which will allow previously serviced amenities in that area of the site to continue to be serviced.

A preliminary proposed water system for the Adams County Animal Shelter (south of Henderson Road) currently includes a well for water supply and storage tanks for fire suppression. As the design for other sites south of 124th Ave progress, they could either tie into the Animal Shelter well (sizing/available water production would need to be confirmed), or provide their own well and storage tanks. A water loop connecting to an existing City of Brighton water line in Henderson Road or to City of Thornton water at 120th and Quebec may also be considered.

# FLOOD INSURANCE RATE MAP



Source: Department of Homeland Security

## IRRIGATION

Based on information provided by Adams County, the average non-potable water demand for the site is 38-40 million gallons per year. The County uses ditch water and an alluvial well for irrigation.

## GAS DISTRIBUTION

The gas provider for the site is Xcl Energy. There are gas lines running along the west and east sides of the site with service lines branching off to provide gas services to the existing buildings.

There is a portion of gas line which runs through the proposed parks building expansion which will need to be removed and relocated to continue providing service to a connecting service line.

A new gas main will be extended from the main line on the east side of the site to serve the proposed buildings. The proposed main will route along the east side of the stalling building, open arena, covered arena, and multi-purpose facility to provide gas services to these buildings. New service lines will be provided for each proposed building (See Proposed North Utilities Plan).

## **ELECTRICAL DISTRIBUTION**

The electrical provider for the site is United Power. The main electrical lines run along the east side of the site with service lines providing electricity to the existing buildings. Main electrical lines will need to be built through the middle of the site, connecting to the existing lines on the east side and running along the east side of the proposed buildings. The new lines will also need to extend north around the Grandstands to provide electricity to this area.

There is currently an electrical service line providing electricity to the existing Grandstands which can be abandoned in the area where there are no proposed buildings over the top of it. A portion of this line needs to be removed where it runs underneath the proposed multi-purpose facility and covered arena. Refer to the Proposed North Utility Plan for approximate proposed routing of lines.

The need for new transformers or upgrade to the electrical will need to be reviewed at the time of design.

## **FIBER OPTIC DISTRIBUTION**

The telecommunications provider for the site is Century Link. Fiber optic lines are dispersed throughout the site. The fiber optic lines providing service to the existing animal shelter barns can be abandoned where new buildings are not going to be built over the top of existing lines, and removed where new buildings are proposed. A section of the fiber optic line serving the Parks building will need to be removed to accommodate the expansion and the existing line will be connected to the expansion.

Main fiber optic lines will need to be built through the middle of the site, connecting to the existing lines on the east side of the site and running along the east side of the proposed buildings. The new lines will also need to extend north around the Grandstands to provide communications to this area (see Proposed North Utility Plan). An additional allowance for lines to provide SCADA (Supervisory Control and Data Acquisition) for the wells, tanks, pump stations and lift station is also included.

## **PUBLIC ADDRESS SYSTEM**

In addition, the county reports that the copper pair wires serving the public address (PA) system need to be replaced. An allowance of lineal footage of line is included in the cost estimate based on the length of known fiber optic lines shown on the North Utility Exhibit to the north of Henderson Road.

## **DRAINAGE**

### **EXISTING FLOODPLAIN**

Except for the agricultural fields and the Brantner Ditch on the western edge of the site, almost all the site is located within the 100-year flood plain of the South Platte River or Brantner Gulch. There is less than two feet of elevation gain from the upper banks of the South Platte River to Riverdale Road. However, a levee, which was built along the east side of the site restricts some floodwaters onto the site.

The site is classified by the Federal Emergency Management Agency (FEMA) as being a Zone X because the levee protects this area from a 1% annual chance of flooding. This is modeled in the Flood Insurance Rate Map (FIRM). Consequently, portions of the area west of the levee do not benefit from seasonal flooding and vegetation has been negatively affected.

### **FLOODPLAIN REGULATIONS**

An Adams County floodplain use permit is the only authorization under which a structure may be erected, moved, placed or altered within the flood control overlay zone district; fill may be placed within the flood control overlay zone district; materials or equipment may be stored or processed within the flood control overlay zone district; or a channel of a watercourse may be changed within the flood control overlay zone district.

The lowest floor, including basement for all new non-residential construction or substantial improvement (more than 50% of market value) of any non-residential structure shall be: (1) elevated at least two (2) feet above the base flood elevation (BFE); or (2) floodproofed so that all portions of the structure less than two (2) feet above the base flood elevation, including the attendant utility and sanitary facilities, are watertight.

Walls shall be substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

A conditional letter of map revision (CLOMR) shall be obtained for all proposed stream alteration activity that increases the established BFE more than 0.00 vertical feet or decreases the established BFE more than 0.3 vertical feet.

In areas with an established floodway, whenever channelization or other stream alteration activity is known or suspected to increase the established BFE more than 0.00 vertical feet or decrease the established BFE more than 0.3 vertical feet, a letter of map revision (LOMR) showing such changes shall be obtained to accurately reflect the changes on FEMA's regulatory floodplain map for the stream reach.

Encroachments within the floodway are prohibited, including: fill, new construction, substantial improvements, and other development, unless certification by a

registered professional engineer is provided demonstrating the cumulative effect of the proposed development. When combined with all other existing and anticipated development, encroachment does not result in any increase in the base flood elevation ("no-rise").

### WATER QUALITY AND DETENTION

Storm water quality and detention storage will need to be provided for new improvements. Non-pervious surfaces should be minimized when possible while redeveloping the Park to minimize the amount of storage required. Where possible, green infrastructure should be used such as rain gardens, bioswales, and storm water wetlands to promote detention and infiltration of runoff from the site. For example, the pond just to the south of the fairgrounds is planned to include wetlands to integrate with the surrounding habitat. Depending on the phasing of improvements, alternative water quality and detention approaches can be considered. Where denser development occurs (e.g. the core area), use of pervious pavers or rain gardens may be considered but will also carry additional construction costs.

## APPROXIMATE DETENTION/WATER QUALITY BASIN LOCATIONS IN THE NORTH PARK



### DETENTION BASIN DETAILS

- 1** Required detention basin volume: 10.4 acre-ft  
Assumed depth: 3 feet  
Basin dimensions: 200 feet by 755 feet  
Zone of impact dimensions: 232 feet by 787 feet
- 2** Required detention basin volume: 2.9 acre-ft  
Assumed depth: 3 feet  
Basin dimensions: 209 feet by 209 feet  
Zone of impact dimensions: 241 feet by 241 feet

[1] "Directory of Plans Matrix." Martin/Martin, Inc. Dated January 1, 2017. Last updated September 7, 2017.

[2] Adams County Development Standards and Regulations, "Chapter 9 – Storm Drainage Design and Stormwater Quality Regulations." December 16, 2014. Accessed August 2017.

[3] Urban Drainage and Flood Control District, "Criteria Manual." Volumes 1, 2, and 3. Revised March 2017. Accessed August 2017

Proposed drainage will generally follow existing drainage patterns. At the fairgrounds (north), stormwater, which falls on the northern area of the site, drains to the east, and stormwater which falls on the southern portion of the site flows south and south east. The site was divided into a north core and south core to estimate stormwater flows. At the Adventure playground/Nature Center south of 124th Ave., stormwater drains to the north east towards Mann Lake #1.

Typically, an open pond is the most cost efficient approach where land is available. Therefore, master plan estimated costs include open ponds. Rough sizing and possible locations for open pond water quality and detention basins are shown in the Utility Exhibits. The water quality and detention ponds shown on the Utility Exhibits are sized for 100-year detention plus water quality volumes for purposes of the Master Plan to allow adequate area for the ponds. However, since a majority of the site is within the 100-year floodplain, the ponds will be inundated during the 100-year storm event (if the floodplain remains as shown) and the ponds will function for the smaller storm events. For the proposed buildings to be constructed, however, the floodplain will need to be modified and the pond design can be coordinated with this effort (re: Floodplain Regulations section of this report). At that time, a decision can be made about where the best location for the ponds will be to meet water quality and 100-year runoff detention requirements. (See Approximate Detention/Water Quality Basin Locations in the North Park)

### ***Basis of Design***

The criteria used for the drainage design are the Adams County Development Standards and Regulations, Chapter 9: Storm Drainage Design and Stormwater Quality Regulations dated December 16, 2014, as well as Volumes 1-3 of the Urban Drainage and Flood Control District's (UDFCD) Urban Drainage Manual which were revised in March of 2017<sup>[2][3]</sup>.

### ***Water Quality Capture Volume (WQCV)***

Proposed imperviousness was estimated for the north and south core areas based on the proposed site plan and are summarized in Appendix E. The recommended imperviousness percentages for a range of surfacing are shown in UDFCD Table 6-3 (Volume 1, Chapter 6, Page 8) and were used to estimate the imperviousness of these areas. The overall imperviousness for the north and south cores were then used to estimate the WQCV using Equation 3-1 provided by UDFCD (Volume 3, Chapter 3, Page 5).

### ***Detention Basin Criteria***

Detention volumes were estimated using Equation EDB-1, Extended Detention Basins in UDFCD Volume 3. These estimates are included in Appendix E for both the north and south cores.



# LAND ACQUISITION

A land acquisition study was conducted for areas adjacent to or contiguous with the Regional Park and Fairgrounds in order to consider prioritization for the expansion of county-owned lands in the future as opportunities arise. The recommendations were based on three tiers of prioritization and associated attributes. See the Land Acquisition Map for a summary of potential acquisitions.

Tier One facilities exhibit traits of being contiguous to the park, undeveloped or minimally developed, and they fill in gaps between the park and physical boundaries such as roads (Riverdale Road and E470) and the South Platte River. Two parcels are owned by Henderson Aggregate, a gravel extraction site with long-term land use and the potential for reclamation. It is also adjacent to the existing Adams Hollow Disc Golf Course and could provide opportunities for future expansion of the course. The Spano land holdings, adjacent to Riverdale Road to the south portion of the site, largely contain farmland, which is compatible with the future planning of the regional park. However, the property does contain some intense development already

and a continued relationship with the land owner to maintain the rural character of Riverdale Road and the regional park should be maintained. Some marginal land is also identified along the South Platte River with limited access and that can help fill in gaps between the Regional Park and the river. One smaller sliver of land is not identified with an owner and should be studied further for potential ease in acquisition.

Tier Two parcels appear as donuts within existing county-owned land and are minimally developed today, but existing residential sites do exist. Finally, Tier Three parcels provide some adjacency opportunities for future acquisition consideration, but have obstacles such as separation by the river.

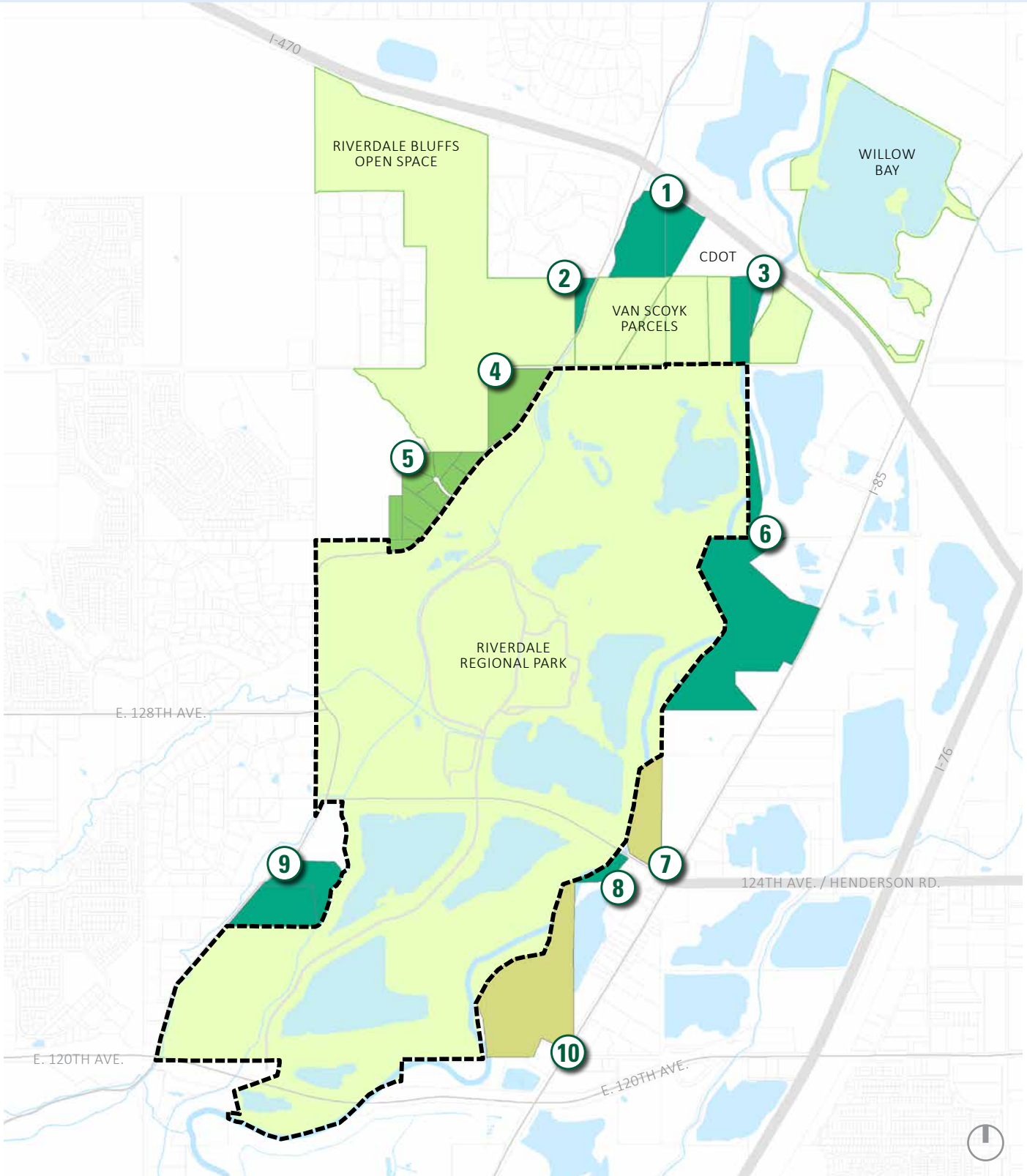
Other factors that weigh into potential for acquisition include ease of access, development pressures from surrounding uses, developability of the land, itself, and perceived ease in acquisition/ownership characteristics. The connection of County-owned parcels helps to create contiguous corridors that experience more efficiency in maintenance and oversight, better habitat connectivity and more interconnected recreational opportunities.

## LAND ACQUISITION ATTRIBUTES

- Parcels that are contiguous
- Parcels that fill gaps in ownership
- Ownership by an extraction industry
- Undeveloped Land
- Ownership undefined, marginal but contiguous
- Connection and access
- Property ownership
- Long-term use
- Development pressure/developability
- Perceived ease in acquisition

LAND ACQUISITION SUMMARY			
Map ID	Current Ownership	Priority for Acquisition	Acreage
1	Dill (2 parcels)	Tier 1	26.68
2	Gallegos	Tier 1	2.79
3	Falcon Resources (2 parcels)	Tier 1	14.06
4	LRK LLC	Tier 2	14.66
5	Applehanz Subdivision (10 parcels)	Tier 2	26.91 (approx)
6	Henderson Aggregate LTD	Tier 1	78.09
7	Kroll	Tier 3	14.04
8	Unidentified ROW or Easement	Tier 1	12.35 (approx)
9	Spano (2 parcels)	Tier 1	25.93
10	Asphalt Specialties	Tier 3	52.44
			<b>267.95</b>

LAND ACQUISITION MAP



LEGEND

- Existing County-Owned Parks Lands
- Tier 1 Acquisition
- Tier 2 Acquisition
- Tier 3 Acquisition

# PARK ACCREDITATIONS AND CERTIFICATIONS

Riverdale Regional Park has the opportunity to achieve recognition and elevate standards through the process of applying for various accreditations and certifications programs. Although these programs may incur an initial expense, many will offer education-related resources and/or result in cost savings over time. The recognition will serve as a vehicle to educate the community about the park's core value system that showcases sustainability and land stewardship. In addition, Adams County has the potential to leverage the recognition from some of the following programs when pursuing additional funding mechanisms. The following is a compilation of park accreditations and certifications that are most aligned with the themes established for the park.

## COMMISSION FOR ACCREDITATION OF PARK AND RECREATION AGENCIES (CAPRA)

CAPRA accredits park and recreation agencies for excellence in operation and service. This accreditation helps parks achieve their goals while sending a message that the park system is aligned with current industry best practices. As a method to determine the level of quality each park system is delivering, the parks are independently evaluated and compared to established benchmarks.

CAPRA accreditation involves three distinct phases including: development of the agency self-assessment report, the on-site evaluation, and the Commission's review and decision. After initial accreditation, the process is repeated every five years with the expectation that the parks will improve their evaluation each cycle.

The CAPRA website identifies the benefits for participating in CAPRA include "...the

potential for external financial support and savings to the public, external recognition of a quality governmental service, increased efficiency and evidence of accountability, identifies areas of improvement by comparing an agency against national standards of best practice..."

## ARBNET ACCREDITATION - ARBORETUM

ArbNet offers four levels of accreditation to recognize arboreta at various degrees of development, capacity, and professionalism. The first level of accreditation requires the most approachable criteria and is appropriate for lands at the scale of golf courses, college campuses, zoos, private estates, or towns. Participants in the program are encouraged to improve their accreditation level over time eventually reaching level four, which are "world-renowned tree-focused institutions."

## AUDUBON PROGRAM – AUDUBON COOPERATIVE SANCTUARY PROGRAM FOR GOLF

"This program is an award-winning education and certification program that helps golf courses protect our environment and preserve natural heritage of the game of golf." The Standard Environmental Management Practices developed by Audubon International provide the framework for golf courses to achieve natural areas and wildlife habitats, improved efficiency, and minimized harmful impacts. The resources at Audubon International will provide guidance for golf course officials complete site assessment in the areas of: environmental planning, wildlife and habitat management, chemical use reduction and safety, water conservation, water quality management, and outreach and education. Potential results from participating include improved environmental performance and community relations, reduced liability, reduced expenses, and improved conservation of our natural resources.

Note that a companion program at Audubon International called Audubon Cooperative Sanctuary Program is also available for other landscapes besides golf.

### **SUSTAINABLE SITES RATING SYSTEM – OPEN SPACES, STREETSCAPES AND PLAZAS, EDUCATIONAL/ INSTITUTIONAL**

The Sustainable SITES program certifies projects that protect and enhance the natural cycles of ecosystem benefits that our landscapes provide such as carbon sequestration and flood mitigation. The program focuses on performance measures rather than prescribing solutions to ensure each project achieves results through creative thinking and innovative ideas. The point system allows each project to be certified at the level most aligned with project goals – from SITES Certified all the way to SITES Platinum.

### **TRUE ZERO WASTE CERTIFICATION**

The TRUE Zero Waste certification system helps facilities quantify their performance and find additional ways to improve their progress toward zero waste. This program can be implemented simply by adding recycling bins and fostering a zero-waste culture. The potential benefits of TRUE Zero Waste Certification include: reducing greenhouse gases, managing risk, reducing litter and pollution, reinvesting resources locally and creating green jobs.

### **NATIONAL WILDLIFE FEDERATION'S GARDEN FOR WILDLIFE CERTIFICATION**

This program helps people restore habitat and wildlife populations to our cities, towns and neighborhoods. The National Wildlife Federation has recognized over 200,000 spaces representing 1.5 million acres as Certified Wildlife Habitats in suburban yards, schools, campuses, corporate properties, farms, parks and more.

Colorado state affiliate participates:  
Colorado Wildlife Federation

Colorado sites certified: Denver Zoo  
Pollinator Pathway and Denver Botanic  
Gardens – Chatfield Farms

### **MILLION POLLINATOR GARDEN CHALLENGE**

A campaign to register a million public and private gardens and landscapes to support pollinators.

## **ACCREDITATIONS AND CERTIFICATIONS RECOMMENDATIONS**

- Pursue CAPRA accreditation
- Initiate the process for arboretum status
- Pursue one of the many certifications and accreditations from Audubon Society programs, such as the Audubon Cooperative Sanctuary Program for Golf
- Consider ways that the Sustainable Sites rating system can be employed during the site-specific planning and design process for various rebuilding efforts
- Pursue True Zero Waste Certification at the Fairgrounds area, the Cultural Facility area, as well as other areas with concentrated activity at the site
- Participate in the National Wildlife Federation's Garden for Wildlife program
- Submit existing and proposed pollinator gardens for the Million Pollinator Garden Challenge

*Note: Recommendations are summarized in Appendix A.*

# SUSTAINABILITY CONCEPTS

Riverdale Regional Park has an opportunity to adopt a sustainability value system that is showcased in the landscape and the built environment and promoted through educational programming and park and facility operations. By employing sustainable practices at the park and fairgrounds, potential benefits may be enjoyed by Adams County, park and fairgrounds staff and the local community in the categories of the park’s bottom line, the built and natural environment, and human health and wellbeing. Potential benefits include energy-related cost savings, attractiveness for future funding, reduced incidents of flooding, improved and expanded habitat, improved indoor and outdoor air quality, reduced potable water consumption and a more informed local community learning from the example set at their Regional Park and Fairgrounds.

## ENERGY RESOURCES

A renewable energy strategy provides clean power to the site. Renewable energy fosters a number of benefits including the reduction to annual energy expenditures, community education opportunities and reduced carbon emissions.

- Introduce solar arrays on new and existing buildings where feasible
- Introduce geothermal systems if feasible
- Introduce wind turbines if not in significant conflict with sensitive avian habitat or view corridors
- Introduce biomass fuel production through use of animal waste, food waste, etc.
- Research and remain open to new technologies, such as methane-powered lighting fixtures

### WHAT IS AN INDICATOR?

Indicators are tracking tools to allow for monitoring progress toward otherwise lofty goals. By employing the use of indicators, efforts can be better monitored and successes can be clearly communicated.

## MEASURING PROGRESS TOWARD SUSTAINABILITY GOALS:

ENERGY RESOURCE INDICATORS	DESIRED TREND
Annual energy production generated from on-site solar arrays	increase
Annual energy production generated from on-site geothermal systems	increase
Annual energy production generated from on-site wind turbines	increase
Number of gallons of biomass fuel produced on-site	increase
Carbon emissions offset from the use of biofuels	increase

## MAINTENANCE AND OPERATIONS

Prioritize fuel-efficient equipment and low-impact operations. By adopting this practice, a number of benefits can be anticipated such as reduced annual fuel expenditures, community education opportunities, and reduced carbon emissions.

- Replace high-fuel consumption grounds equipment and replace with low-emitting, fuel-efficient and/or biofuel vehicles
- Replace high-fuel consumption equipment and replace with low-emitting fuel-efficient and/or biofuel equipment
- Reduce the incidence of idling amongst grounds equipment or park visitors by posting informative signage about the impacts of idling and by defined staff practices
- Utilize central irrigation controls for precise watering and water use conservation

## GREEN INFRASTRUCTURE

Expand and enhance green infrastructure stormwater management within the park. Stormwater BMPs (best management practices) promote a natural water cycle. Water is slowed and detained, filtered with vegetation and infiltrated to replenish the ground water supply.

- Preserve and maintain the on-site tree nursery
- Replace buried stormwater infrastructure with surface stormwater BMP systems that promote detention and infiltration such as rain gardens, bioswales, and stormwater wetlands
- Conserve existing vegetated and permeable surfaces
- Replace some impermeable surfaces (such as parking lots) to a permeable pavement or grass-pave system
- Prevent erosion by utilizing a native vegetation approach
- Encourage green roof systems for new construction on at least 25% of the roof surface

## MEASURING PROGRESS TOWARD SUSTAINABILITY GOALS:

MAINTENANCE AND OPERATIONS INDICATORS	
Number of low-emitting fuel efficient and/or biofuel grounds equipment	increase
Percentage of low-emitting fuel efficient and/or biofuel grounds equipment	increase
Number of roadways and parking lots with signage discouraging idling	increase
Gallons of water required for irrigation	decrease

GREEN INFRASTRUCTURE INDICATORS	
Annual native tree production at tree nursery	increase
Surface acres of stormwater infrastructure	increase
Gallons of stormwater runoff detained, infiltrated and prevented with on-site stormwater BMPs	increase
Acres of existing permeable surfaces conserved	increase
Acres of vegetation serving as erosion control	increase
Square feet of green roof area on site	increase

*Sustainability Concepts, Cont.*

**COMMUNITY ENGAGEMENT AND EDUCATION**

Sustainability does not stop at the borders of the park. By educating the surrounding community and providing a venue for the community to come together, sustainability values and investments will reach a larger audience. This supports the mission of the purposed of this facility as well as the partnership and mission of the CSU Extension.

- Introduce a series of adult education classes that focus on various sustainability topics
- Introduce a series of youth education classes that focus on various sustainability topics
- Install interpretive educational signage concurrently with sustainability investments (solar arrays, rain gardens, permeable pavements, etc.)
- Forge partnerships within the surrounding community to help coordinate sustainability events and investments
- Forge partnerships with environmental artists to create temporary or permanent art installations that promote sustainability

**BUILDING PRACTICES**

Adopt green building practices in order to improve the energy efficiency, reduced carbon emissions, and create healthier indoor environments for park employees and visitors.

- Establish a retrofitting schedule for park facilities to improve insulation
- Establish a retrofitting schedule for park facilities to improve energy efficiency through replacing appliances, HVAC systems, and lighting systems

**MEASURING PROGRESS TOWARD SUSTAINABILITY GOALS:**

<b>COMMUNITY ENGAGEMENT AND EDUCATION INDICATORS</b>	
Number of environmental events annually	increase
Number of nodes with interpretive educational signage	increase
Number of public/private partnerships that promote sustainable practices	increase
Number of community members reached through education events	increase
Number of classes	increase
<b>BUILDING PRACTICES INDICATORS</b>	
Number of buildings on-site with improved insulation	increase
Number of buildings on-site with improved energy efficiency appliances	increase
Number of buildings on-site with improved HVAC systems	increase
Number of buildings on-site with improved lighting systems (LED)	increase
Number of buildings on-site with low-flow plumbing, fixtures, water stations, and bottle fillers	increase
Number of LEED or Energy Star certified buildings	increase
Number of buildings on-site committed to natural and environmentally-friendly supplies and cleaning products	increase
Percent of new construction materials either reclaimed materials or materials with recycled content	increase

- Establish a retrofitting schedule for park facilities to improve water efficiency
- Adopt energy efficiency standards for new construction such as LEED or Energy Star rated
- Transition building cleaning supplies to natural and environmentally-friendly products

## WASTE PRACTICES

Reduce landfill waste generated on the site.

- Continue to provide commingled recycling dumpsters for site users
- Continue to offer special recycling events such as electronic-waste recycling days
- Continue to provide special event recycling bins and collection for on-site or off-site events
- Introduce water bottle filling stations
- Install educational signage communicating ideas about landfill waste and recycling/composting benefits

## LAND MANAGEMENT

Adopt responsible natural land management practices.

- Increase tree canopy cover on site
- Increase acres of native and regionally appropriate species
- Increase acres of native understory species areas
- Manage and remove invasive vegetation species
- Adopt an integrated pest management approach
- Reduce use of unnatural pesticides and herbicides

## MEASURING PROGRESS TOWARD SUSTAINABILITY GOALS:

WASTE PRACTICES INDICATORS	
Number of compartmental recycling receptacles	increase
Pounds of materials recycled from the site's collection receptacles	increase
Number of special events recycling receptacles deployed	increase
Number of water bottle filling stations/Number of plastic bottles mitigated	increase
Number of signage nodes dedicated to landfill/recycling/composting education	increase

LAND MANAGEMENT INDICATORS	
Percent of canopy cover on site	increase
Acres of native and regionally appropriate species	increase
Acres of native understory species areas	increase
Acres of invasive species removed	increase
Acres of turf managed with sustainable practices	increase
Acres of landscape managed with an integrated pest management approach	increase



## Sustainability Concepts, Cont.

### WILDLIFE

Protect and enhance wildlife diversity and habitats.

- Convert lawn and pavement areas to native vegetation habitat areas
- Assess and restore existing habitats that provide adequate vegetative cover and corridor connections
- Increase the number of habitat types on site (if feasible and appropriate)
- Prevent pet waste litter on site
- Establish on-leash, off-leash, and no pet areas based on habitat sensitivity
- Locate high-intensity activities at a distance from sensitive habitats
- Introduce educational signage communicating habitat types and species
- Establish receptacles for fishing waste such as line, hooks, and bait as a strategy to reduce litter and reduce conflicts with wildlife

### FISHING LINE DISPOSAL RECEPTACLE



Image credit: ncbs.ifas.ufl.edu

## ACTIVE LIFESTYLES

Support active lifestyles at the fairgrounds and park. Communities embracing active lifestyles promote sustainability through reducing the dependence on the automobile and healthy/local eating habits.

- Maintain and complete gaps in existing trail network on the site
- Determine locations for portal trails to provide safe and multi-modal access to the site from all the surrounding communities
- Increase bicycle parking racks on the site
- Forge partnerships to establish local and healthy food-related events at the site
- Commit to supporting and purchasing local and healthy food for fairgrounds and parks events
- Introduce demonstration gardens, agriculture displays, and permaculture installations at the site
- Forge a partnership to host bicycle events, bicycle maintenance education programs and/or bicycle building programs
- Prohibit smoking or limit smoking to designated areas

## MEASURING PROGRESS TOWARD SUSTAINABILITY GOALS:

WILDLIFE INDICATORS	
Acres of land area determined to be moderate or high-quality habitat	increase
Acres of land area restored as habitat	increase
Number of habitat types located at the park	maintain
Number of pet waste disposal receptacles at the park	increase
Acres of land dedicated as "no dog" areas or "on-leash" areas	maintain or increase
Number of habitat and park-use conflicts on the site	decrease
Number of signage nodes dedicated to habitat and species information	increase
Number of lakes with no reports of invasive aquatic species, such as Zebra mussels, Quagga mussels, and Bryozoan mussels	maintain or increase
Number of fishing nodes with fishing waste receptacles	increase

ACTIVE LIFESTYLE INDICATORS	
Miles of trails on site	increase
Number of trail connections (portal trails) to the surrounding communities	increase
Number of healthy and/or local food-related events	increase
Number of bicycle-related events	increase
Number of trail race events	increase
Acres of demonstration gardens or agricultural/permaculture displays	increase
Acres of park where smoking is prohibited	increase

## WATER RESOURCES

Water is an exciting natural resource at Riverdale Regional Park. The diversity of natural and created water elements is quite impressive. Good green infrastructure practices will support this resource and ensure its protection for generations to come. A green infrastructure approach offers numerous benefits including recreation value, aesthetics, social and environmental equity, reduced maintenance, water quality and habitat value.

- Incorporate bioretention facilities in parking lots in landscaped areas, medians and roundabouts
- Introduce green infrastructure demonstration projects at the entrance to high-profile buildings, such as a visitor center. Facilities to consider include: rain gardens, pollinator gardens and green roofs
- Utilize playing fields and open lawn areas for detention storage
- Commit to using permeable pavements in parking stalls, overflow parking areas and walkways
- Introduce water conservation fixtures such as central control irrigation, waterless urinals, and low flow faucets
- Disconnect gutter downspouts from stormwater systems by allowing rainwater to be directed to landscaped areas
- Strategically remove some curb areas as a way to allow stormwater to flow from impervious surfaces into landscaped areas
- Create multiple partnerships with elected officials, stormwater utility manager, water regulatory agency or the department of conservation or natural resources as a means to implementing and maintaining green infrastructure projects. Other ideas for partnerships include the Audubon Society or local watershed groups.
- Leverage funding opportunities using three strategies:
  - Water providers can fund infiltration-based green infrastructure projects that recharge groundwater supplies
  - Stormwater utility companies could potentially fund projects that slow runoff from impervious areas

## MEASURING PROGRESS TOWARD SUSTAINABILITY GOALS:

WATER RESOURCES INDICATORS	
Surface acres of bioretention and detention facilities on site	increase
Number of green infrastructure demonstration projects	increase
Surface area of permeable pavements on site	increase
Gallons of potable water consumed annually	decrease
Percentage of stormwater downspouts disconnected from subsurface stormwater infrastructure	increase
Number of water-related partnerships created	increase
Water resources-related funding partnerships created	increase
Number of educational signage nodes communicating green infrastructure benefits	increase

- Watershed and Environmental groups are eligible for grant funding to implement green infrastructure projects
- Develop a memorandum of understanding for each partnership created in order to clearly define roles and responsibilities for green infrastructure projects, especially regarding maintenance and repairs
- Amend compacted soils to improve infiltration
- Include educational signage (in English and Spanish) to explain the green infrastructure facilities and the benefits they provide
- Refer to Urban Drainage and Flood Control District for resources regarding stormwater management and flood control



*Image credit: Adams County*

# PHASING

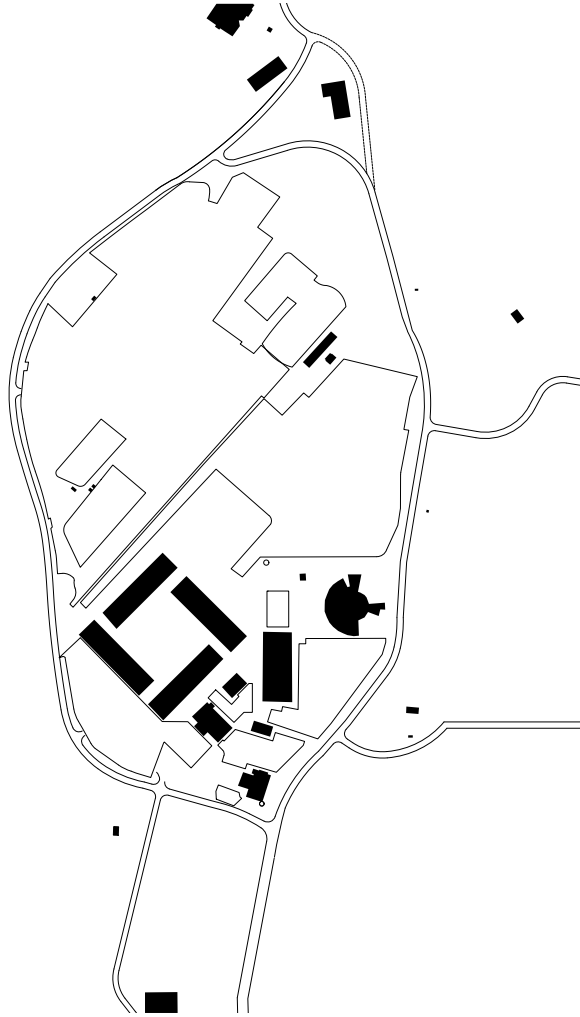
The following section articulates an approach for phasing improvements for the Regional Park and Fairgrounds. Considerations in defining phasing include: cost efficiencies, continuing operations during construction, and revenue-generating features.

Improvement projects are described and organized in the following section under two separate categories - the fairground facilities and the regional park.

# FAIRGROUNDS FACILITIES

The phasing plan within the fairground facility area follows an approach of updating the campus while allowing for adequate function during events throughout each phase and maintaining current operations to the greatest extent possible. Old facilities will remain functional until replacement facilities are in place. The following phasing plan outlines a sequence of events that places importance on near-term improvement needs, but it also recognizes that efficiencies in construction, funding opportunities and/or other influences may require certain projects to occur at another point sequentially.

## EXISTING

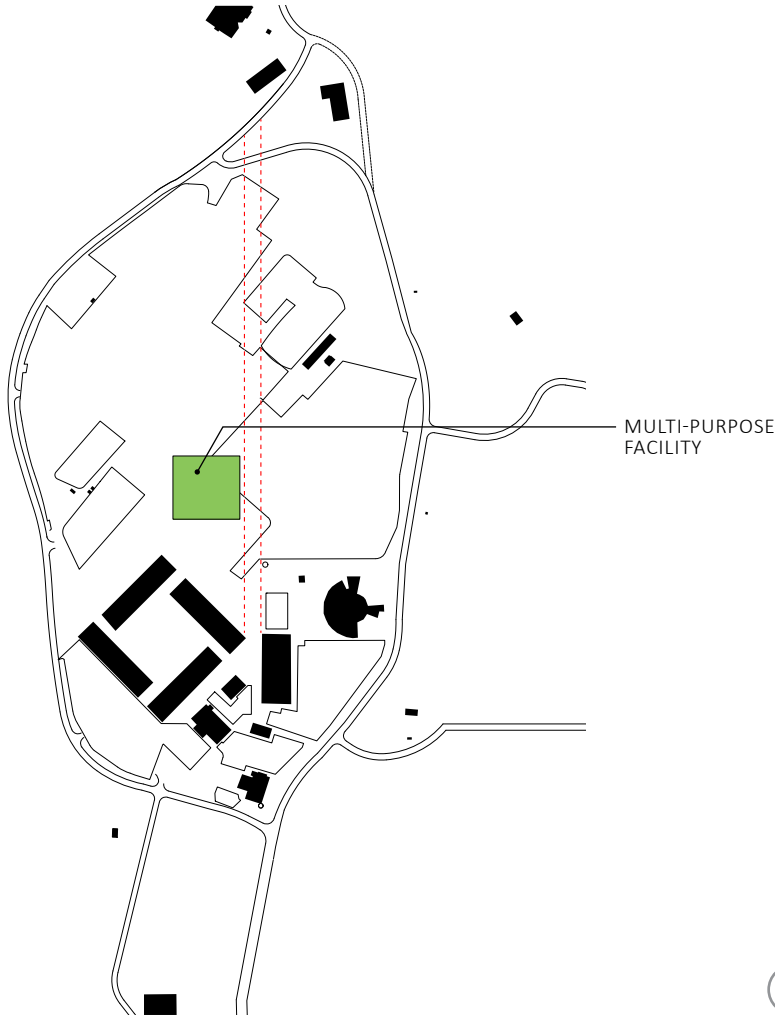


## EXISTING PARKING SUMMARY

<i>Parking</i>	<i>Everyday Total</i>	<i>Event Total</i>
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lots (existing)	2,409	1,573
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,409</b>	<b>1,816</b>
<b>SHUTTLE ROUTE PARKING</b>		
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>NA</b>
<b>Total Vehicle Parking</b>	<b>2,409</b>	<b>1,816</b>
<b>Total RV Parking</b>	<b>0</b>	<b>0</b>

*Note: an additional 100 event parking spaces located at the trailhead at 124th/Henderson (25 spaces) and Mann-Nyholt Lake (75 spaces). These lots are not on the shuttle route but could serve some attendees.*

## PHASE 1










## PHASE 1

The first phase of construction in the fairground facility core introduces a new Multi-Purpose Facility. User groups and stakeholders have indicated a need for a facility to replace the Indoor Arena that was demolished. This facility will provide additional flexible space that fills today's rental gaps. Interim access is provided through existing paved lots.

### PHASE 1 PARKING SUMMARY

<i>Parking</i>	<i>Everyday Total</i>	<i>Event Total</i>
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lots (existing)	2,343	1,816
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,343</b>	<b>1,816</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>747</b>
<b>Total Vehicle Parking</b>	<b>2,343</b>	<b>2,563</b>
<b>Total RV Parking</b>	<b>0</b>	<b>0</b>

### LEGEND

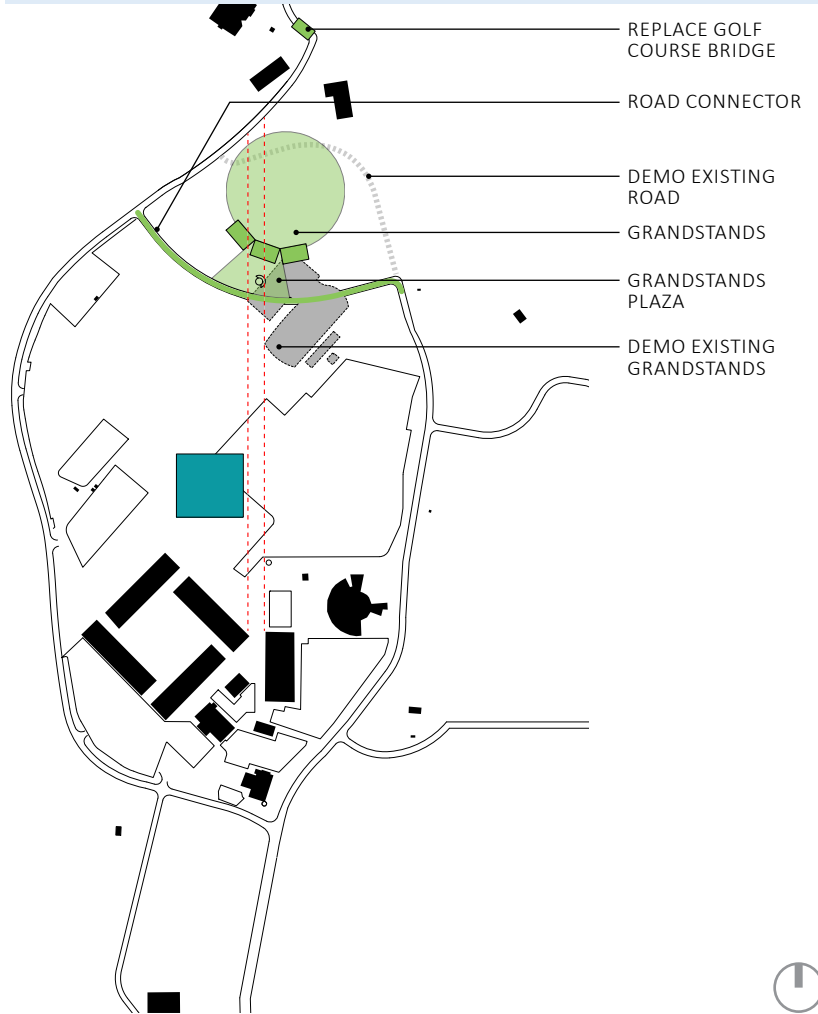
-  Existing, no change
-  Current Phase
-  Demolition
-  Roadway Demolition
-  New Building
-  New Parking
-  Utility Easement



## PHASE 2

Phase 2 embarks on the construction of the new Grandstands. The Grandstands will anchor the north end of the fairgrounds and will require rerouting of the loop road. The bridge to the golf course should be engineered for vehicular traffic and replaced at this time to open another route through the site during high volume traffic times. Once the existing Grandstands are demolished, the site will free up space for subsequent building phases.

## PHASE 2



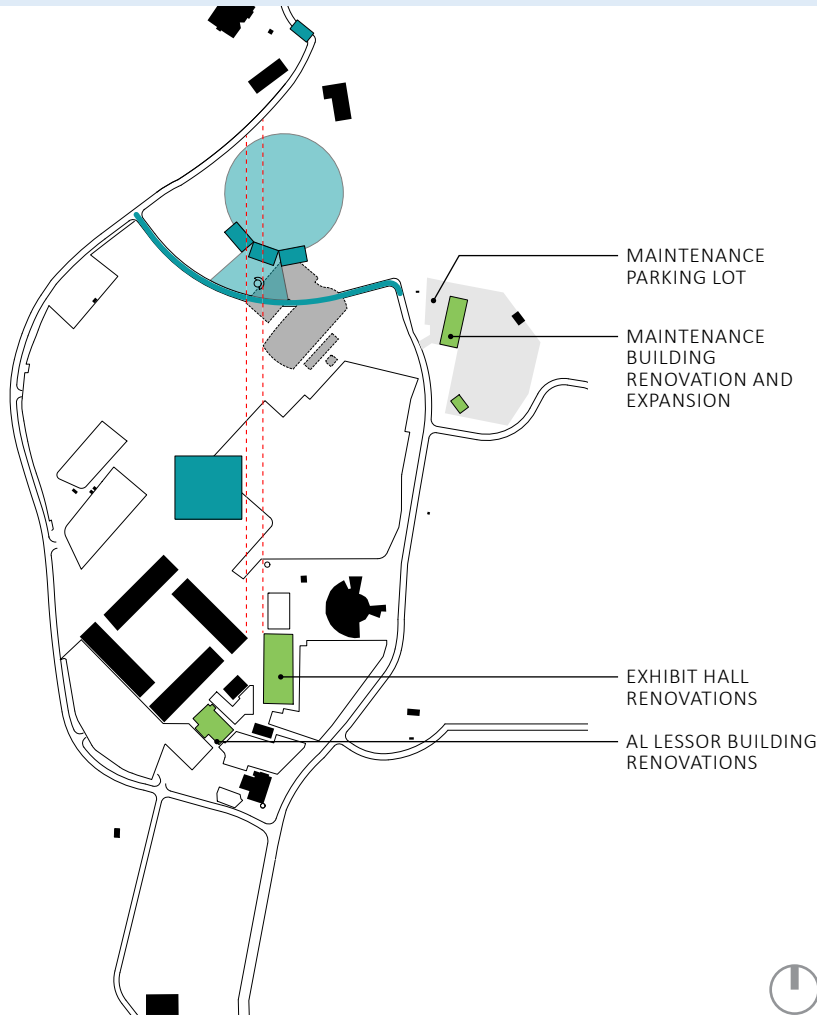
### LEGEND

- Existing, no change
- Current Phase
- Demolition
- Roadway Demolition
- New Building
- New Parking
- Utility Easement

### PHASE 2 PARKING SUMMARY

<i>Parking</i>	<i>Everyday Total</i>	<i>Event Total</i>
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lot (existing)	2,155	1,628
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,155</b>	<b>1,628</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>747</b>
<b>Total Vehicle Parking</b>	<b>2,155</b>	<b>2,375</b>
<b>Total RV Parking</b>	<b>0</b>	<b>0</b>

## PHASE 3



## PHASE 3






The parks maintenance facility is in need of repairs and expansion. As the park continues to add additional amenities, the need to expand and renovate the maintenance facility becomes greater. The maintenance facility needs to remain functional during the expansion phase. The facility should be evaluated for expansion potential versus new construction, although new construction is anticipated at this time. These maintenance site improvements should begin in Phase 3.

Improvements to the existing Exhibit Building and Al Lesser Building should also be included in this phase to maintain their usefulness to facility users. These include relocating the attached shower/restroom facility to a more functional and less public location and updating finishes for the Exhibit Building, and adding fire sprinklers and an automatic overhead door and opener for the Al Lesser Building. Both structures should have overhead power added to increase electrical access and supply.

### PHASE 3 PARKING SUMMARY

Parking	Everyday Total	Event Total
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lots (existing)	2,155	1,628
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,155</b>	<b>1,628</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>747</b>
<b>Total Vehicle Parking</b>	<b>2,155</b>	<b>2,375</b>
<b>Total RV Parking</b>	<b>0</b>	<b>0</b>

### LEGEND

-  Existing, no change
-  Current Phase
-  Demolition
-  Roadway Demolition
-  New Building
-  New Parking
-  Utility Easement

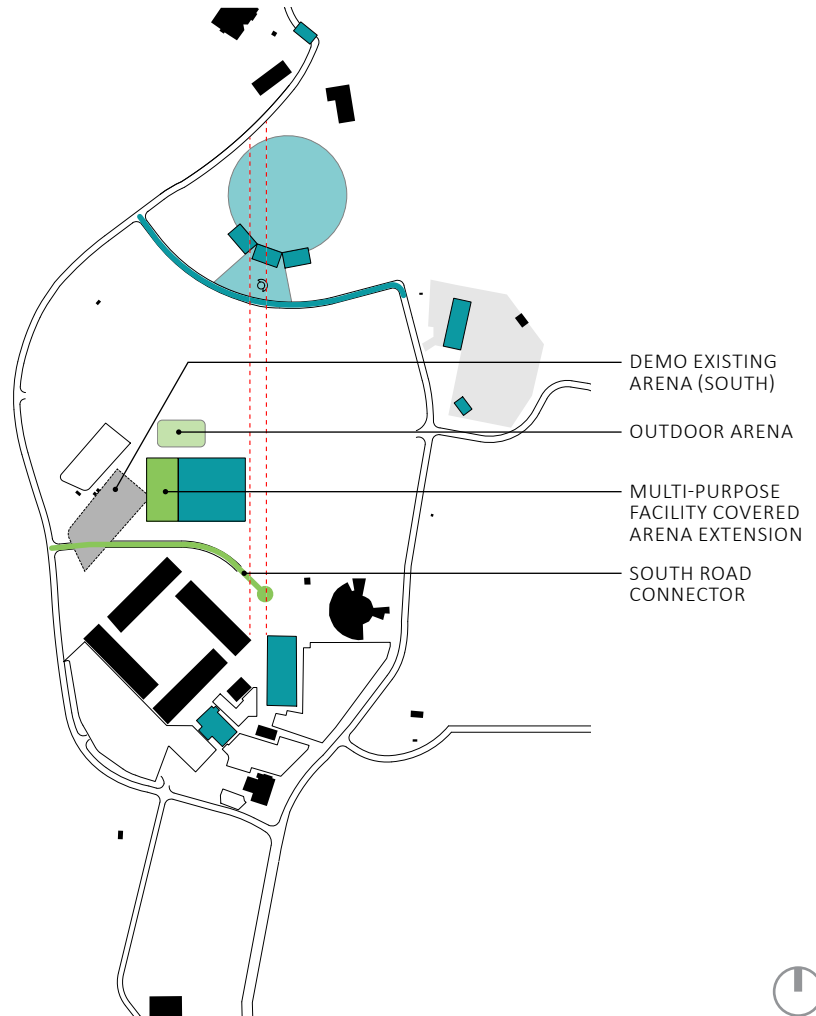
*Note: an additional 100 event parking spaces located at the trailhead at 124th/Henderson (25 spaces) and Mann-Nyholt Lake (75 spaces). These lots are not on the shuttle route but could serve some attendees.*

*Parking at 124th Ave/ Henderson Road on-street parking and parking at Quist Middle School will also be available in the future.*

## PHASE 4

The proposed Multi-Purpose Facility includes shared construction efficiencies in attaching a covered arena. This should be studied further to understand the extent of construction efficiencies, budget efficiencies and funding mechanisms to determine if the extension could be built at the same time as the main facility or if a two-phase approach should be taken with the covered arena added on at a later time. The master plan conceives that the expansion will occur sequentially in a separate phase. At the time when the expansion is triggered, the existing south outdoor 4-H arena will need to be removed for construction of the building's extension. For this reason, a new outdoor arena should be constructed in order to maintain all 4-H functions. Finally, an access road to link to the entire Multi-Purpose Facility should be established to formalize link all of the new facilities to the main core.

## PHASE 4



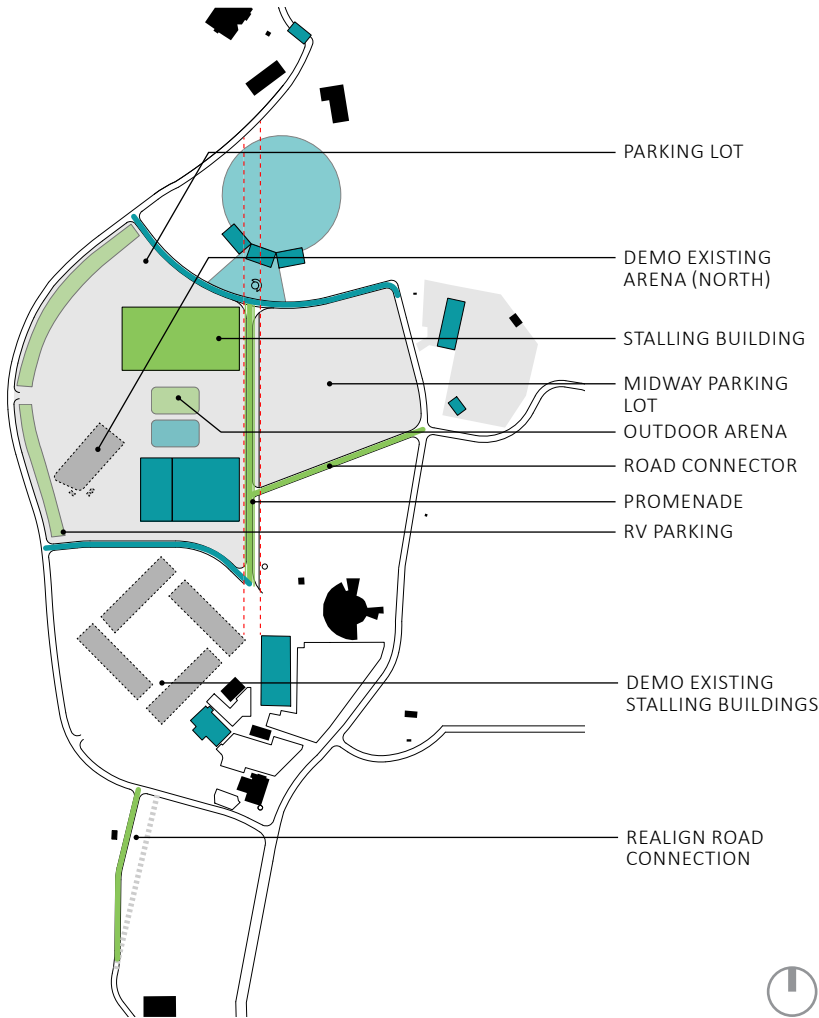
### LEGEND

- Existing, no change
- Current Phase
- Demolition
- Roadway Demolition
- New Building
- New Parking
- Utility Easement

### PHASE 4 PARKING SUMMARY

<i>Parking</i>	<i>Everyday Total</i>	<i>Event Total</i>
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lot (existing)	2,155	1,628
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,155</b>	<b>1,628</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>747</b>
<b>Total Vehicle Parking</b>	<b>2,155</b>	<b>2,375</b>
<b>Total RV Parking</b>	<b>0</b>	<b>0</b>

## PHASE 5



## PHASE 5







The fifth phase will construct a new stalling barn and the second outdoor arena to replace the existing north 4-H arena that will be demolished during this phase of work.

Some key circulation routes will also be the focus of this phase. A framework to the campus will be initiated with a strong north to south spine that can serve vehicles during the typical days and pedestrians only during events. Phase 5 includes the completion of the parking lot to the west of the stalling barn, multi-purpose facility and arenas, which also creates the platform for the addition of RV parking spaces along the perimeter of the lot with hookup stations. The midway parking lot and connector road to the east is also added during Phase 5, as well as a formalized road connection to the south of the core fair facilities to provide a shuttle route and relief valve during event times.

### PHASE 5 PARKING SUMMARY

Parking	Everyday Total	Event Total
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lot (existing)	771	771
New Parking Lots	900	900
New Midway Parking Lot	850	used for Fair
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,521</b>	<b>1,671</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>747</b>
<b>Total Vehicle Parking</b>	<b>2,521</b>	<b>2,418</b>
<b>Total RV Parking</b>	<b>32</b>	<b>32</b>

### LEGEND

-  Existing, no change
-  Current Phase
-  Demolition
-  Roadway Demolition
-  New Building
-  New Parking
-  Utility Easement

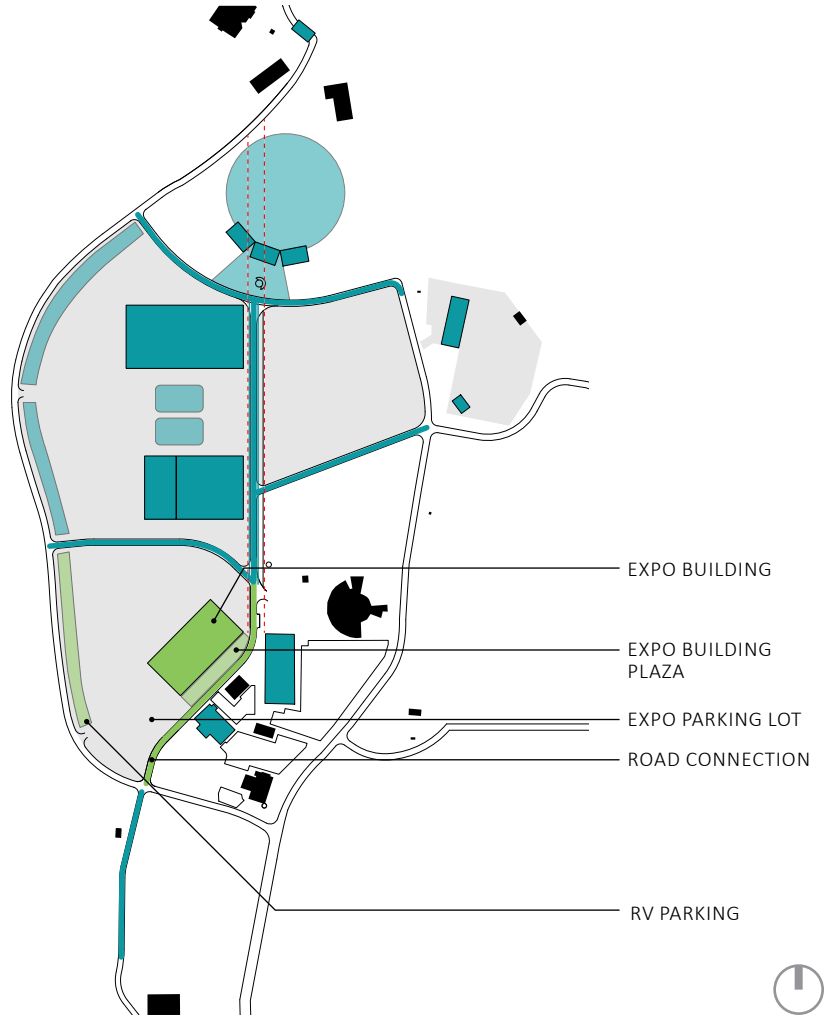
*Note: an additional 100 event parking spaces located at the trailhead at 124th/Henderson (25 spaces) and Mann-Nyholt Lake (75 spaces). These lots are not on the shuttle route but could serve some attendees.*

*Parking at 124th Ave/ Henderson Road on-street parking and parking at Quist Middle School will also be available in the future.*

## PHASE 6

Phase 6 introduces an Expo Building at the south end of the spine. A new road connector provides improved circulation through the facility campus. With the removal of the old stalls during Phase 5, the parking lot to the west of the Expo Building can now be renovated and RV spaces added.

## PHASE 6



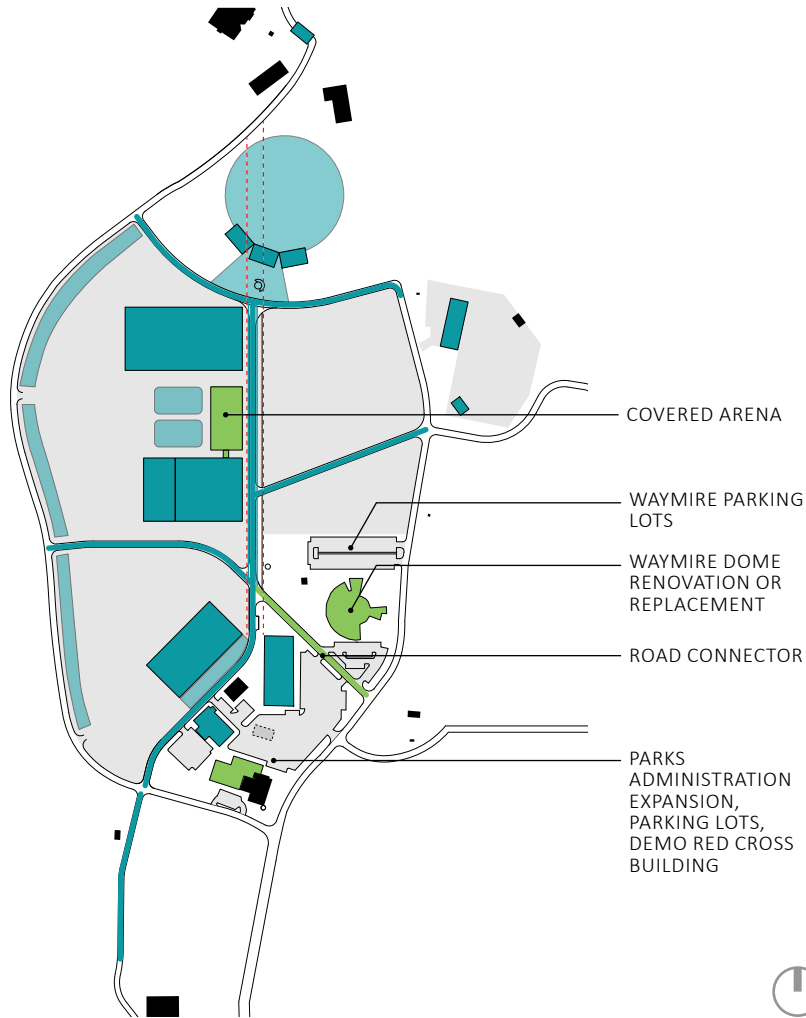
### LEGEND

- Existing, no change
- Current Phase
- Demolition
- Roadway Demolition
- New Building
- New Parking
- Utility Easement

### PHASE 6 PARKING SUMMARY

<i>Parking</i>	<i>Everyday Total</i>	<i>Event Total</i>
<b>FAIRGROUNDS LOOP PARKING</b>		
Parking Lot (existing)	552	552
New Parking Lots	2,400	1,550
New Midway Parking Lot	850	used for Fair
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>2,952</b>	<b>2,102</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
West Event Lot		315
128th Ave Parking Lot		13
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>1,075</b>
<b>Total Vehicle Parking</b>	<b>2,952</b>	<b>3,177</b>
<b>Total RV Parking</b>	<b>54</b>	<b>54</b>

## PHASE 7



## PHASE 7

Phase 7 includes the future improvements as needed, such as the construction of a second covered arena along the north end of the central spine, expansion of the Administration Building, demolition of the Red Cross Building, replacement or additional renovation of the Waymire Dome and reorganization of the parking and circulation routes around these facilities.

### PHASE 7 PARKING SUMMARY

Parking	Everyday Total	Event Total
<b>FAIRGROUNDS LOOP PARKING</b>		
New Parking Lots	2,293	2,293
New Midway Parking Lot	850	used for Fair
<b>Vehicle Parking in Fairgrounds Loop</b>	<b>3,143</b>	<b>2,293</b>
<b>SHUTTLE ROUTE PARKING</b>		
High School Parking Lot		400
Golf Course Parking Lot		247
Historical Society Parking Lot		100
West Event Lot		315
128th Ave Parking Lot		13
<b>Vehicle Parking on Shuttle Route</b>	<b>NA</b>	<b>1,075</b>
<b>Total Vehicle Parking</b>	<b>3,143</b>	<b>3,368</b>
<b>Total RV Parking</b>	<b>54</b>	<b>54</b>

### LEGEND

- Existing, no change
- Current Phase
- Demolition
- Roadway Demolition
- New Building
- New Parking
- Utility Easement

*Note: an additional 100 event parking spaces located at the trailhead at 124th/Henderson (25 spaces) and Mann-Nyholt Lake (75 spaces). These lots are not on the shuttle route but could serve some attendees.*

*Parking at 124th Ave/ Henderson Road on-street parking and parking at Quist Middle School will also be available in the future.*

# REGIONAL PARK

The phasing for the regional park improvements follows a logic guided by budgetary considerations and the thoughtful introduction of public amenities. As varying funding sources become available, some phases may be implemented earlier.

## PHASE 1

The first phase includes adding an adventure and ADA accessible playground to the south parcel and introduces a new group pavilion in the north parcel.

## PHASE 1



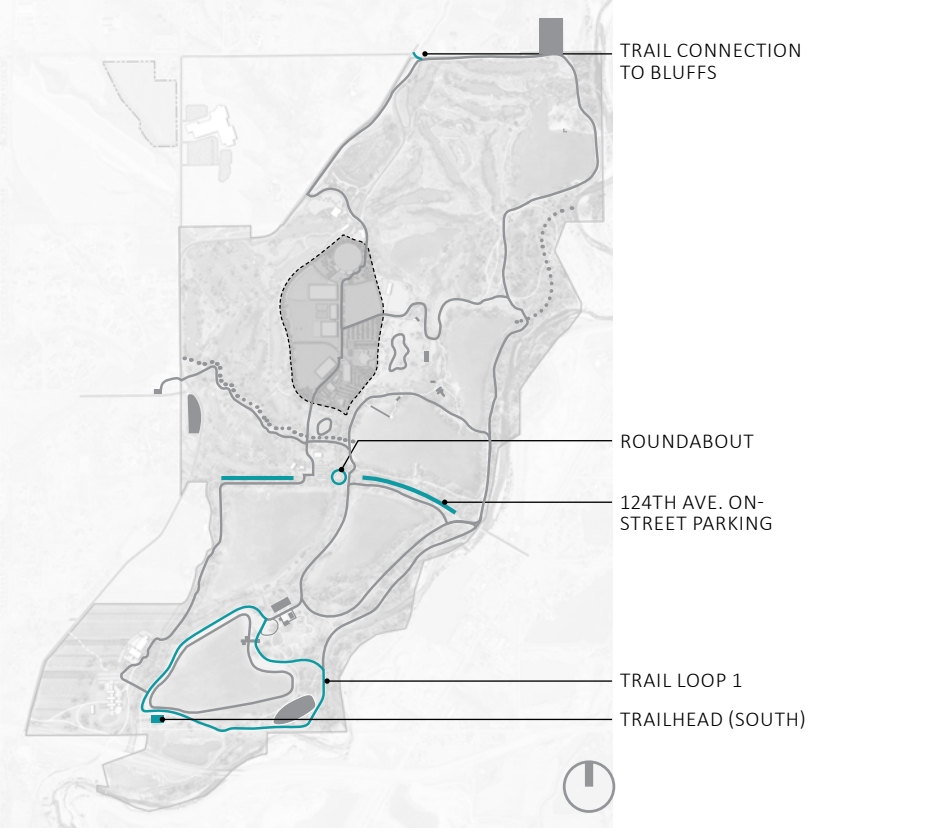
## PHASE 2

Phase 2 begins to establish more user activity in the South Park with a one-and-a-half-mile trail and trailhead parking located adjacent to 120th Parkway. An existing trail section runs through this location providing immediate connection opportunities. This phase should begin to add more general park infrastructure improvements to the south parcel, such as irrigation, utilities, revegetation and landscape establishment.

The phase also introduces a roundabout at Park Boulevard and 124th Avenue to provide fluid ingress and egress through the park and redirect the main entrance to 120th Parkway. Along with the roundabout improvement, on-street parking is proposed to occur on 124th Avenue.

It is anticipated that a trail connections will need to be made to the Bluffs area early in the development process.

## PHASE 2



### PHASE 3



NATURE CENTER AND PAVILION, RESTROOM, PARKING AND TRAILHEAD

### PHASE 3

Phase 3 continues to expand the south parcel's programming with a Nature Center, pavilion and restroom facility. Included with this new hub is a trailhead parking lot, irrigation and landscaping/revegetation needed to re-establish the site.

It is assumed that the extension of Park Boulevard, connecting 120th Parkway to 124th Avenue, will occur with the construction of the Animal Shelter, and that it will be in place prior to providing further amenities in the south section of the park. This phase is contingent on that roadway being in place.

### PHASE 4



FISHING PIER  
BRANTNER GULCH REALIGNMENT  
WATER QUALITY FACILITY  
PLAYGROUND REPLACEMENT  
TRAIL LOOP 2  
FISHING PIER  
IMPROVEMENTS TO LAKE 3

### PHASE 4

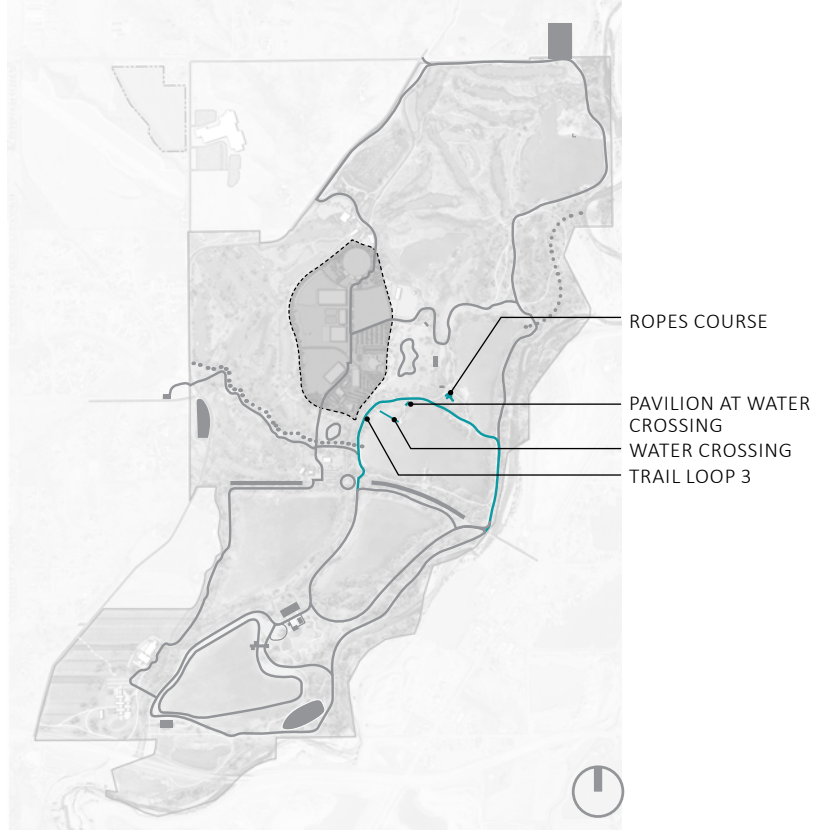
In the north park, the Brantner Gulch restoration along the South Platte River serves as a water quality pilot project and recreational amenity. A intermittent water quality facility is located within the great lawn to serve recent development projects within the fairground core facility area. Also during Phase 4, the new trail system is extended with a second loop in the south parcel, along with improvements to Lake 3 and replacement of the existing north playground.



## PHASE 5

The fifth park phase includes a bridge at Mann-Nyholt Lake and an additional pavilion for celebrations. The pavilion will provide an additional rental facility and will be highly desirable due to its scenic location. Also in Phase 5 is a high ropes course that will provide team building opportunities and help to leverage the facilities for corporate and conference events. The park trail system grows further with Trail Loop 3, effectively connecting the south park to the fairgrounds loop.

## PHASE 5



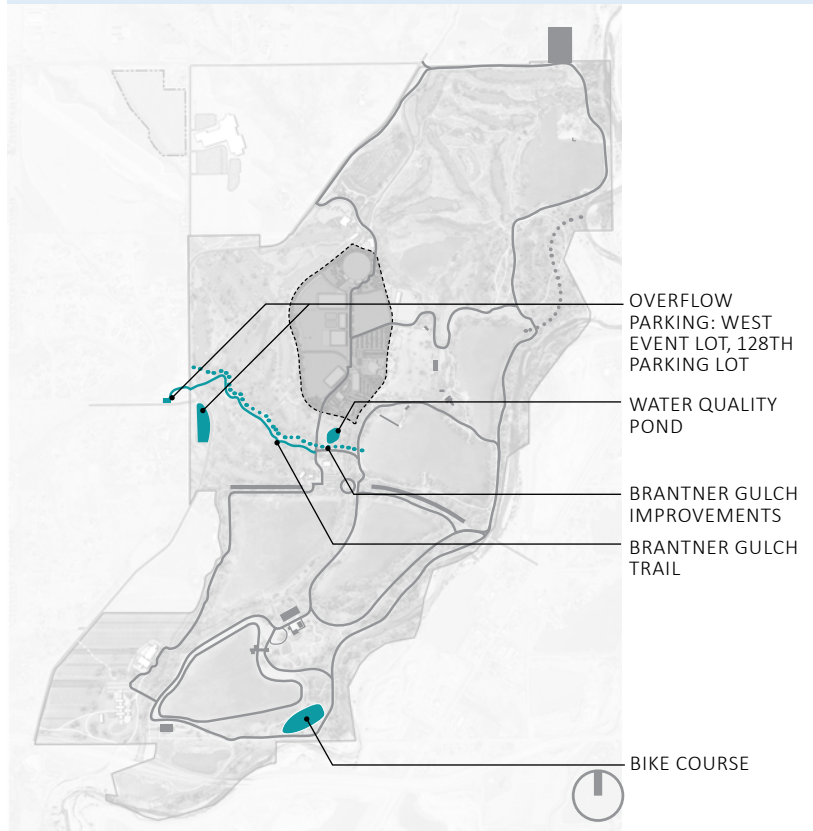
## PHASE 6

The Brantner Gulch project is being studied and conducted by the Urban Drainage and Flood Control District to stabilize the health and water quality of the Brantner Gulch and reduce damage and velocity in the area during flood events. The implementation of this project will serve these goals, as well as incorporate a trail connecting to the adjacent neighborhoods to the west.

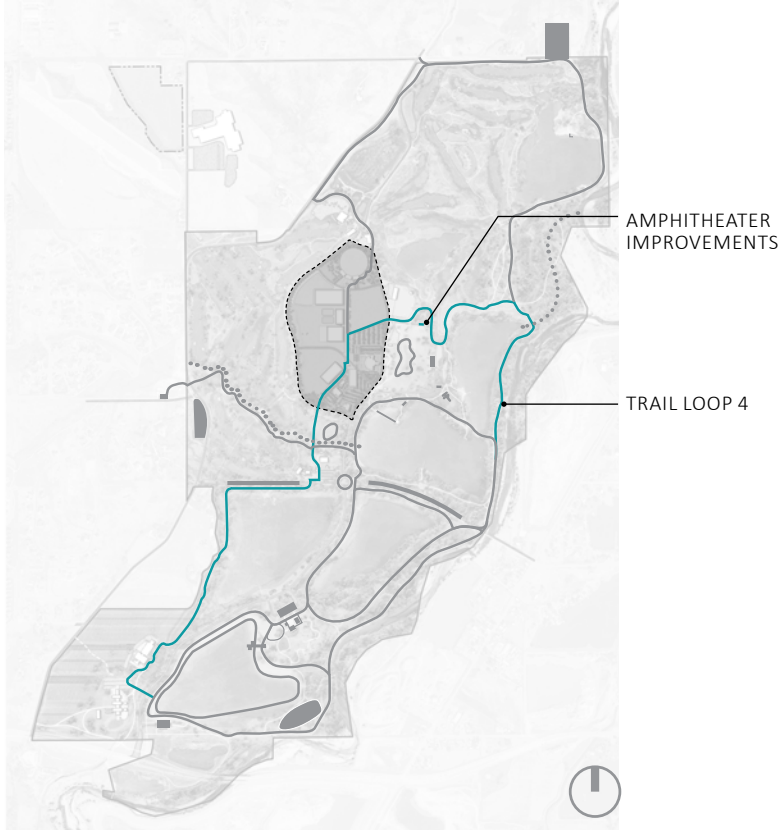
The dirt spoils from the Brantner Gulch project should be used on site to create a bike course as a new recreational program element with the potential to attract new user groups to the park.

This phase should include overflow parking lots on Riverdale Road and on 128th Avenue, as the Brantner connection provides ease in accessing the site during events.

## PHASE 6



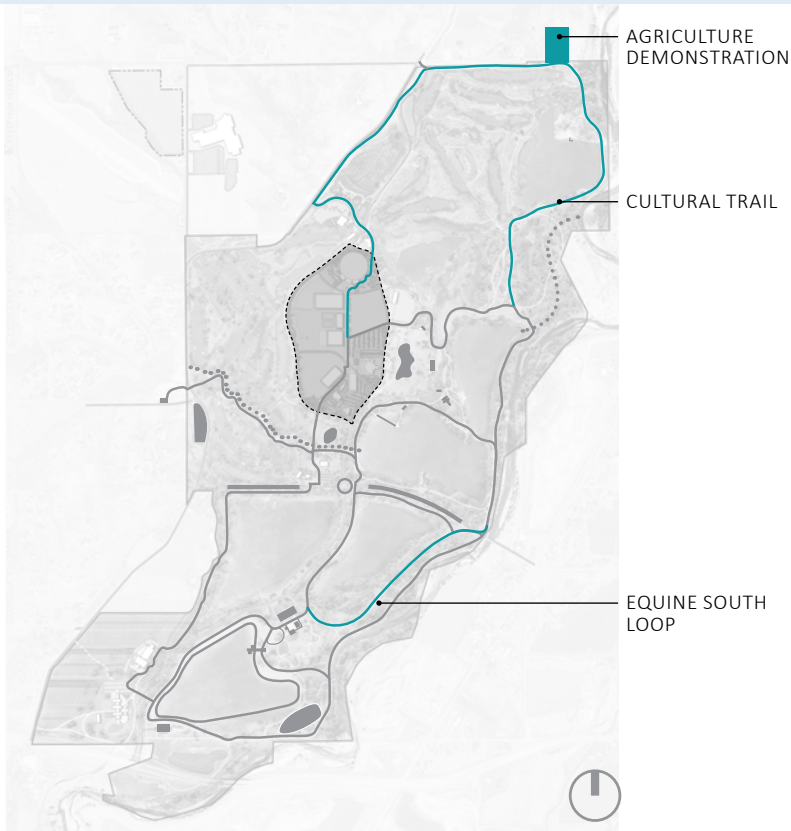
## PHASE 7



## PHASE 7

Phase 7 sees the extension of the trail system to include Loop 4 and amphitheater improvements.

## PHASE 8



## PHASE 8

During the final phase, a completed trail network will fully provide pedestrian and bicycle access to all of the 1,197 acres of the park. The final trail connections completed in this phase include a South Loop for horseback riding, Trail Loop 4 and the completion of the ten-kilometer interpretive Cultural Trail. In addition to trail connections, an agricultural demonstration area will be featured on the northern boundary of the park.