

MARCH 2015



The New Denver Zoo

Leading the Next Generation of Scientists & Conservationists through Incredible Experiences



Denver Zoo Facility Master Plan
March 2015
Prepared by:
Denver Zoo Planning Department
& CLR Design

The New Denver Zoo

FACILITY MASTER PLAN

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*Leading the Next Generation of Scientists &
Conservationists through Incredible Experiences*

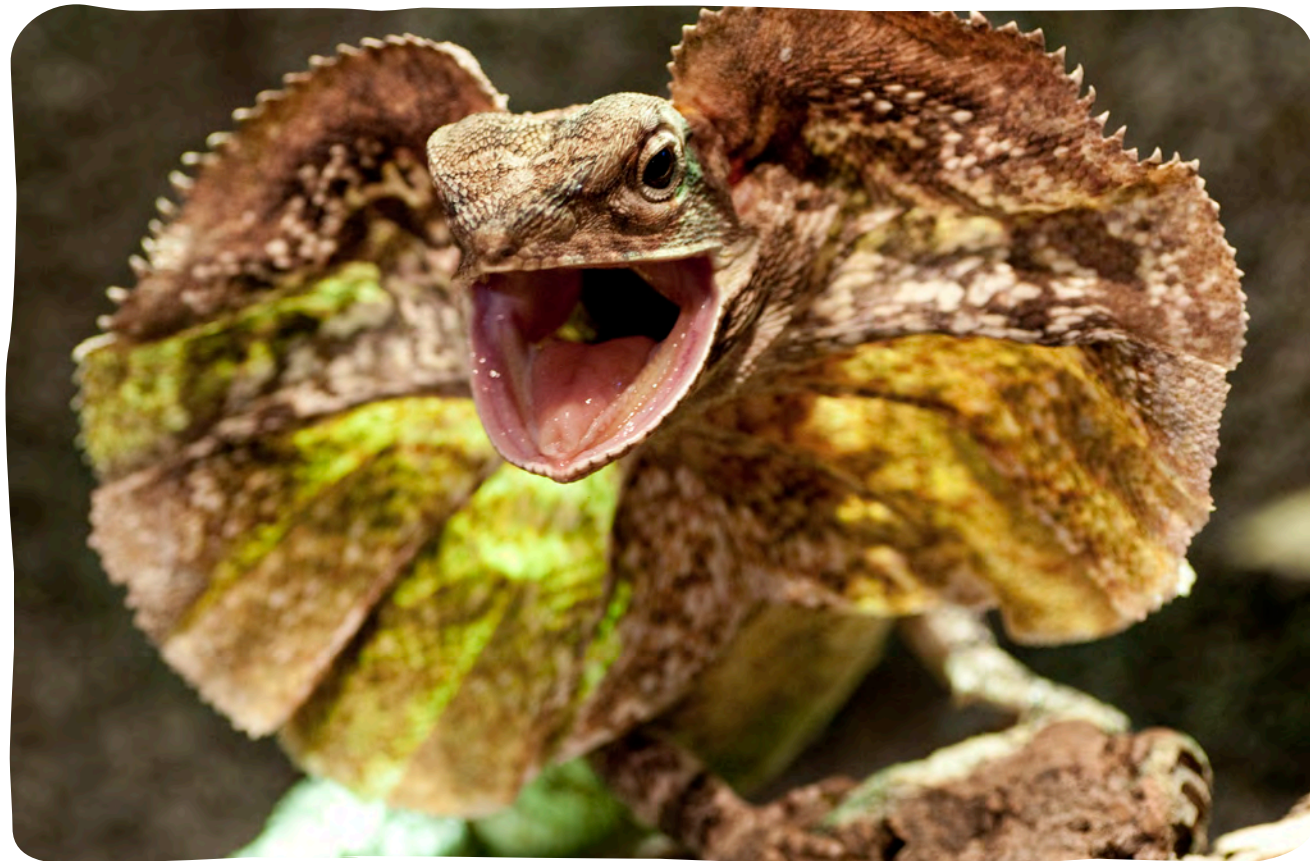




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DENVER ZOO MISSION:
Secure a better world for animals
through human understanding



Above: Bring the Zoo to You!
After school program showcases 2-3 live animals developing a connection with the natural world.
Available for grades K-6th.

Denver Zoo makes it a priority to engage various demographics of all ages, backgrounds and interests. Pictured above is an example one of our children's programs connecting with the animal collection. The array of educational programming aims to create defining moments for the more than 2 million guests through shows, classes, camps, tours and up-close animal encounters.

Opening Messages

I am pleased to share Denver Zoo’s new master plan with you. It truly represents our commitment to be a world class zoo. This plan is a result of over 10,000 hours spent with staff and trustees, community leaders, and industry leaders in design. All departments and disciplines at Denver Zoo were involved in the master plan development. The plan aligns with Denver Zoo’s mission, vision, values, and strategic imperatives. We hope our new design will help every guest leave our campus with the feeling they have gained something – knowledge, inspiration, connection. Denver Zoo is deeply engaged in the community and wants to help our schools succeed. Our dream in this plan extends beyond the boundaries of the Zoo - supporting teachers and students in a radically different way:

- **Real experiences** - Learning starts with natural curiosity, and students are most curious before the age of 9. As we shift to online and mobile learning, the value of the real experience needs to be more differentiated to capture the attention of young minds.
- **Satellite classrooms** - This plan imagines education satellites across the Zoo, integrated with animal exhibits and supporting technology to create memorable learning experiences. Educators are empowered with the tools they need before visiting.
- **Immersive programs** - They will be deeply immersed in an animal rich environment during the visit and provided with the guidance and connections they need after their visit to continue to inspire Colorado’s students.

More than anything, Denver Zoo strives to create a place to experience awe and wonder, and to have one-of-a-kind connections to animals. This plan elevates the guest experience to new heights, and *The New Denver Zoo* promises to be a treasured resource for the entire community. There are several layers to this document and I encourage you to read through it in detail. Not only does it contain the map for Denver Zoo’s future, it also shares a vision of Denver Zoo’s role in supporting our local community in an ever-changing world.

Shannon Block
President and CEO



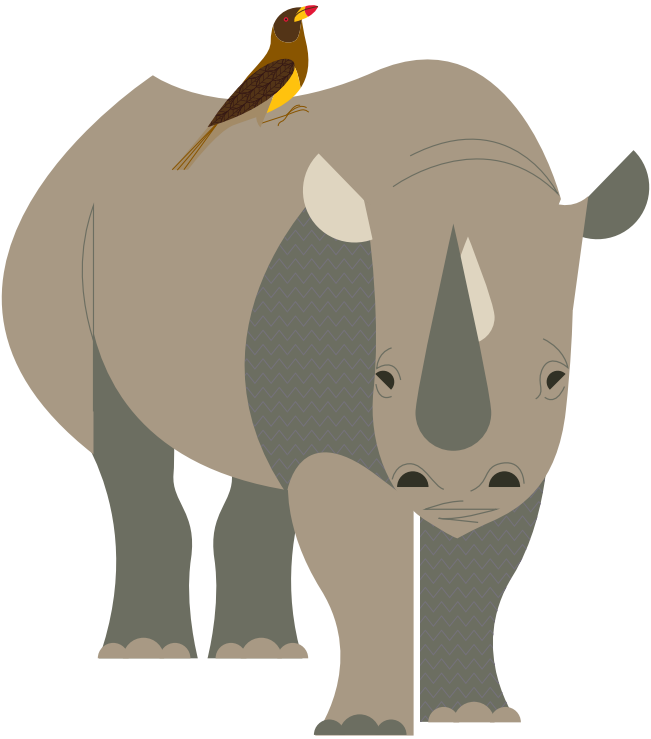
The communities of Denver and Colorado deserve an exceptional zoo. To fulfil this goal requires a thoughtful vision and the resources needed to achieve it. This Master Plan serves as a roadmap to our destination. It is comprehensive, yet contains the latitude to modify our approach based on changing circumstances and challenges.

The document *The New Denver Zoo* is a carefully considered plan for the future of the Zoo based on the following fundamental principles:

- **Animal care and conservation** - Denver Zoo will establish new standards for animal care and exhibits, based upon state of the art practices which will assure optimal physical and emotional animal health. We will connect our guests to the conservation work Denver Zoo leads to protect threatened and endangered species and wild places throughout the world.
- **Guest experience** - Denver Zoo is committed to connecting our guests to animals as safely and intimately as possible, in order to maximum opportunities for personal growth and sheer enjoyment. The Denver Zoo will be a place where enduring memories are made!
- **Education** - Denver Zoo will be a leader in education and create unique and inspirational learning experiences by connecting our guests to the natural world.
- **A sustainable future** - Just as Denver Zoo has served generations of families over 118 years, we need to stay relevant and vibrant to assure that our commitment to our communities is fulfilled continuously. Our model for business sustainability goes hand-in-hand with our commitment to maintaining leadership in environmental sustainability in all of our activities.

The depth and vision embodied in this plan is a testament to the incredible level of work and investment by many individuals and groups committed to the future of the Zoo. These contributions highlight the importance and strength of the relationships between Denver Zoo, the City and County of Denver, and all the communities we serve together.

Dennis O’Malley
Board of Trustees Chairman



Introduction

Why a New Master Plan?

In 1999, Denver Zoo adopted the Millennium Master Plan (MMP). That plan outlined four phases. Upon completion of the first two phases (Toyota Elephant Passage was the final piece of the second phase, completed in 2012) – the zoo took time to re-evaluate the second portion of the MMP to confirm the direction was still in line with facility needs, the mission, and direction of the institution. This evaluation of the second half of the MMP, along with data collected during the Facility Assessment, led staff to rethink and create a new master plan, instead of simply revising the existing plan.

Facility Assessment 2012

The Facility Assessment, from 2010-2012, took inventory and analyzed the current state of zoo facilities, from circulation to building conditions. This analysis, coupled with the last phases of the MMP, identified areas of high facility need which were outside the scope of the MMP. The timeline of the first two phases of the MMP was longer than originally imagined and therefore many of the facility needs changed.

A New Master Plan

The new master plan outlines four exhibit projects: Africa, Coastal, Denver Zoo Into the Wild, and Asia. The zoo intends to complete these projects over the next 15-20 years, with the exception of Denver Zoo Into the Wild (this project initially had four zones – however, only one, Peaks to Prairie, is planned to be completed over the next 15-20 years).

The Strategic Imperatives, Denver Zoo Mission, and Guiding Principles guided the plan and will guide the implementation and priorities moving forward.

An Inclusive Planning Process

Denver Zoo used an innovative and inclusive design process to produce this plan. Bringing more minds, perspectives, passion, and professionalism to the design effort yielded the greatest results. This process was lead by a diverse group of trustees, the Executive Team and a Zoo Master Plan Committee with representatives from every zoo department. The group also received assistance and consultation from CLR Design, an architectural firm specializing in zoo design. 165 Zoo staff members were directly involved in the master plan process. Over 10,000 hours were devoted by staff throughout the process including eight 3-day workshops facilitated by CLR. The Zoo Master Plan Committee spent over 50 meeting hours working on the plan and over 150 hours outside formal meetings doing related work and research.

In addition, Denver Zoo lead a series of community engagement forums. These meetings were augmented with an online feedback module. Over 550 individuals participated in these engagment and feedback opportunities.

Strategic Imperatives


Mission

Secure a better world for animals through human understanding.

Vision

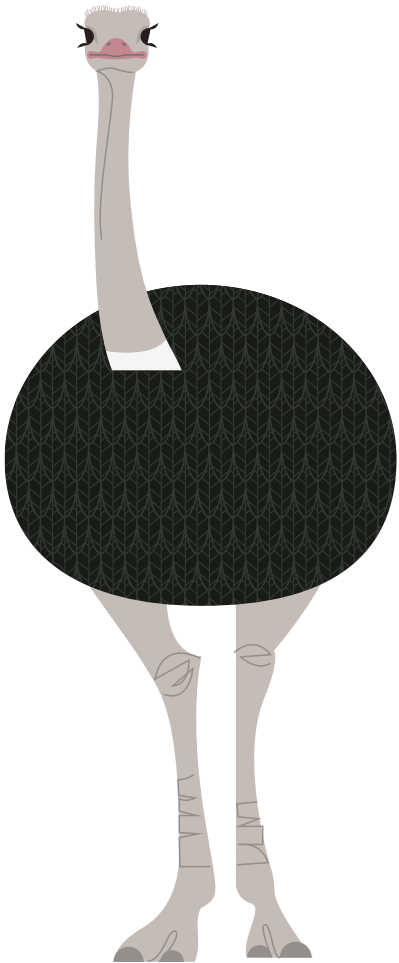
Continuously innovate to inspire life-changing human and animal connections.

Strategic Imperatives

- 
 1. Inspire awe and appreciation of human and animal connections by continuously improving our guest experience while upholding our animal care best practices.
 2. Connect Colorado to Denver Zoo as an educational organization that creates positive, ever-changing learning experiences.
 3. Develop a future state operating model that meets our needs and ensures future growth.

Icons: Tradition presents a zoo as cultural institution to view animals and their environments. At Denver Zoo we are focused on the future of the zoo as a living institution. We are building a zoo where everyone learns, infrastructure is responsive to demands, and the environments and research are cutting-edge. We are creating a place centered on education, scientific research, and connecting people to the animals. Here we emphasize the shared nature of environments and moments between the people and planet. We want our guests and animals to be immersed in each other’s journey.

Throughout the plan, the icons above will highlight ideas tied to the imperatives.



Guiding Principles

Animal Conservation

Connecting guests to our field conservation work promotes awareness of and compassion for threatened and endangered species. Sharing success stories in field conservation encourages positive action toward conservation and inspires guests to get involved.

Animal Care

Innovation paves the way to new standards in animal care. We will continue to create habitats and supporting areas that meet each animal’s needs at all life stages: physically, mentally, and behaviorally. We prioritize the quality of animal facility programming over the quantity of animal species.

Veterinary Science

A premier program of veterinary medicine and surgery will enhance collaborations with local, national, and international professionals and students, including those at universities, teaching hospitals, specialty hospitals, and wildlife organizations. By becoming a resource in veterinary care through active engagement in research, we will advance zoological medicine.

Community

Denver Zoo is a part of City Park, of Denver, the nation and the world. We value the diverse communities in which we belong. As a part of Denver’s City Park, we respect our neighbors and build upon the legacy of the Zoo within the park and strive to achieve the best physical and operational presence for all of the communities we serve.

Context: How do we fit?

Local and Regional

Denver Zoo is the most visited cultural organization in Colorado. In 2012, the Zoo served over 2 million people – primarily within the Denver Metro area. Many of the Zoo’s programs connect underserved audiences to animals, science, and conservation, both on-site and in the community. Additionally, as part of the Zoo’s agreements with the City and County of Denver and a commitment to remaining accessible to the entire community, the Zoo provides at least seven free days every year to remove financial barriers to community members who otherwise might not visit the park. The Zoo’s ability to serve the community as a resource in education has driven the master plan team to look at how the stories and educational aspects of this new zoo will attract and be relevant to diverse audiences throughout the local community.

Guest Experience

Experiences and moments which connect our guests to animals create lasting memories, inspire awe, and create life changing human and animal connections. Crafting these experiences and moments at a variety of scales throughout the zoo and for visitors of City Park is a priority in this plan.

Securing Our Future

Making meaningful connections between individuals and groups and supporting a strong relationship with the City and County of Denver is critical to a successful future. Creating positive relationships and an operating model that meets our needs will ensure future growth.

Education

Connecting guests to the natural world through recreation and learning inspires them to take action for animals and the environment. By utilizing Denver Zoo’s Program Content Standards to define stories, environments, exhibit elements, and interpretation we will help guests achieve what we want them to know, feel, and do.

Sustainability

Connecting guests to the natural environment and sustainable ideas will inspire zoo visitors and communities to meaningfully reduce their environmental impact.

AZA Community

Denver Zoo has been an accredited member of the Association of Zoos and Aquariums (AZA) since 1976. The AZA is a community of organizations and individuals dedicated to the advancement of zoos and aquariums in the areas of conservation, science, education and recreation.

Worldwide Conservation Community

Denver Zoo is committed to the conservation of biological diversity. This includes focusing on vulnerable species through conservation and research programs, both regionally and internationally. Since 1996, Denver Zoo has been involved in over 600 wildlife conservation projects in 62 countries, representing all seven continents.



Opposite Left: Lorikeet Adventure is one of our stimulating exhibits where guests can hand-feed colorful lorikeets.

As a cultural center and conservation catalyst Denver Zoo promotes awareness and biodiversity for the global animal community. The zoo fosters human and animal connections as a means of engaging the public in our efforts to safeguard species survival.



Below: A teen volunteer teaches a young guest how to fold a crane out of recycled zoo maps at the Artistic Asia interpretive station.





The data collected during the Facility Assessment was used as the base information for decision making. This contextual information guided the process and identified priorities.

Site Analysis and Operating Environment

Facility Assessment

From 2010 - 2012, Denver Zoo’s Planning Department performed a Facility Assessment to document and gain a campus wide understanding of the state of the facility. This process and the information gathered created a basis of understanding for the master planning process. This section organizes a portion of the Facility Assessment data, or site inventory and analysis used as base information which informed decisions during the planning process.

Denver Zoological Gardens is established and maintained by the Denver Zoological Foundation Inc., for the people of the City and County of Denver and for the general public in cooperation with the Denver Parks and Recreation Department.

An updated and restated agreement was renegotiated and approved by the DZF and the City and County of Denver in November 1998. Under the new terms, the City and County of Denver retain ownership of the Zoo’s grounds and all attached physical buildings and exhibits. The Foundation assumes direct ownership of the animal and plant collections, equipment, supplies, vehicles, and all other personal property at Denver Zoo. The Foundation also has “the responsibility and authority to maintain, administer, manage, operate, and control the Denver Zoological Gardens”.

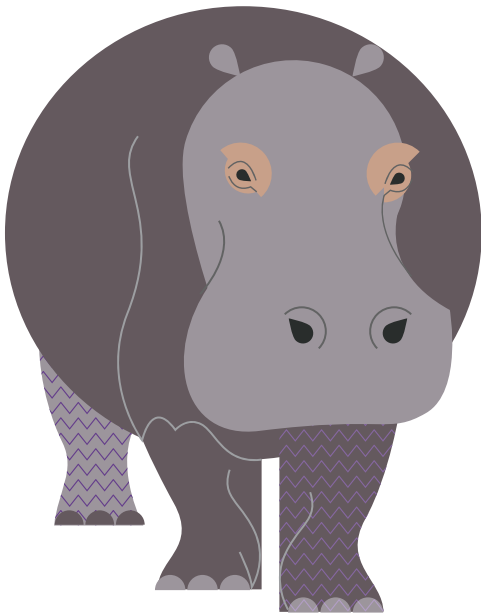
Management

GOVERNANCE

Denver Zoo began formal operations in 1896. From that time until July 1956, the Zoo was directly owned, operated, managed, and controlled by the City and County of Denver through the Department of Parks & Recreation. The Denver Zoological Foundation Inc. (DZF) was established and incorporated in November 1950 as a Colorado not-for-profit 501c3 organization for the express purpose of “developing, improving and maintaining the Zoo’s gardens and animal exhibits in cooperation with the City and County of Denver.” On July 27, 1956, DZF and the City and County of Denver signed the first cooperative agreement:

ZOO MANAGEMENT BOUNDARY

These changes in governance also led to a physical separation between Denver Zoo and City Park. In 1957, a perimeter fence was constructed around the zoo and its boundaries have remained unchanged. Any improvements, including new exhibits and modifications, must occur within the zoo’s perimeter fence. This presents a challenge that forces staff to use space wisely during every redevelopment phase.





Campus Givens and Assumed Conditions

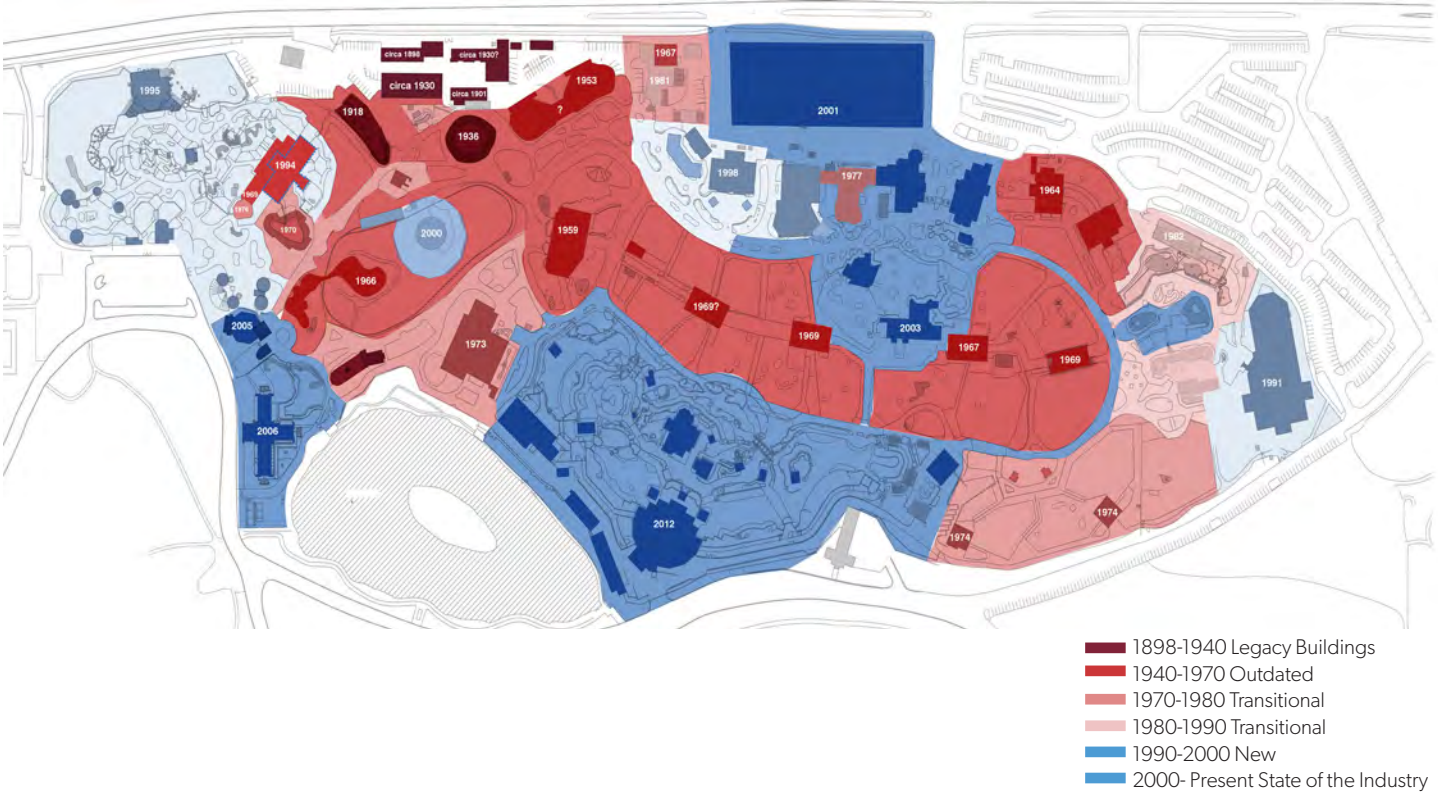
CAMPUS GIVENS AND ASSUMED CONDITIONS

At the onset of the Master Plan planning process, assumptions were made about which areas of the zoo would and would not be considered for redevelopment in the plan. The most recent exhibits were not considered for changing in the next 15-20 years.

In this map, legacy trees and areas on the National Historic Registry are also identified. While these areas may be slated for redevelopment, special consideration will be taken for preservation.

HISTORIC STRUCTURES

In 1982, Denver’s parks and boulevards designed during the City Beautiful movement of the 1890s - 1920s were added to the National Historic Registry. There are several zoo buildings and features that are included in this designation: the Chapel, Bear Mountain, Duck Lake, Duck Lake Island, and the “City Park Shop Buildings,” now referred to as Old Monks, the Stone Garage, Operations, and Building C.



Campus Construction Timeline

AGING FACILITY

The time of construction was mapped during the Facility Assessment. The infrastructure and underground utilities in most areas have not been touched since their construction. The buildings and grounds in the areas have been maintained. However, as the buildings age, the cost of maintenance grows.

As this map indicates, there are many older areas of the zoo defined as “Outdated.” These large areas in red indicate facility needs and outdated exhibit models. The location of the red areas present an opportunity for large exhibit areas. Since the red areas are for the most part, aggregated in large swaths; very large animal yards and exhibit sequences are now a possibility.

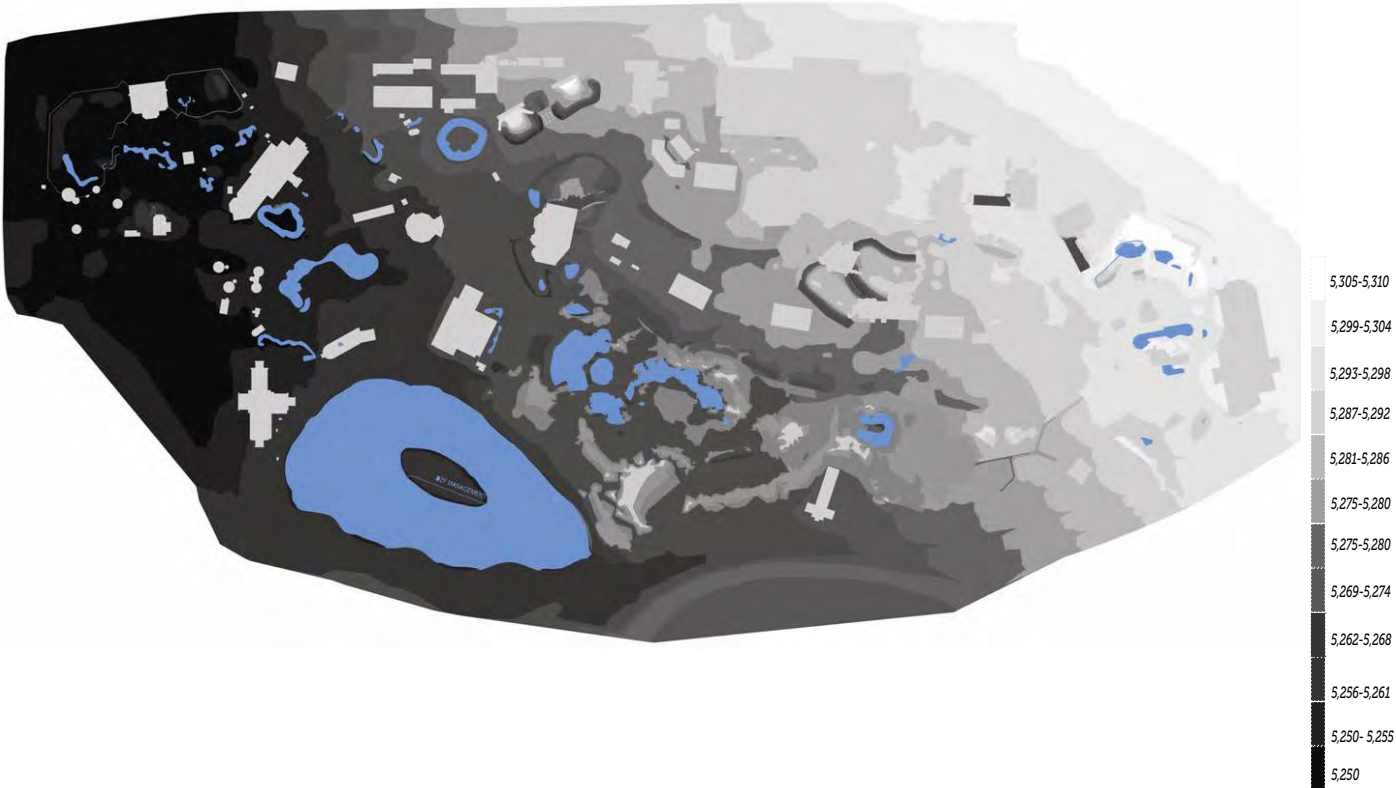


Tree Canopy

PRESERVING OUR TREE CANOPY

The tree collection at Denver Zoo is a priceless visitor amenity: it frames and characterizes many of the zoo’s landscapes, provides shade during hot months, and is the result of longitudinal planning and generations of care. Some trees are nearly 100 years old.

As part of the Facility Assessment, the Planning and Horticulture departments identified mature trees of value within the zoo. These trees are identified as “Legacy Trees” and were selected based on age, species, aesthetics and general health. There are other trees identified which contribute to the tree canopy but are not specifically “Legacy” trees. These trees are irreplaceable and will be preserved whenever possible in new exhibit areas. With any development, the zoo will mitigate for all tree removal, despite its classification, and maintain existing tree canopy. The idea of “reforestation” will be discussed in more detail in the Campus Ecology section of this document which proposes adding trees to the zoo’s canopy. It should be noted that the zoo’s tree survey is still in progress and will be completed in cooperation with the Denver Parks and Recreation Department’s Forestry division.



Topography

TOPOGRAPHY AND WATER BODIES

The digital elevation model in this map shows the range of elevations in the zoo. The dark areas are lower in elevation. Each band indicates a range of elevations derived from a topographic survey performed in 1999.

There is a 60 foot elevation change from 23rd Avenue to Primate Panorama. In this map, each color band represents a 5 foot range.

Although the grade change throughout the zoo is gradual and relatively mild, there are two items to note. Near the current orangutan exhibit, there is a low area that was once a body of water – which has drainage issues in major storm events. Also the stormwater on the zoo’s campus generally flows from the northeast to the southwest.

Topography and drainage basins offer opportunities to reveal natural processes through design interventions which highlight natural processes already at work.

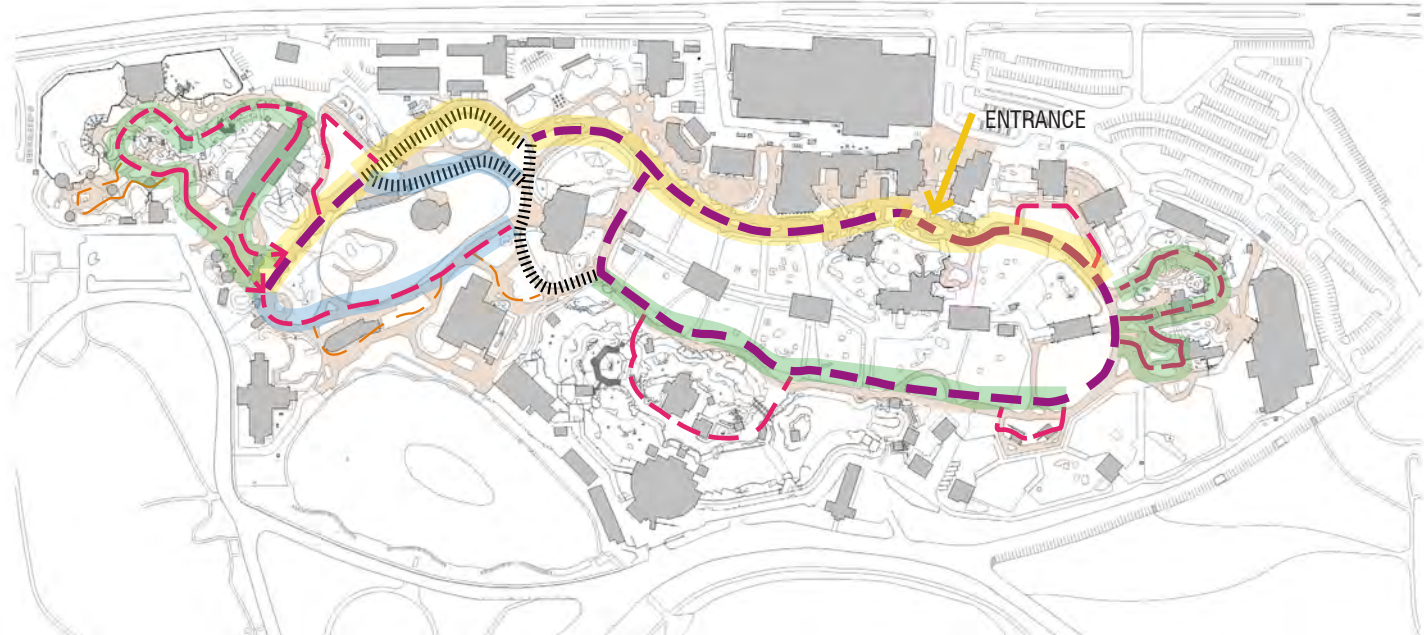


- Proposed Connections to complete pedestrian free Service Route
- Existing Service route along perimeter of yards and exhibits
- Existing Guest/ Pedestrian pathways currently serving dual purpose as service route
- Animal Service Area

Circulation: Service

SEPARATING SERVICE AND PEDESTRIAN PATHS

Currently, the existing infrastructure does not allow service teams to access all yards and exhibits without disrupting or entering guest (pedestrian) pathways. As new developments have occurred, service drives at the perimeter of the zoo have been implemented. Currently, the perimeter service drive is not contiguous therefore, in many cases, service vehicles much travel through the zoo’s guest pathways to complete their work.



- Path Hierarchy Unclear
- Primary Pathway
- Secondary Pathway
- Tertiary Pathway
- Highest Pedestrian Activity*
- Moderate Pedestrian Activity*
- Lowest Pedestrian Activity*

*determined from Occupancy Studies

Circulation: Guest

PATH HIERARCHY

The network of pathways through the zoo offer a range of experiences. The main path is typically wider and offers a direct route through the zoo while the secondary and tertiary pathways, off the main path, create a sense of exploration and discovery. There are areas in the existing zoo path network that are not clear from a guest perspective; they are confusing and guests often become lost or frustrated. More than one path is emphasized in some areas, such as Monkey Island, thus making the hierarchy unclear.

BUSIEST AREAS OF THE ZOO

The Occupancy Study, a circulation study conducted in 2010 and 2011, identified the northern path through the zoo as the pedestrian route with the most guest activity. This is largely due to guests using the path more than once during a visit - traveling to and from the main entrance. While it is not desirable for guests to back-track, it is understood there will always be a degree of retracing steps, since the Zoo’s entrance is also its exit. The heavy guest use clearly identifies the path’s high level of importance. It should be regarded as a guest amenity and recognized as an opportunity to expand on the conventional function of a path from a necessary feature for circulation to a guest amenity and a destination.



Circulation:
Occupancy Study

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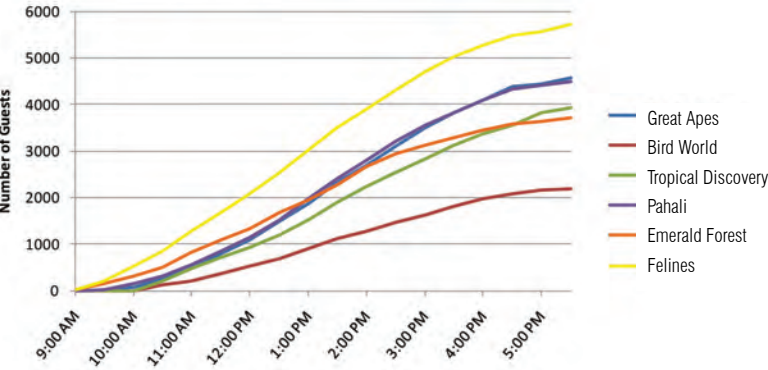
OCCUPANCY STUDY 2011 & 2012

The Occupancy study was designed to document how guests travel through the zoo. The information gathered in the study recorded the number of people passing through pre-identified thresholds at 5 minute intervals.

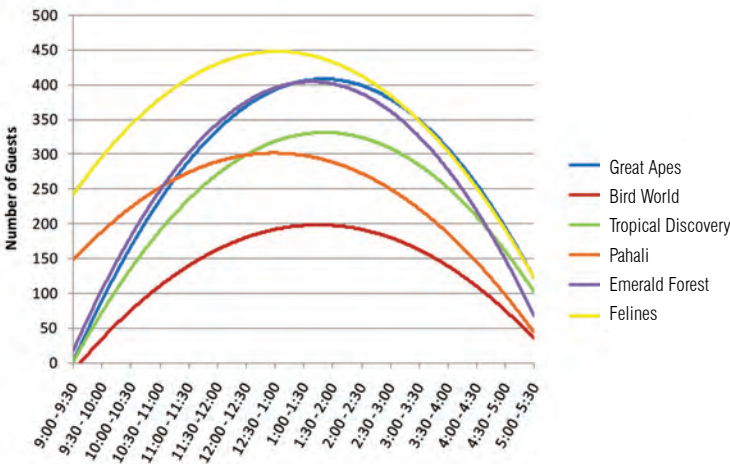
This data was used to understand visitor stay-time in areas and buildings as well as guest capture rates.

The data collected has been used to initiate small design changes to help with guest flow and navigation. The data was also used in the planning process as a data point for understanding guest flow.

NUMBER OF VISITORS



TRENDLINE



6,836
Average Attendance
Saturday, August 6, 2011
Wednesday, July 13, 2011
Sunday, July 10, 2011

2.5
Average Stay Time (hours)



Denver Zoo’s Urban Setting

DENVER IS A GROWING TOURIST DESTINATION

The Zoo’s location, like many zoos in the country, is close to the urban core of the city. This presents opportunities as well as challenges.

As Denver grows and continues to invest in the Lower Downtown area, more and more people are living and working in the city center. Denver has made significant investments in public transportation with the implementation of the Light Rail system which has portions still under construction. Although public transportation to City Park is minimal, the distance to downtown, a major transportation hub, is 2.5 miles. This proximity offers opportunities as Denver continues to grow as a tourist destination.

The Light Rail line from Downtown Denver to Denver International Airport (DIA) is scheduled to be completed in 2016. Denver Zoo is 21 miles from DIA and 1.7 miles to the nearest proposed light rail stop (I-70 and Colorado Boulevard) serving the airport.



Legacy of the City Beautiful Movement

DENVER’S CITY PARK

City Park is bound by 26th Avenue, Colorado Boulevard, York Street and 17th Avenue. Denver Zoo is in the center of the park, however it feels like the edge of the park as 23rd Avenue acts more as an arterial road than a park road. Furthermore, City Park Golf Course (north of 23rd Avenue) solidifies the sense that the park ends at 23rd Avenue, since most park activities occur south of 23rd Avenue.

Denver Museum of Nature and Science is located within the park as well. Denver Zoo serves nearly 2 million visitors annually while Denver Museum of Nature and Science’s annual attendance is approximately 1.3 million. Together with events hosted by Denver Parks and Recreation, City Park is a heavily visited park.

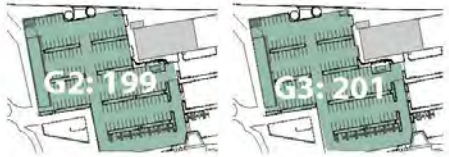
Cooperation and coordination between the Zoo, the Museum, and Denver Parks and Recreation is increasingly important as the visitation to the park continues to increase.

Parking within the park is a challenge. A multifaceted approach to parking and inter-agency cooperation is necessary to respond to the parking demands within the park. Increasing the number of parking spaces is only part of the solution. The Operational Projects section discusses the Zoo’s proposal of 500 underground parking spaces within the Zoo’s management boundary.

DENVER ZOO PARKING GARAGE
LOWER PARKING LEVELS

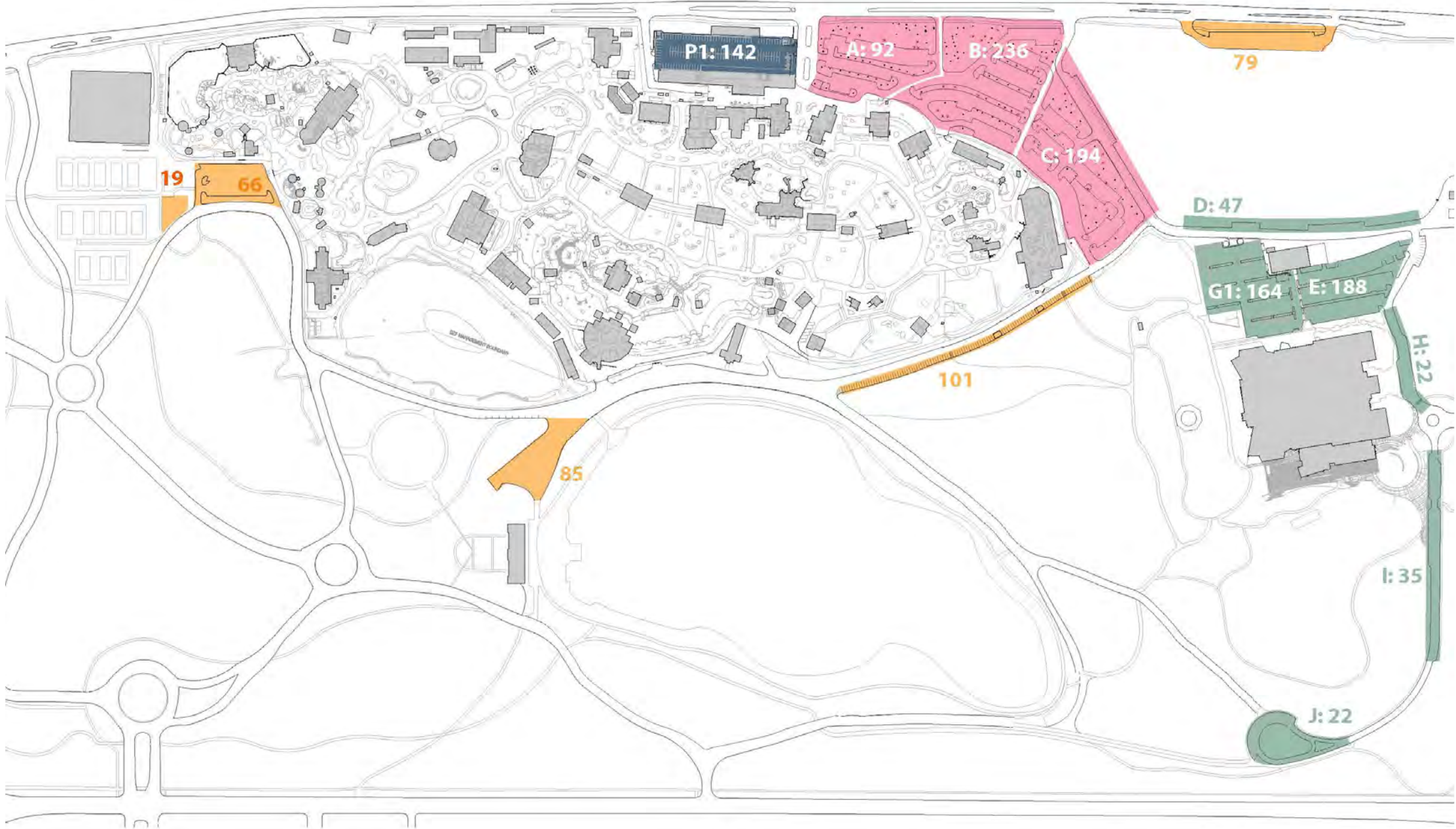


DENVER MUSEUM OF NATURE & SCIENCE
LOWER PARKING LEVELS



- Denver Museum of Nature & Science (DMNS)
- City Park
- Denver Zoo, DMNS & City Park
- Denver Zoo

* All spaces within City Park are shared between users. Parking has been assigned a color based on proximity and estimates by the facilities.



Parking Inventory

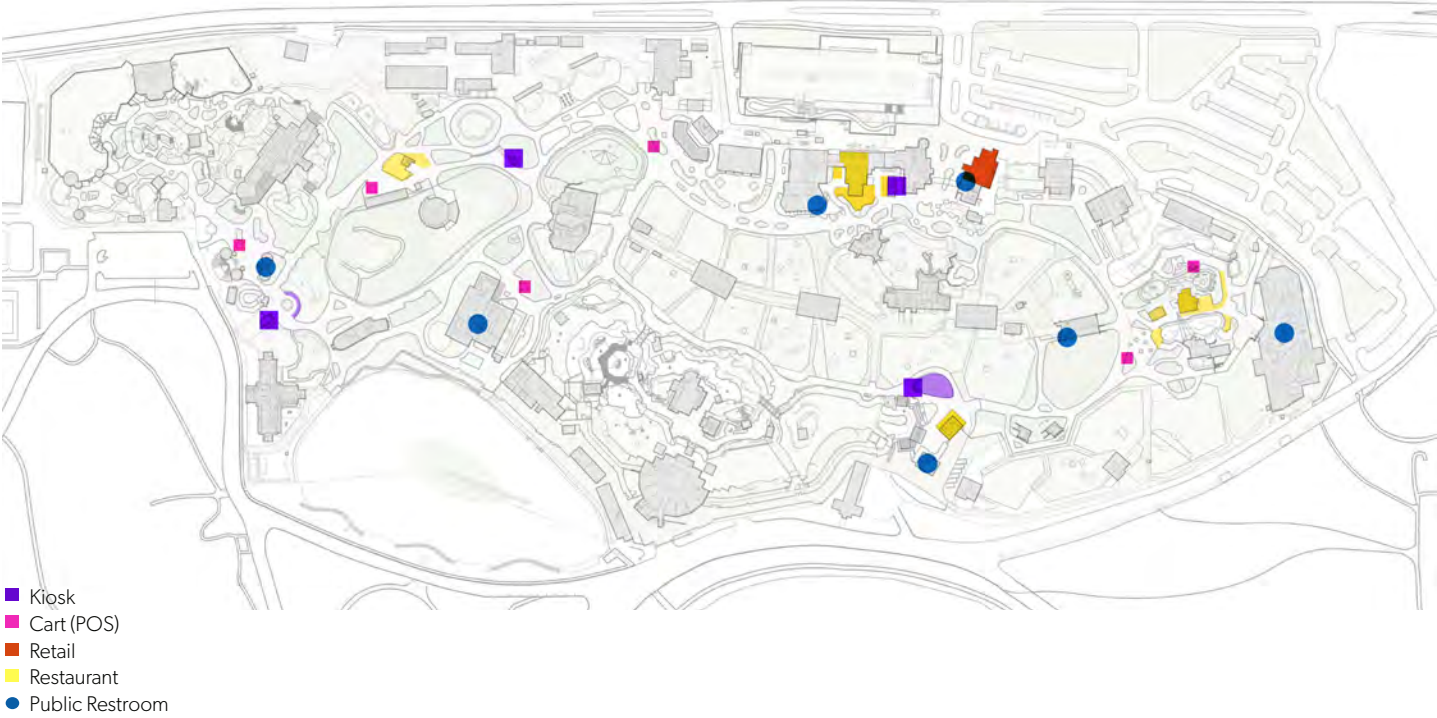
CITY PARK SHARED PARKING

Denver Zoo is within and a part of City Park and therefore all parking is shared by zoo guests, park users and Denver Museum of Nature and Science (DMNS) guests; the exception to that is any parking within our management boundary does not have to be shared.

Parking often overflows into the adjacent neighborhoods. Adding parking spaces within City Park has been contemplated, but is not feasible at this time. It is a priority to create spaces within the Zoo's management boundary to address parking needs.

Despite the construction of two parking garages within the park, one at DMNS (2004) and one at Denver Zoo (2002), parking continues to be an issue. As DMNS and Denver Zoo continue to grow in annual visitation and the park continues its success, parking remains a challenge.

There have been a number of operational changes implemented to relieve the pressure on parking; staff and volunteers are asked to park off site during the busy months and alternative transportation is incentivized.

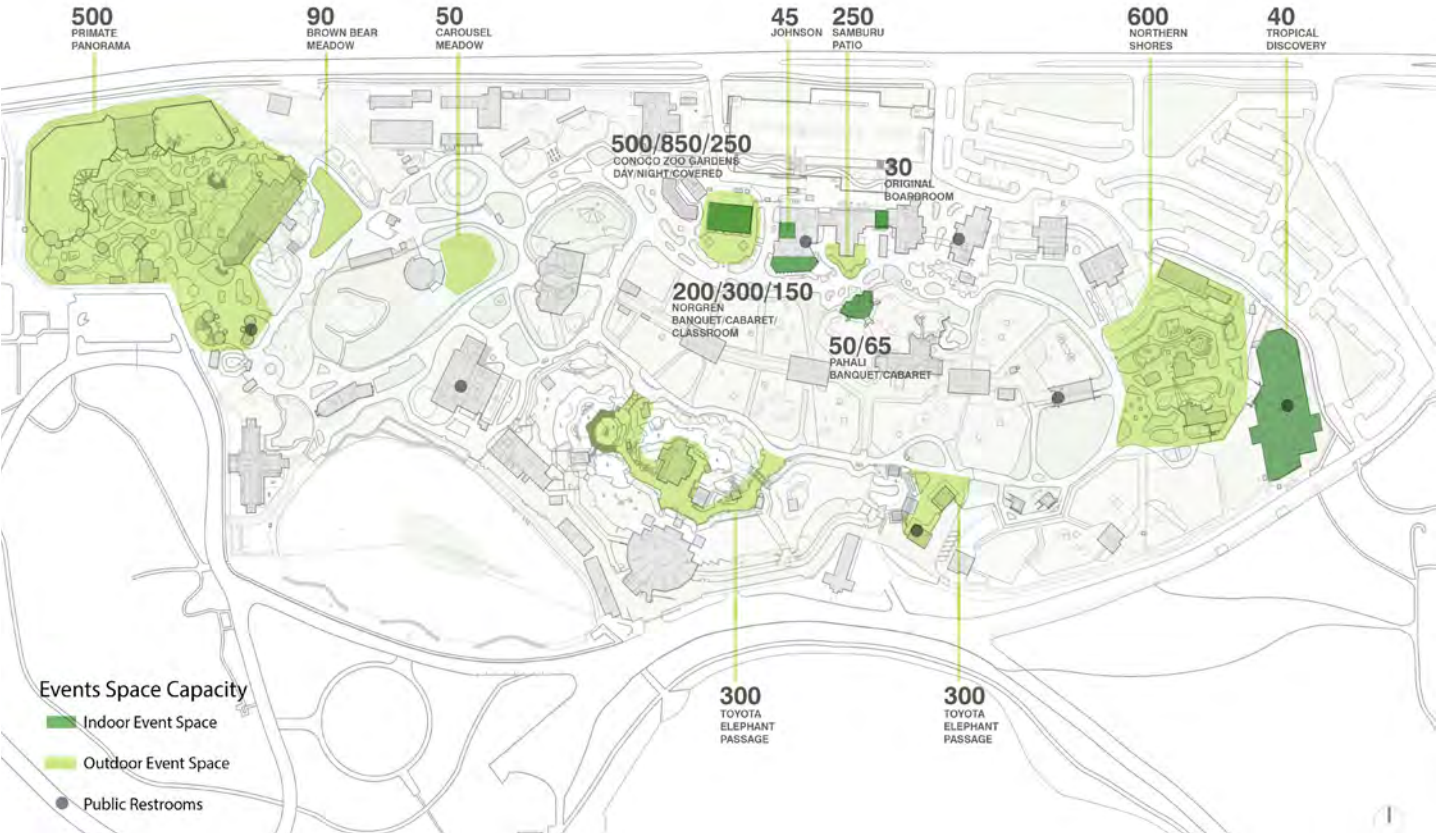


Guest Amenities

ORGANIZATION OF GUEST RESOURCES

An inventory of kiosks, carts, retail stores and restaurants is included to augment mappings of the exhibit spaces. The visualization and planning of these amenity spaces will be a tool in ensuring that opportunities are available to visitors throughout the entire campus to provide a multitude of choices.

Kiosks, carts and stores are mapped separately to reinforce the permanence and scale of the retail opportunities. Restaurants are spread throughout the Zoo and provide a range of options. The main restaurant, Samburu Grille, is located at the main entry and is the only restaurant with indoor seating. A major restaurant located deeper within the zoo may better serve guests who would be able to stop in the middle of their visit, rather than at the beginning or the very end.



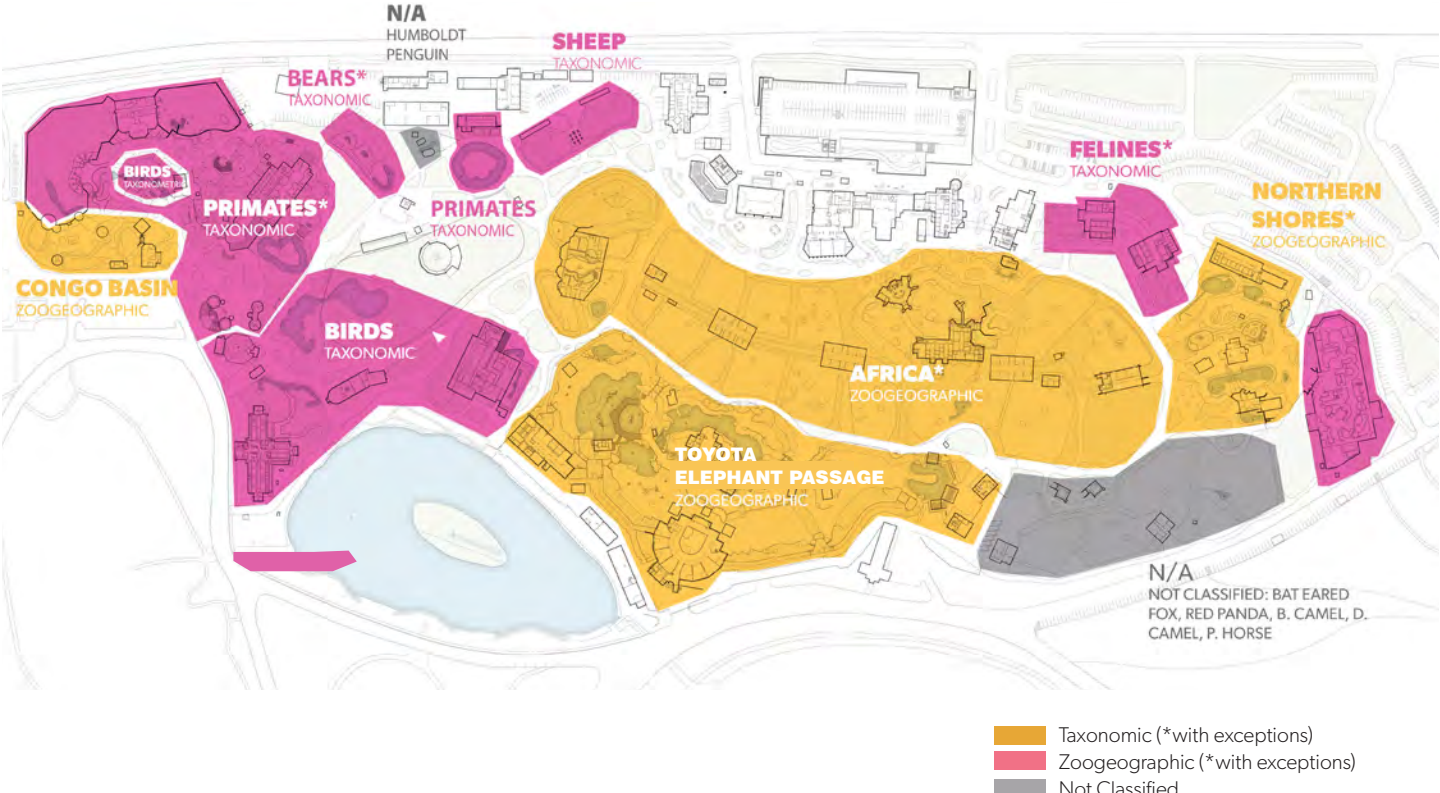
Event Spaces

AN OPPORTUNITY TO INTEGRATE EVENT SPACES AND ANIMAL EXPERIENCES

Events are an integral part of Zoo operations as they diversify occasions for which visitors can be a part of the zoo and serve as great fundraising opportunities. The zoo provides opportunity for private parties and corporate groups to host events. There are options for facility rentals as well as opportunities to reserve zones of the zoo.

There are also annual events hosted by the Zoo celebrating holidays and providing immersion experiences. Highlighted events include Zoo Lights, Boo at the Zoo, Boo After Dark, Brew at the Zoo, Do at the Zoo, and Zoo Year's Eve. Events are dispersed throughout the year and cater to a range of age groups and interests.

Current rental facilities are challenged by a lack of connection and integration with the greater zoo site and the excitement the exhibits offer.



Utilities

CHALLENGES OF AN OLD SITE

The network of utilities has been replaced and added to in both small and large projects over a span of 100 years. Some utilities have been abandoned in place, creating unknown conditions below grade. Current and future projects will include digital 3D models.

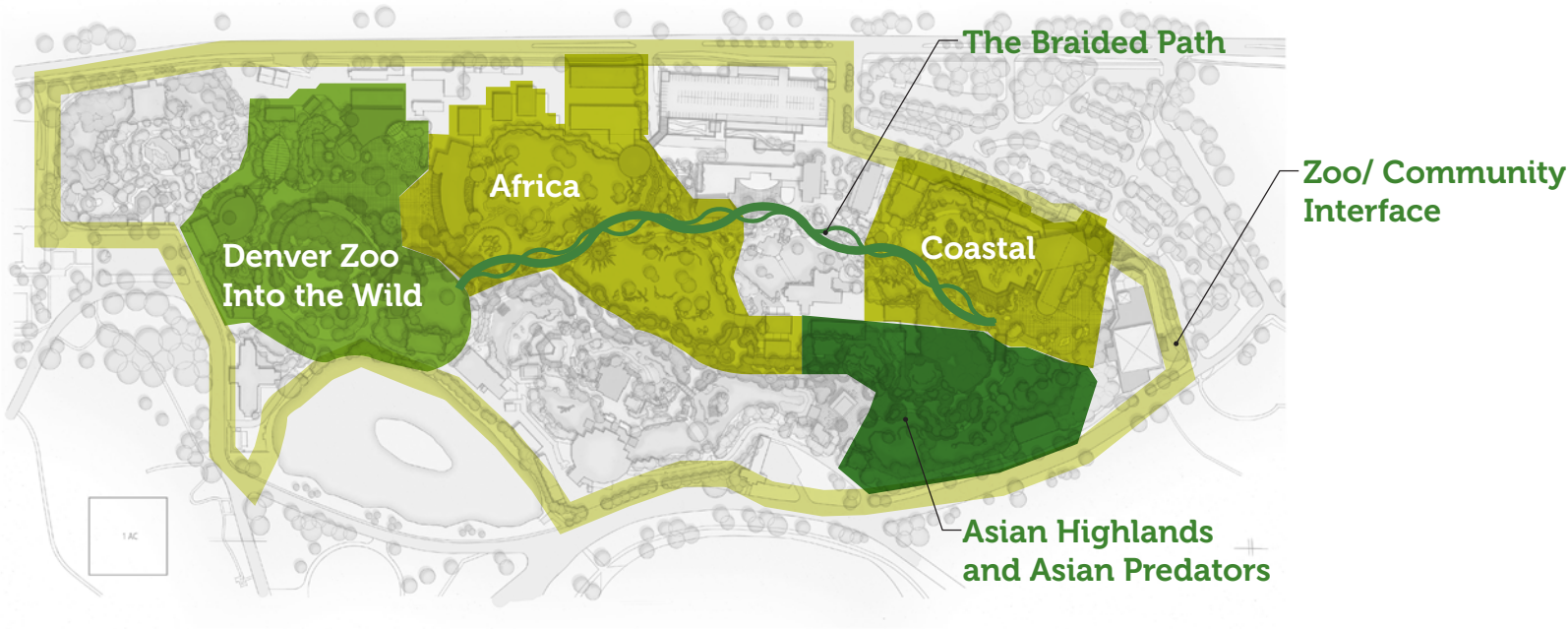
In some areas of the zoo, utilities over 100 years old exist below grade. Years of construction have created a complex network of pipes, wires, and cables under the zoo. Many of the record documents for these utilities are incomplete or incorrect. The zoo's planning department has insisted on obtaining building records of all utilities on all recent projects and will continue to demand precise and accurate documentation work for all future projects. The planning department has also made significant efforts to reconcile historic record documents and will continue to update these in the immediate future.

Exhibit Organization

EVOLVING ZOO EXHIBIT TYPOLOGIES

Denver Zoo's exhibits are generally organized under two schools of classification: taxonomic and zoogeographic. Taxonomic is a biologic expression which refers to sorting animals and exhibits based on species type. Conversely, zoogeographic organization places animals based on the places they would inhabit in the wild.

Exhibit practices are undergoing a paradigm shift in which biome or global movements are now serving as the organizational spine for zoos. Denver Zoo is exploring exhibit systems that use broad concepts and performance needs as the organizing structure, such as the idea of animal care, human-animal connections or field conservation.



The New Master Plan

Master Plan Scope

The plan is made up of four exhibit zones and an experiential circulation spine that transects all four exhibits. The four exhibit zones are: Africa, Coastal, Denver Zoo Into the Wild, and Asian Highlands and Asian Predators. The Braided Path is the circulation spine.

These four zones and the Braided Path are located within the oldest areas of the zoo. The areas not contemplated within the redevelopment areas are Primate Panorama, Operations, the Front Entry, Predator Ridge, Avian Propagation Center, Tropical Discovery and Toyota Elephant Passage.

Plan Framework: Site Planning Strategies

The Site Planning Strategies create a framework for design decisions. Guided by the Mission, Strategic Imperatives and the Guiding Principles, these strategies were developed through a collaboration between the design team and zoo staff.

The strategies are as follows: Zoo as a Classroom, Guest Experience Hubs, Flow, Clustering, Frontage, Animal Collection, and Campus Ecology.

Master Plan Projects: Four Project Zones

The Master Plan Projects are the result of layering or stacking the Site Planning Strategies. This section describes what is imagined for the four exhibit zones.

1. Africa: A Wild Savanna

- a. The Watering Hole: Premier Restaurant
- b. The West Portal: Program Space and Dedicated Program Entrance
- c. The Veterinary Hospital

2. Coastal: Change at the Coast

- a. The East Portal: Program Space and Dedicated Program Entrance

3. Denver Zoo Into the Wild: Worldwide Impact

- a. Peaks to Prairie: Local Impact

4. Asia: Asian Predators and Asian Highlands

The guest path transect, the Braided Path and the Zoo/ Community Interface will also be described. The Braided Path touches all four exhibit zones and is not contemplated to be constructed on its own. It will be built as a part of each of the four exhibit zones. This is also true for the Zoo/ Community Interface which will be a part of every exhibit zone improvement project.

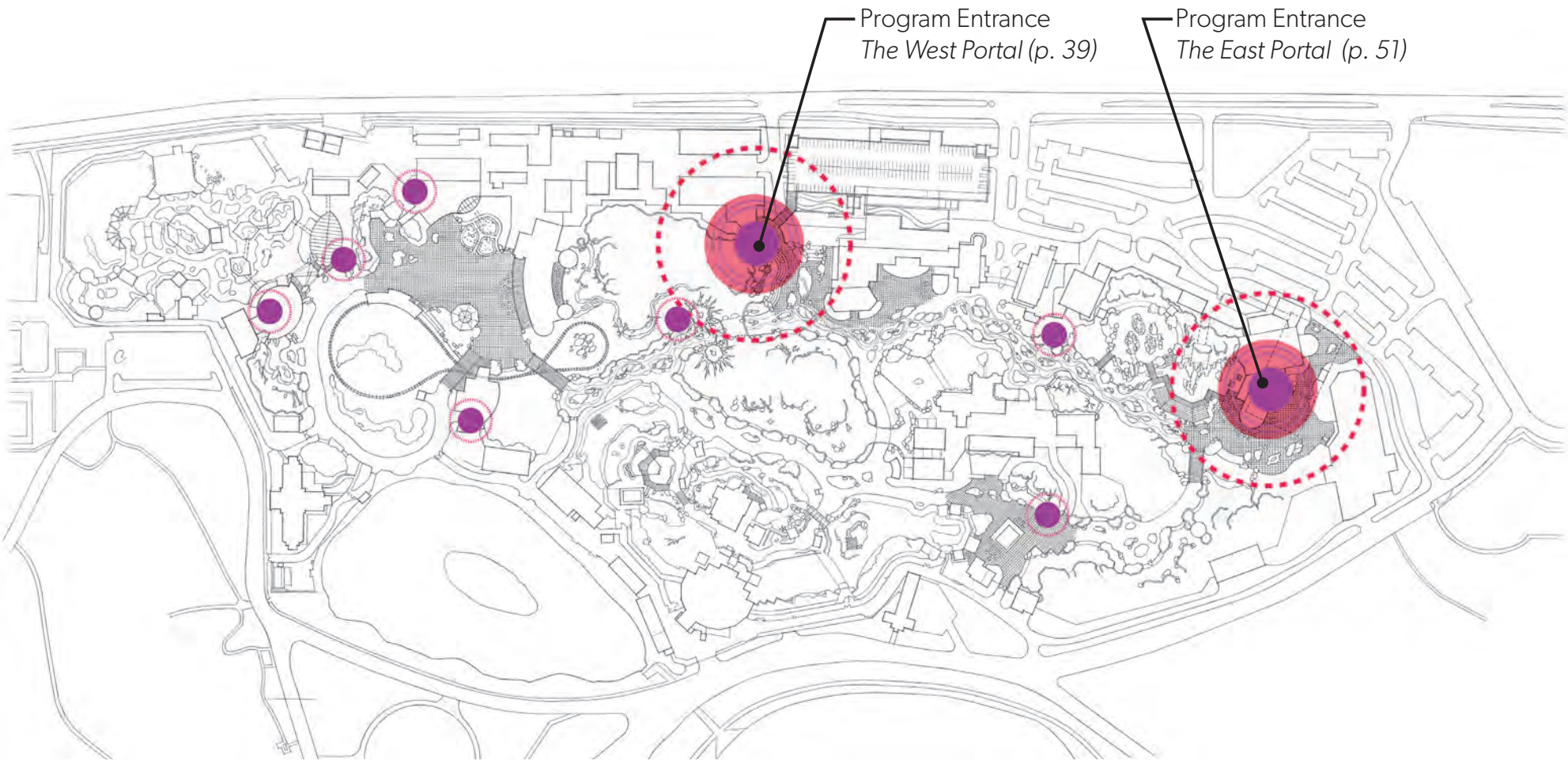




Denver Zoo New Master Plan



Below: Student Groups at Denver Zoo
Our zoo teaches and our zoo learns. Educational programming exists for the entire age spectrum and across a variety of interests. We offer keeper and career discovery programs as well as specific events and excursions for school-aged children. DZF serves 400 regional schools as a partner in hands-on education and research. Experiences are provided for over 47,000 students.



The Zoo as a Classroom

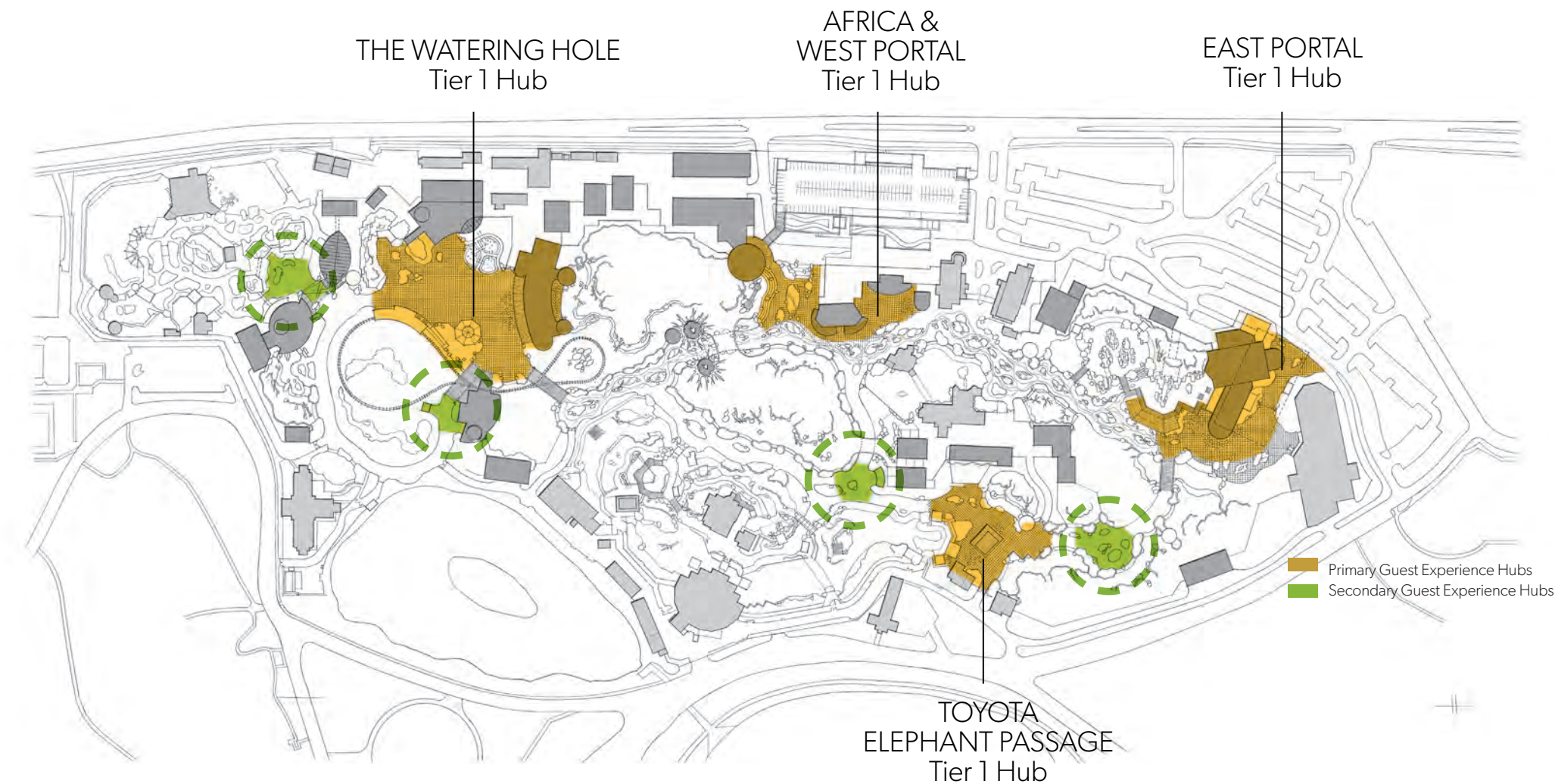
Integrated Learning

Two planning strategies expressed in this plan speak directly to Denver Zoo’s Strategic Imperative to connect Colorado to Denver Zoo as an education institution.

1. Two Program Entry Portals establish and contextualize an immersive and interactive visit upon entry for program participants. The Portals are entry gateways and program spaces integrated into exhibits. The two Portals are located along the Zoo’s frontage and will be discussed as a planning strategy to enhance Zoo frontage on page 24. The East and West Portals will be described in more detail on pages 51 and 39.

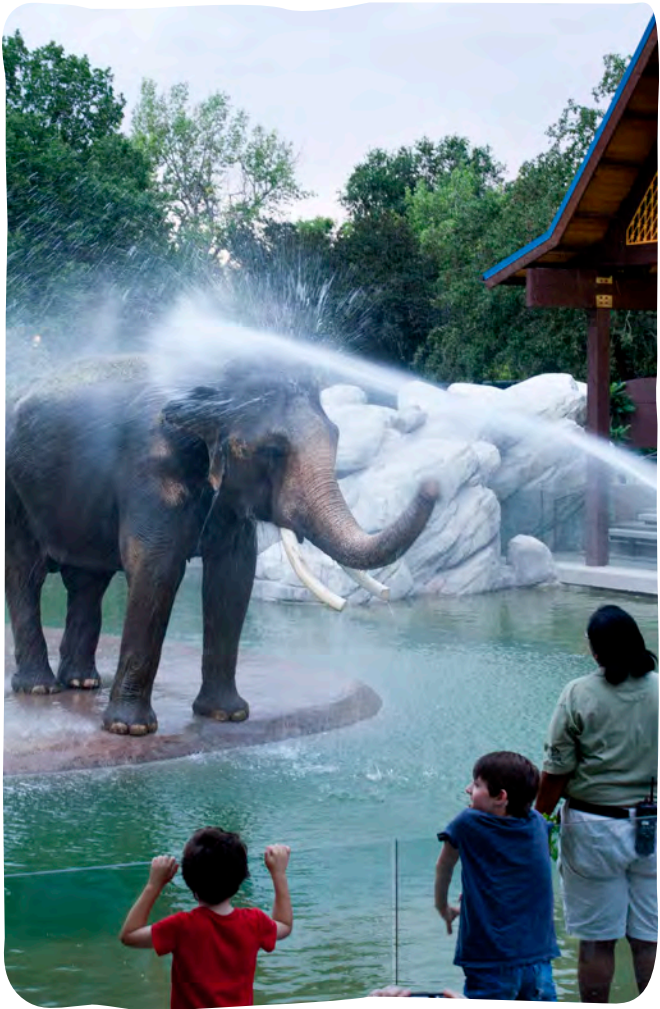
2. Education Satellites disperse resources throughout the Zoo, making every exhibit a potential classroom. Satellite facilities are 1000sf conditioned classroom spaces integrated within the exhibits. The diagram above marks potential Satellite locations.

Satellite classrooms are themed learning spaces which provide an interactive and engaging setting for program participants within the Zoo environment. Their location, integrated into a surrounding exhibit, provides more than a classroom – it creates a dramatic and immersive experience.



Below: Guest Experience Hubs

At Denver Zoo we measure our success by the number of lives, both human and animal, we can impact for the better. Guest experience hubs will continue to bring our two most valued stakeholders (our guests and the animals) together through unforgettable experiences. We have programs in place to bring individuals from all social, cultural, and economic groups in to experience the wonders of the zoo.



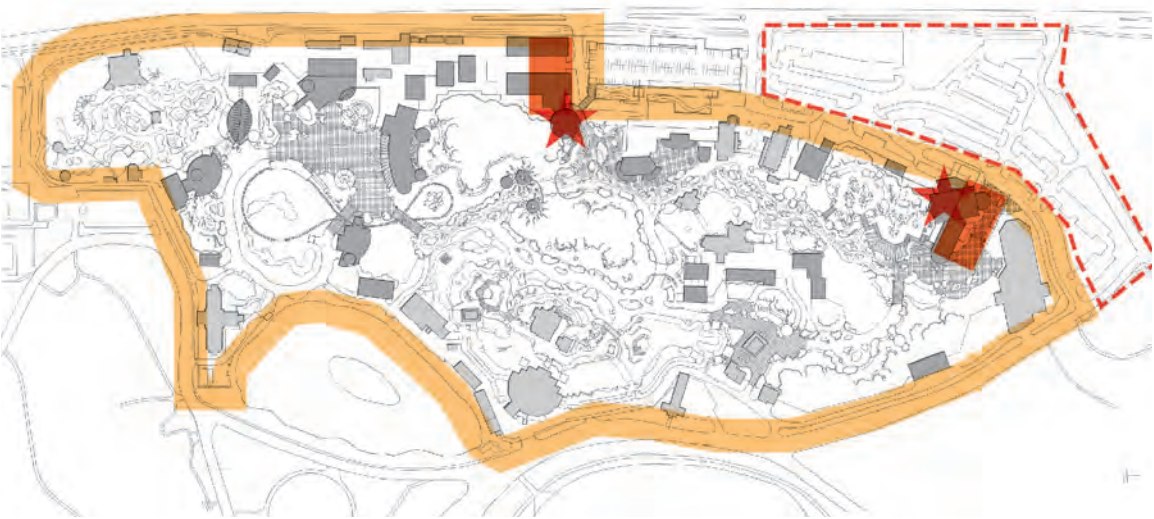
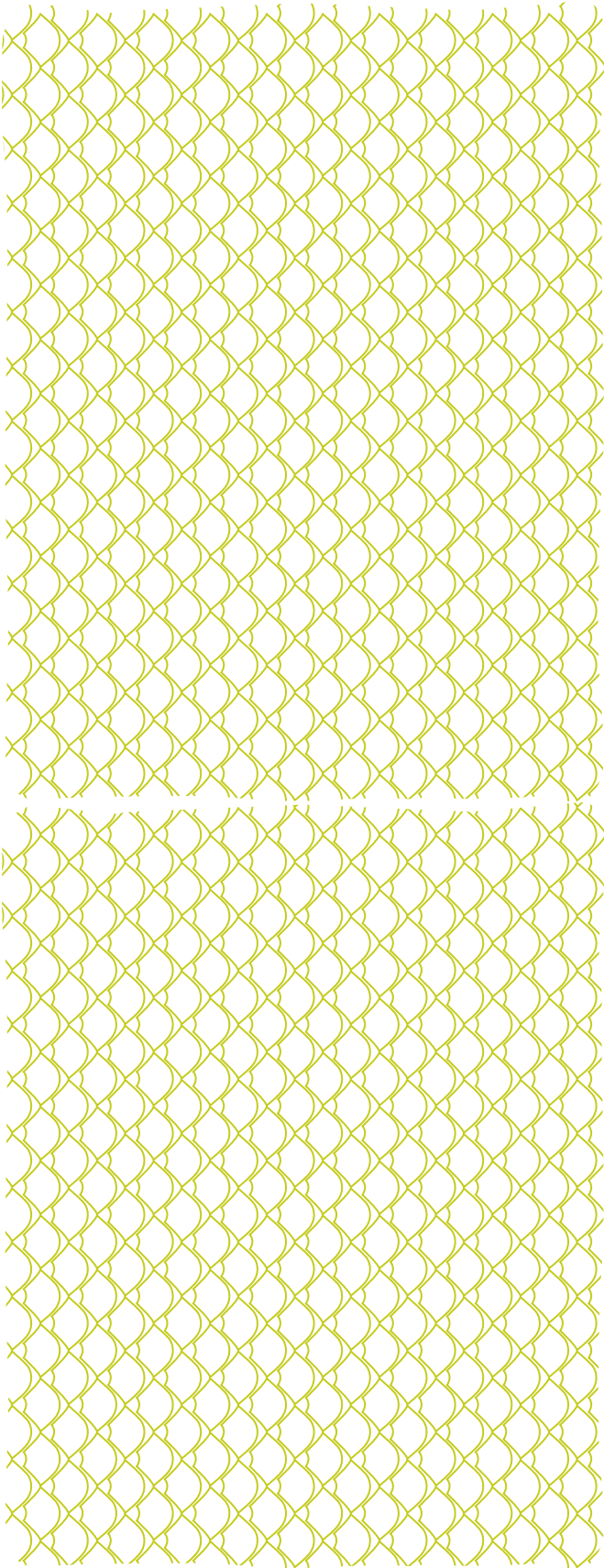
Guest Experience Hubs

Serve, Engage, and Organize

Hubs are notable geographic locations at major pathway intersections and provide a range of guest experiences and services. Each Guest Experience Hub will offer the following amenities: food and beverage, retail, seating, childrens interactive play space, animal encounter, and restrooms.

There are four Tier 1 visitor experience hubs that have been identified in this plan:

1. Coastal Exhibit Hub (New-Proposed)
2. The Watering Hole (New-Proposed)
3. Africa and the West Portal (New-Proposed)
4. Toyota Elephant Passage (Existing)



Flow

Visitor and Service Circulation

Separating guest flow and service flow will increase operational efficiencies while improving the guest experience. This plan identifies a perimeter service drive that would allow easy access by service vehicles, animal care staff and other operational functions. Additionally, animal barns are planned adjacent to the service drive to maximize efficiency and to minimize the frequency of service traffic within guest areas. Barn clusters will be discussed in more detail below.

Guest flow can be described as a figure 8 with a cut-through. The figure eight allows for clear navigation while the cut-through offers maximum flexibility in visit duration.

Clustering Uses

Clustering Creates Efficiencies

By grouping associated behind-the-scenes operational functions, staff can easily access and utilize the resources they need to perform their work.

Barn clusters maximize efficiency by placing animal holding buildings and their affiliated programming needs in close proximity to each other and adjacent to the perimeter service path. This clustering will create efficiencies in work tasks and resources. Additionally, by clustering barns on the perimeter, there will be less area dedicated to service drives and “back-of-house” areas since they will be shared and make the most efficient use of space.

Zoo/Community Interface

Zoo Perimeter Improvements

Denver Zoo is within City Park and the interface between Park users and Zoo uses has been carefully considered in this plan. The south side of the Zoo interacts most directly with Park users and therefore has a different proposed typology than the north side of the Zoo which is where the majority of guests enter the zoo and where Zoo entry and orientation happen.

- **Parking:** Increased parking within the Zoo perimeter is identified but will not solve parking issues in the Park. Denver Zoo and City Park will continue to work together to address parking and safety in the Park.
- **Zoo Entry Frontage:** Iconic architecture featured at two new program entrances will create an engaging visitor experience upon zoo arrival.
- **Zoo Park Frontage:** Zoo perimeter fence improvements and community connections. Maximization of zoo perimeter tree plantings within the zoo fence.

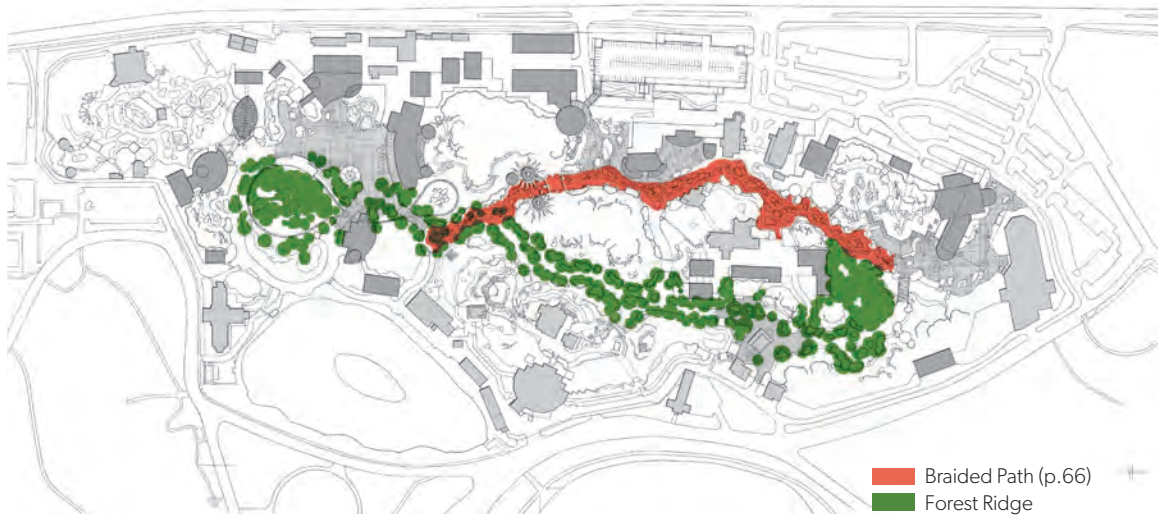




Animal Collection Exhibit Adaptations

Two strategies in the plan support the zoo’s animal collection objectives. The first strategy is the use of larger expanses for animal exhibits. These habitats aren’t large just for the sake of size - they are designed to better meet the health needs of particular species, provide flexibility for current use and future shifts in philosophy, and present a more immersive and engaging experience for visitors. The plan also creates more intersections or crossings between animal spaces and guest spaces.

Four new indoor exhibit buildings are included in the plan. The goal is to increase and enhance indoor viewing opportunities.

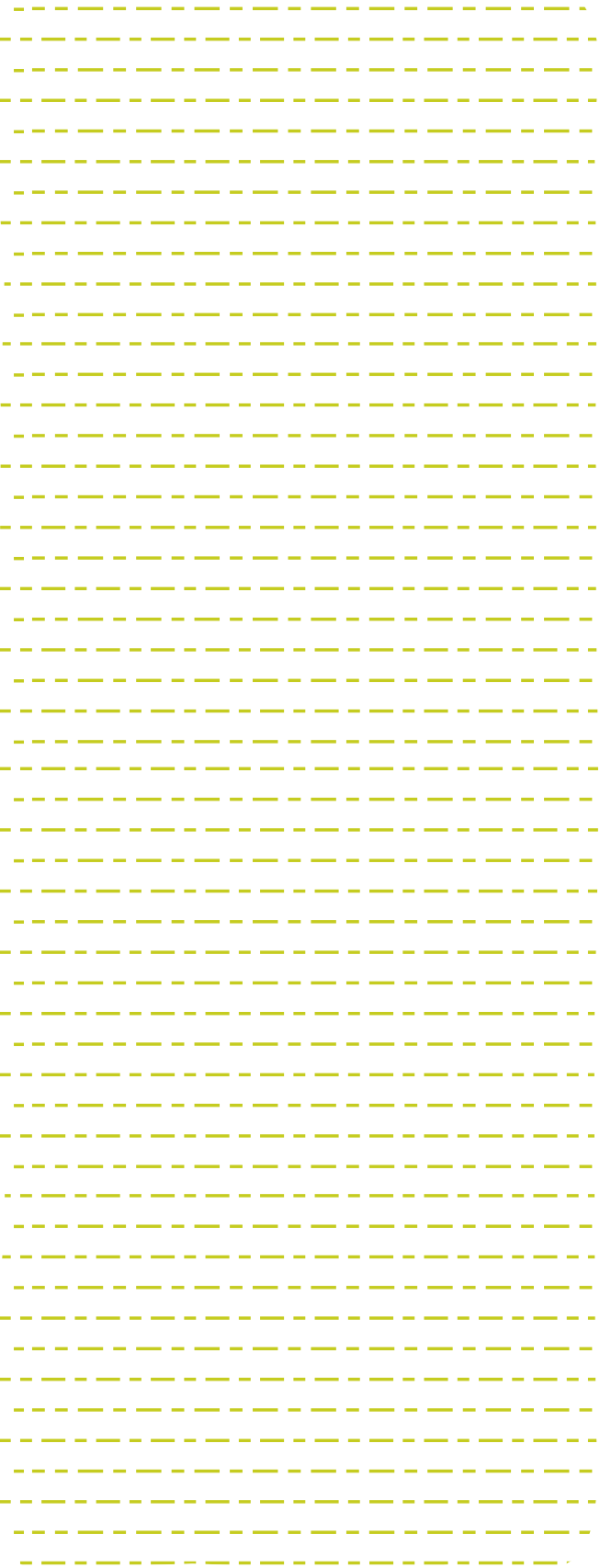


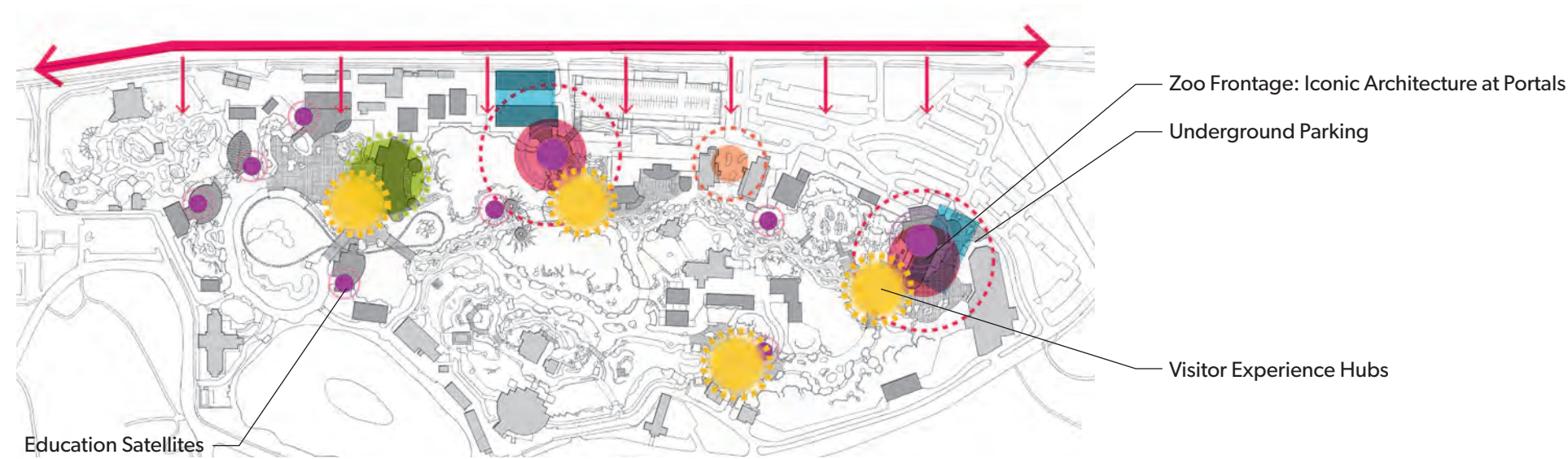
Campus Ecology Design Elements Inspired by Nature

Campus Ecology is a concept that highlights and celebrates natural processes and elements within the zoo landscape.

Two key site planning strategies incorporate the concept of campus ecology.

- **Campus Reforestation**
Campus reforestation will add to the tree collection at the zoo, provide shade for visitors and animals, and diversify the age of the trees on campus. The Forest Ridge concept will create a forested path connecting the two areas in the zoo with the highest concentration of mature trees; Carousel Meadow and Giraffe Meadow.
- **Braided Path**
The Braided Path is designed to offer an immersive, exploratory experience. The path will be at once a place for discovery and a place that will manage stormwater through innovative and sustainable practices. The path encourages visitors to navigate options within their environment. This confluence of zoo landscapes, visitor experiences, and natural processes on the zoo campus will connect zoo guests with their immediate environment.





Revenue Generating Strategies

Looking to Our Future

In the plan, there are several design strategies proposed to increase and diversify the Zoo’s revenue generating capacity while capitalizing on and highlighting the Zoo’s unique animal experiences.

- 1. Zoo Entry Frontage: Iconic architecture on the northern edge of the campus, visible to the public, not only creates an exciting, immersive entry portal for program and event participants, but also acts as an advertisement on 23rd Avenue.
- 2. Education Satellites: Integrated and immersive conditioned spaces within exhibits offer intimate spaces for students, donors or small events.
- 3. Visitor Experience Hubs: Visitor amenities strategically placed in major pathway intersections occur at the appropriate time throughout a visit and provide concessions, retail, animal experience and orientation.
- 4. Animal Adventures: Additional paid VIP experiences connect guests to animals and the Zoo’s mission.
- 5. Parking: Increased parking spaces within the Zoo perimeter in underground structured parking, allow for visitation growth and address existing parking demands.

Zoo Entry Frontage: Events and Programs

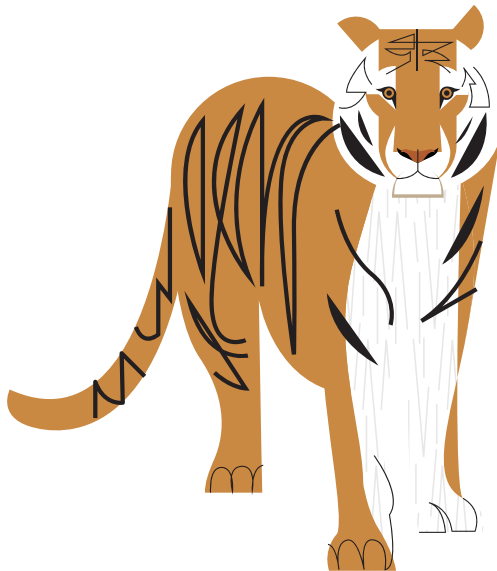
East Portal: Integrated Indoor space

The East Portal, an immersive and impressive space primarily for events, will dramatically change the Zoo’s events program. As a year-round event venue, the East Portal will increase the capacity for revenue generating by offering exhibit-integrated indoor event spaces that can be rented day or night, during any season. Additionally, being a part of the Coastal exhibit allows for the most opportunity for animal connections as the species planned for this exhibit are active in the evening hours and in cold weather -times and seasons the events programs will target.

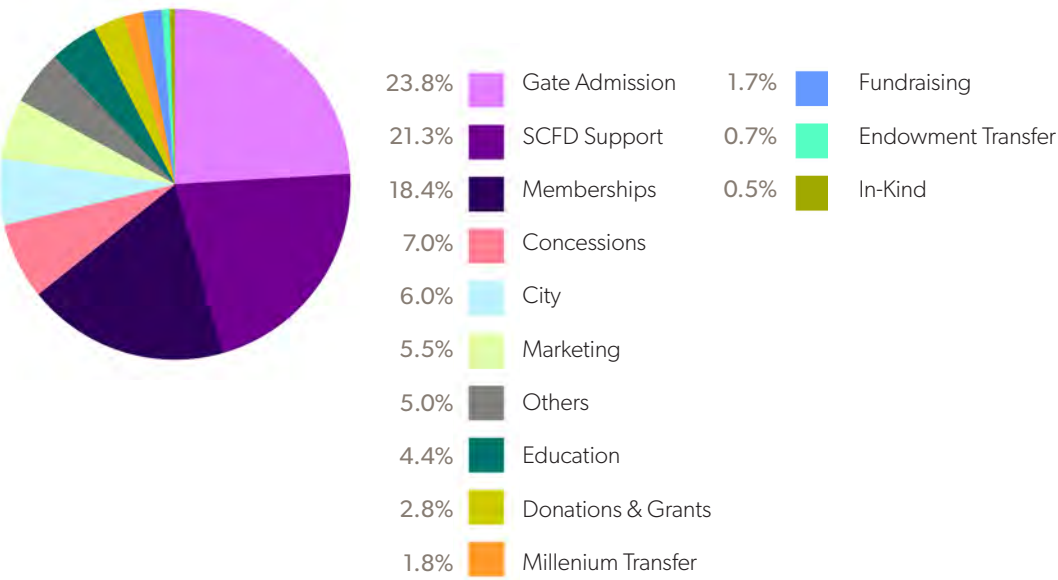
Though the net increase in event and program space is only 700 square feet, improvements in functionality as well as the ability to offer spaces throughout the year will create the potential to double the amount of program and event revenue the zoo generates. The East Portal also addresses program needs for the Education Department. As an entrance for school groups, the East Portal will provide an orientation space prior to their tour into the zoo and spaces for small classroom-style programs.

West Portal: Education and Events

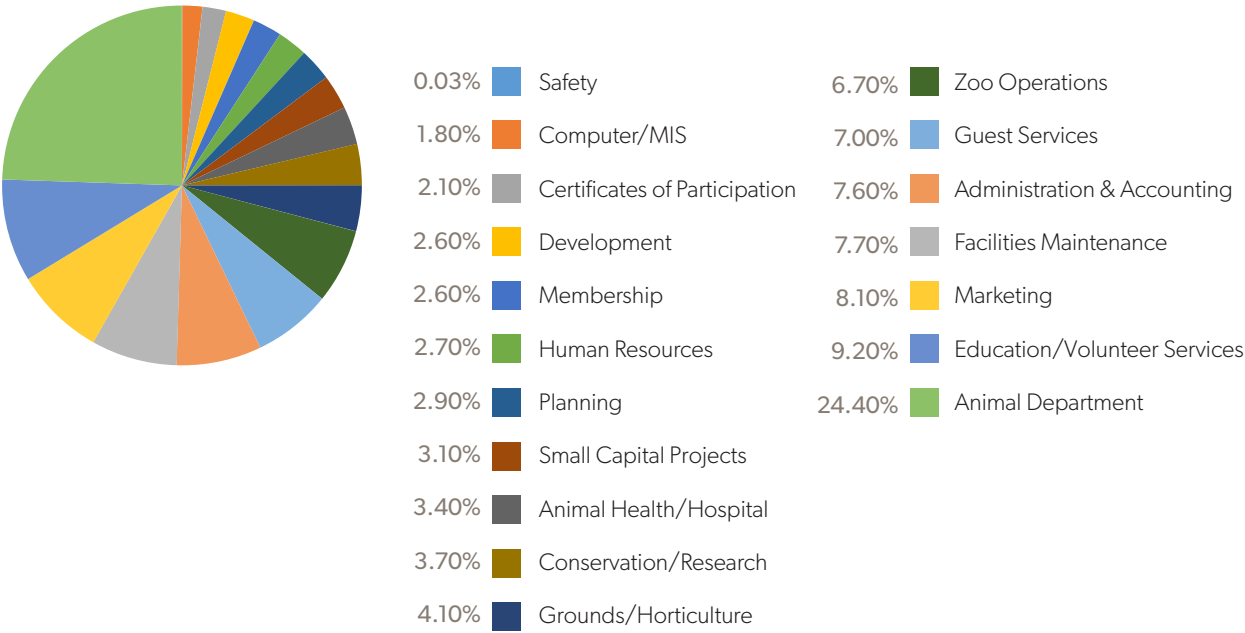
The West Portal is a gateway for education programs and events patrons. The portal will provide space for large assembly-based programming overlooking the African exhibit and will be connected to the Veterinary Hospital providing education opportunities and programming. The large program space will seat up to 250 people.



\$34,441,759
Total Income 2013



\$30,615,080
Operating Expenses 2013



Below: Zoo Lights
Zoo Lights features more than 40 acres of
brilliantly illuminated lights and give children
the chance to visit Santa Claus.

In 2013, Zoo Lights served 148,284 guests
generating \$1,233,381.00 in ticket sales.

Education Satellites

Eight 1000 square foot spaces incorporated within animal exhibits allow for education programs to be out in the zoo, using the zoo as a classroom. When not being used for education programs, these conditioned spaces provide opportunities for an intimate event, a staff meeting or a private space for donor cultivation. Each satellite will be uniquely designed to fit within every exhibit concept.

Guest Experience Hubs

Guest Experience Hubs will be designed as aesthetic environments, integrated within adjacent exhibits and animal experiences. These amenity-driven areas increase revenue by lengthening visitor stay times at strategic locations which create connection points. Hubs encourage longer stay times by giving all members of the family a chance to enjoy amenities and spend time together. Longer visitor stay times encourage visitors to remain at the zoo through multiple meal or snack times, which creates additional opportunities for food and beverage sales.

Premier Restaurant: The Watering Hole

The largest Guest Experience Hub is strategically located at the main intersection of primary east-west pathway. Integrated in the African Exhibit, the large plaza and extensive visitor amenities encourage visitors to come in and stay. This hub will include current revenue generators in upgraded or similar versions. A new extended train concept takes visitors on a journey through Africa. The themed ride with a longer duration creates a

broader target market age than the current train, increasing ridership and allowing for a higher price point. The Conservation Carousel will remain and continue to generate revenue. The grand plaza area will include additional space for mobile carts to expand food and beverage opportunities. The main revenue facility is a year-round, themed restaurant. This large mixed-grill concept, with grab-and-go capabilities, seats 196 inside and 138 outside. Conceptually, the restaurant is similar to Samburu Grille, currently the Zoo’s highest per capita food service location. The new restaurant will feature additional speed of service options to increase overall sales capacity. High quality food offerings, improved location, and faster service will increase overall food per cap spending.

Animal Adventures

During the design phase of new exhibits, we will explore “Animal Adventure” opportunities – connecting our guests nose-to-horn with some of our amazing animals. In addition to building revenue capacity, these experiences will create generational memories; keeping visitors coming back throughout their lives.

Parking

Structured, underground parking is proposed within the zoo perimeter near the West Portal (250 spaces) and beneath the East Portal (250 Spaces). The current parking allows for a design day (based on projected needs in the late 1990s) of 6,700 visitors. However, the zoo currently sees 125 days per year with attendance exceeding 6,500. To design a parking plan to meet the needs for a 10,000 – 12,000 visitor day, would require construction of more than 800 new spaces.





Exhibit Projects and Narratives

Narratives Process

The projects outlined in this chapter are a result of layering the Site Planning Strategies in the previous chapter to define how each area works; circulation, guest amenities, barn locations, animal yards, etc. The Guiding Principles and Strategic Imperatives guide the narrative and program details. In this section, the narratives paint a picture of what the exhibit areas may feel like, what the animal collection may be, and what guests might experience while there.

When the design process begins for a master plan project, some constraints around the project may not be the same as they are today. Specifically, the animal collection may change as there are dynamic sets of criteria for animal selection. The Strategic Imperatives, Guiding Principles, and the Site Planning Strategies will not change - they will guide the design, especially during the Project Ideation phase (which will be discussed in more detail in the Design Framework chapter). The Project Ideation phase of the design is

the first phase, prior to hiring an architect, where Zoo stakeholders define the animal collection, project narrative, education outcomes, guest experiences, event needs, staff needs, and all other program needs.

The identified projects are the result of the Zoo's rigorous planning process and the Strategic Imperatives, Guiding Principles, and Site Planning Strategies should be apparent. The three animal exhibit projects build on past successes and expand on new ideas in zoo exhibits. The Veterinary Center envisions comprehensive facility upgrades and presents the range of work performed by the Zoo's veterinary staff. The Braided Path reimagines the traditional landscape associated with a major guest thoroughfare and establishes a new array of possibilities. In spite of their varied emphases, each relates to and flows with the overall plan – which will be realized in the full build-out. These are the projects which will shape and define the future of Denver Zoo.



Denver Zoo New Master Plan

AFRICA EXHIBIT PROGRAM

AREA SQUARE FEET

West Portal

West Portal Building 1st Floor.....	6000
West Portal Building Ground Floor	6000
Outdoor Africa Habitat Theatre.....	6000

The Watering Hole Restaurant

Footprint Including Terraces 27,600

Animal Areas

Africa Yard 1	97,000
Africa Yard 2	66,000
African Forest Yard 1	20,000
African Forest Yard 2	3,700
African Forest Holding	5,000
Off-Exhibit Africa Yard 1	11,000
Off-Exhibit Africa Yard 2	3,700
Holding 1	3,600
Holding 2	3,200
Holding 3	3,300
Holding Complex	5,500

Indoor Exhibit Building/ Pavilion

African Forest Pavilion
(Including Education Satellite) 8,500

Other Features

Education Satellite (in Baobab).....	1,000
African Forest Pavilion Satellite	1,000





AFRICA



While Denver Zoo has active projects in many parts of Africa. Current work focuses on conserving Grevy's zebras and rhinos. Partnerships with local women's and children's groups promote coexistence while helping enhance local livelihoods.

Africa: A Wild Savanna

Africa's Connections

The sun's rays fuel the grasses consumed relentlessly by herds of grazing antelope. In turn the antelope, warthog, and zebra feed a pride of lions that retreat to the shade of a rocky outcropping. Musical rhythms of the local people echo off the rocks sending a lizard scuttling past pictographs of animals immortalized centuries ago.

Guinea fowl searching for a drink descend upon springs welling up from beneath the rocks, and grab burrowing insects from the moist soil. Termites engineer the earth into concrete towers providing a scratching post for a rhino, a cool den for a python, or a perch for a hornbill. With a bill full of termites the hornbill returns to its nest inside the acacia tree to feed its mate and young inside. As the red sun sets over the savanna it silhouettes a giraffe feeding on the acacia's blossoms. Africa's grassy plains and woodlands are a special place where time has stitched an intricate quilt of important connections among its residents.

These interactions among living and non-living things, between plants and animals, and between animals and people serve as the heart of Denver Zoo's new Wild Savanna exhibit. From the Zoo's main entrance, guests begin their African adventure by encountering carnivores at Predator Ridge. Mirroring the complex interactions of the African grasslands are the experiences of Zoo guests exploring this large, multifaceted exhibit. As they meander along the braided pathway this landscaped thoroughfare invites children and adults to interact with grasses, rocks, puddles and trees immersing them in the landscape. The large open animal habitats surrounding the braided path are connected with a land bridge that allows for animal movements over guests below.

The Wild Savanna will offer visitors wide views of multiple species from many perspectives, from eye-to-eye individual encounters low along the path, to broad views of animal groups high in the towering baobab that looks down on the plains.



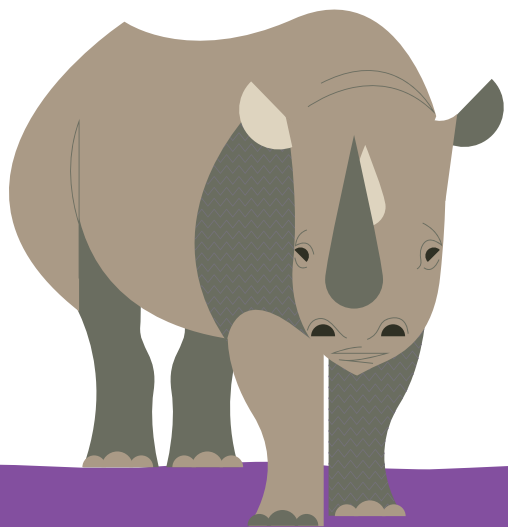
These interactions among living and non-living things, between plants and animals, and between animals and people serve as the heart of Denver Zoo's new Wild Savanna exhibit.

From the zoo's main entrance, guests begin their African adventure by encountering carnivores at Predator Ridge.





View from the Braided-path to the Baobab Tree
The Africa exhibit offers a variety of features for guests: expansive views of African wildlife, direct interactions with animals, and pathway alternatives



ANIMAL
ADVENTURES

Guests can choose to enhance their zoo visit by feeding exhibit animals from a baobab tree featuring exclusive access for this experience.

This experience is **ever-changing**; you can feed multiple species at different levels from the Baobab trees.

Baobab Trees

The iconic, super-sized baobab trees give guests opportunities to see across the African habitats and gain views that otherwise would be unavailable. From this vantage point they feel connected to the animals crossing the land bridge they passed under to access the tree top views. The trees serve as a hub throughout the day for the animals, and like the trees of the savanna, offers shade, a bit of food, or serves as a gathering place. Smaller animals from Africa can be found within these trees and provide a broader understanding of the diverse species from the grasslands and forests. These small mammals, reptiles, amphibians or insects help tell the story of the smaller interactions that are necessary within the larger ecosystem and provide year-round viewing in this climate-controlled space. Additionally, an education satellite will be located within or near the baobab trees; perfect for unique birthday parties, camps, overnights, or donor cocktail parties at sundown.

Outdoor Theater

An outdoor Habitat Theater provides an additional warm weather demonstration space, where staff facilitates interactive animal encounters and shows. Animals can be trained to come to the area from within the African habitats or be program animals that are housed separately from exhibit animals and trained to fly over, run through, or interact with guests visiting this space. For instance, a trumpeter hornbill could be released from the baobab on the braided pathway and fly down to the theater. Or a crowned crane could take off from the habitat theater space, fly across the savanna’s expanse, and land at a designated location near the new restaurant, The Watering Hole.





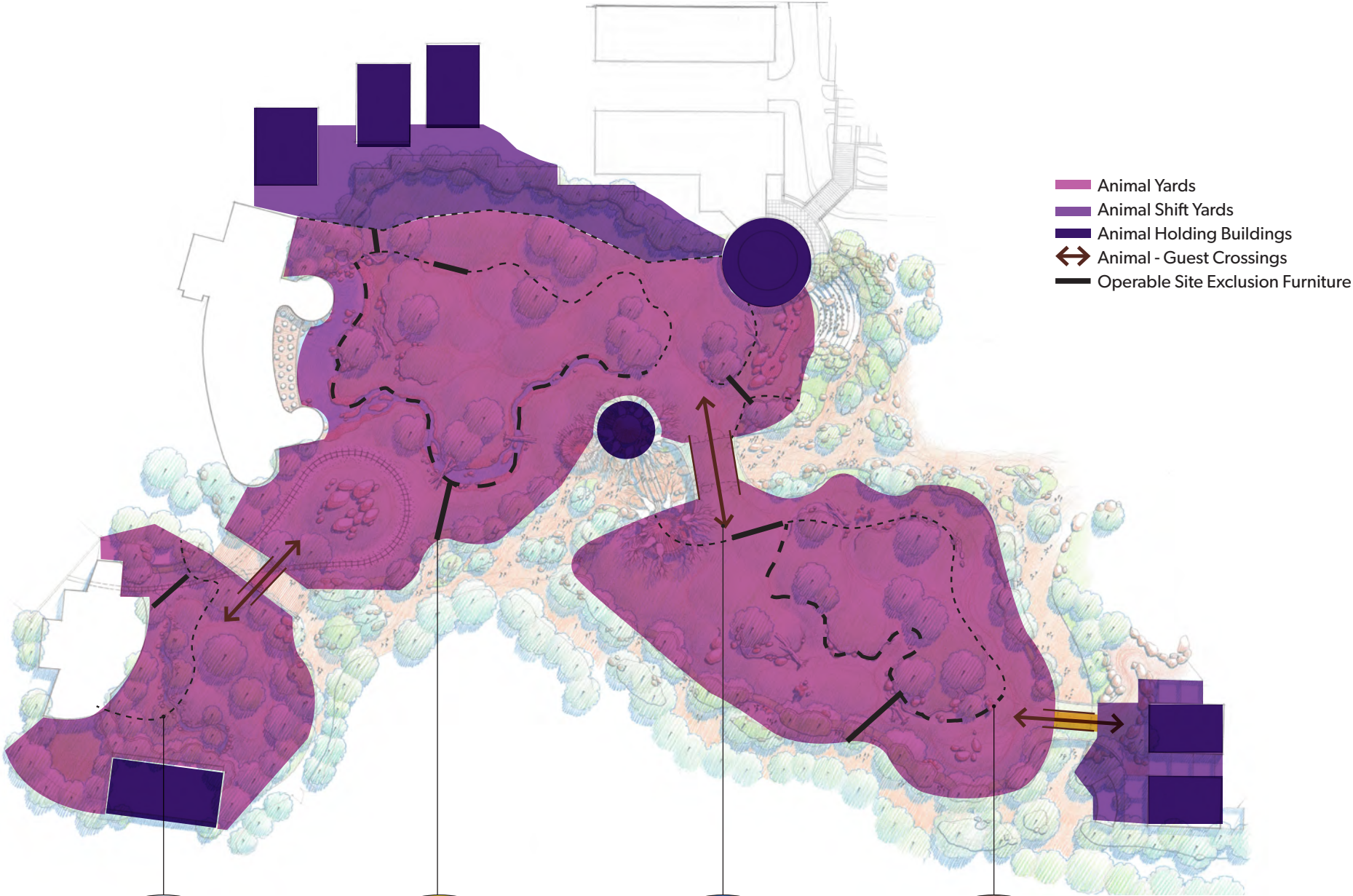
ANIMAL MANAGEMENT



A unique aspect of Wild Savanna is that most of these animals have never been exhibited in the manner proposed. The habitat itself will be a flexible exhibit that encourages species to mix, but also provides them areas of seclusion that are necessary for these species, reinforcing the zoo’s commitment to providing choices and behavioral enrichment to its residents. The barns will be designed in a way to maximize choice for the animals and facilitate training, allowing the animals to cooperate in their own healthcare. The barns will be designed in a “cluster” to maximize operational efficiencies. The barns may have a connection to the hospital to facilitate treatment and quarantine procedures.

Landscape elements will be used as barriers to carefully manipulate the location of the animals and will allow for flexibility in animal management.

Additionally, these large exhibit yards will feed into large holding areas also to assist in animal management.



Mudbank



Operable Site Exclusion Furniture



Animal - Guest Crossing



Water





BUILDING ON SUCCESS

Together with Predator Ridge, the African exhibit sequence will be the largest exhibit at Denver Zoo. Building on the rotational exhibitry concepts in Predator Ridge, winner of the 2005 AZA exhibit award, the Africa exhibit redevelops a large area in the north central zone of the zoo campus. African animals will roam and graze throughout two expansive yards, each with a variety of landscape features designed to maximize animal enrichment and rotational flexibility.

Conservation Requires Relationships

The Wild Savanna depicts Sub-Saharan Africa - perhaps the last place on Earth to maintain its full suite of large mammals. Denver Zoo is heavily involved in conservation efforts in Botswana. As one of Denver Zoo's conservation focal areas, its conservation programs in Botswana include research on lions, brown hyenas, African wild dogs and conservation education and outreach. Denver Zoo's philosophy of involving people living in these conservation areas will be present in graphics and the visitor programs and another way guests will experience the theme of interactions.

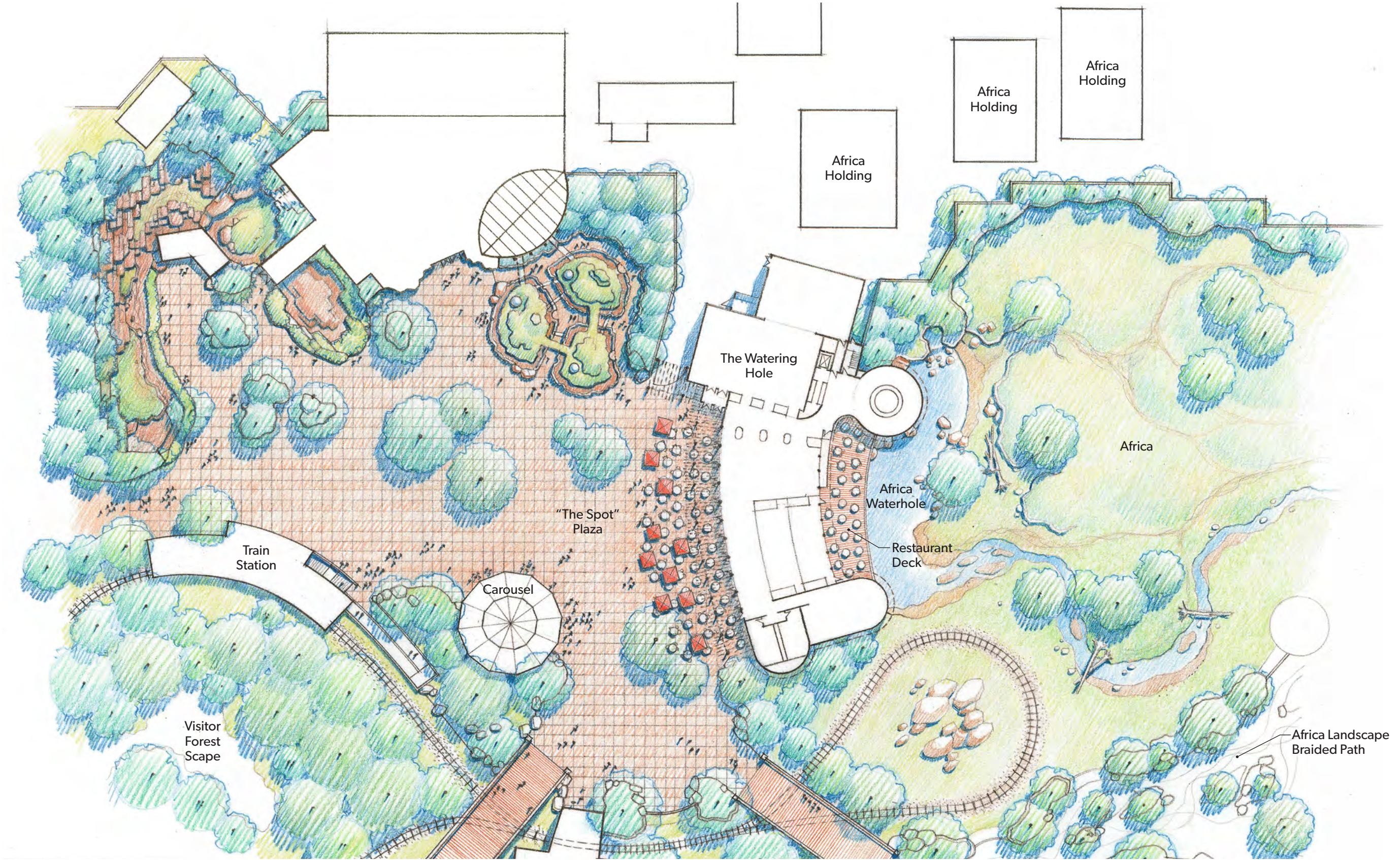
Animal Dynamics

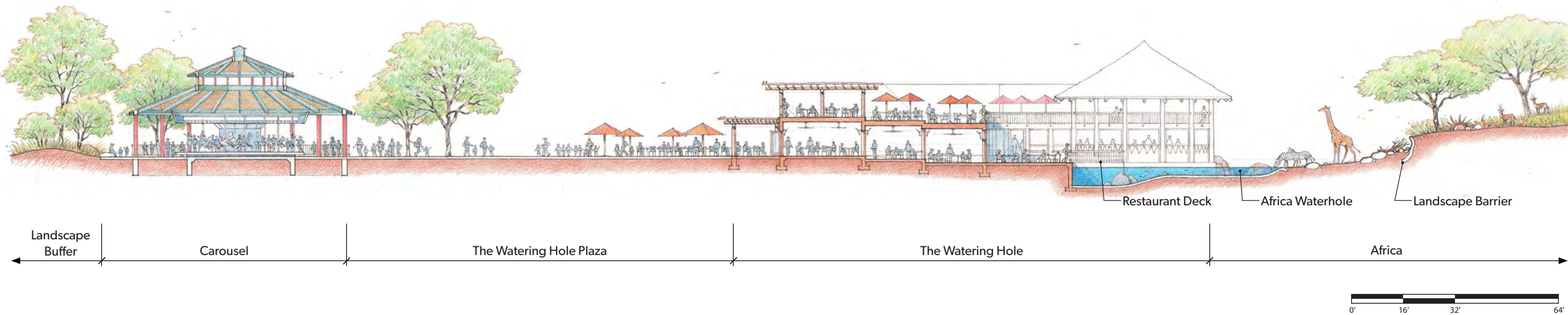
The uniqueness of this multiple-animal exhibit will be partially due to its mix of species. The animal candidates highlight several AZA priority species with which Denver Zoo has experience and success. These include black rhinoceros, giraffe, Grevy's zebra, gerenuk, okapi, bongo, ground hornbills, storks, vultures and cranes. Breeding these species benefits the populations within zoos.

Candidate Species:

Black rhinoceros, giraffe, Grevy's zebra, gerenuk, okapi, bongo, ground hornbills, storks, vultures, waterfowl, and cranes







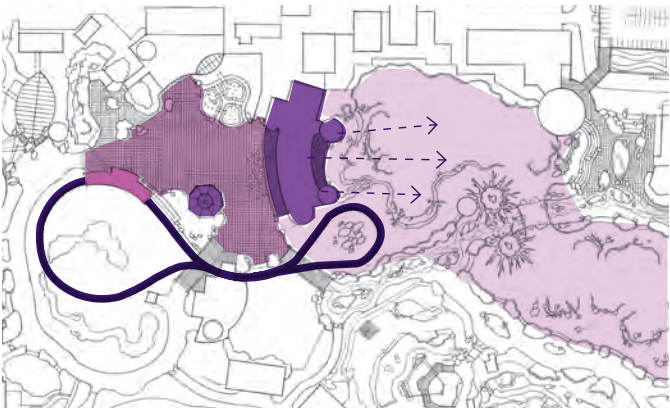
Africa: The Watering Hole

Denver Zoo’s Premier Dining Experience

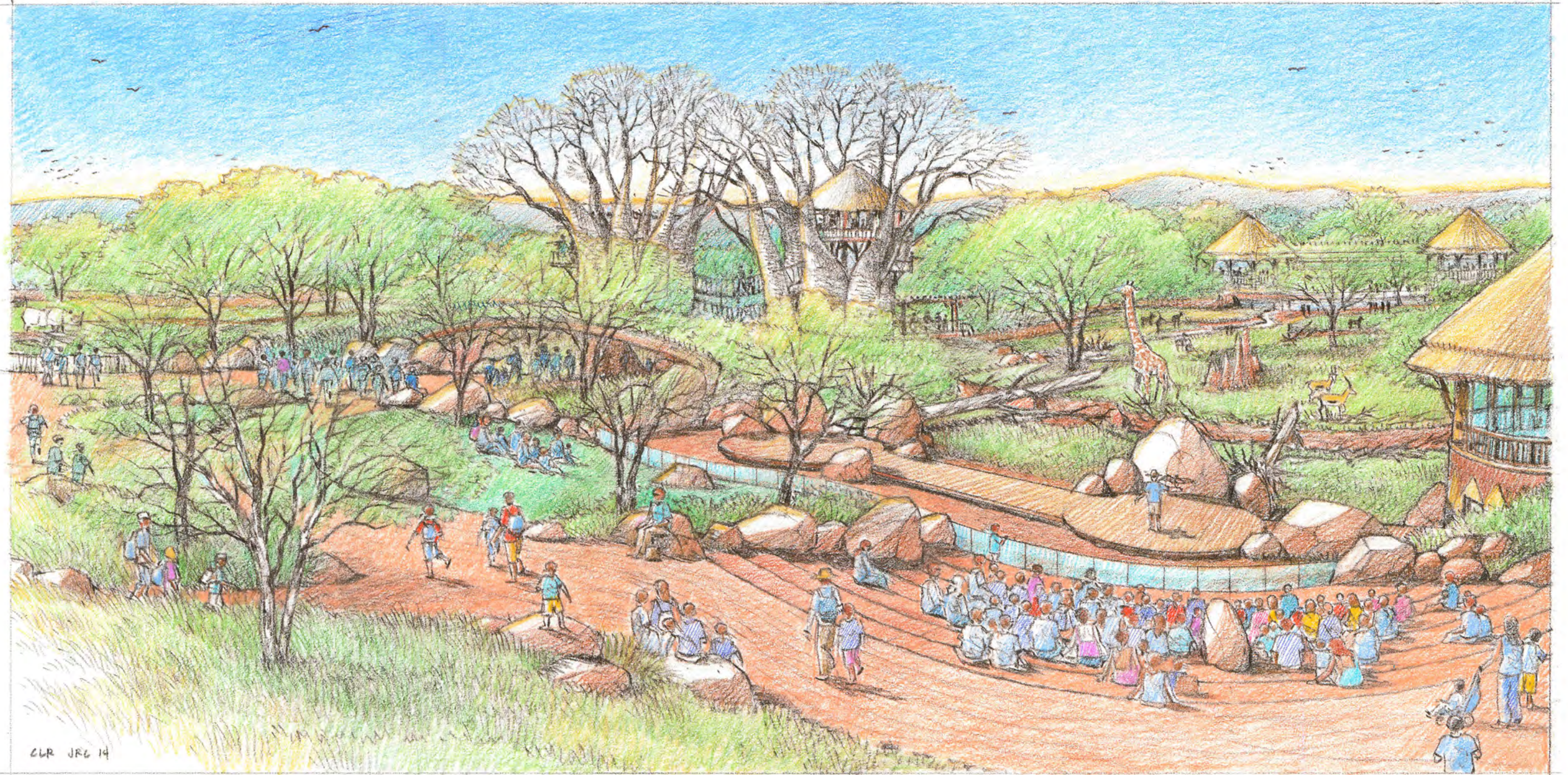
As guests continue exploring the Wild Savanna they will discover an exciting new culinary destination and unique marketplace. This improved location for the zoo’s primary restaurant is based on visitor studies and sited to maximize revenue. It will provide an aesthetic experience for guests and reinforce the exhibit theme by highlighting the connections between African people and wildlife. Art, music, and products representing the cultural value of animals will surround everyone. Restaurant visitors will enjoy a panoramic view of the exhibit and have opportunities to connect with the animals close up at the waterhole. The new flow of people through the zoo will anchor this location as a visitor experience hub, including restrooms, retail outlets and a dining experience with panoramic views of Africa. The adjoining plaza is a gathering place for outdoor events, both public and private, ranging from African musical performances to corporate

parties. This large plaza to accommodate events also provides improved access to the Conservation Carousel and a new and expanded train ride that provides a unique glimpse into the African exhibit.

With the ability to seat 750 people (400 outdoors and 350 indoors), this restaurant will replace Samburu Grille and Brown Bear restaurants. While the overall seating increase will be modest (adding seats for just over 100 people), staff anticipate business will grow since this restaurant will not only offer food, but will also be an experience for guests. The lunch space on the second floor will meet the needs of school groups, while not infringing upon restaurant guests’ seating. The Watering Hole will have the ability to provide a rich new evening event facility and offer an intimate location for donor cultivation.



The Watering Hole: Views, Plaza, Train and Carousel



View from the Braided-path to the Baobab Tree

The Habitat Theatre at the West Portal provides panoramic views to the west, including the baobab tree, the land bridge, expansive views of animal yards, and, in the distance, The Watering Hole – the proposed restaurant experience within the Africa exhibit



Africa: The West Portal

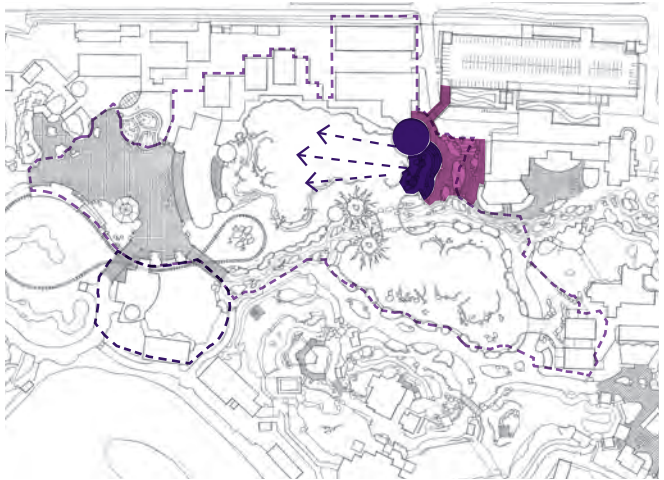
The West Portal Education Tree-house

The West Portal is separate program entrance from the parking garage. The Portal is an innovative program space within the Wild Savanna exhibit, with unique adjacency to the animal hospital. As a part of the zoo’s frontage, the architecture will be distinct and inviting, conceptualized as a large tree-house, visible from outside the Zoo.

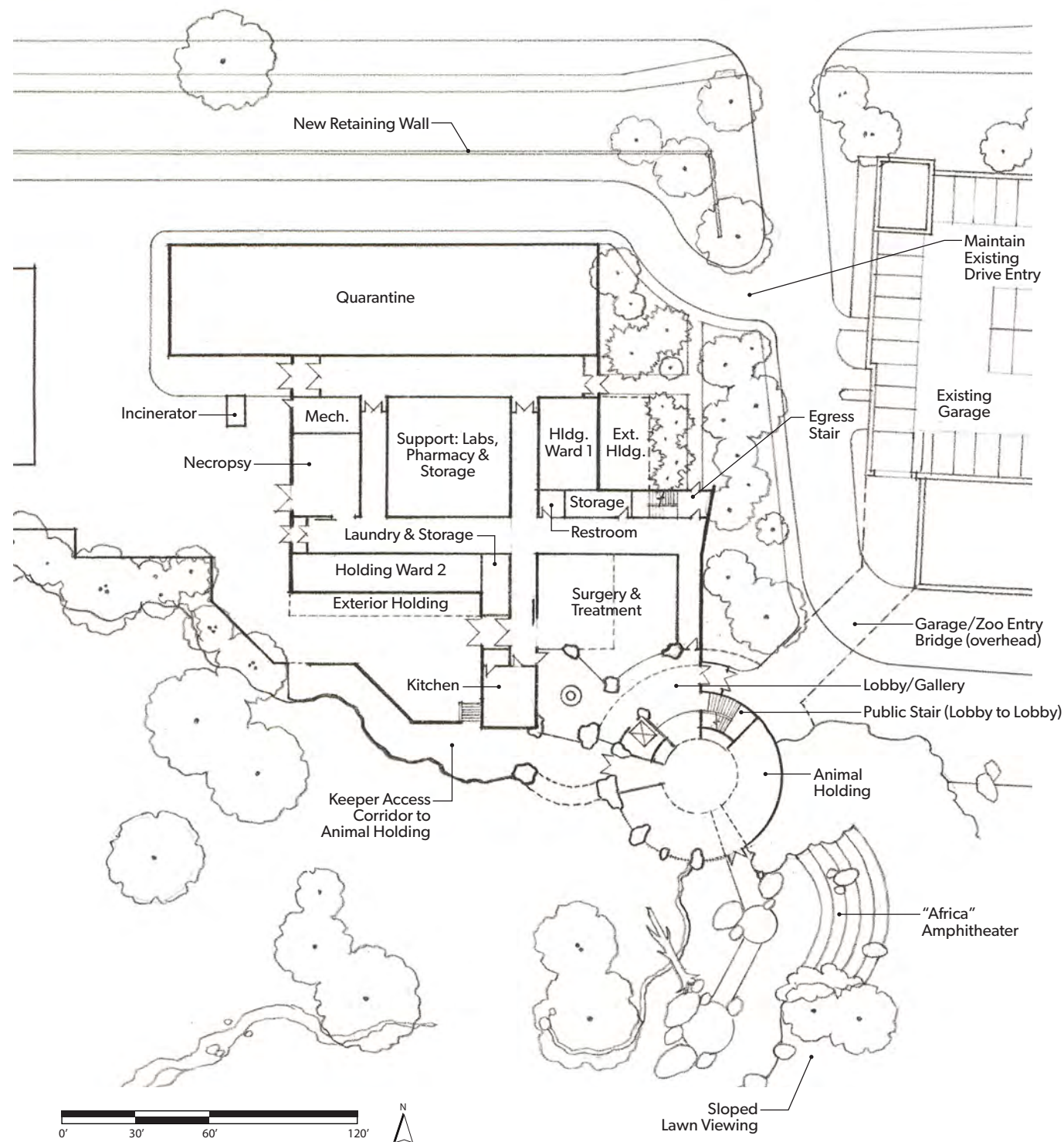
The location creates many exciting opportunities for the Zoo’s education programs. This is the largest in the sequence of Education satellite facilities; due to its size, it is called a “super satellite.” As a portal it will provide Zoo access for programs from the west end of the parking garage. Looking out from the tree house participants will see the African savanna with giraffe, zebra, or other hoof stock. The primary use of the West Portal is as an educational space for scheduled programs such as large assemblies or public shows, held in an interactive indoor venue equipped for live animal encounters and audio visual

presentations throughout the year. Events activities, large meetings and opportunities for guest speakers will be possible here as well.

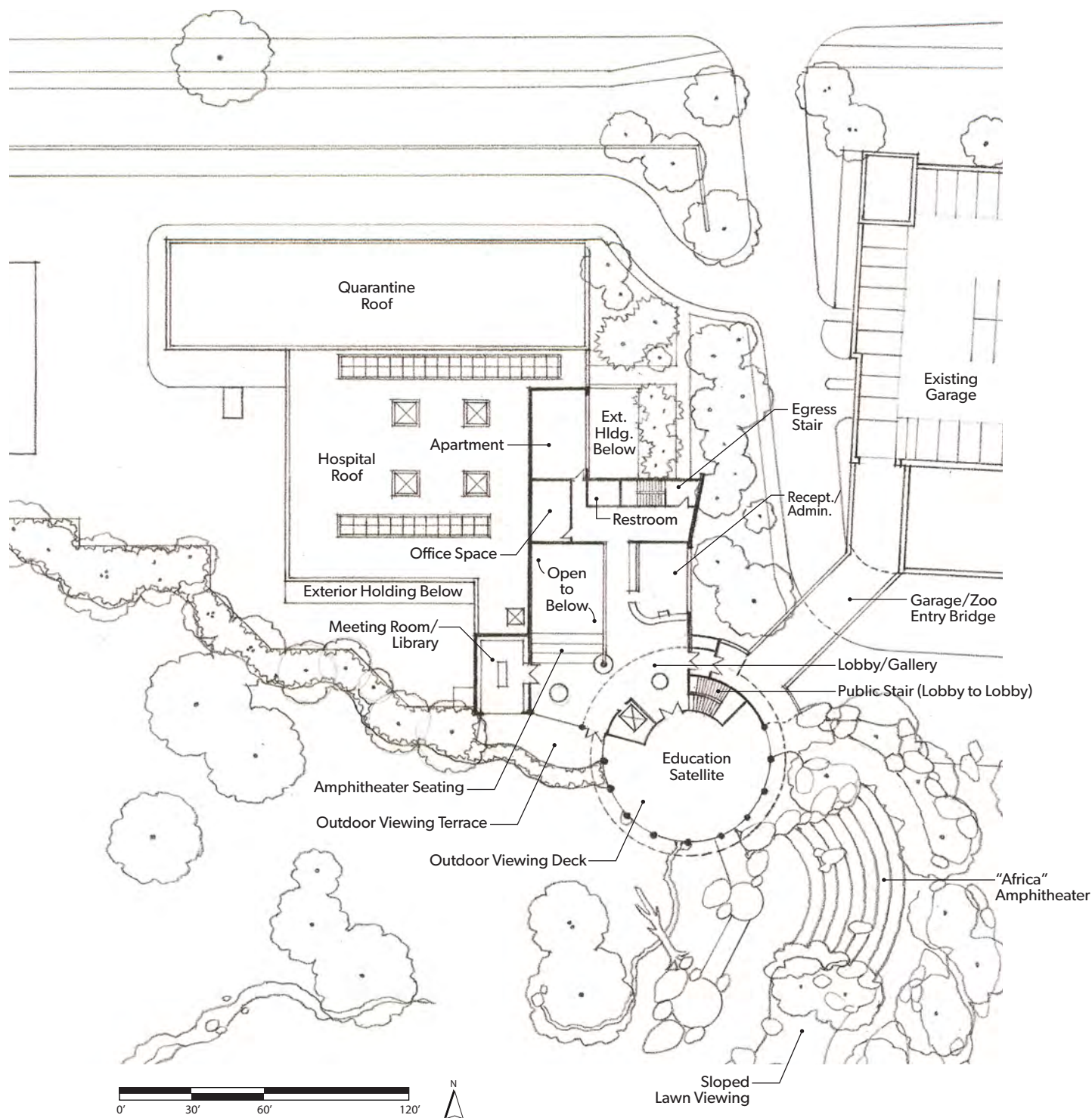
A built-in science lab on the lower level connects to the new hospital as well as animal holding areas, providing a space for middle school, high school and college students to explore advanced concepts and zoo careers through an engaging behind-the-scenes view into the veterinary and keeper facilities. These keeper facilities will have approximately 6,000 square feet devoted to housing animals used in the indoor venue on the upper floor and in the Habitat Theater outdoors. Species will be aligned with the specific needs for the Education Department’s programs, as well as the African-themed animal experiences envisioned for the outdoor location.



The West Portal



LOWER LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN

Veterinary Hospital Conceptual Floorplan



Africa: Veterinary Hospital

Animal Management Needs

The veterinarians’ compassion, commitment, and care for animals attracts guests and appeals to their sense of connection to animals. The new Veterinary Hospital will not only be a state-of-the art facility, it will also include the public in new ways that inspire pride in the zoo and respect for the skill and dedication the Zoo Veterinary staff invests in their work .

Denver Zoo’s veterinary hospital was constructed in 1969. Although renovations have occurred since then, advances in veterinary medicine and zoo animal management have outpaced those updates. The capacity and functionality of the current facility is lagging behind the needs of the animal collection and the veterinary staff. Nearly every feature within the veterinary hospital is in need of enlargement or adaptation, including animal wards, treatment and surgery rooms, office spaces, and areas for performing advanced diagnostics. This new hospital will include improvements for animals and animal care staff, technology upgrades, and an increased capability to promote and sustain interaction with colleagues as well as zoo guests.

Technology and Facility Updates

The facility will provide opportunities for accessing the animals safely and providing holding that includes quarantine spaces as well as enrichment and training areas. These areas will be flexible to maximize the space given to each individual and have features that can be available based on the needs of the occupant. Some possible features include pools with covers to provide for both terrestrial and aquatic animals and moveable walls to provide more space when larger rooms are required.

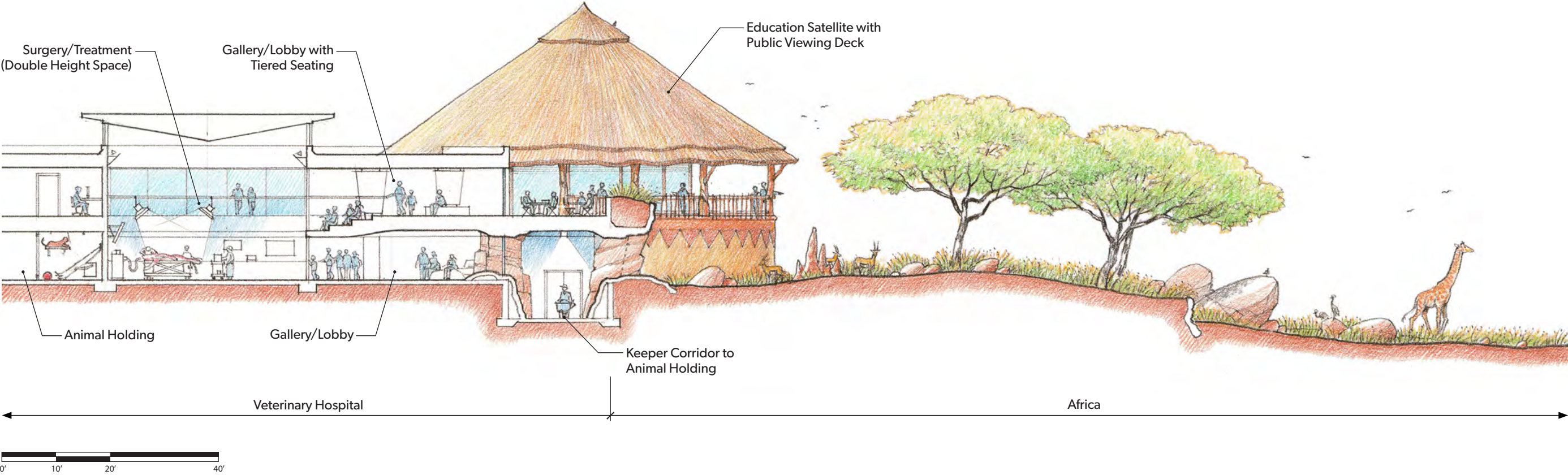
The heart of the new veterinary hospital will contain animal treatment rooms, critical care units, a surgery suite, a laboratory and a pharmacy, where technological advances in veterinary care will be supported with state-of-the-art equipment. In addition to a world-class laboratory for diagnostics, nutritional analyses, and research, the hospital will have digital radiography equipment, ultrasonography, endoscopy units, and advanced anesthesia monitoring. It will also include a computed tomography (CT) unit, an advanced imaging technique present in only one or two zoos in the country. Its use within the Zoo environment will revolutionize the ability to diagnose and treat Zoo patients.



Veterinary Hospital



Above
Summer safari day campers engage in hands-on
activities with Dr. Larsen at the Veterinary Hospital



Veterinary Hospital (Continued)

Collaborating with students and colleagues

Additionally, this facility will provide increased opportunities for research, collaboration, and teaching. It provides access to technology and facilities for veterinary students, graduate students, visiting veterinarians, and other visiting researchers. A built-in science lab on the lower level connects to the new veterinary hospital and animal holding areas, providing a space for middle school, high school and college students to explore advanced concepts and zoo careers through an engaging behind the scenes view into the veterinary and some keeper facilities. This facility will become a focal area for Zoo personnel; its upper level will incorporate offices for veterinary hospital staff, animal department staff, and temporary living quarters for visiting students and other animal health professionals.

Guest Experience

The new veterinary hospital will showcase the Zoo's exceptional veterinary care program, through interpretation, educational programs, and VIP tours. These views of the Zoo's veterinary hospital staff, and the state-of-the-art facilities and equipment they use will help visitors appreciate and understand how Denver Zoo delivers the highest possible level of medical care for its animals. For zoo guests, this area will be open every day and will provide more than just a peek behind the scenes – it will offer interactive interpretation to allow our visitors a deeper understanding of the dedication, the resources, and the care and passion the Zoo's animals receive inside the veterinary hospital.



**Veterinary Hospital and West Portal
Shared Education Space**

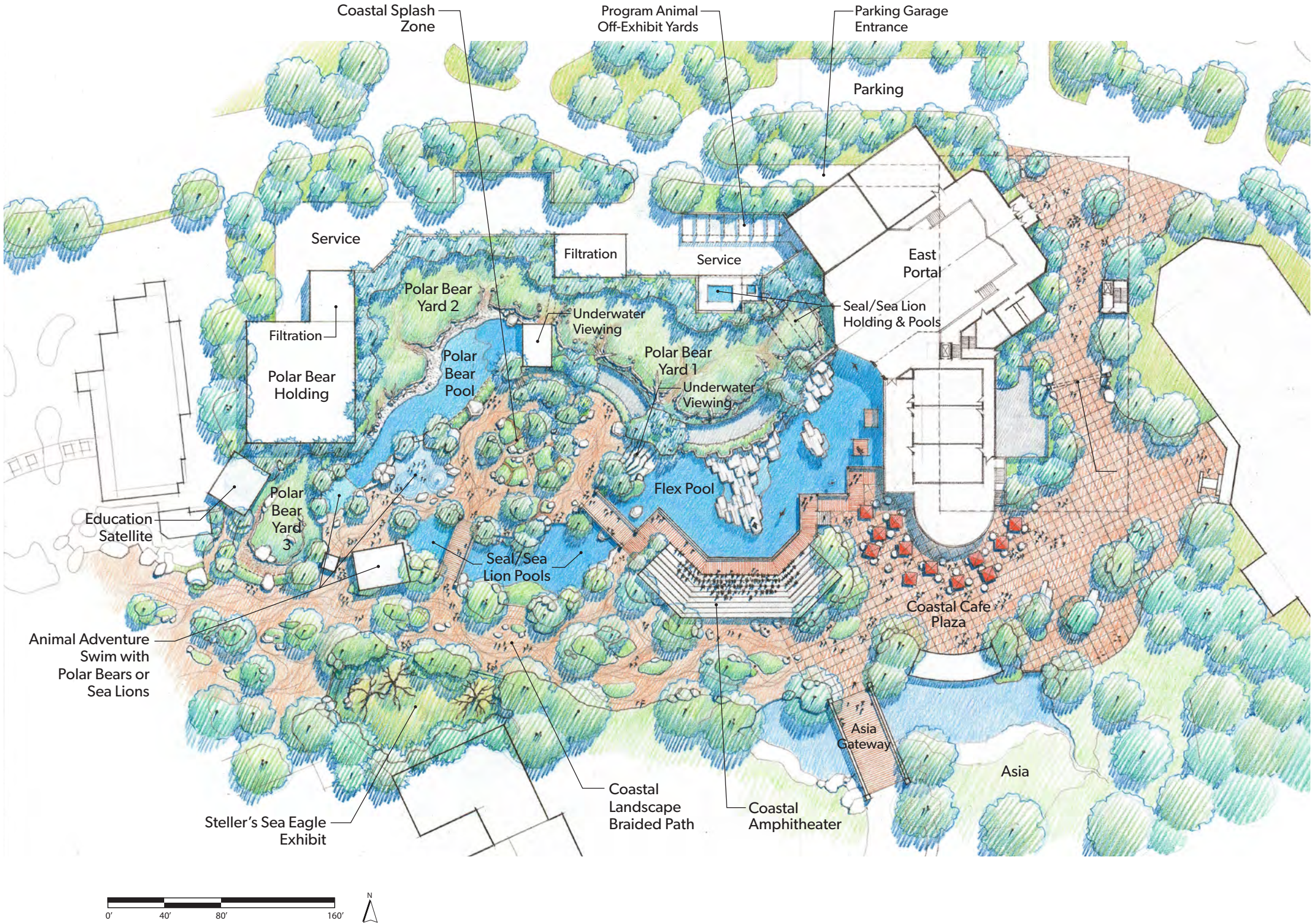
COASTAL EXHIBIT PROGRAM

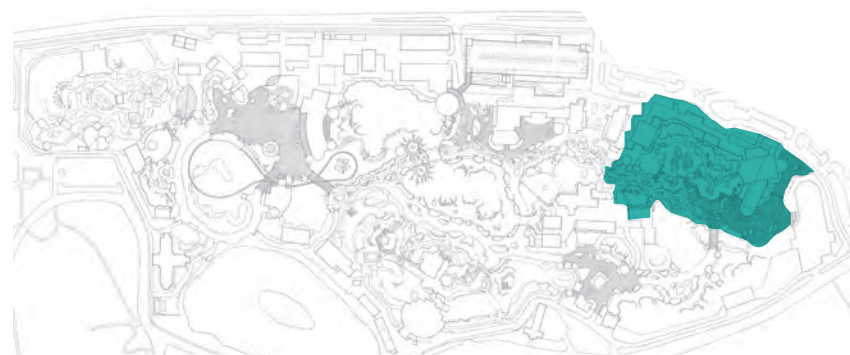


AREA	SQUARE FEET
East Portal	
Education Resource Center	4,000
Education Animal Holding	2,500
Great Hall	12,000
Classroom 1	1,300
Classroom 2.....	1,300
Classroom 3.....	1,300
Coastal Cafe.....	1,000
Kitchen & Food Storage.....	2,800

Animal Areas	
Polar Bear Pool	3,800
Polar Bear Yard 1	7,500
Polar Bear Yard 2.....	6,500
Polar Bear Yard 3.....	2,000
Polar Bear Holding	5,100
Polar Bear Filtration	900
Sea Lion Holding	2,000
Sea Lion Filtration	1,200
Flex Pool.....	11,000
Sea Lion Pool.....	4,500
Steller's Sea Eagle Exhibit.....	6,000

Other Features	
Education Satellite	1000
Play Zone - Coastal Splash Zone.....	2,600
Animal Adventure	1,500





COASTAL

Coastal: Change at the Coast

Imagine a coastal village in the Pacific Northwest, the colorful wooden walls of its homes and shops battered by wind and waves, but testament to the artistic, rugged people that call it home. Totem poles of native tribes adorn the pathways and tell stories of the animals so important to Haida or Tlingit culture.

Guests walk along a plank boardwalk in the fishing village, discovering animals such as sea eagles, sea lions or polar bears. They learn of the changes within this seemingly hearty ecosystem, and how the animals and people that share the northern shores have had to adapt to sometimes harsh conditions and a now uncertain future.

Change is a reality that impacts us all, from a small crab scuttling away from the rising tide, to a sea eagle rebuilding a storm strewn nest, a polar bear searching for food amongst retreating sea ice, or generations of coastal fishermen following their shifting fishing grounds to bring in the next big catch. The Coastal exhibit will embrace, examine and celebrate change.

Discovering an almost playful daily change along the shore, children splash in a tide pool play area that exemplifies the daily pull of the moon on the tides, as water rises and falls amongst colorful urchins, crabs and sea stars, fabricated larger than life so kids can climb on, under or through them. As guests explore the village, they are oriented to the extreme seasonal changes in light that inhabitants of the most northern climates endure – perhaps through a short video or simulated light show in the East Portal grand hall. The Education satellite, built to exemplify a fishing vessel along the wharf or a tribal longhouse, tells the stories of people adapting to this ever-changing way of life, and the way they live alongside the animals in this dynamic ecosystem.

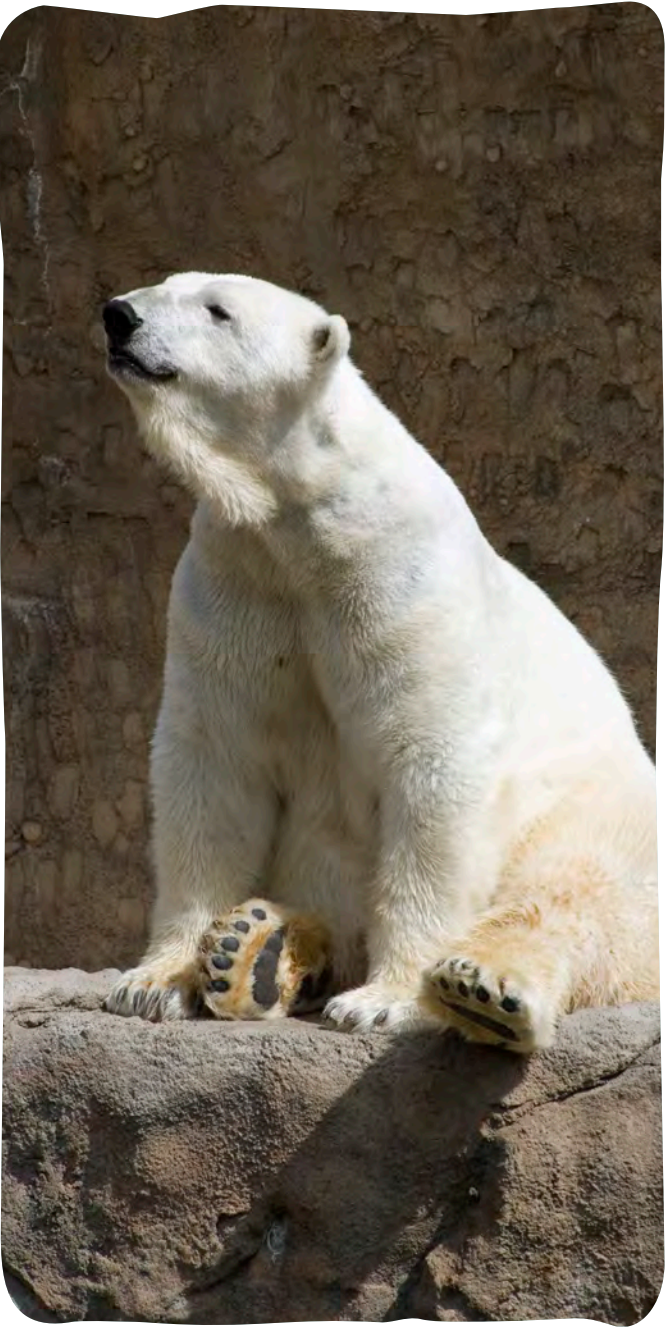
The highlight of the exhibit comes as guests encounter some of the most charismatic and beloved species of the northern shores. Polar bears are an ideal species to illustrate the challenges we all face in a changing and uncertain climate future. They have delighted guests and connected our community to the Zoo since the original Northern Shores exhibit

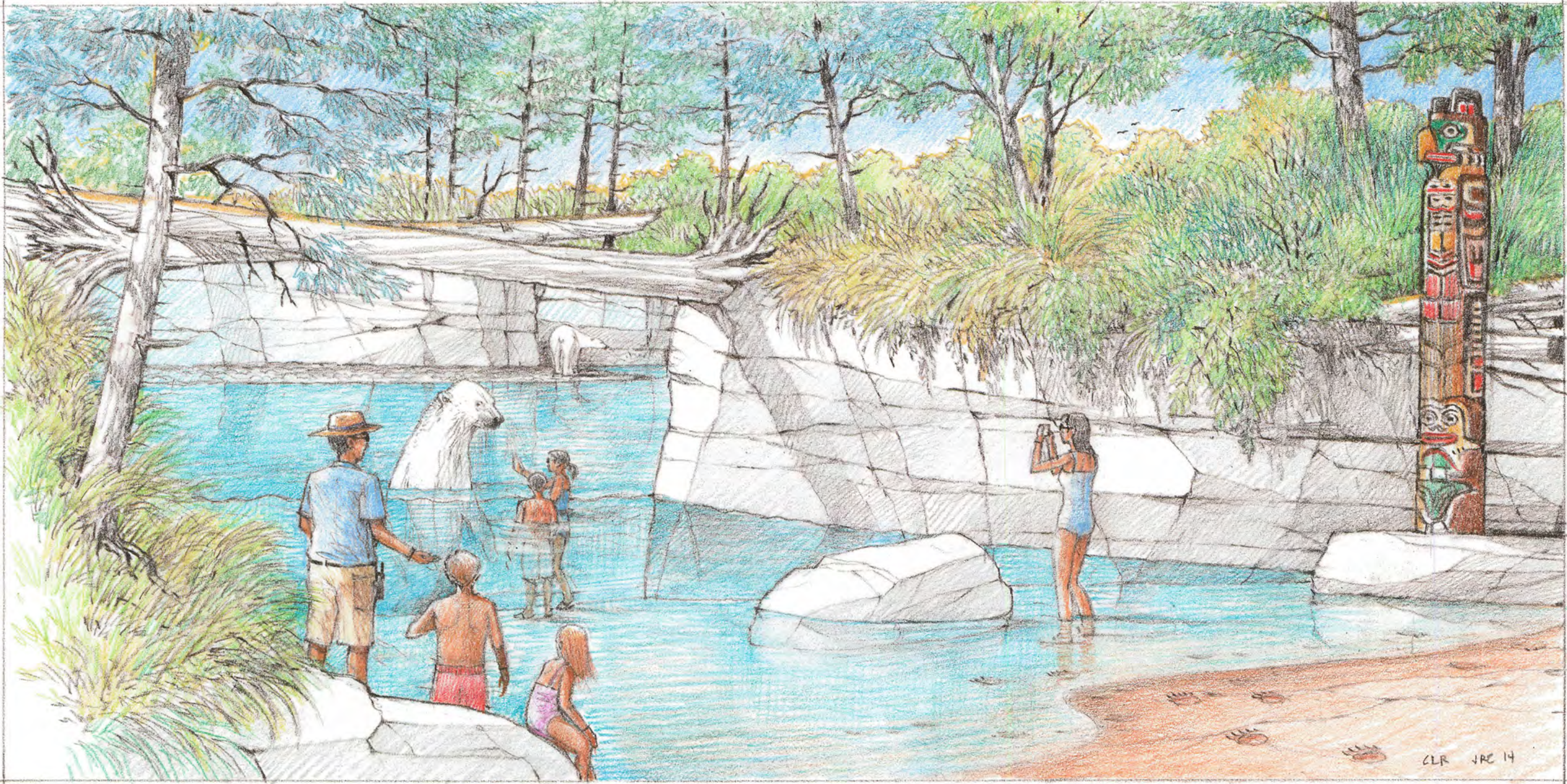
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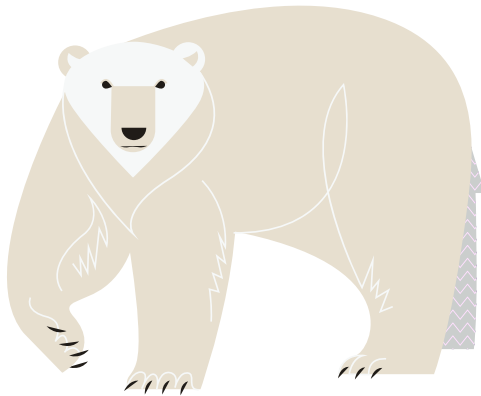
Change is a reality that impacts us all, from a small crab scuttling away from the rising tide, to a sea eagle rebuilding a storm strewn nest, a polar bear searching for food amongst retreating sea ice, or generations of coastal fishermen following their shifting fishing grounds to bring in the next big catch.

The Coastal exhibit will **embrace, examine and celebrate change.**





Polar Bear Encounter
Guests enjoy a premium experience at a pool in the Coastal Exhibit –
underwater interaction with a polar bear!



ANIMAL
ADVENTURES

Guests have the opportunity to be **paw to toes** with some of the zoo’s most charismatic animals.

In this keeper-guided experience, guests may swim “with” a polar bear or sea lion; adjacent animal and guest pools divided only by exhibit glass provide a chance to get up close and personal with an animal in an intensely memorable encounter.

opened in 1989. In the mid-1990s, Denver Zoo became known around the world for two popular polar bear cubs, “Klondike” and “Snow”.

Polar bears face great threats to their survival, as the sea ice they call home retreats in response to global climate change. The opportunity to consider how these animals adapt to changing environments, and how people must also adapt as ecosystems which we belong to and influence change, provides a rich backdrop for interpretive messages that build on the connections between animals and people.

In the Spotlight

Polar bears are the anchor species of this exhibit. They are also an AZA priority program species and are a natural way to introduce a conversation about climate change.

Polar bear habitats and holding areas are focused on providing the best care for polar bears during all life stages. This is not only good for the animals, but creates a dynamic and

active exhibit that encourages the bears to move around and perform natural behaviors. Designers will incorporate husbandry and enrichment opportunities into the habitats and holding areas of all the species in this project.

Candidate Species:

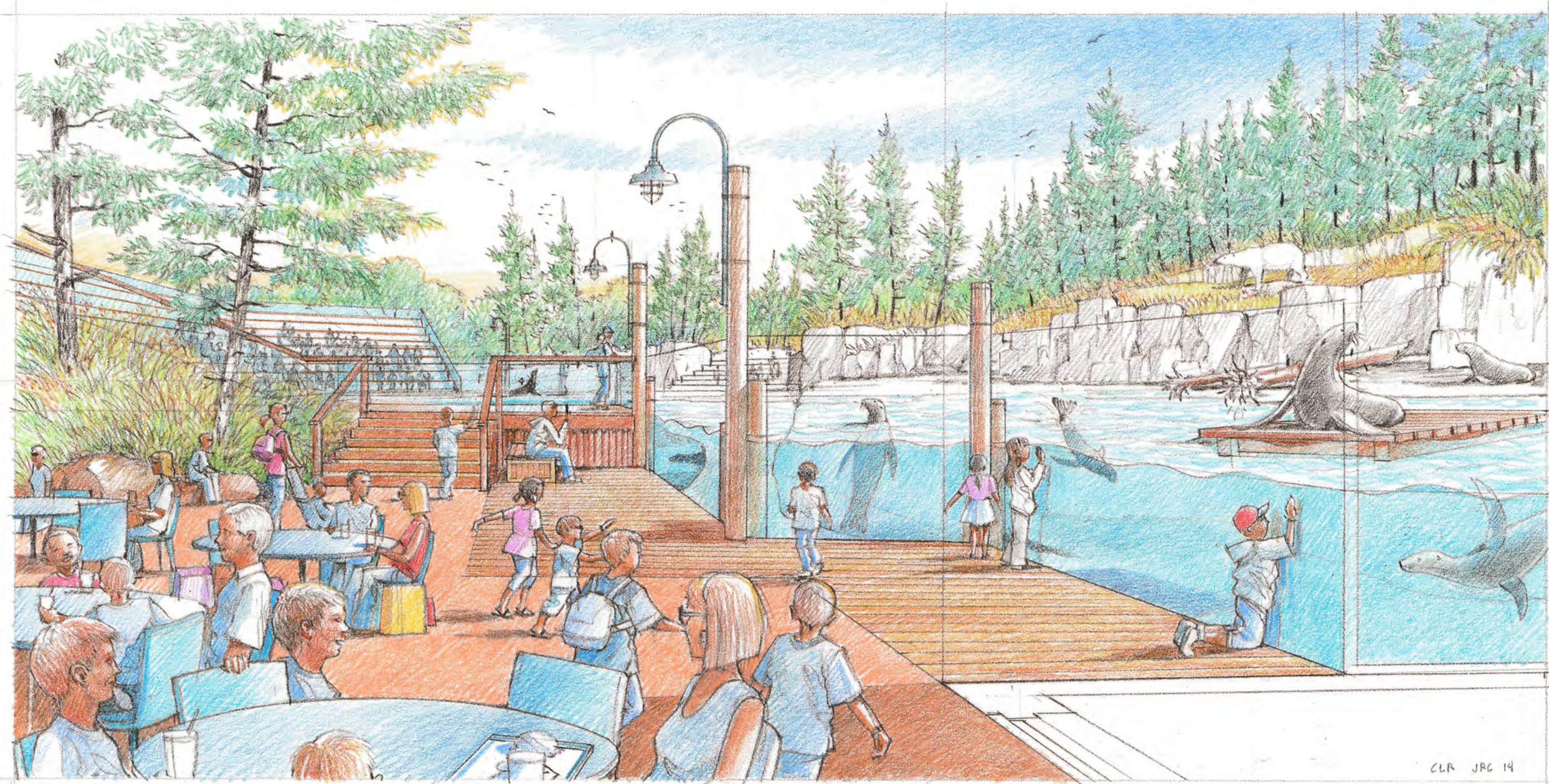
Polar bears, sea lions, harbor seals, and Steller’s sea eagles

Visitor Experience

The Coastal exhibit contains a Tier 1 guest experience hub, with guest amenities including restrooms, retail, food service, seating and opportunities for play. The Coastal Amphitheater accommodates a large, dynamic show with 450 seats to showcase sea lions, a guest favorite, and other charismatic species. A café is located adjacent to the amphitheater on a deck looking over the exhibit. This café, perhaps designed as a

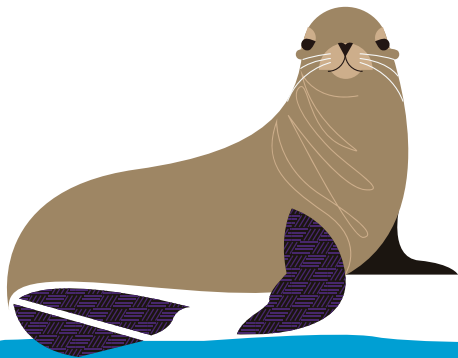
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Coastal Cafe
Guests enjoy underwater animal viewing, an amphitheater featuring daily demonstrations, and seated eating areas.





UNIQUE SETTING & EXPERIENCE

The primary marine mammal exhibit will feature mammals and birds from the North Pacific coasts. Multiple pools, a sophisticated life support system, and viewing experiences above and below the water surface will create a world class exhibit.

This exhibit also includes a premiere event space, with a setting and experience unparalleled in the metro area.

lighthouse amongst the fishing village, will have outdoor seating for 250 guests with the ability to enclose seating for 50 guests during the cold season. A tide pool play area will replace the current Explore the Shore play area, giving children the opportunity to splash as water rises and falls amongst colorful sea creatures, fabricated larger than life so kids can climb on, under or through them. The Animal Adventure opportunity, swim with a polar bear, is truly a once-in-a-lifetime memory maker. This experience allows visitors to get “paw to toes” with one of the largest, charismatic mammals in the Coastal exhibit. The protected environment (separate pools, separate water filtration, separated by thick glass) gets visitors up close in this amazing interactive experience.

Education Satellite: A Fishing Vessel

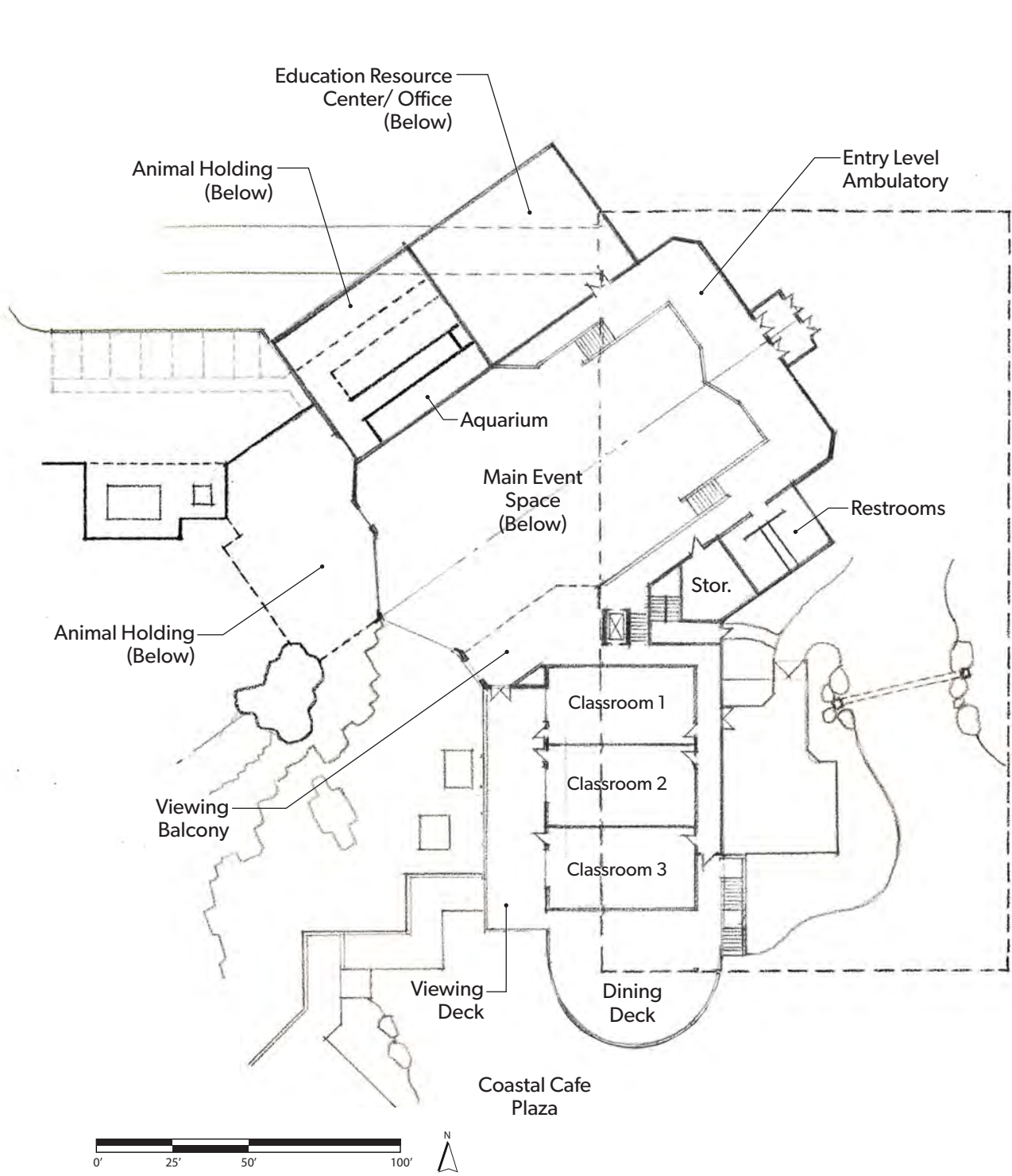
The Coastal exhibit contains an Education Satellite classroom that provides an immersive learning environment with unique views into exhibits, as well as innovative connections to animals or behind the scenes areas. This satellite is the closest education satellite to the East Portal group entrance and, therefore, the shortest distance for the Zoo’s youngest

guests. Programs for this age group, including early childhood students and preschoolers, could take place inside this engaging space, as well as summer camp activities for the Zoo’s youngest campers.

Thematic suggestions for this satellite’s design include a fishing vessel that appears to be floating on the same pool as polar bears or sea lions, or incorporating iconic architecture where the satellite is imagined as a lighthouse or longhouse with totem poles visible from 23rd Avenue.

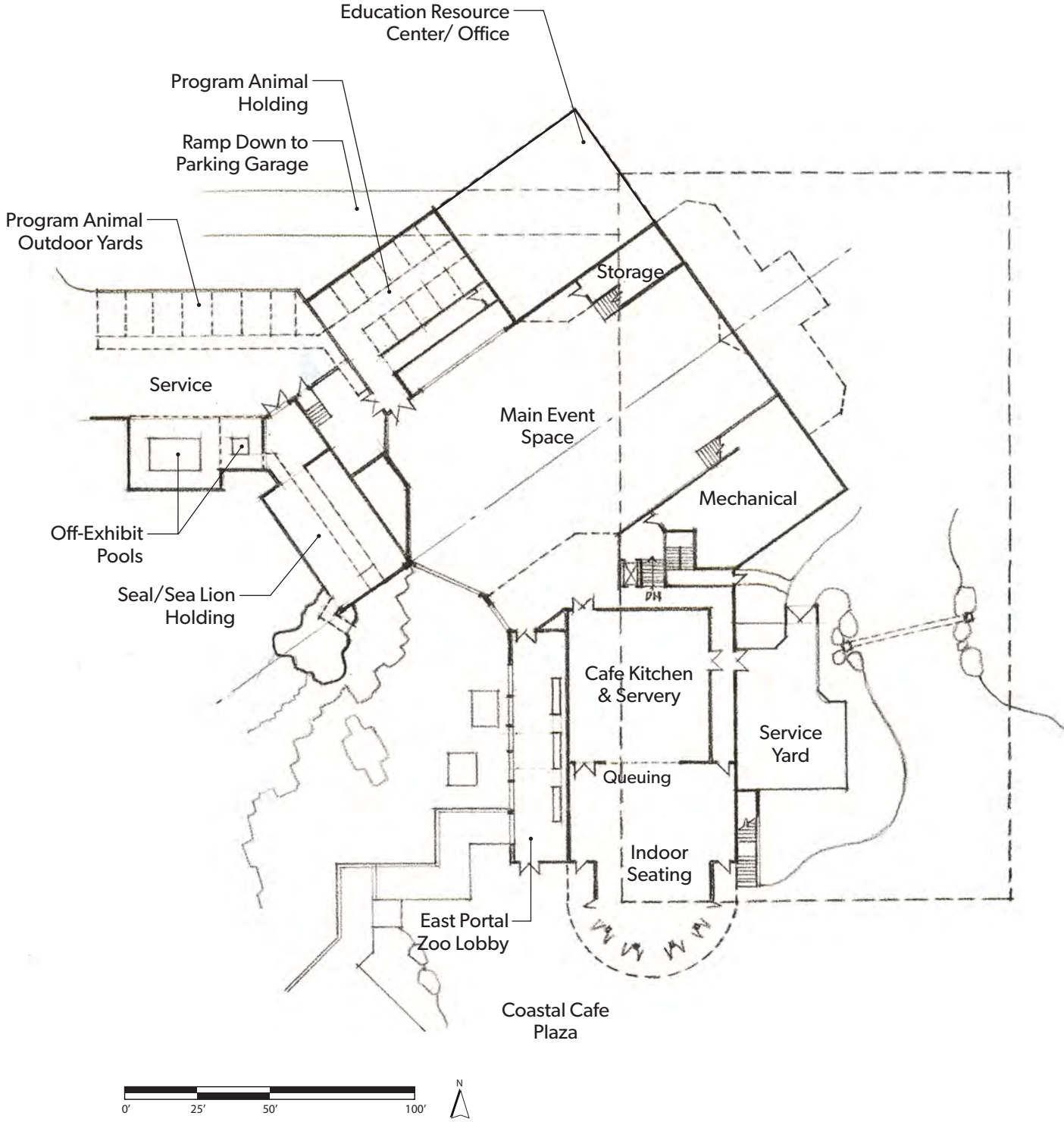
When not in use for scheduled programs, staff or volunteers can engage Zoo visitors within the space. It could also be used for donor events or meetings.



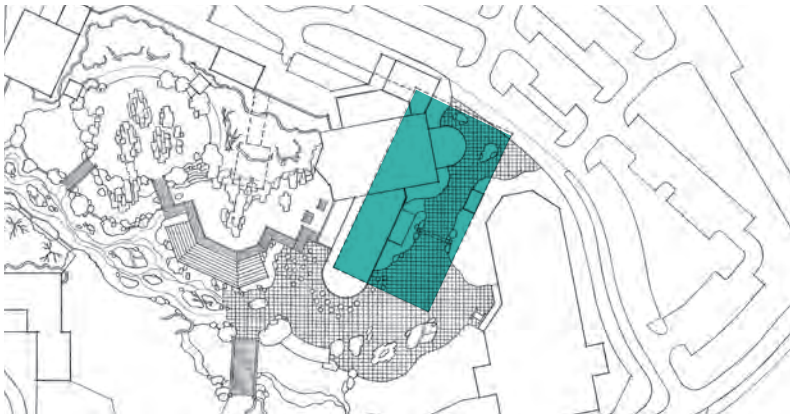


UPPER LEVEL FLOOR PLAN

East Portal Floor Plan



LOWER LEVEL FLOOR PLAN



Structured Underground Parking
below the East Portal



East Portal: Views



Program Circulation
Visitor Circulation



Shared Rental Space (Primarily Events)
Education Space

Coastal: The East Portal

An Events and Education Center

The East Portal, embedded within the Coastal Exhibit, is imagined as an architecturally iconic building on the Zoo’s highly visible north frontage. Its primary functions are to serve as an entrance for special events as well as large school groups. This building will simplify and organize needs for both events and education programs. Designed primarily with special events in mind, the East Portal will capitalize on its dynamic settings, featuring multiple and flexible four-season spaces that create up-close encounters with some of the Zoo’s most charismatic species and the greatest venue in Denver.

This new entrance engages guests upon arrival, even before they pass through the Zoo’s gates. The East Portal evokes a sense of adventure and discovery: as guests approach, they hear waves crashing and feel the cool spray of seawater against the craggy shoreline dotted with windswept trees. Once inside, a grand hall serves as a check-in and orientation point for students or an elegant location for a 750 person plated dinner. The hall provides awe-inspiring underwater views to the sea lion and polar bear exhibits. An aquarium, filled with schooling fish that rely on the same ocean as the large mammals in the exhibit, wraps around the room. These fish provide enrichment for the animals as they pass outside the building in clear tubes that make it appear as if they’re swimming in the same water as their predators.

Classroom and rental spaces look out over the water’s edge. Their views will offer unique opportunities for expanded education programs, events space and donor cultivation events. The building is also the home to education program animals and a launch pad for Denver Zoo’s outreach into the community.

The East Portal is one in a series of facilities that increases the zoo’s overall program and rental event and meeting capacity, which results in the reduction of conflict over desired spaces as well as creation of space for future growth (See Portal Needs in Appendix).

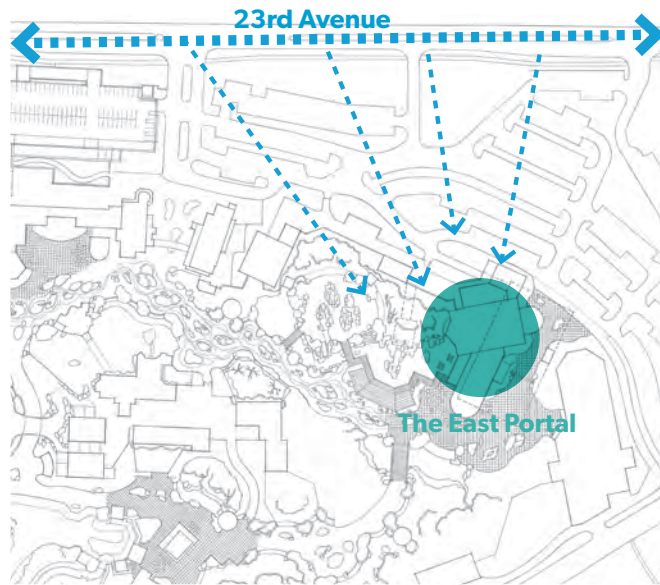
Candidate Species

Aquarium fish for East Portal: Salmon or trout, Arctic char, eel, catfish, crayfish

Events Program

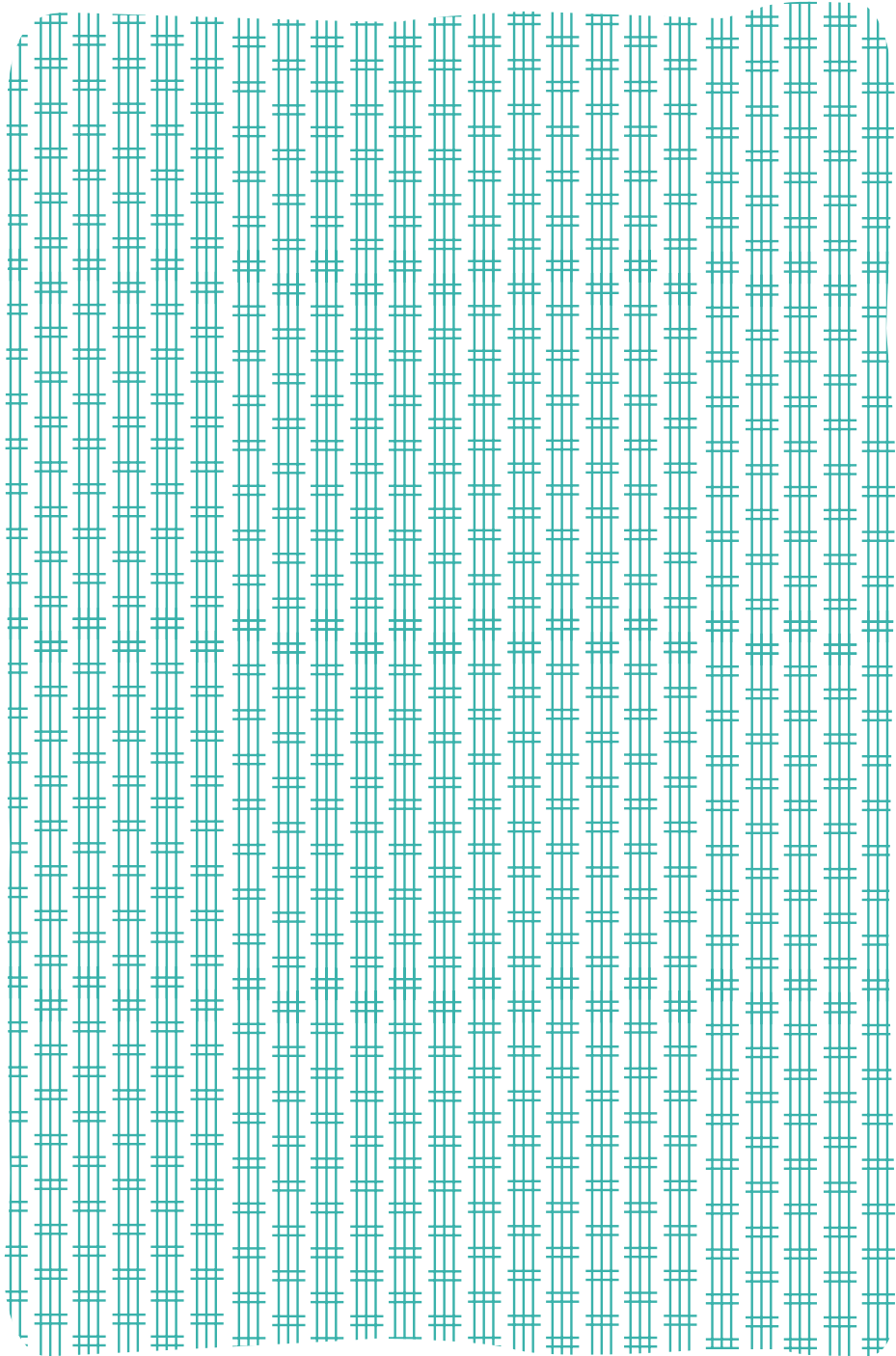
This four-season event center will replace the two existing event spaces, Norgren Hall and Conoco Pavilion. Though these venues have served the Zoo well, events have been unable to reach their full potential in these spaces. While the East Portal does not significantly increase the Zoo’s indoor event space, staff project at least doubling their rental revenue

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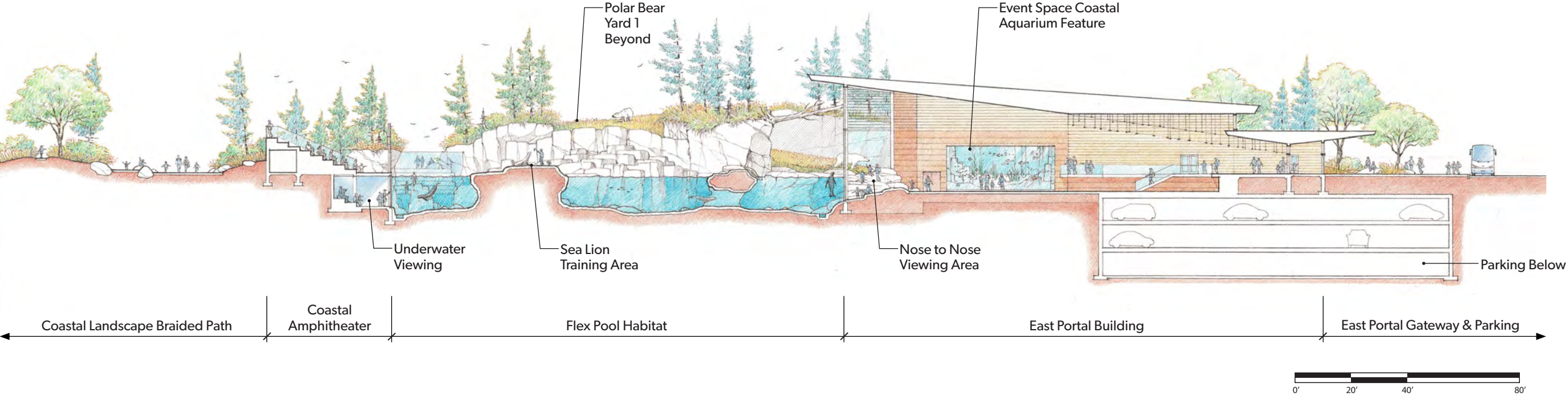
East Portal: Frontage; Iconic Architecture visible from
23rd Avenue





Nose to Nose
A polar bear and a young zoo guest share a connecting moment. Life-long connection with animals begin in moments of awe and wonder.





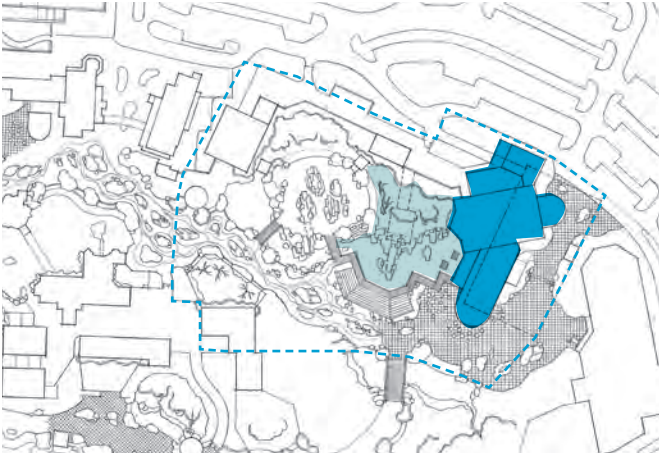
The East Portal (Continued)

in the East Portal. It will accommodate larger indoor events (up to approximately 750 people) and provide the ability to rent spaces throughout the year. Additionally, as a part of the Coastal exhibit, the facility will offer patrons an experience unlike any other in Denver. This will allow staff to elevate the zoo's events program as one of the premier venues in the state while continuing to connect people to the Zoo's animals and its mission.

Education Program

The iconic and engaging East Portal entry for program participants provides expanded spaces and support features that allow efficient check-in and group organization at increased capacity. This will reduce congestion at the main zoo entrance, directing school groups to their designated entrance. It also improves efficiency and capacity for bus drop-off of thousands of students annually, with the ability to accommodate up to 45 buses in the parking lot and bus lanes.

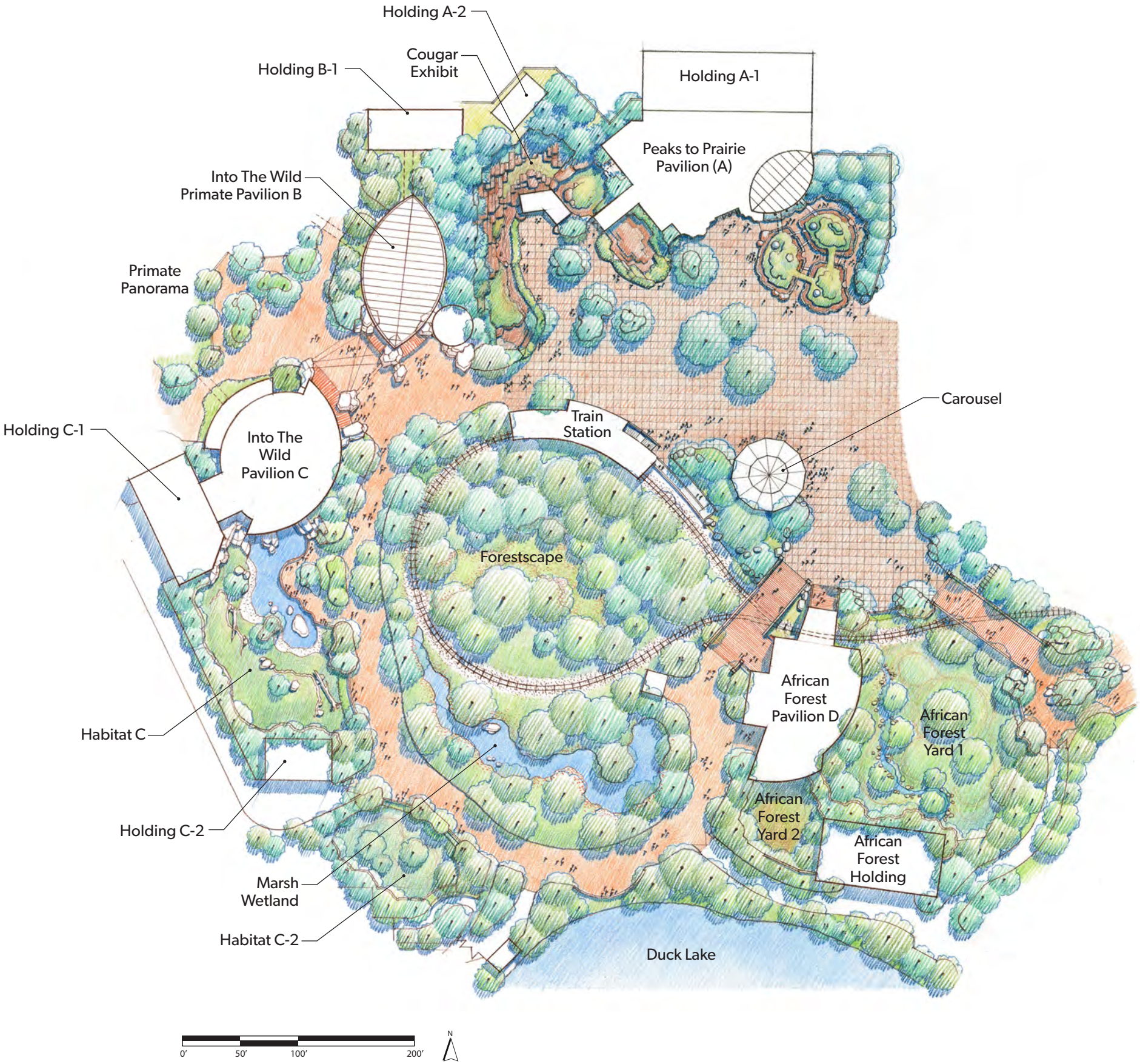
The adjacent East Portal underground parking structure will support program efficiency for the Zoo's Outreach team, allowing for climate-controlled loading of animals, biofacts and program supplies, as well as improved access to parking and egress from the zoo without negatively impacting the guest experience and other campus activities. Education programs such as school group classes, summer camps and even large sleepovers can utilize the flex room space and grand hall, engaging spaces that provide an immediate connection to the zoo through unique exhibit views. A key component of this facility is improved indoor and outdoor holding space and capacity for the Education program's animal collection, which supports both onsite and offsite educational programming, engaging the Zoo's guests, program participants, and the community. Additionally, an Education Resource Center that provides organized storage (for teaching and program materials as well as teacher loan boxes) which better meets the needs of the Zoo's growing guest engagement and education program teams.

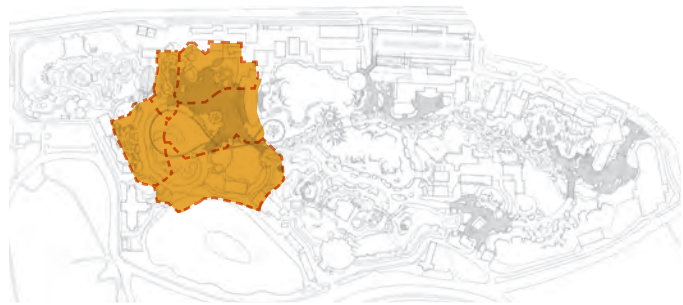


East Portal Connection to Exhibit Pools and Yards

DENVER ZOO
INTO THE WILD
EXHIBIT PROGRAM

AREA	SQUARE FEET
Pavilions	
Peaks to Prairie Pavilion (A)	10,000
Holding A-1	6,100
Holding A-2	2,300
Pavilion B	6,700
Holding B-1	2,300
Pavilion C	10,000
Holding C-1	4,500
Holding C-2	2,000
African Forest Pavilion (D)	8,500
African Forest Holding	4,800
Animal Areas	
Cougar Exhibit	11,000
Habitat C	14,000
Habitat C-2	5,000
African Forest Yard 1	20,000
African Forest Yard 2	3,700
Prairie Dog Exhibit	3,000
Marsh Wetland	25,000
Other Features	
Education Satelilite	(4) 1000





Denver Zoo Into the Wild: Worldwide Impact

A New Type of Exhibit

This innovative area breaks free from traditional zoo design conventions and demonstrates a dynamic new way to think of zoo exhibits. Denver Zoo Into the Wild is a place for guests to discover how the Zoo is a leader in conserving species in its care, in conserving natural resources, and in conserving animals and ecosystems around the world.

Designing for Flexibility

Due to the changing nature of the environment and animal populations in the wild, the exhibit will be designed to offer significant flexibility, allowing staff to modify exhibits and interpretation based on the changing needs of certain species at that time.

The animals exhibited may also be important AZA priority program species. This is where staff will explain what AZA does, how Denver Zoo participates as a member organization as a zoo and in its Zoo conservation programs, and how, as an AZA member, the Zoo cares for its animals. This exhibit will also serve as a venue to showcase the efforts of the Zoo's animal behavior staff - designing and incorporating choices, enrichment, and training into the exhibits to help the animals.

An Interactive Experience

Denver Zoo Into the Wild consists of four distinct exhibits, or zones, each with a different theme or variation on a theme (e.g. Peaks to Prairie on page 56). It offers a new concept, not linked to one biome or particular ecosystem. Each zone includes an education satellite facility as well as an immersive indoor space or pavilion area for visitors. One idea for these spaces is a two-story interactive tree, which allows guests to experience the layers of the rainforest, from ground to canopy. Another idea is to install and maintain a living building featuring sustainable construction and energy use, embodying the Zoo's commitment to sustainability by connecting green living and other choices to their impacts on the environment. Interactive elements to engage younger children and families appropriately in the conservation message include opportunities for play-based animal care, through "Be a Keeper" and "Be a Veterinarian" components, and to practice field research



Below Right: Lake Titicaca Frog, Telmatobius culeus
Denver Zoo is leading the charge to protect Peru and Bolivia's critically endangered Lake Titicaca frog. In addition to being threatened by poachers they are also at risk due to habitat loss, pollution, non-native fish predators and disease. Denver Zoo has recently identified a life-threatening fungus on the frog. Further research on the fungus and treatment can help aid in the species' perseverance.

techniques with hands-on or play-based "Be a Wildlife Researcher" experiences. The goal is to engage guests in the Zoo's mission-based conservation work and encourage them to practice simple conservation actions here and then commit to repeating these behaviors after returning to their home.

Play, Learn and Relax

Positioned between the Tier 1 hub at "The Spot" and the gateway to Primate Panorama, this area has a variety of types of spaces. An existing grove of trees will be preserved and used as a visitor area for relaxation or picnicking in the shade. The proximity to Duck Lake provides an opportunity to connect the Zoo's guests to the rookery on Duck Island and relate to the storm water systems and wetland wildlife in a dynamic way. Finally, the Zoo's train travels through the area, presenting an up-close view of the outdoor exhibits.

Candidate Species

Species representing animal care stories: (including animals in SSP programs) Humboldt penguins, amphibians, Asian turtles, flamingos, songbirds, cranes, condors, small cat species or primates.

Species representing field conservation: Rocky Mountain wildlife, tropical species from focal areas.

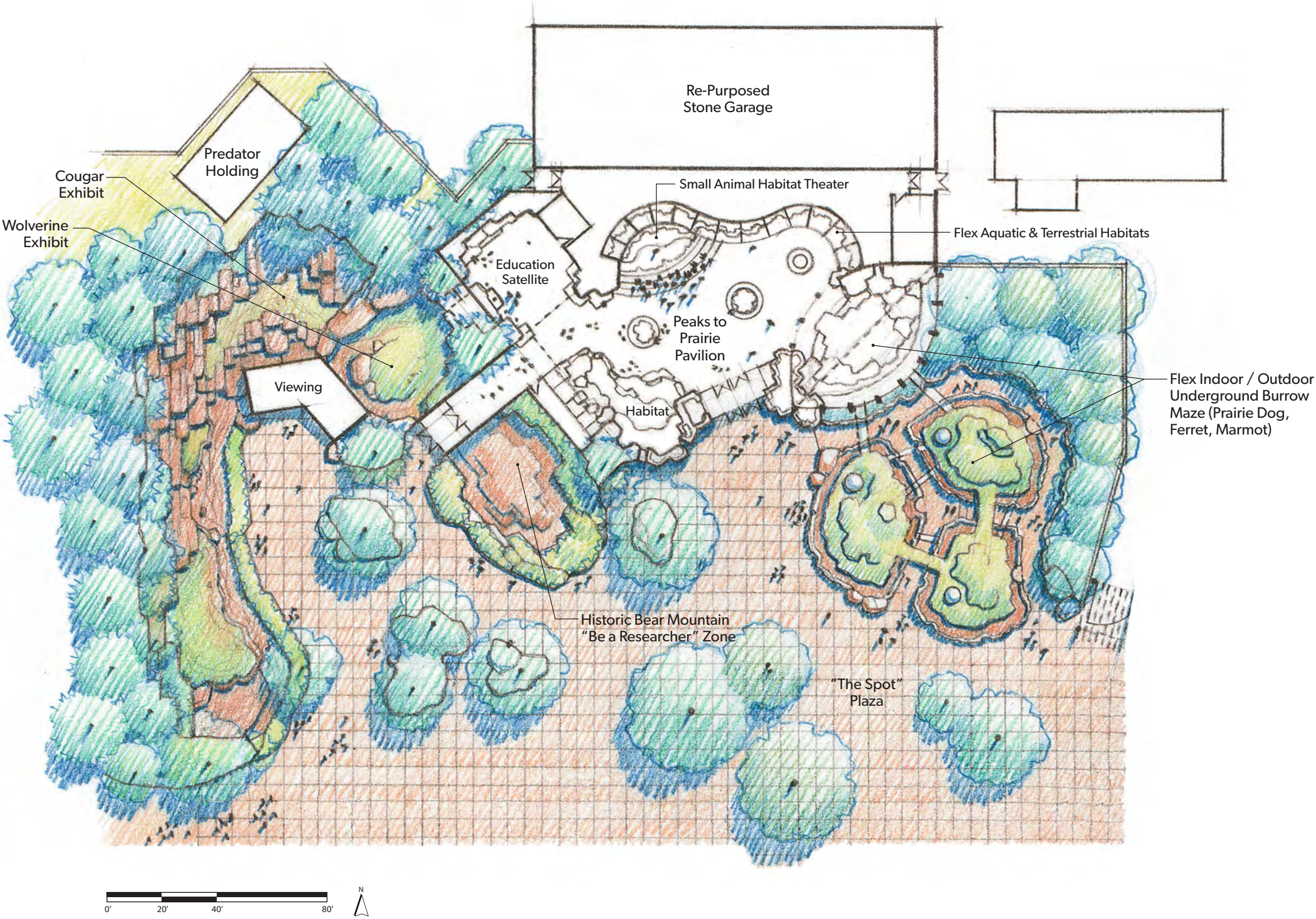
Discover how Denver Zoo is a leader in conserving species in its care, conserving natural resources, and conserving animals and ecosystems around the world.

DENVER ZOO INTO THE WILD



PEAKS TO PRAIRIE

AREA	SQUARE FEET
Peaks to Prairie Pavillion	
Education Satellite	1000
Indoor Habitat	1000
Small Animal Habitat Theatre	800
Flex Aquatic and Terrestrial Habitats	1000
Animal Areas	
Cougar Exhibit	11,000
Wolverine Exhibit.....	2,000
Predator Holding	2,300
Burrow Maze.....	10,700
Repurposed Stone Garage.....	7,500
Other Features	
"Be a Researcher" Zone	2,700





PEAKS TO PRAIRIE



Peaks to Prairie: Local Impact

Conservation Needs in our Own Backyard

Peaks to Prairie is one of the four exhibit zones within Denver Zoo Into the Wild. This zone showcases the Zoo’s conservation field work throughout its nearest focal area: the Rocky Mountain great plains region.

This hands-on exhibit connects guests to local wildlife and wild places, including prairies, mountain forests, and streams. Children and adults will have opportunities to engage in play-based or actual field research activities that foster an understanding and appreciation for how Denver Zoo helps animals. It also features the zoo’s animal care evolution by contrasting the historic Bear Mountain exhibit with a modern, sustainable indoor pavilion. Guests will also discover sustainable practices the zoo is undertaking and how they can help conserve resources and species in their own backyards.

Current local projects

Denver Zoo partners with several local organizations on conservation projects. Colorado is home to three of the five species of prairie dogs in North America. Denver Zoo supports numerous conservation projects for this important keystone species and other prairie wildlife, such as the endangered black-footed ferret.

Collaborating with other institutions, Denver Zoo created the Front Range Pika Project to engage citizen scientists in the collection of long-term monitoring data on pikas and their habitat.

The zoo also supports landscape-scale conservation: researching and providing corridors for wildlife to move between habitat areas. In Colorado, Denver Zoo supports corridor protection measures such as the Colorado Corridors Project, I-70 Wildlife Watch, the Bison Project, and the Southern Rockies Wildlands Network Vision.



Interactive exhibit features help guests connect with prairie ecosystems, as they become part of a prairie dog colony.

Anchored in prairies, mountain forests, and streams, children and adults will have opportunities to engage in activities that foster an understanding and appreciation of how Denver Zoo helps animals close to home.

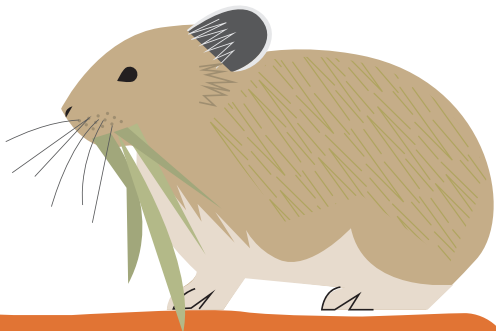




Peaks to Prairie Pavillion

A view of the Peaks to Prairie Pavilion and surrounding exhibits. Note the building's main feature: a sustainable "green" roof, with grasses and flowers, which evokes the rolling hills of the prairie. Also, in the foreground, a prairie dog exhibit features an active and charismatic species and connects the exterior and interior spaces of the exhibit.





Hands on Colorado

Guests will crawl, creep and climb through historic and state-of-the art exhibits that feature the evolutions in animal care throughout the past century. The exhibit will connect guests with local parks to explore natural areas within the state and to take action at home that protect and conserve the region’s natural resources for wildlife.

Interactive exhibit features help guests connect with prairie ecosystems, as they become part of a prairie dog colony. Guests can “dig” inside underground tunnels, look through viewing windows and encounter spaces that bring the visitor nose to nose with prairie dogs and other small creatures that share their habitat. Families can get hands-on experience with conservation field techniques as they explore play-based areas representing prairie and mountain field research, such as scaling a climbing wall to reach an eagle’s nest to count chicks, trapping, tagging and releasing an endangered black-footed ferret, or exploring researchers’ tools and instruments at a tent camp.

Peaks to Prairie Pavilion

The pavilion’s exterior adjoins the nearly 100-year-old Bear Mountain. This presents a striking contrast between outdated construction and an ecologically appropriate building that can respond to and work in harmony with the environment. The habitats within the pavilion illustrate the zoo’s progress in animal care by contrasting the historic Bear Mountain exhibit and its features with the contemporary animal care spaces, fixtures and furnishings in the indoor pavilion.

This zone’s pavilion features both prairies and peaks, with immersive aspects for the zoo’s guests and program participants. Inside the east end, the role of prairie dogs as a keystone species is highlighted; it features specialized reptiles, amphibians and birds that rely on prairie dog burrows for a place to live. The interactive aspects of the outdoor town also continue inside, allowing children to explore and discover prairie wildlife.

The Peaks to Prairie Pavilion green roof is planted with grasses and prairie flowers, curving downward on the east end to appear as a continuation of the prairie dog colony exhibit.

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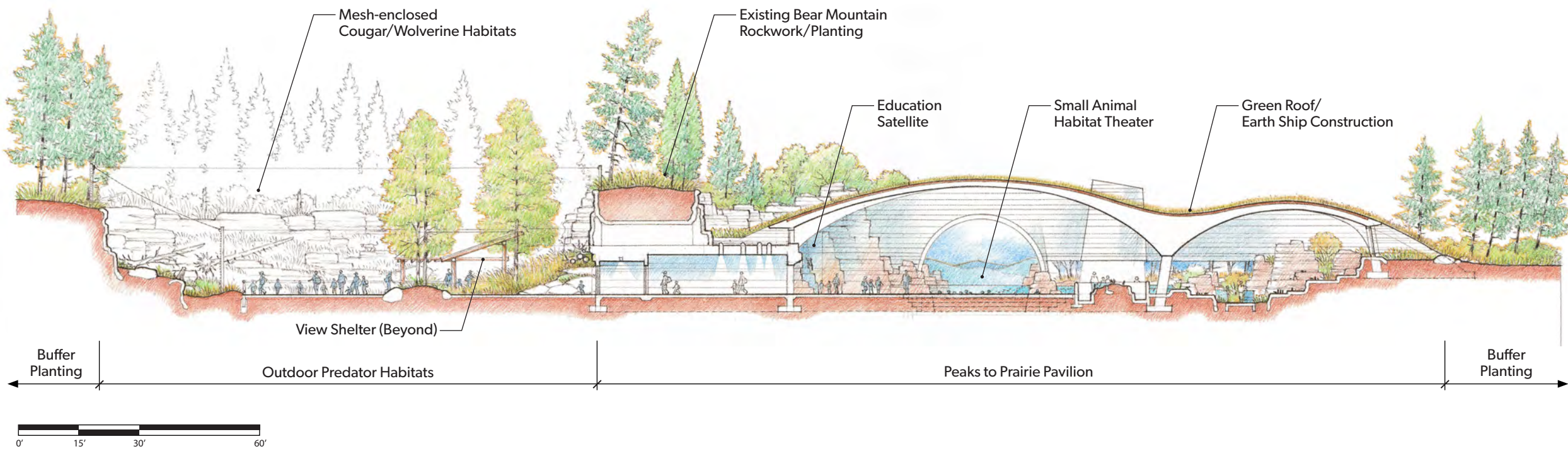
ANIMAL ADVENTURES

Guests can participate in the keeper experience first-hand in this adventure.

Keeper-for-a-day will highlight selected daily keeper responsibilities and the immediate connections keepers share with animals.



Inside the pavilion, guests will participate in animal demonstrations, see a variety of animal exhibits, and engage in activity stations, including a climbing wall.



Bison and pronghorn sculptures “graze” on the roof under the watchful eye of similarly styled grizzly bear and mountain lion sculptures at the top of Bear Mountain. Sustainable features of the building, including its roof and other energy and water conservation elements, speak to the conservation of resources theme present in Denver Zoo into the Wild, giving zoo visitors instruction on at-home conservation efforts they can employ.

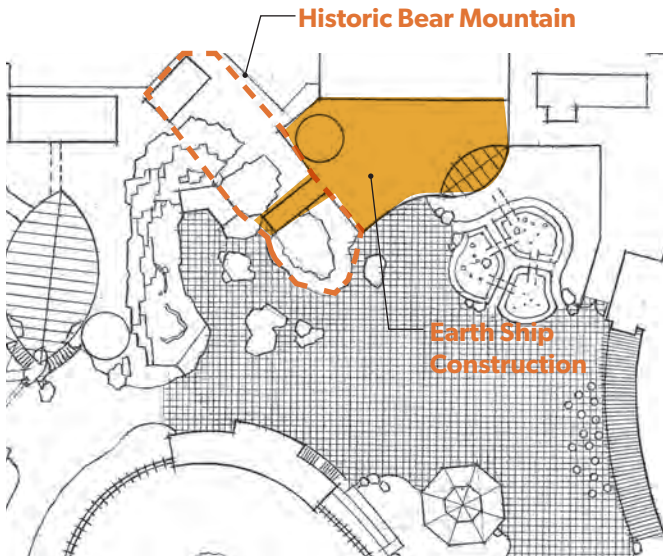
Other grassland species that aren’t so easily viewed due to their nocturnal or underground lifestyle can be exhibited in a “show-like” manner inside the pavilion in a Prairie Habitat Animal Theater. This unique concept is a blend of a traditional exhibit and an animal theater stage. Trained prairie species like barn owls, badgers, kit foxes and hawks would be transferred into this prairie-themed exhibit with animal trainers cueing natural behaviors while engaging guests. With a variety of species rotating through this experience, visitors would have reasons to visit again and again. Additionally, guests will learn about the zoo’s sustainable practices, and how they can help conserve resources and protect species in their own backyards.

Education Satellite

An associated Education Satellite, themed as a cabin in the Rocky Mountains, looks out onto a mountain carnivore exhibit and beavers swimming through their river dam home. The satellite’s classrooms provide an immersive learning environment with exclusive views into exhibits, as well as connections to animals or behind the scenes areas. These spaces have basic elements (see appendix) as well as site-specific themes or amenities designed for a specific age group. This Peaks to Prairie cabin satellite, complete with log walls, rustic furnishings, and a ‘campfire,’ is used for scheduled programs such as classes and camps. When not in use for programs, staff or volunteers can engage zoo visitors within the space, or it could be used for donor cultivation events.

Candidate Species:

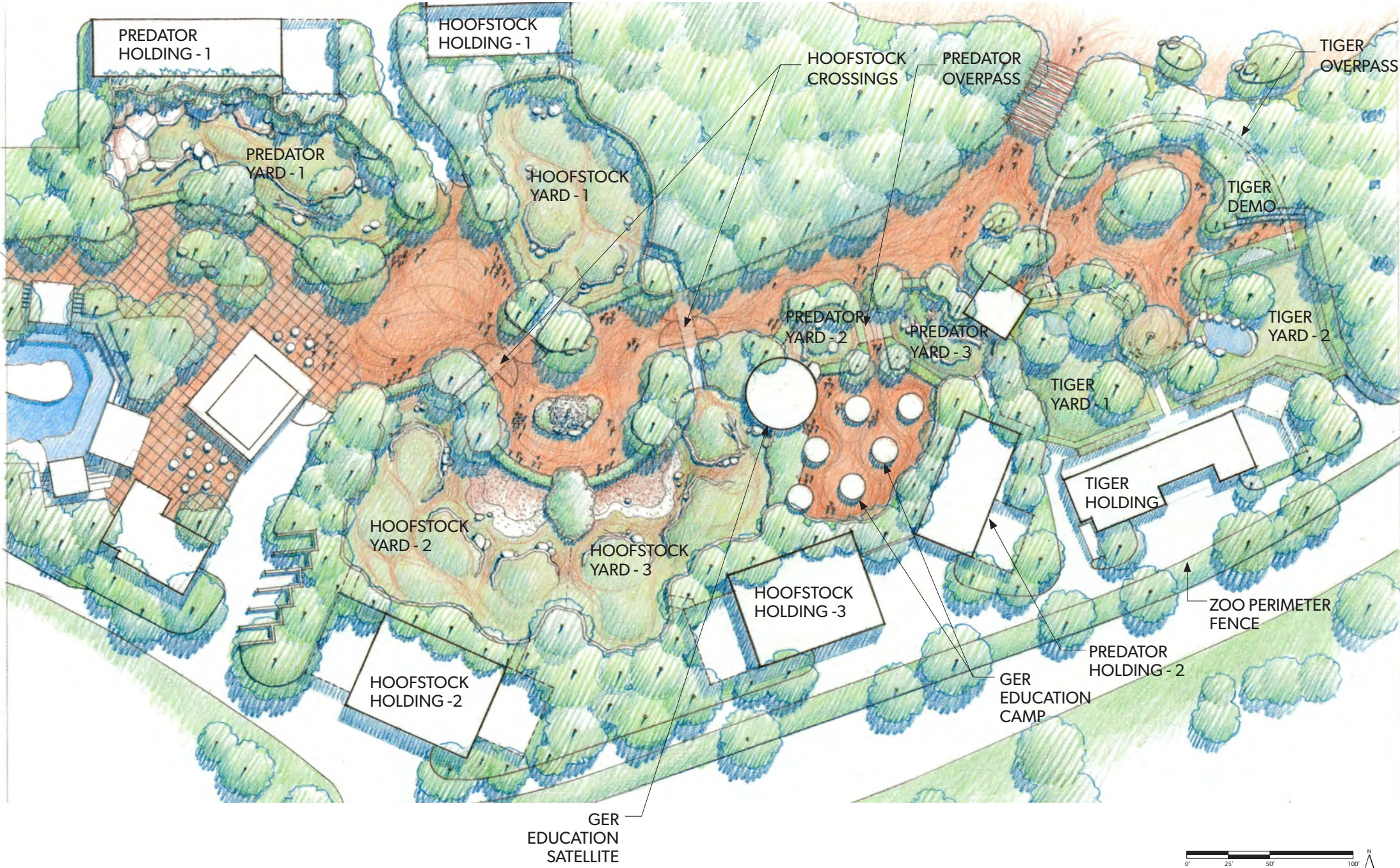
- Prairie ecosystems: prairie dogs, black-footed ferrets, burrowing owls, and reptiles
- Mountain ecosystems: mountain lion, lynx or wolverine
- Riparian ecosystems: beaver, river otter, fish



Peaks to Prairie Pavilion’s green architecture/ Earth Ship Construction cuts through historic Bear Mountain.

ASIAN PREDATORS & ASIAN HIGHLANDS

AREA	SQUARE FEET
Animal Areas	
Predator Holding - 1	5,300
Predator Yard - 1	9,000
Hoofstock Holding - 1	4,000
Hoofstock Yard - 1	9,700
Hoofstock Holding - 2	4,700
Hoofstock Yard - 2	13,000
Hoofstock Holding - 3	4800
Hoofstock Yard - 3	11,000
Predator Holding - 2	3,100
Predator Yard - 2	1,400
Predator Yard - 3	2,800
Tiger Holding	3,194
Tiger Yard - 1	6,000
Tiger Yard - 2	5,700
Other Features	
Education Satelilite (Ger)	1,500
Ger Education Camp	(6) 200





ASIA



Asia: Asian Highlands & Asian Predators

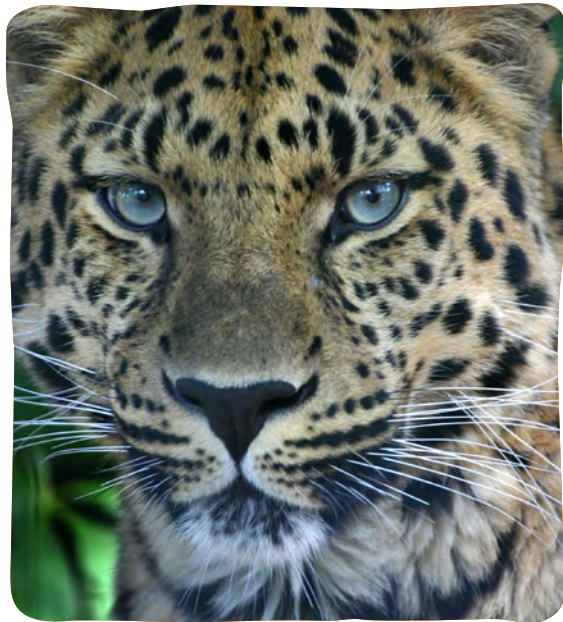
Conservation Impact

Asia is the home of our most comprehensive and robust field conservation program and Conservation Biology focal area. Since 1996, the zoo has been working in Mongolia to preserve important habitats and wildlife, with a focus on transitioning the Ikh Nart Nature Reserve from an area without any government funding or other support, to a thriving sanctuary worthy of being selected by the United Nations to serve as a model for other nature reserves and parks worldwide.

The Asia Exhibit will have two zones, “Asian Highlands” and “Asian Predators,” and is designed as a complimentary experience to the themes presented in Toyota Elephant Passage (TEP). TEP features mostly tropical Asian species while the new exhibit features mostly temperate Asian species. These animals can tolerate cold weather and will be

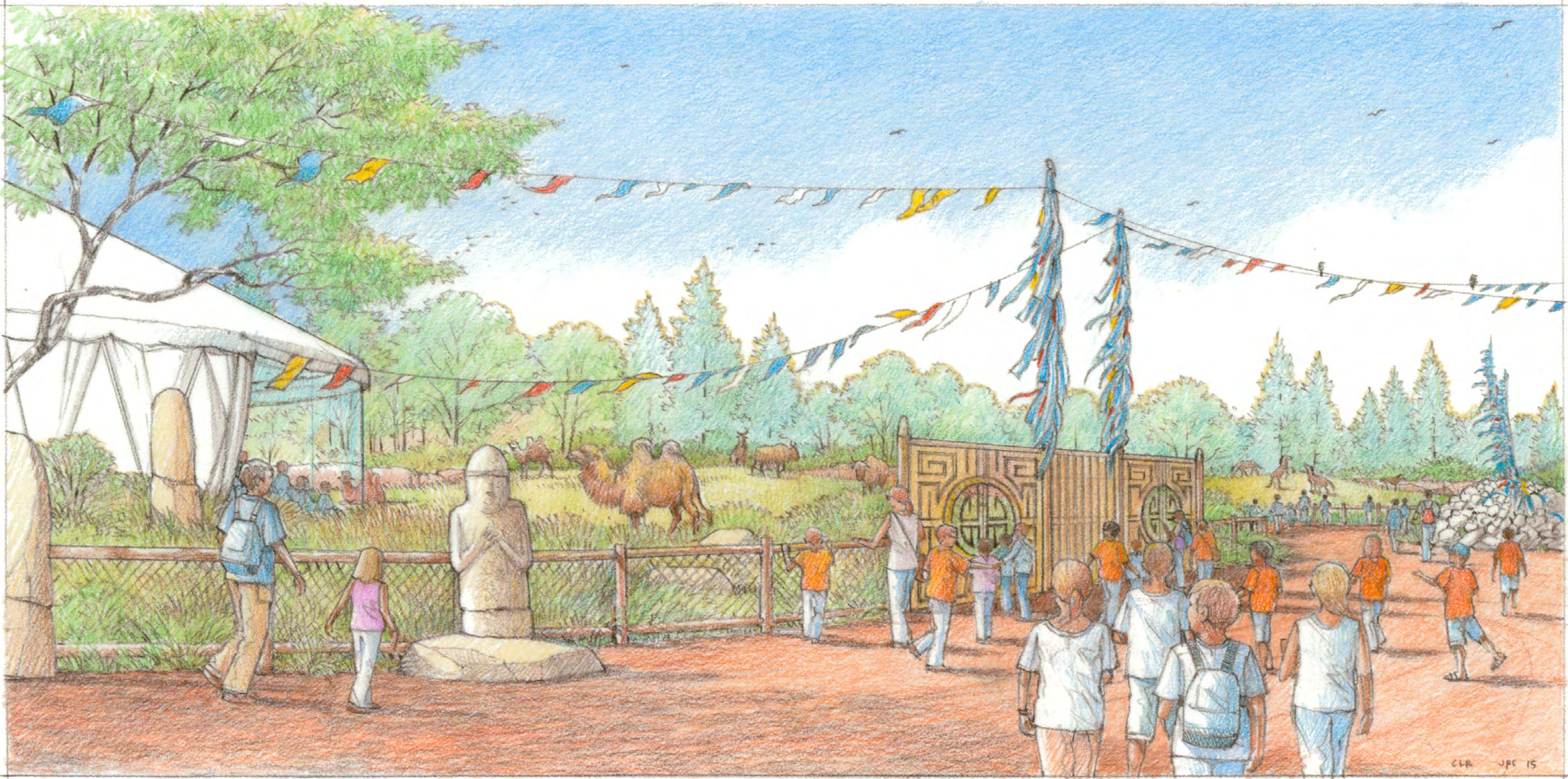
the foundation of great exhibits, comfortable being outside and active even in inclement conditions.

The predator component of the exhibit has evolved since conceived in the 1998 Millenium Master Plan, largely due to the success of Predator Ridge and its rotational exhibit model. For Asian Predators, the spaces will recreate habitats found in temperate Asian ecosystems. Up to three big cat species will shift through multiple habitats and make choices within these exhibits, providing mental and physical enrichment. Also, the predators featured here (Amur tiger, snow leopard, and Amur leopard) are integral to Denver Zoo’s story. The Zoo has been extremely successful breeding these endangered AZA priority program species and anticipates even greater success with this new exhibit.

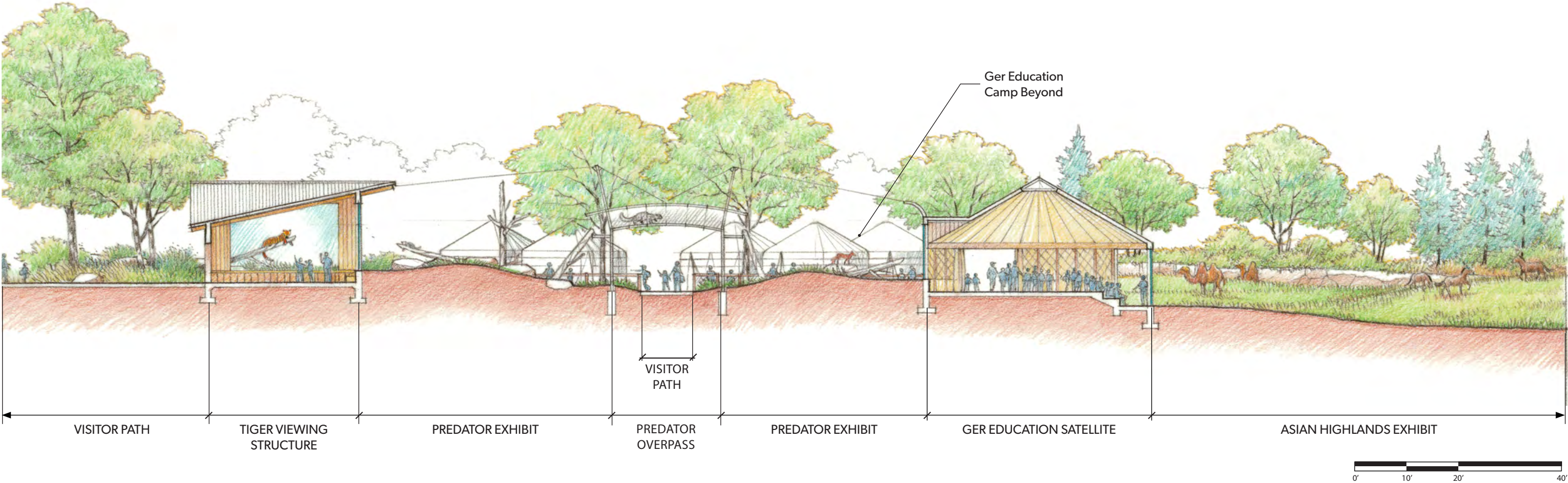


Since 1996, Denver Zoo has been working in Mongolia to preserve important habitats and wildlife, with a focus on transitioning the Ikh Nart Nature Reserve from an area without government funding or other support to a thriving sanctuary worthy of being selected by the United Nations as a model for other nature reserves and parks worldwide.





Asian Highlands



For Asian Highlands, many current and past hoofstock species are envisioned as candidates for the steppe (grasslands) habitat. Prezwalski’s horses, Bactrian camels and takins are all animals that have lived and bred at Denver Zoo and are all from the Asian focal area. A replica version of the field research site from Ikh Nart would be incorporated and used for guest engagement, connecting zoo visitors with the important conservation efforts Denver Zoo is leading in Mongolia. The field research set will also be used for overnight campouts conducted by the Education and Volunteer Services Department. This tented camp would feature several small or a few large, Gers (traditional Mongolian tents), accommodating sleeping arrangements for up to 50 people.

Education Satellite

An Education satellite facility in the Asian Predators exhibit transports program participants to a mountain forest. This satellite could be themed as an ethereal structure blending into the birch forests where Amur tigers and leopards roam, or a traditional home reminiscent of Mongolian or Nepalese mountain cottages, native to the snow leopard habitat.

Candidate Species:

Amur tiger, snow leopard, Amur leopard, takin, Prezwalski’s horse, Pallas Cat, Bactrian camel, d’holes, sloth, cinereous vulture, bustards, and cranes

ANIMAL ADVENTURES

Guests can participate in the keeper experience first-hand in this adventure.

Keeper-for-a-day will highlight selected daily keeper responsibilities and the immediate connections keepers share with animals.

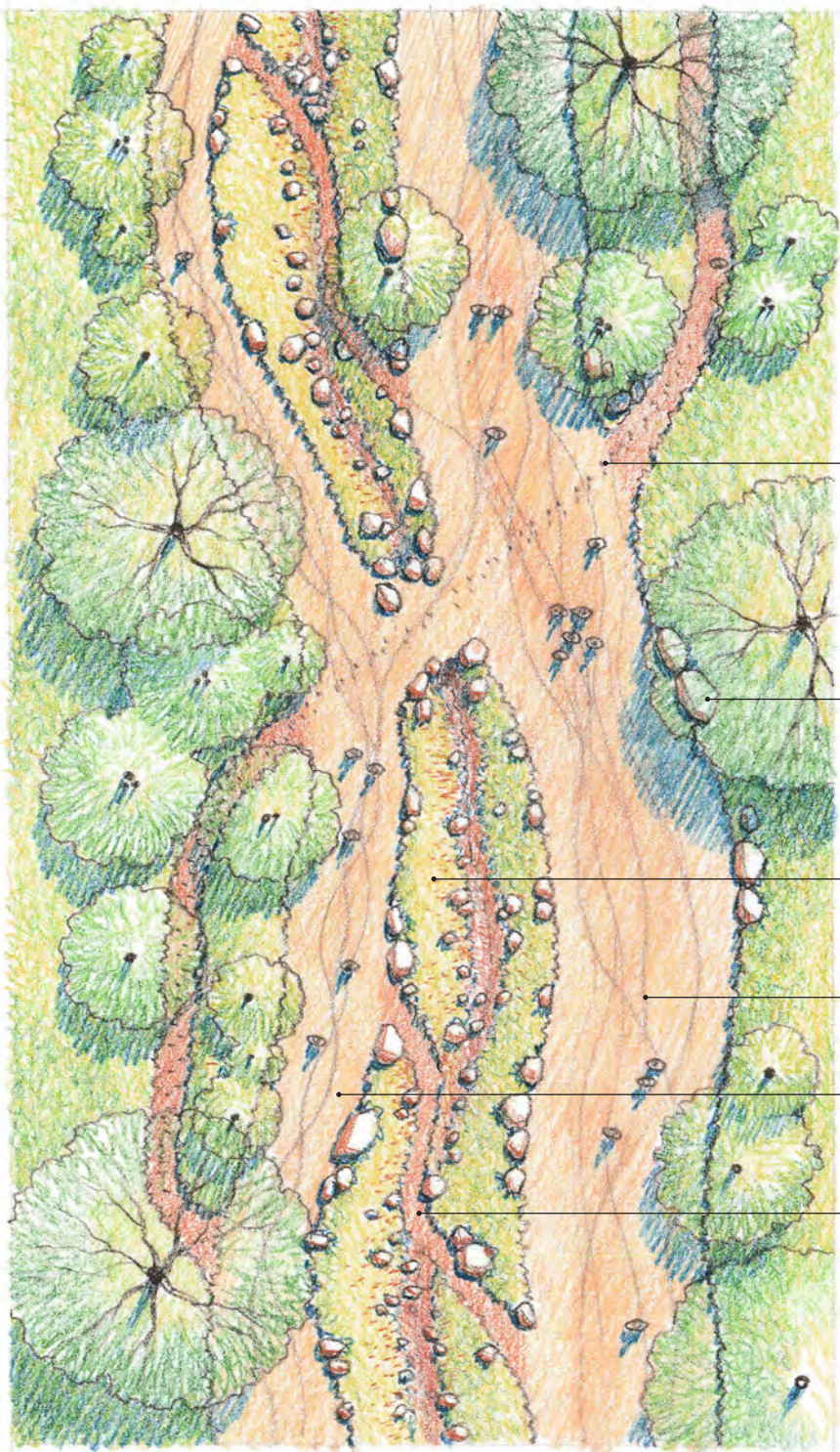
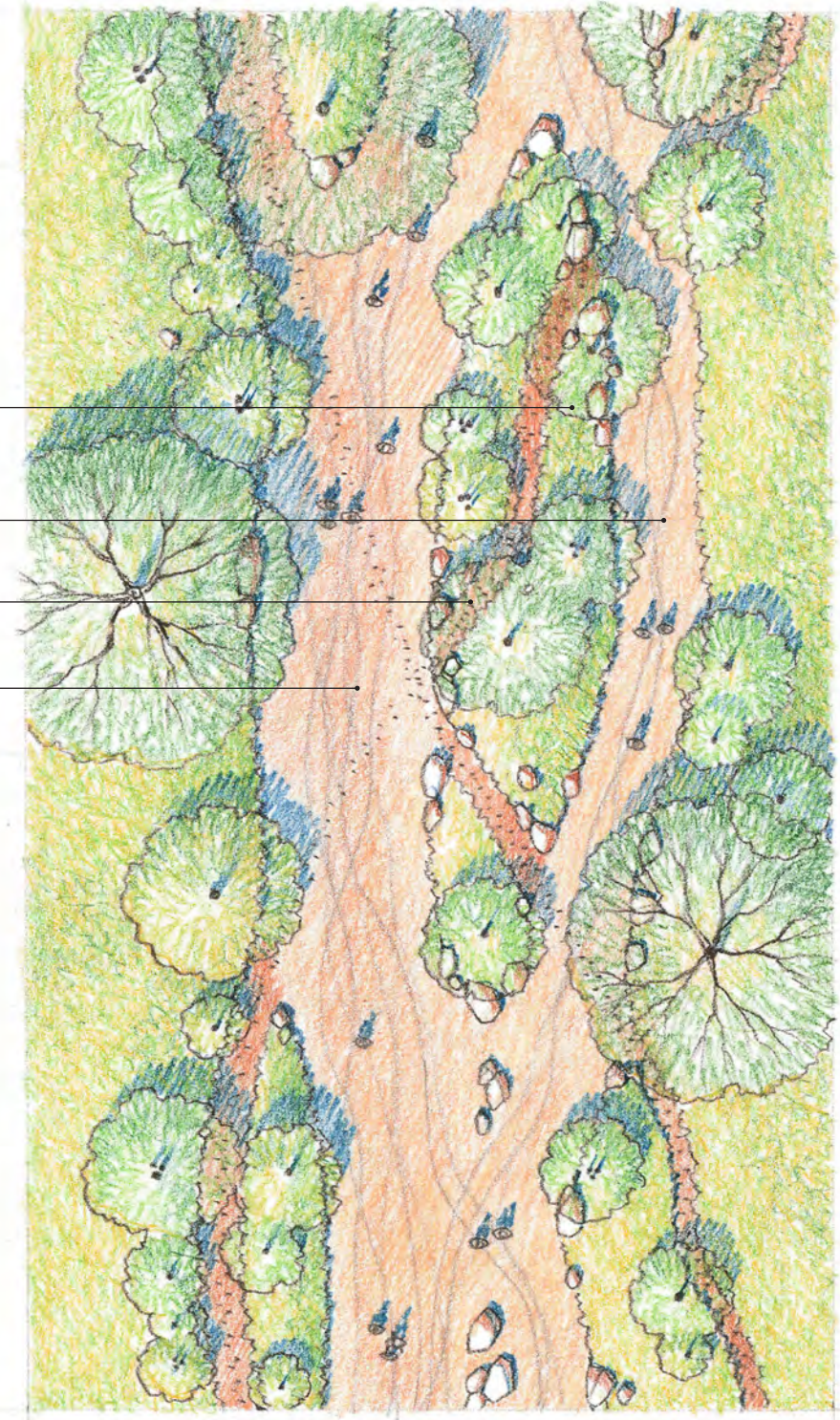


BRAIDED PATH
PLAN DRAWINGS AND SECTION

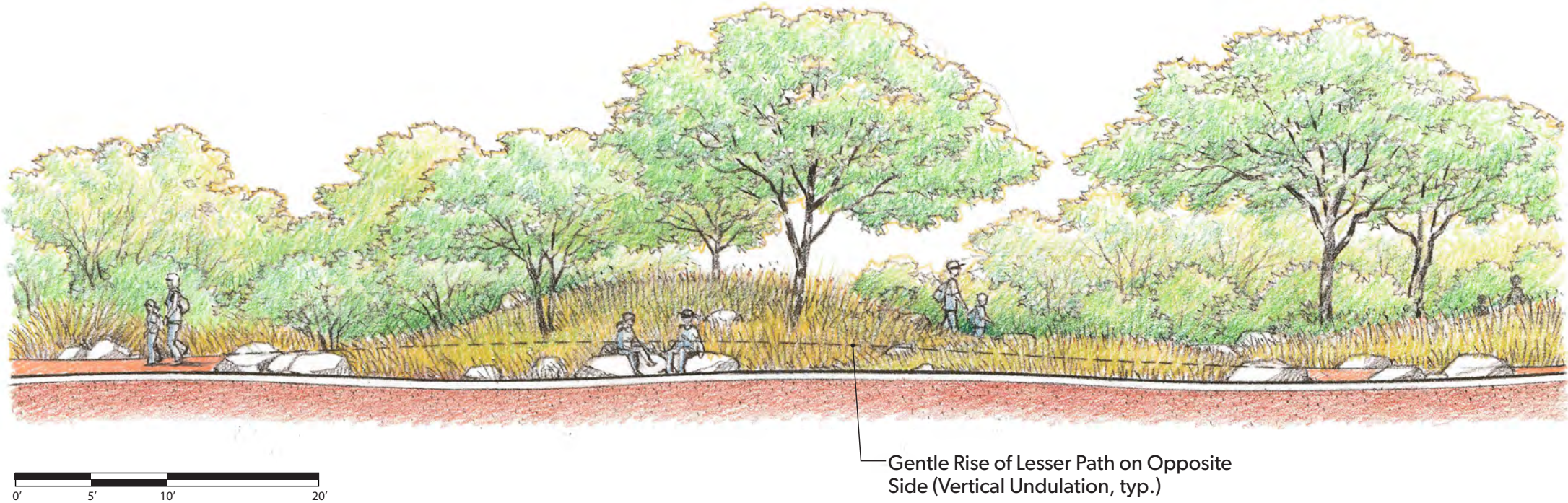
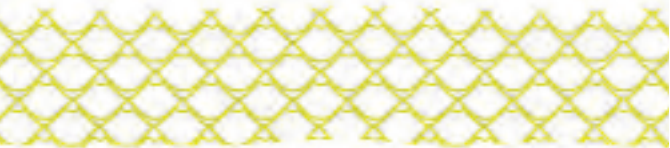
Left: Hummock/Mounded

Far Left: Central Swale

Opposite: Braided Path Section Elevation



BRAIDED PATH PLAYSCAPE



The Braided Path

Exploring the zoo takes on new meaning at the Braided Path. Unlike conventional Zoo paths with only one option, the braided path is designed to offer an immersive, choice-filled educational experience. The path encourages visitors to select options within their environment, choosing between different path types, plantings, and sight lines.

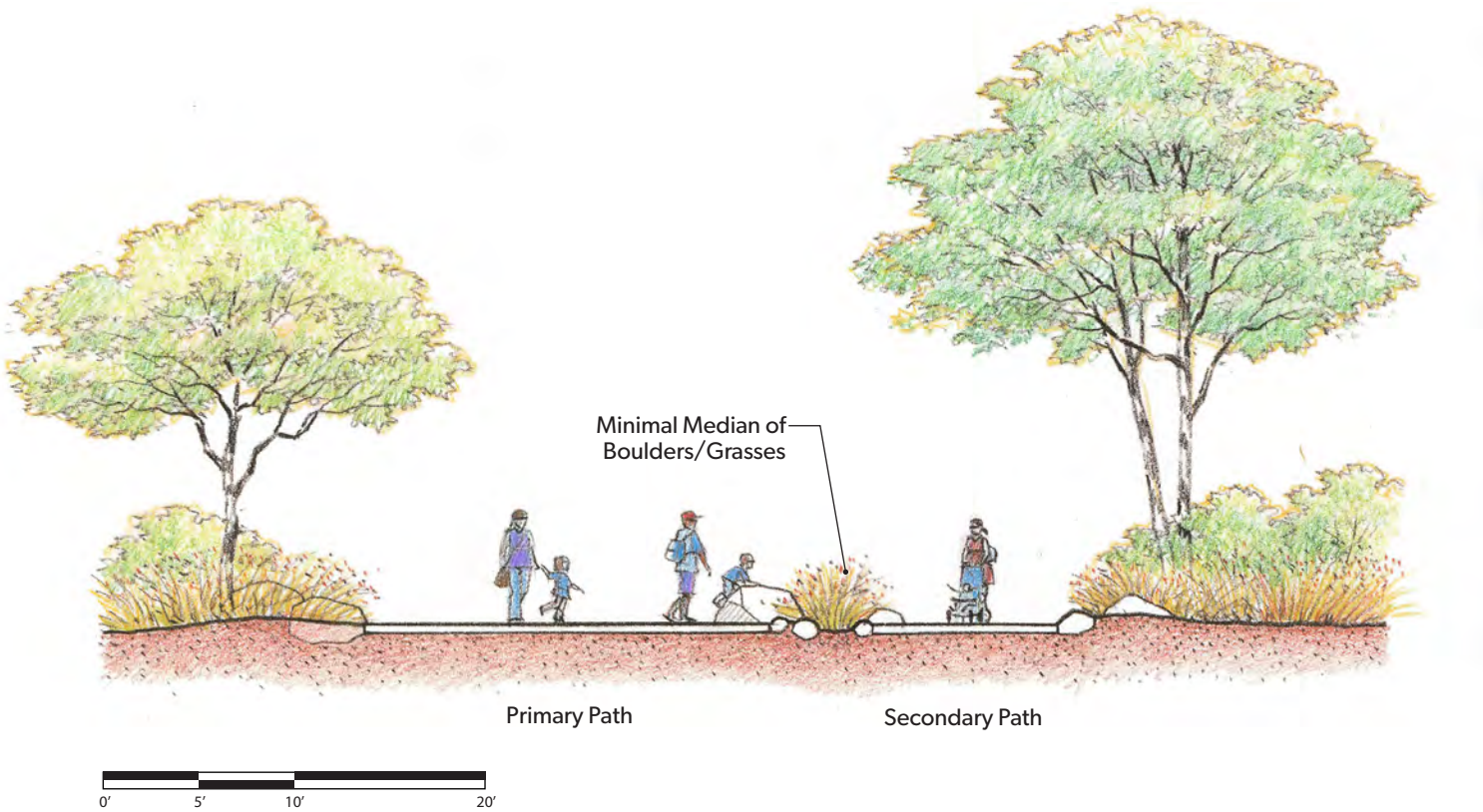
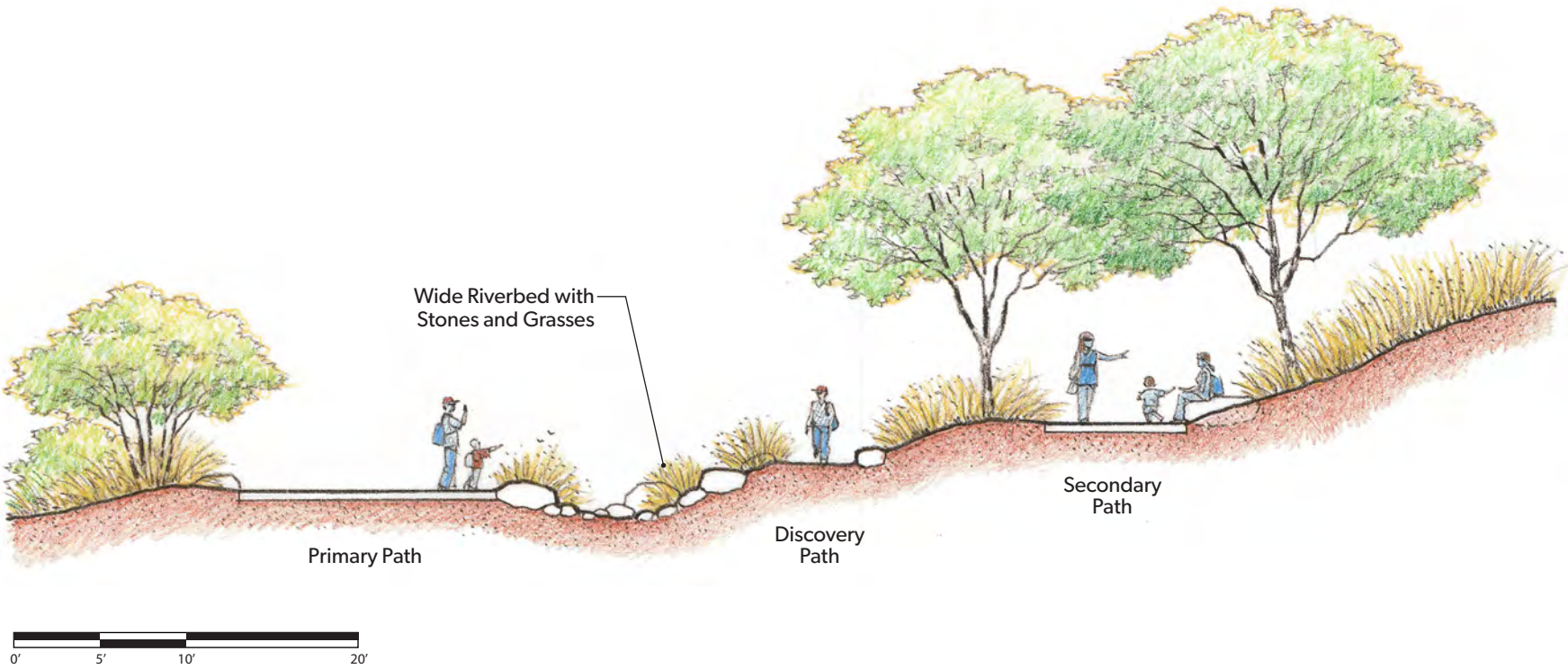
It also features storm water processes and management as design elements. During rain events, flow will be directed through planters which will hold, filter, and slowly release water. Other water paths may lead to storm inlets which can demonstrate the importance of clean waterways. The experience on this path can be guided or unguided, led by a facilitator or realized independently and intuitively. This confluence of zoo landscapes, visitor experiences, and natural processes on the zoo campus will connect zoo guests with their immediate environment.

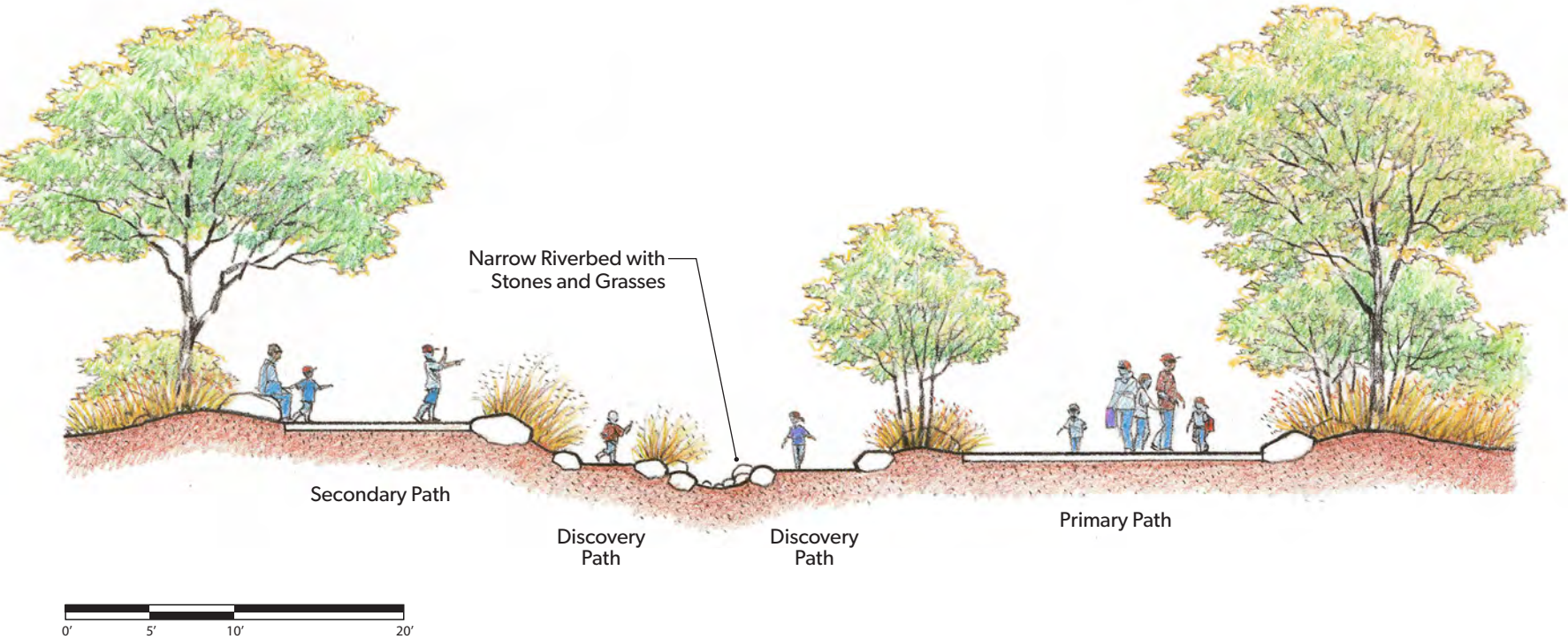
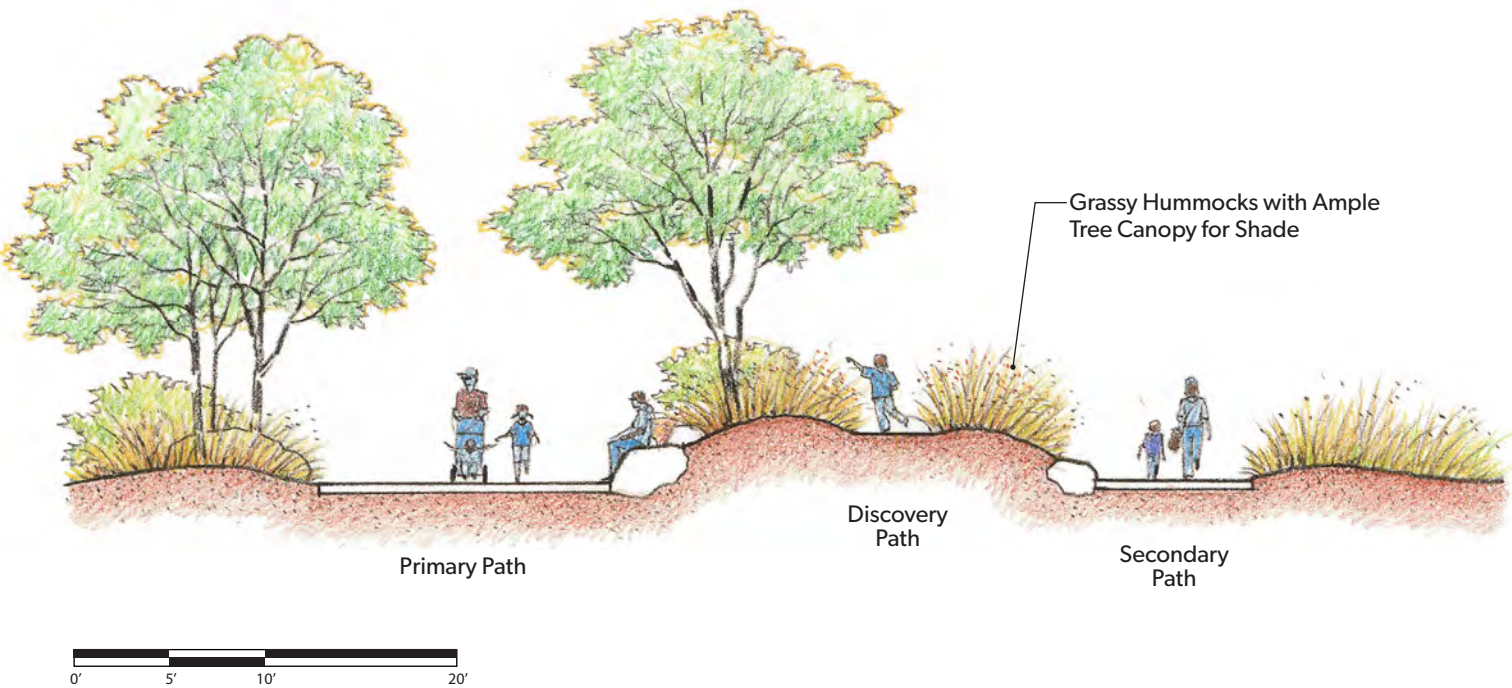
This confluence of zoo landscapes, visitor experiences, and natural processes on the zoo campus will connect zoo guests with their immediate environment.



BRAIDED PATH SECTIONS

- Top: Wide Condition at Slope
- Below: Narrow Condition
- Top Right: Wide Condition with Central Landform
- Bottom Right: Wide Condition with Central Dry River Bed





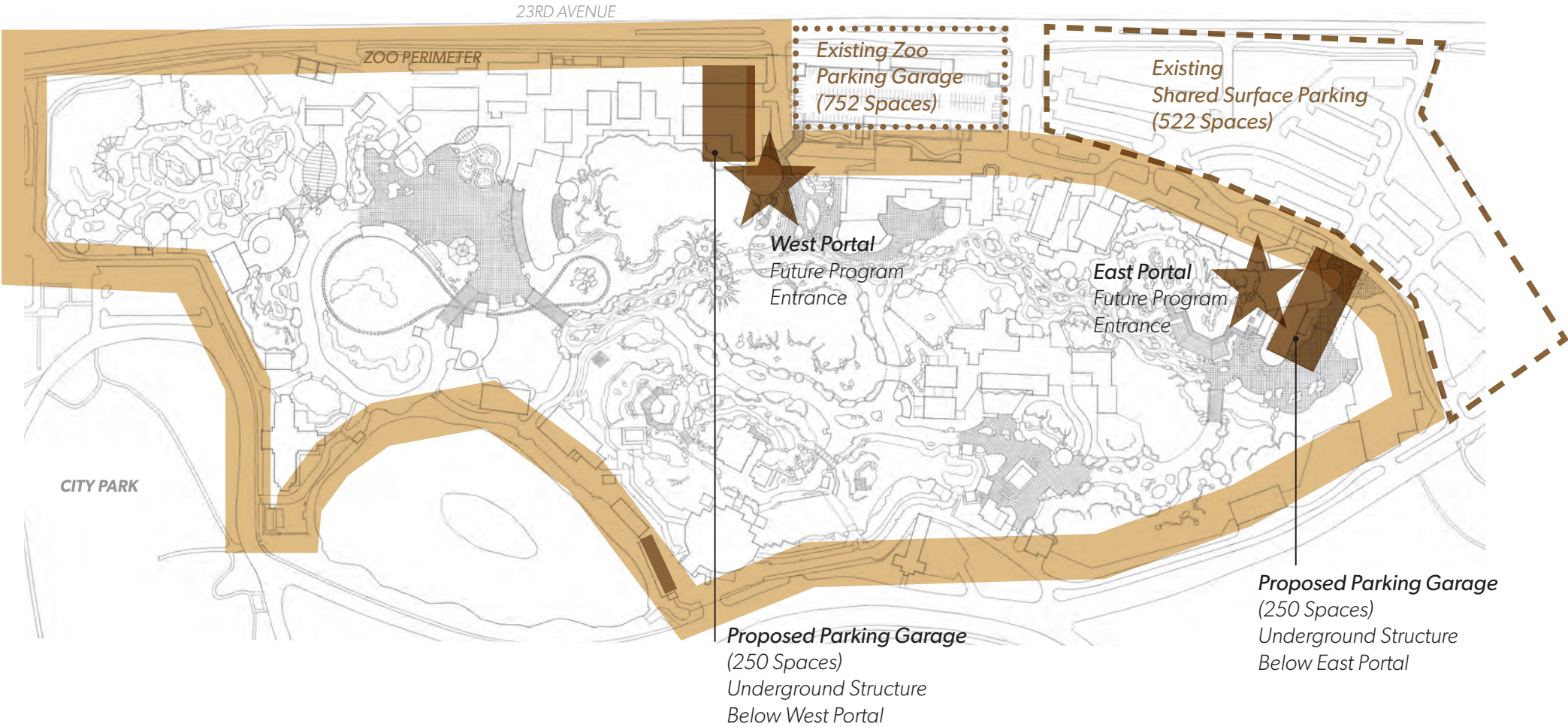
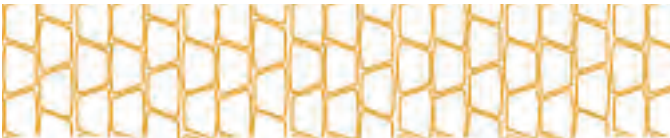
DISCOVERY PATH

More than a major guest route, the Braided Path encourages play, movement, and exploration through a variety of levels and features. The path will also provide experiential learning about stormwater concepts through active and passive programming.



ZOO/ COMMUNITY INTERFACE

PERIMETER • PARKING • ENTRY



.....

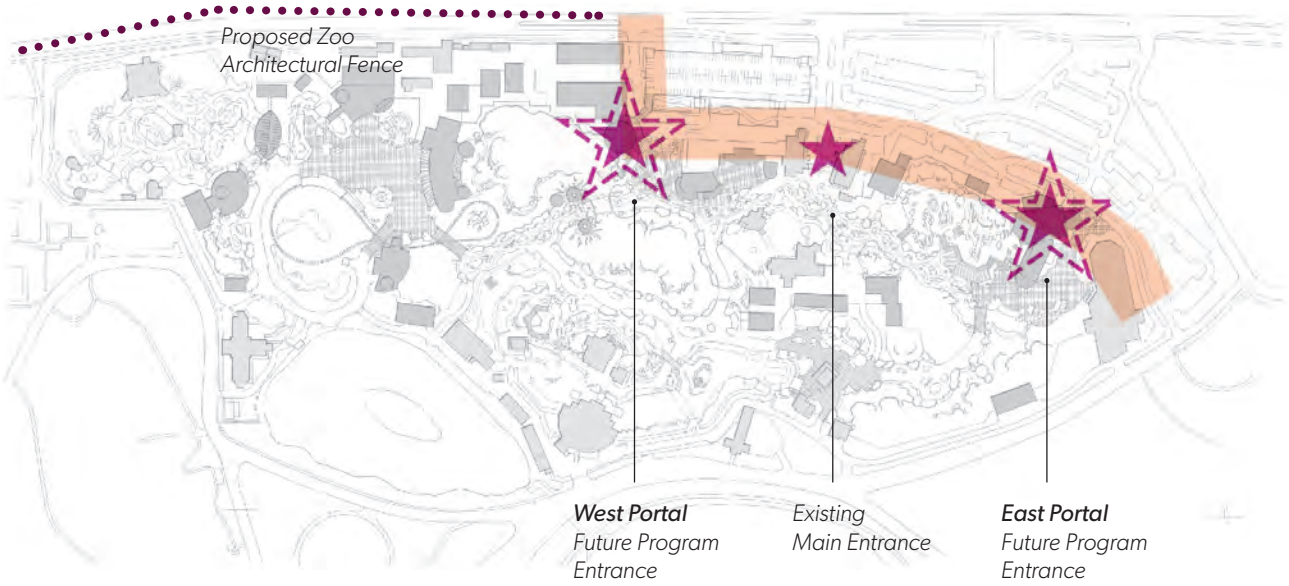
Zoo in the Park

Denver Zoo is within and part of City Park, and has been there since 1896. The interface has changed through the years and reflects the different operational realities that have evolved over time. The interface between Denver Zoo and City Park and the greater community cannot be described as only one thing. There are different conditions and different functions of each section of the interface. The north side of the Zoo on 23rd Avenue has distinctly different opportunities and constraints as does the south side of the Zoo. The interface conditions have been studied in this plan and the below design objectives have been developed to guide and identify improvement projects.

Design Objectives

1. Celebrate Visitor Entry and Arrival
2. Improve parking and circulation
3. Visually integrate into City Park landscape
4. Continue to build partnerships with neighboring institutions
5. Soften Zoo to Park edge at the Waste Management Building
6. Meet Safety Standards

Zoo interface improvements can be organized into three categories and will be described in more detail in the following pages: Entry Frontage, Park Frontage, and Parking. The Waste Management Building, part of the Park Frontage, will be described separately as it has a specific set of conditions and opportunities.



Entry Frontage
East and West Portal/ Iconic Architecture

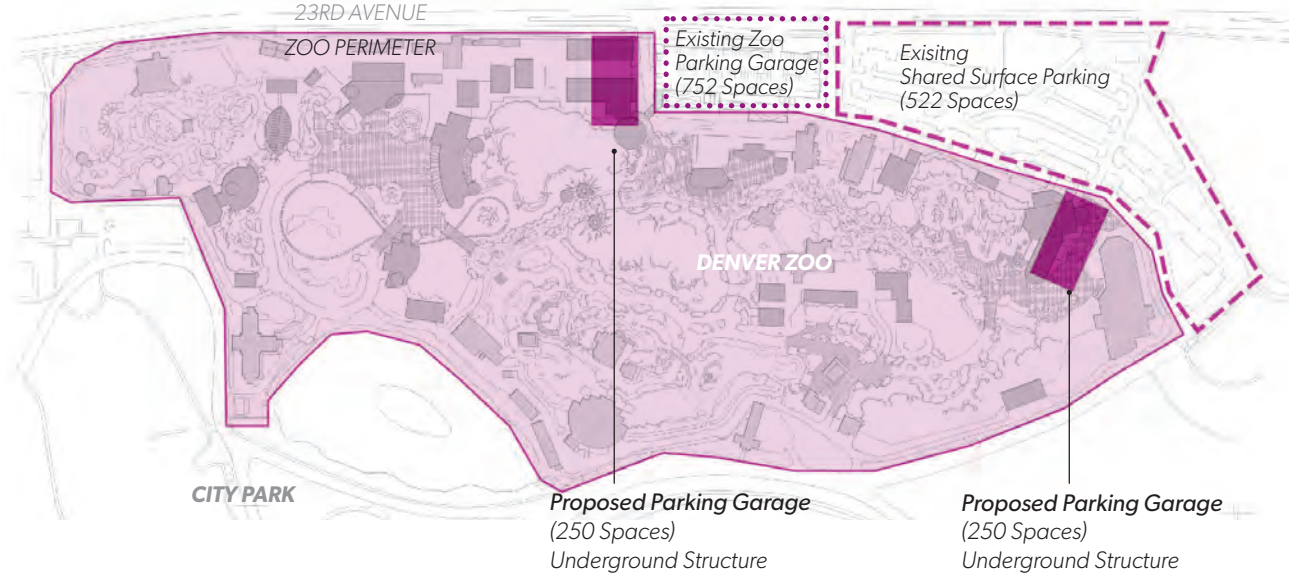
The visibility of the zoo’s northern edge along 23rd Avenue provides an opportunity to develop iconic architecture and landscapes along 23rd Avenue. The frontage will advertise the Zoo not only as a place to see animals, but as a venue to host large special events in a unique setting and provide group educational experiences not found anywhere else in Denver.

Two program entrances that will feature iconic architecture visible from 23rd Avenue have been proposed. The East Portal (p.21), part of the Coastal exhibit and the West Portal (p.19), part of the African exhibit and connected to the Veterinary Hospital (p.19).



Park Frontage
Integrate into park visually and open access points to Zoo

The south side of the Zoo is also the middle of City Park. Understanding the role of this edge to a Park user is essential as we continue to make improvements along this perimeter. To visually integrate into the park can mean many things and we will continue to work with Parks and Recreation and community members as we move forward. The Zoo/Park interface at the south side of the zoo has various conditions which require multiple strategies for improvements: plantings, public art, perimeter fence. Specifically, the Waste Management Building presents a unique opportunity to celebrate Denver’s commitment to sustainability and Denver Zoo’s goal of zero waste by 2015. Design strategies will be discussed in the next pages.



Parking
Increase parking

Denver Zoo is within and part of City Park and therefore all parking is shared by zoo guests, park users and Denver Museum of Nature and Science (DMNS) guests; the exception to that is any parking within our management boundary does not have to be shared. Parking has been a challenge since the 1980’s prior to the construction of two parking garages within the park, one at DMNS and one at Denver Zoo. Despite these additional spaces, parking continues to be an issue as DMNS and Denver Zoo grow in annual visitation and as the park continues its success.

There have been a number of operational changes implemented to relieve the pressure on parking; staff and volunteers are asked to park off site during the busy months and alternative transportation is incentivized. However, despite these efforts, parking remains to be a challenge.

This plan increases the total number of spaces within the Zoo’s perimeter by adding structured, underground parking under the proposed Veterinary Hospital and under the East Portal. Both structures are shown to have 250 spaces each.



I. Vine Wall



H. Lorikeet - Congo



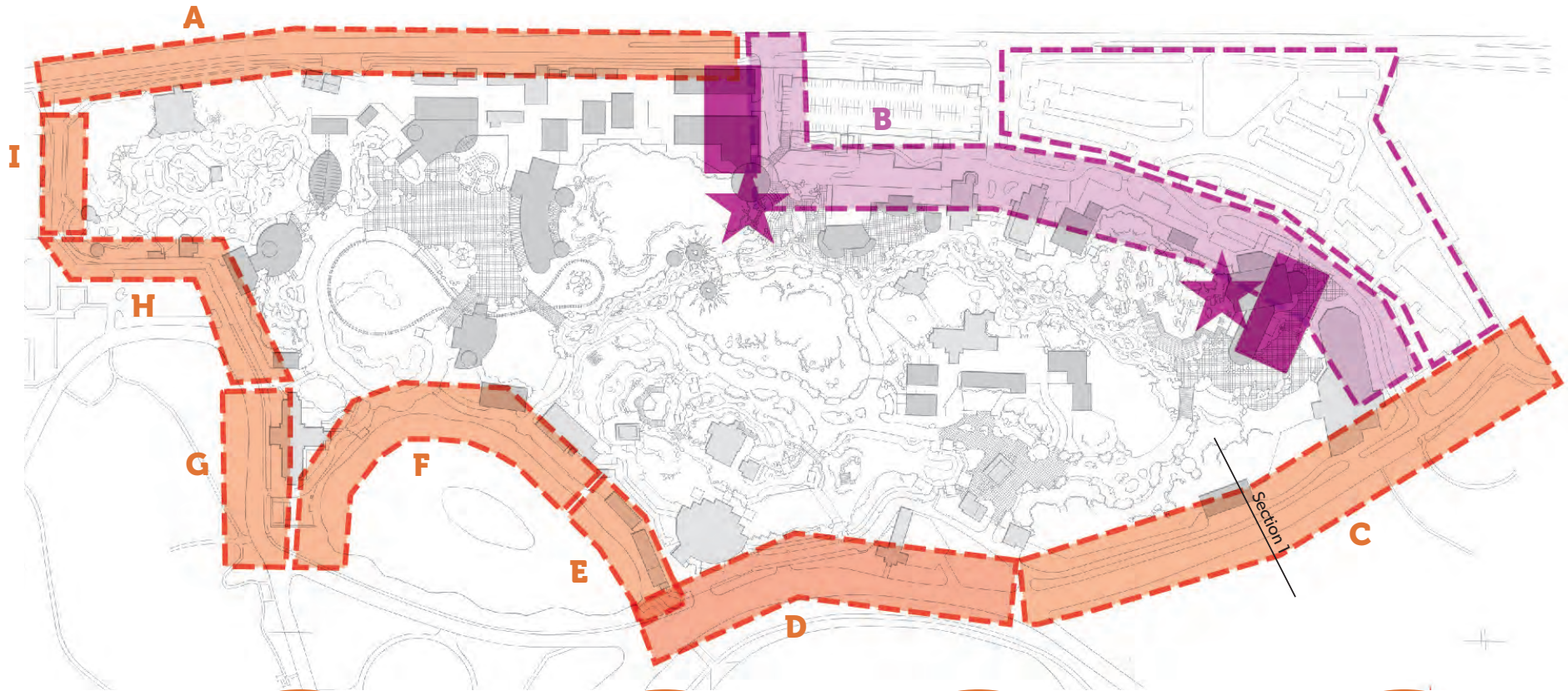
G. Art Wall



A. 23rd Avenue



B. Zoo Entry Frontage



F. Duck Lake Edge



E. Waste Managment Building



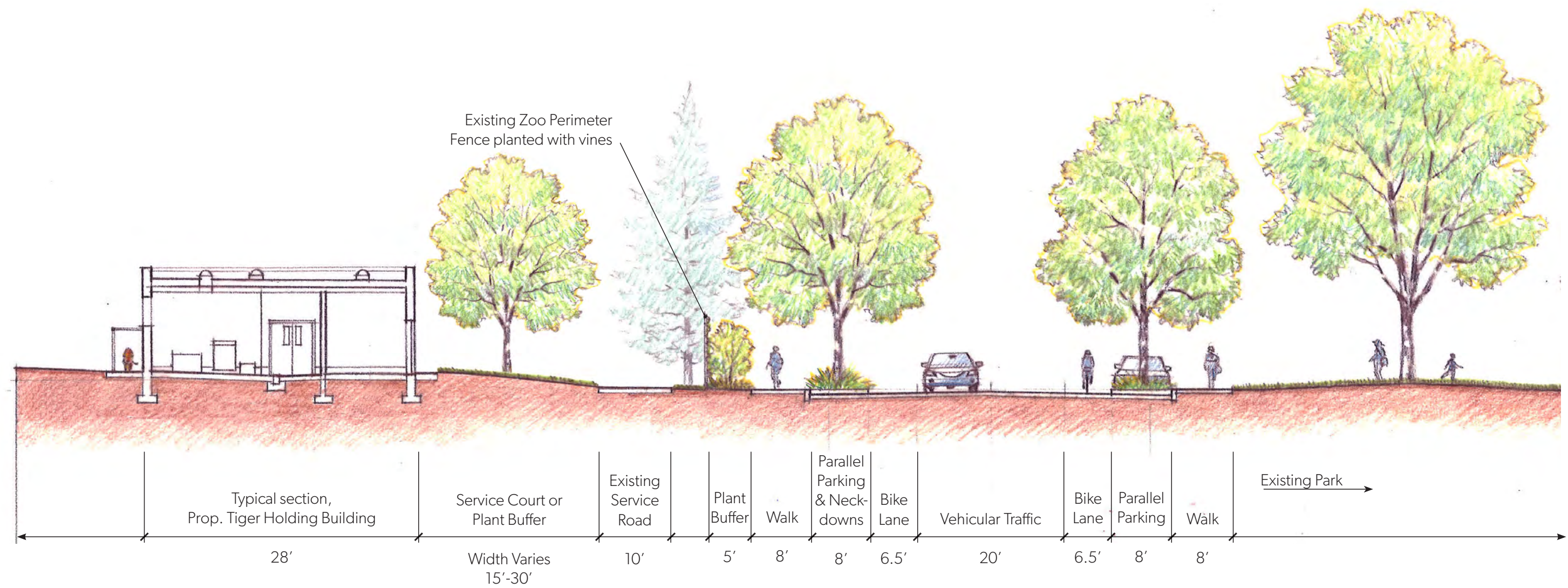
D. Park Blvd. 2



C. Park Blvd. 1

Zoo Perimeter Fence

The diagram to the right describes continued improvements to Denver Zoo’s perimeter fence. There are some sections that will remain unchanged as they are either recently improved or do not require updates or changes.



Section 1

C. Park Boulevard 1 at Proposed Tiger Barn

Proposed Park road, Park Boulevard 1, and zoo barn section at the proposed Tiger barn (area C, left). More detail can be found on the Park Boulevard 1 section in the *City Park Circulation and Use Plan 2011*.

Waste Managment Building

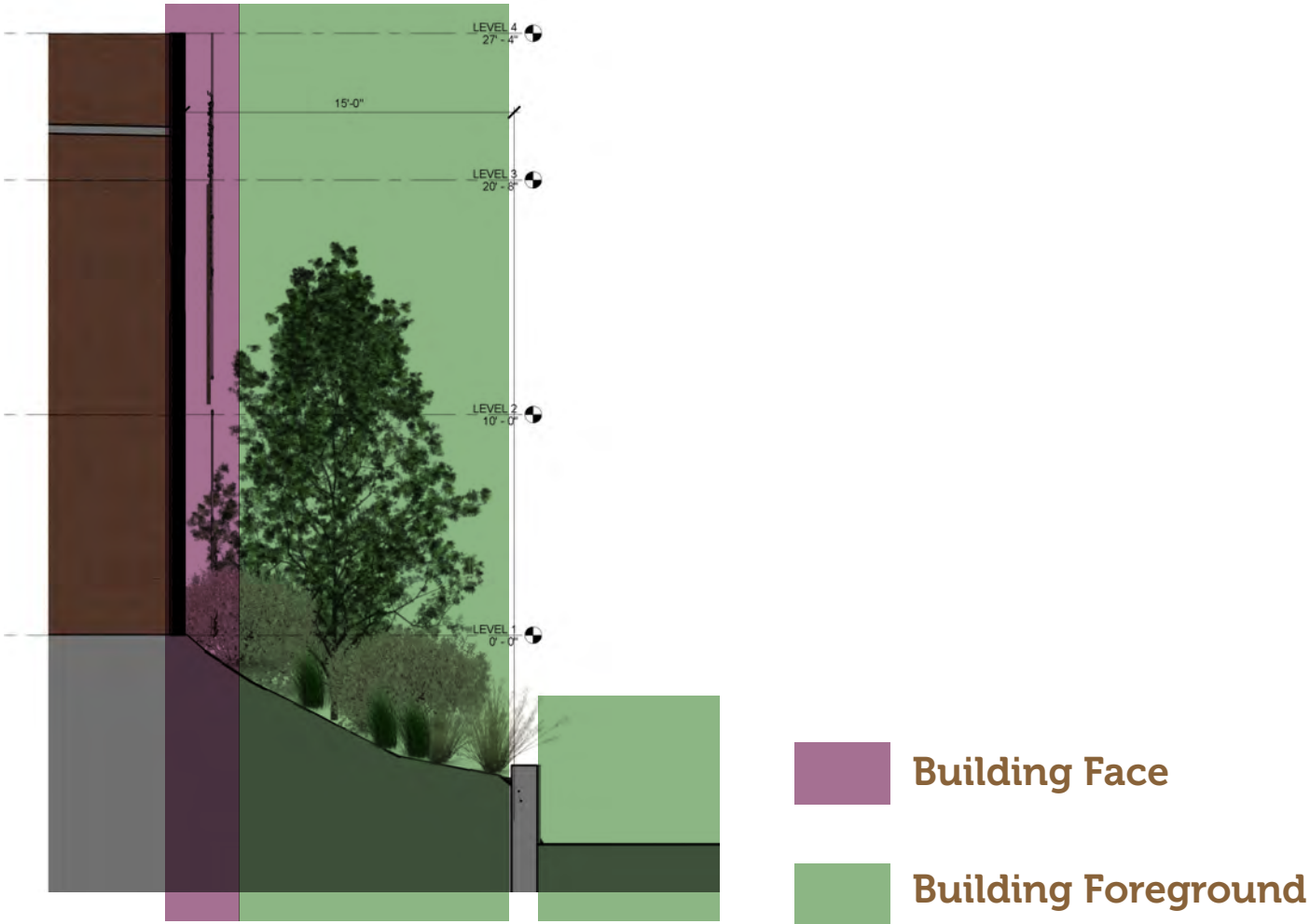
To activate and visually integrate the facade of the Waste Management Building into the City Park Landscape, multiple design strategies will be employed but can be broken down into two parts:

Buidling Face:

The building face offers opportunity for art or murals, an architectural treatment, and/or planted with vines. See the following page for many possibilities that will continue to be explored.

Building Foreground:

The Foreground of the building will be heavily planted with species appropriate to the challenging planting conditions to create a foreground and sense of depth to integrate the building facade into the existing landscape.



Option 1



Option 4

Facade Treatment

Formal execution of facade elements explored.



Duck Lake

View of Duck Lake from City Park.

*Building Face:
Facade
Treatments*



Mural or other Fine Art



Vines



Architectural Screen

*Foreground:
Planting*



Trees



Wetland Plantings



Grasses and Shrubs

Waste Management Building Facade: Design Possibilities



Operational Projects

Staff Hub

Zoo employees use a variety of points to begin and conclude their shifts, work in many different areas, and use several separate break spaces. This is due to the variety of work happening on any given day at the zoo. A single staff hub combines most of the employee resources, functions, and features currently spread throughout the zoo campus. These include a universal information center to communicate employee news and updates, updated restrooms and new shower/locker facilities, computer work stations for staff without access to office spaces, a dedicated and secure employee entrance, and a common break area with meeting spaces, private spaces, tables and seating, and a staff kitchen. While it is not a direct public or animal project, it addresses needs identified in the master planning process for additional resources for the employees – the committed individuals who dedicate their work to the zoo and its mission. It also creates opportunities for random interactions and collaborations between work groups that may not typically share the same work areas. These planned and unplanned meetings can also increase the sense of community among zoo employees.

Deferred Maintenance

Many major capital improvement projects identify and provide solutions for major exhibit needs for the zoo. Often underestimated are the less notable but equally important maintenance repairs and preventative work that is part of managing a zoo campus. Current assessment of the zoo’s facilities has identified a robust list of maintenance projects specifically addressing major repair or preventative projects which allow the zoo to continue to operate. The estimated total cost for this work totals over \$9 million. Some examples include: addressing roof leaks in zoo buildings throughout the campus, mechanical and plumbing repairs for the 1959 pachyderm building, and extensive hardscape work on service drives and visitor paths. In many cases, the entirety of this work won’t be performed within the scope of the major projects outlined in the Master Plan. However, the maintenance of existing and aging facilities in need of major work is necessary to avoid catastrophic failure of the zoo’s structures and landscapes.

Sustainability Retrofits

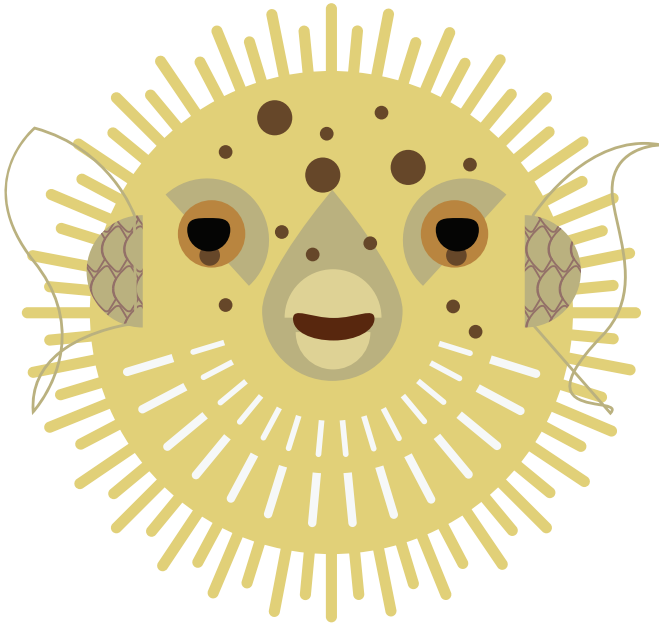
As part of its Sustainable Management System, the Zoo continually seeks methods and innovations to improve its use and management of natural resources. When possible, zoo staff and consultants analyze and evaluate current facilities and operational practices and determine which areas could yield sustainability gains through modifications. Some examples include: switching irrigation zones currently fed with potable water to tie into re-use water feeds, swapping out lamps and fixtures to conserve electricity, and redesigning mechanical systems to operate more efficiently.

Small Capital Projects and Infrastructure

Each department has an opportunity to request improvements, modifications, and renovations that will support departmental needs and enhance Zoo wide experiences. The small projects are focused on: animal enrichment and health, education, guest experience, human capital, revenue generation, safety and sustainability. Projects are designed to address the strategic imperatives.

Review Process

Each Master Plan project will go through an extensive, internal, design and design review process with stakeholders and technical experts. Designs will also be reviewed and subject to approval per the Zoo’s Cooperative Agreement with the City and County of Denver. Denver Zoo is committed to our partnership with Denver Parks and Recreation and City Park staff. Denver Zoo will continue to work together with Denver Parks and Recreation to support common interests including parking, infrastructure improvements, and design solutions for Denver Zoo, City Park, and City Park users.





Below: Drought-tolerant plants in Denver Zoo’s Front Entrance

In keeping with Denver Zoo’s promise to uphold a sustainable future, projects have been undertaken. While the recycling program and new Waste to Energy system and large and impressive projects, other smaller installations take place all of the time. The irrigation system is currently being converted to recycled water. Influenced by Denver Water’s local conservation goals, storm and waste water streams within the zoo have also been separated to help improve the output water quality.

Phasing

Master Plan Phasing Criteria

The phasing for any master plan is a result of the analysis of many complex and dynamic factors. Some of these factors are inherent in the physical facility; others are external factors that have an impact on strategy and implementation. Final phasing and funding strategies will be approved by the Board of Trustees.

Phasing criteria to be considered:

Facility Needs

The specific needs of the facility as buildings, grounds, and infrastructure in varying stages of age, condition, technology, relevance, etc.

Animal Collection Planning

The short, medium, and long-term animal collection plans as developed for our goals as well as the greater goals of zoos and animal needs around the world.

Construction Sequencing and Impacts

The location, size, duration, and impacts of specific projects or project components on the zoo campus, adjacent land uses, and on visitor and operations.

Stakeholder Feedback

Input from visitors, staff, trustees, volunteers, city partners, and neighbors.
Existing and Future Donations- The current donations or the anticipated donor interest for specific projects.

Business Planning

Evaluate phasing sequences in terms of capital investment, operational costs, and revenue generating capacity.

Framework for Planning and Design

Design Framework: Project Ideation

The design process for the capital projects outlined in this document will begin with project ideation, when a diverse group of stakeholders will define the goals and outcomes of the new exhibit using the guiding principles and objectives as a guide. This process of defining the project will typically happen before an architect is hired, but does not have to. As stated in the guiding principles: *This plan is contemplated using the following guiding principles with the emphasis on finding the dynamic balance of these ideas working in concert. Each one of the principles is important to us as an individual mandate, but every principle must yield to the others with the goal of creating a unique and innovative future for Denver Zoo.*

Typical Sequence for Design and Construction

The zoo follows a standard design process to ensure each project has the site, structure, features, and functionality to achieve its full potential. The planning department initiates and organizes collaboration from multiple departments throughout the zoo. While not every individual will be a part of the design process for a given project, all departments have representation at some level.

Project Ideation

A core group of stakeholders begins working on concepts prior to hiring an architectural consultant. The initial stages of the process include pre-design work (which has begun with the concepts in the overall master plan) to identify the basic goals, needs, and problems the project will address. These translate into the project’s program, which guides the project into the next phase of design.



Acknowledgements

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