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Introduction

To connect people, animals and the natural world
Lee Ehmke  
Director/CEO, Minnesota Zoo  
President, Minnesota Zoo Foundation

The community leaders who planned and built the Minnesota Zoo in the 1970s were committed to creating nothing less than one of the world’s great zoos, one that would serve as a vital addition to Minnesota’s rich cultural fabric. Today, following an active decade of physical transformation and program growth, the Zoo is beginning to realize the promise seen by its visionary founders.

Widespread recognition and numerous awards for excellence in conservation, education, exhibition design, marketing and animal care are evidence of the Zoo’s drive to excellence. But the most telling signs of success are the record levels of attendance and membership experienced in the past few years. Minnesotans have embraced the Zoo, “voting with their feet” by visiting in ever-increasing numbers. In addition, the Zoo today is enjoying unprecedented levels of philanthropic support and capital investment by the citizens of the state. A strong public/private partnership has been forged, making it possible for the Zoo to aspire to even greater endeavors, as detailed in this Master Plan.

As successful as we have been, we cannot afford to rest on our accomplishments, given the many challenges ahead. Much of the Zoo’s original infrastructure requires attention; mainstays like our monorail system, animal hospital and dolphin exhibit are all approaching the end of their viability. Increasing pressures on the state’s finances will require the Zoo to become even more self-sufficient and entrepreneurial. And critically, the world’s wild animals and wild places are being lost and threatened at an alarming rate. As a society we are becoming divorced from the natural world and less conversant with the sciences that might allow us to slow or reverse global environmental losses.

The Minnesota Zoo is poised to meet these challenges head on. This Master Plan proposes a framework for achieving growth in a financially sound and sustainable manner. A five-year business plan was developed in tandem with the longer term physical vision for the Zoo, focusing initial investment on a sequence of projects intended to add value to the guest experience, enhance the Zoo’s capacity to generate earned revenue, foster partnerships and develop new conservation-relevant signature exhibits.

Minnesota is known for its excellent cultural institutions and commitment to environmental stewardship; the Zoo is set to play an important role in both of these areas. With implementation of key elements of this Master Plan, Minnesotans will have the world-leading Zoo its founders intended, to more effectively connect people, animals and the natural world.
BUILDING ON SUCCESS

RUSSIA'S GRIZZLY COAST - 2008
The Minnesota Zoo, now in its fourth decade of operation, has been developed under the guidance of two significant Master Plans: the original 1970 “Mirror to the Environment” Plan and a Facilities Master Plan adopted in 2001.

Portions of the original plan were implemented, resulting in the zoo buildings and sitework that opened to the public in 1978. The 2001 Plan led to an active decade of capital construction at the Zoo, largely under the umbrella of the Heart of the Zoo Campaign, which has transformed our institution into one of America’s top zoos.

Under the 2001 Plan, the Zoo placed a strong emphasis on increasing the density and intensity of experiences offered to Zoo guests. Most of the new or renovated facilities and guest amenities were intentionally focused on the core (“Heart”) of the Zoo. Milestone accomplishments under the 2001 Plan include:

- Tiger Lair & Tiger Base Camp, 2002
- Lemurs: Ghosts of Madagascar, 2004
- Creatures Beneath of the Canopy, 2005
- Medtronic Minnesota Trail, 2007 (2008 AZA ‘Significant Achievement’ in Exhibits Award)
- Russia’s Grizzly Coast & Central Plaza, 2008 (2009 AZA ‘Top Honors’ in Exhibits Award)
- Woodland Adventure, 2009
- Faces of the African Forest, 2010
- Target® Learning Center, 2011
- 3M Penguins of the African Coast, 2011
- Cargill Environmental Education Center, 2011
- New Lower South Entry, 2011
- Minnesota Trail Black Bear Exhibit, 2012

Our audience has responded positively to these improvements, with Zoo attendance growing to an all-time high of over 1.36 million guests in fiscal year 2012, a 40% increase over 2005 attendance levels. Zoo membership now exceeds 46,000 households, also an all-time high.

With many of the initiatives proposed in the 2001 Plan now complete, it is an appropriate time to re-visit and update the roadmap for the future of the Zoo, taking into account the many variables that have changed, from the world economic climate to the population demographics of the greater Twin Cities metropolitan area. Collection planning, fundraising opportunities from public and private sources, zoo guest expectations and the situation of wildlife in many parts of the world are dramatically different today, and this new cycle of master planning is informed by and responds to those changes.
**Vision:** The Minnesota Zoo is a world leading zoo. By creating memorable guest experiences, being a trusted resource for environmental learning and conducting critical conservation programs, we will save wild animals and wild places.

The Master Plan supports this vision, in several important ways:

**EXHIBITS AND GUEST AMENITIES**

A combination of minor renovations, major re-building and completely new exhibits and guest facilities are proposed in this Plan. Considerations were given to meeting the asset preservation needs of older existing facilities (Discovery Bay, Tropics Trail, Northern Trail, Main Building), as well as the expansion of the Zoo to include entirely new exhibits and attractions (Africa Trail, Sumatran Longhouse Orangutan Forest and Events Center, Adventure Park). These additions will add value to the guest experience, and in some cases create incentives to attract new audiences. New animal exhibits will improve animal care while supporting institutional conservation and education goals. New guest amenities will improve guest comfort, and add to the educational impact and recreational appeal of a Zoo visit.

**SERVICES AND INFRASTRUCTURE**

The systems and back of house facilities required to operate the Zoo, support the Zoo’s conservation and animal management programs, and to maintain guest safety and comfort will require major upgrades. Most of these facilities are concentrated in the service center located at the northeast portion of the Zoo, linked to the rest of the Zoo by a network of dedicated service roads. This location works well, but new facilities are needed, and existing systems and facilities need to be updated to support exhibit growth, increased attendance, and new conservation programs. Sustainability goals necessitate both site-wide and project specific planning to address water management, waste disposal and energy use/generation.

**STRATEGIC BUSINESS PLAN**

A Business Plan was conducted in concert with the facilities planning process and will guide the implementation and phasing strategies of the Master Plan. The business plan was developed with a primary focus on increasing earned revenue during the next five years as the Zoo secures existing and new funding sources for capital investments. The Business Plan identifies new revenue opportunities including an Adventure Park experience with zipline and challenge courses; Back Stage Pass/Behind-the-Scenes Tours offering unique, personalized animal encounters; a Conservation Carousel; refocusing the Zoo’s education programs to strengthen the balance between mission and margin; increasing first year member renewal through enhanced and targeted member services and programs; and engaging new sponsorship and major gift partners with the Zoo. The Business Plan also recommends investment in a number of the major new exhibit initiatives outlined in the Master Plan, which will add value to the guest experience and drive modest attendance increases.
Planning Principles
All of the projects and infrastructure improvements proposed in this Master Plan were developed and tested using the following planning principles for guidance.

SUPPORT STRATEGIC PLAN GOALS:

- Be recognized as an essential Minnesota treasure and a must-see destination in the Midwest.
- Be a leader in animal care and conservation.
- Inspire people to learn, care and act on behalf of wildlife and wild places.
- Model, demonstrate and inspire best practices in environmental sustainability.
- Provide the best guest experience in Minnesota.
- Develop a financially robust and sustainable economic model.

SUSTAINABLE DESIGN AND OPERATIONS:

- Energy:
  - Decrease greenhouse gas and air pollution emissions by increasing energy conservation and efficiency measures.
  - Use natural gas for heating future facilities.
  - Explore the use of geothermal systems for larger building systems.
  - Upgrade the existing greenhouse glazing to double pane as part of the Greenhouse addition project.
- Water:
  - Decrease water usage by increasing conservation and efficiency measures.
  - Use rainwater harvest methods for uses to include: refilling pools, backwashing, and holding building wash down.
  - Develop constructed wetlands, rainwater gardens and vegetated swales for storm water runoff.
  - Construct vegetated floating islands to naturally clean the standing lake water areas as indicated in the Africa Trail exhibit area.
  - Use porous paving systems, where appropriate, for natural infiltration in lieu of collected storm drains systems.
- Design exhibits to maximize rainwater infiltration.
- Waste:
  - Divert maximum amount of waste from landfills through source reduction, reuse, composting, and recycling.
- Materials and Products:
  - Increase the percentage and variety of environmentally responsible products and materials purchased by and used at the Zoo.
- Staff Culture:
  - Promote and increase environmentally responsible behavior around the Zoo’s workforce.
ADDRESS AGING INFRASTRUCTURE WITH CREATIVE ADAPTIVE REUSE:

- Main building re-purposed use as Upper Entry Plaza.
- Northern Trail/Musk ox holding converted to Africa Grasslands Holding.
- Utilize existing trunk utility systems to serve expansion areas.
- Tropics Trail exhibits renovated/re-purposed.
- Convert Animal Hospital to office space.
- Convert Monorail Barn to Hay Storage.
- Convert Discovery Bay dolphin exhibit to new exhibit/attraction.

ADD VALUE TO THE GUEST EXPERIENCE:

- Enhance guest comfort.
- Clarify and enhance entry experience.
- Add new guest amenities.
- Build new and enhanced exhibits.
- Create new activities and attractions.

ADD NEW PREMIUM EXPERIENCES:

- Expand optional “value added” opportunities.
- Increase attendance with improved facilities and new exhibits.
- Maximize location and type of retail and food sales.
LEGEND
- RESTROOMS
- RETAIL SPACE
- EVENT SPACE
- SIT DOWN FOOD SERVICE
- WALK-UP FOOD SERVICE
- CART FOOD SERVICE

GUEST SERVICES
- New Retail Spaces:
  - Asian Highlands
  - Crossroads Park
  - Entry Plaza
  - African Fishing Village

- New Food Service:
  - Sumatran Longhouse
  - Asian Trail
  - Crossroads Park
  - Entry Plaza
  - African Fishing Village

- New Event Spaces:
  - The Sumatran Longhouse
  - Adventure Park
  - Group Picnic Area
  - African Grasslands Tented Camp
  - Crossroads Park

- New Restrooms
  - Adventure Park
  - Group Picnic
  - Africa Fishing Village
  - Crossroads Park
  - Asian Highlands
  - Sumatran Longhouse
Circulation Plan

Legend

- Visitor Circulation
- Greenway Path

Visitor Circulation

- Add new visitor circulation paths to new exhibit areas.
- Connect the visitor path to the proposed North Creek Greenway.
SERVICE ACCESS

LEGEND

SERVICE ACCESS

- Extend and improve Service Access roads to new exhibit and visitor areas.
  - Adventure Park
  - Group Picnic
  - Africa and Tented Camp
- Extend and improve road connections for new Hay Barn (former monorail barn).
Entry Sequence & Prairie’s Edge
- South and East Entries, Prairie’s Edge Exhibits
- Upper Entry Plaza
- Snow Monkey Exhibit and Gift Shop

Discovery Bay
- Interim Repair Plan
- Options for Future Major Renovations
- Upper Level Options:
  - Option A – Sea Lion Encounter
  - Option B – Walrus Ice Floe Exhibit
  - Option C – Amazon Flooded Forest Exhibit
  - Option D – Tropical Atoll

Asia Trail
- Overall Asia Trail Improvements
- Asian Highlands

Crossroads Park
- Carousel, Nature Play, Restrooms, Food, Gift, Picnic

Group Picnic Area
- Covered Pavilions, Restrooms, and Service Facility

Adventure Park
- Zipline, Ropes Course, Chutes and Ladders Course

Butterfly Pavilion and Main Lake Restoration
- Butterfly Pavilion
- Food Service
- Main Lake Restoration

Tropics Trail
- Overall Tropics Trail Plan
- South America
- Orangutan Forest/“Longhouse” Events Center

Service Center
- Animal Hospital, Vehicle Storage, Holding, Greenhouse

Family Farm
- Horse Barn

Africa Trail
- Overall Africa Trail
- Grasslands Exhibits and Tented Camp
- Forest Exhibits
- Kopje Exhibits
ENTRY SEQUENCE & PRAIRIE’S EDGE

A major new entry and exhibit complex re-using existing buildings in need of asset preservation will set the stage for peak season zoo visits. This multi-phase project celebrates and expands our commitment to Minnesota-based conservation, and creates an entry experience in keeping with our goal of becoming one of the state’s premier attractions. New and enhanced revenue centers will strengthen the Zoo’s financial model.

CONCEPTS:

- During the Zoo’s peak season (April-October), guests will arrive at the Zoo via approaches linked to the south and east parking areas. From either parking lot, guests will experience a prairie environment as they are led to a single point of entry on the Upper Plaza. The primary entry access will shift to the east, and will feature panoramic and close-up views of Minnesota prairie wildlife.
- From the east entry pathway, an exhibit of Prairie dogs with hidden barriers visually links to the Bison and Pronghorn hillside beyond to create a powerful animal experience for guests before they arrive at the ticketing and membership gates on the Upper Plaza.
- From the south, a new pathway will lead guests past the IMAX theater, offer a glimpse of Bison habitat, and will lead to a ticketing and control point on the Upper Plaza.
- New signage, landscape features and pathways will separate the flow and clearly orient guests visiting the IMAX Theater. Should the IMAX theater no longer be used for showing large format films, it is possible a portion of the building could be modified to house Zoo administrative, event and education spaces.
- Along both entry approaches, shaded canopies, seating, signage and a refined “prairie” landscape vocabulary will welcome and comfort guests as they arrive and depart. Both will feature iconic animal sculptures, stone and wood gateway elements and thematic paving.
Minnesota Zoo

South & East Entries
Prairie’s Edge Exhibits

Prairie’s Edge

Bison & Pronghorn Exhibit
CONCEPTS:

- The existing lower south entry will be used during peak season by school groups and for after hours events. During the coldest months of the year, when visitation to the Zoo is low, the lower south entrance will serve as the main entrance for all Zoo guests.

- A major interpretive focus will be the Zoo’s involvement in native prairie conservation and restoration, including prairie butterfly breeding and research, and Bison breeding and re-introduction.
During peak season, guests arriving from both the South and East parking areas will be guided to a single point of entry, a completely re-developed Upper Plaza. Providing guest services of all varieties and intuitive orientation opportunities, this becomes--for much of the year--the Zoo’s primary entrance.

CONCEPTS:

- Ticket sales functions (manual and kiosk), shaded and sheltered queue lines, membership and online ticket holder express entry lanes, and pre-control point restrooms will provide comfort and ease of entry.

- The ambiance of the Upper Plaza, including the façade of the existing Administration building, will be transformed using wood and stone, similar to the architectural vocabulary developed for the Lower South Entry in 2011.

- Once beyond the control point, guests will have access to membership and guest services staff, a climate-controlled retail shop, a café with shaded seating, information kiosks and stroller and wheelchair rental.

- Clear connections will be developed to the interior features of the Zoo (Target® Learning Center, Medtronic Minnesota Trail, Tropics Trail) and to the outdoor Zoo experiences, starting at the Central Plaza. The existing paving materials, wall treatments and ramps at the Upper Plaza level will be replaced and enhanced.

- A major feature of the Upper Plaza will be a sheltered treetops-level view into a new Snow monkey exhibit. Other guest views will be directed toward the Zoo’s Main Lake and surrounding forest.
A new Snow monkey habitat will be located within the footprint of the existing exhibit. A more naturalistic environment with trees, rocks and ponds will highlight one of the Zoo’s most charismatic social animal species, and will complete the transformation of the Main Building which started with the opening of the 3M Penguins of the African Coast exhibit in 2011.

CONCEPTS:

- Enclosing the Snow monkey exhibit in a tall mesh tent will create significantly more usable vertical space. Artificial and real tree trunks will create multiple climbing and resting opportunities for the monkeys.
- The exhibit ground plane will be raised, bringing the animals up to the eye level of guests, and providing a unique underwater view of a recreated “natural hot spring,” where monkeys can swim and bask as they do in their native Japan.
- Off exhibit animal holding will be expanded and upgraded to permit management of multiple groups of Snow monkeys.
The ramp leading from the Upper Plaza will be rebuilt to direct guests toward the Central Plaza and outdoor sections of the Zoo. New plantings will provide a naturalistic backdrop to the Snow monkey exhibit. Major repairs will be made to the adjacent lower level walkways and terraces overlooking the Main Lake.

A new walk-in retail shop will be developed opposite the Lower South entry lobby, with views into the Snow monkey exhibit. This will serve as a primary retail space during the winter months when the nearby Lower South entry will be the primary access point into the Zoo.
With the departure of Dolphins from the Zoo’s collection, there is an opportunity to re-imagine Discovery Bay, an exhibit and event complex with significant presence and potential. Given immediate needs for infrastructure repair and the likely costs of any major renovations, this Plan lays out both a modest interim scheme and multiple options for future major redevelopment. Discovery Bay will remain a key venue for the Zoo’s revenue generating activities, and is a unique “window” to the world’s oceanic environments and the challenges facing them.

INTERIM REPAIR PLAN:

CONCEPTS:

- With the allocation of $4 million in Asset Preservation funding in 2012, the immediate need is to repair the former Dolphin pools and assure the integrity of the surrounding structural and mechanical infrastructure. Once this is complete, salt water systems will be upgraded to support a large multi-species fish collection, highlighted by large schools of attractive and spectacular rays (stingrays and spotted eagle rays).

- The Zoo will investigate the possibility of creating an interactive experience allowing a select number of guests to actually “dive” with the fish in the repaired pools. Working with partners, programs such as “Sea Trek” or “Snuba” that offer non-certified “diving” experiences will be investigated and implemented while plans and funding for a more significant renovation are developed.
OPTIONS FOR FUTURE MAJOR RENOVATION:
When funds and timing permit, this Plan recommends major investment in a new signature exhibit re-using the building’s former dolphin pools. The Plan also recommends significant reconfiguration of existing exhibits on the building’s Main Level to enhance its value as an exhibition and special events space.

LOWER LEVEL EXHIBIT CONCEPTS:
- Under any of the following new exhibit scenarios, it is recommended that the existing Estuary pool be removed to increase the usable square footage for after-hours events. New aquariums and touch pools will be developed around the perimeter of the room, including some that are strategically placed in front of existing viewing windows, creating panoramic multi-species views for guests. These new exhibits could include Sea dragons and Seahorses, Jellies, Moray eels and Octopus. Species selection would vary depending upon the theme eventually selected for the Main Pool renovation.
- New lighting and movable walls and/or curtains will be added to improve visibility and drama of the Shark Reef and to enhance the ambience of the entire Main Level space.
**UPPER LEVEL EXHIBIT CONCEPTS:**
- Depending upon the exhibit concept eventually chosen, the existing raked amphitheater seating could be kept in place (with improvements), significantly modified, or removed entirely and replaced by a horizontal mezzanine extension.
- The Upper Level space adjacent to Discovery Bay—now occupied by monorail ticketing and queuing—could become available for re-use if the monorail is de-commissioned. Under any of the potential scenarios for exhibit redevelopment, this space could become an indoor/outdoor café and dining area, with views to the Central Plaza below.

**UPPER LEVEL EXHIBIT OPTIONS:**

**A. SEA LION ENCOUNTER**

The former Dolphin pools are transformed into a rocky coastal habitat, complete with rock formations and a sea cave offering unique close up views of Sea lions lounging on foreground ledges. One of the original rear Dolphin management pools will be converted into sea lion holding areas with off-exhibit pools and keeper work areas. The existing seating will be modified and improved, and new animal barrier systems will be developed to retain the amphitheater as a demonstration space.
B. WALRUS ICE FLOE EXHIBIT

Modifications to the pools will be similar to those described to house Sea lions, but thematic elements could include a massive iceberg, seemingly carved by the water, creating passages for Walruses to swim around and through.

C. AMAZON FLOODED FOREST

One quite radical re-thinking of the former Dolphin area is to convert it into an Amazon River flooded forest environment, accessible above water on the upper level and underwater from the lower level. The addition of extensive above-water landforms and planting areas will transform the space into an immersive rainforest environment. Views into the flooded forest reveal enormous Arapaima and other giant fish, and in a separate but seemingly contiguous space, Giant river otters are seen swimming around submerged tree roots.

D. TROPICAL ATOLL

A more elaborate version of the “interim” ray and fish renovation will be to create a thematic environment of coral outcroppings and tropical vegetated islands, together with permanent facilities to facilitate interactive “in water” guest experiences (changing rooms, waterside pavilions etc.).
The Zoo’s original Northern Trail will be re-developed as an immersive experience focusing on the diversity of wildlife found in the temperate regions of Asia. This process has already started, with the addition of Russia’s Grizzly Coast in 2008, now one of the entry portals into the Trail loop. When Bison, Pronghorn and Prairie dogs are moved from their current exhibits to the new East Entry and Prairie’s Edge exhibit, the entire Northern Trail will convert to an Asian zoogeographic theme. New animal exhibits and guest amenities will be added along the length of the Trail, transforming it into an energized and diverse experience. Existing and new conservation initiatives—at the Zoo and in nature—will be highlighted throughout the Trail.

CONCEPTS:

– Just as Russia’s Grizzly Coast provides a powerful multi-species exhibit cluster at the beginning of the Trail, new zones of exhibit and guest amenity density will be added at key points along the Trail. Where appropriate, exhibit pathways will diverge from the main loop road, creating more intimate and exploratory experiences.

– Smaller animal exhibits will be added along the length of the Trail, breaking up the current perception of long distances without animal viewing opportunities. Possible “infill” exhibits include Steller’s sea eagle, Eurasian lynx, Mongolian pika, Musk deer, Arctic fox and Snowy owl.

– Where appropriate, architectural and decorative elements of human cultures associated with the environments being represented will be used to give character to buildings, landscape structures and interpretive elements throughout the Trail. Similar to the existing Dhole viewing “yurt” and Russian “cabin” already in place, new viewing areas and other guest facilities will incorporate cultural elements to help establish a sense of place.

– Existing hoofstock enclosures will be improved with more shade and vegetation, better-disguised barrier fencing, more intensively-developed viewing areas and interpretive zones, and expanded off-exhibit holding and management spaces. Where possible, rotating mixed species herds will be maintained, adding interest and diversity.

– A major commitment of exhibit and holding space will be devoted to groups of Asian wild horses, part of expanded efforts to conserve and restore this iconic species in the wild in Mongolia and China. The Zoo’s historical success and commitment to the wild horse will be interpreted and celebrated.
A new Asian Highlands exhibit complex will be developed, with immersive experiences featuring communities of wildlife from the Mongolian steppe and Himalayan mountain environments. These exhibits will highlight important conservation initiatives of the Zoo, including captive propagation, in situ research and reintroduction. Select guest amenities will be developed here, at a point midway between the Central Plaza and Crossroads Park.

CONCEPTS:
- Guests will first encounter the Edge of the Himalayas exhibit, where, from the remnants of an old mountain village, Snow leopards, Musk deer, Tragopans, Red panda and Markhor can be viewed from rustic shelters and rock-strewn pathways, with layered views of an expanded Takin exhibit in the background.
On the north side of the Trail, a Mongolian Steppe vista will include Pallas cats in the foreground and, roaming on the grassy hills beyond, rotating and mixed herds of Asian wild horses, Camels, Onager and Gazelle.

Integrated into the Asian Highlands area will be a series of guest amenities, including sheltered seating areas, a food cart, restrooms and a camel ride that seemingly takes riders into the steppe habitat.
The midpoint of the Asia Trail loop pathway is a key spot for the development of a major visitor hub.

Here, a new “Crossroads Park” will address the goals of improving the guest experience and maximizing revenue generation. It will be an identifiable “place,” similar in character to the existing Central Plaza.

CONCEPTS:

- This important intersection of the Asia Trail, Wells Fargo Family Farm and future Africa Trail will be developed as a public space with its own defining character, creating a place for orientation, rest, play, eating and shopping. Using some of the design elements of the existing Central Plaza, Crossroads Park will become a destination within the Zoo, as well as a launching point for other experiences.

- A Conservation Carousel, with profits dedicated to supporting the Zoo’s conservation activities, will anchor Crossroads Park, providing an attractive amenity to guests traveling through the intersection or those using the adjacent group picnic areas. It is a great opportunity to develop a carousel with a distinctly “Minnesota Zoo” character.

- The existing group picnic facilities (shelters and lawn areas) will be relocated and improved, augmenting their revenue generating capacity and creating an important option for use of the Zoo by organized groups.

- New food service, sheltered seating, restrooms and a retail shop will serve a growing volume of guests, particularly when a new Africa exhibit comes on line as a second major destination that will be accessed from the hub.

- A new tram and horse wagon turnaround and loading area, with seating and shade, will create a clear and inviting gateway to the Wells Fargo Family Farm.

- A major new nature-based play area will be developed, utilizing a natural slope descending to an existing pond. A single point of entry and a nearby seating area will allow adults to comfortably watch children play in a safe yet challenging environment inspired by the bluffs and canyons of the river valleys of southeastern Minnesota. Play elements may include climbing structures, “caves,” and interactive water features.
The Wells Fargo Family Farm is consistently ranked as one of the most popular and effective areas of the Zoo. Development of a publicly-accessible horse barn will expand the Farm’s educational and interactive opportunities.

**Concepts:**

- Husbandry and display of a larger number and variety of horses will be supported.
- Revenue-generating pony rides and other contact experiences could be increased.
- A second-level loft space could be used for overnight education functions.
LEGEND
- GRASS / SHRUB
- EXHIBIT AREA
- SERVICE ROAD
- VISITOR PATH
- NEW VISITOR BUILDING
- EXISTING VISITOR BUILDING
- EXISTING SERVICE BUILDING
- TREE / FOREST
- WATER
The great wildlife of Africa will be showcased in a major new anchor exhibit at the Zoo’s north end. A tree-studded grassy slope descending toward a large lake, a densely-forested ridge, and a high promontory bordered by a deep pool and an expansive marshland offer an incredible variety of settings for a series of African habitat and animal encounter experiences. The realization of an Africa Trail will elevate the Zoo’s position as a major Minnesota and Upper Midwest attraction, significantly increase attendance and earned revenue, and support the expansion and increased effectiveness of our conservation programs.

CONCEPTS:

- The site and habitat zones for the complete build-out of Africa Trail lend themselves to a phased sequence of development, permitting fundraising, construction and attendance impacts to be spread over a number of years.

- Africa Trail will be a permanent seasonal exhibit. Most of the species envisioned for this complex will require extensive indoor living spaces for the colder months of the year. Instead of building expensive indoor public viewing of large animal environments, this Plan proposes that Africa Trail be closed to the public when the weather will not permit the animals to be exhibited outdoors. This will minimize the capital and operating expenses associated with large public animal buildings, and will encourage visitation during the warmer months of the Zoo’s peak season.

- Access to view some of the animals in their indoor areas during the off-season could be promoted as a premium “backstage pass” opportunity for small groups.

- Africa Trail is planned as a series of three interconnected loop pathways, all of which will be accessed directly from the Crossroads Park hub, where most of the major guest amenities serving the exhibit area (restrooms, food service, retail) will be located. In addition, food, drink and gift carts will be incorporated within the exhibit complex.

- A “Tented Camp,” located on a hillside perched above the exhibits, will include overnight accommodations and an elegant air-conditioned Lodge for special events, group rental and education activities.

- Wherever feasible, exhibits in Africa Trail will display multiple species, or will provide panoramas of different species seemingly sharing the same habitat. Long vistas will be augmented by close-up viewing opportunities, and in some cases, interactive feeding or contact opportunities will be offered.
Leaving Crossroads Park, guests will pass through a dramatic African gateway, overlooking a vast grassland habitat. Here, the legendary sweep of the African savanna will be re-created: herds of Antelope, Ostriches, Giraffes and Rhinos will range from the lakeside to the surrounding ridgelines, and guests will be invited to enter their world. The first phase will focus on the lake and surrounding hillsides that are currently occupied by a Musk ox exhibit, which will be converted into an African grasslands habitat.
Minnesota Zoo

GIRAFFE, RHINO, ANTELOPE, & OSTRICH EXISTING OUTDOOR HOLDING

HYRAX

EXISTING OUTDOOR HOLDING

VEGETATED FLOATING ISLANDS

RHINO ENCOUNTER BOMA

SECRETARY BIRD

EXISTING LAKE

BOARDWALK

TENTED CAMP

LEGEND

GRASS / SHRUB
EXHIBIT AREA
SERVICE ROAD
VISITOR PATH
NEW VISITOR BUILDING
NEW SERVICE BUILDING
EXISTING SERVICE BUILDING
TREE / FOREST
WATER

PROGRAM
Outdoor Exhibit Area 174,400 sf
Conditioned Indoor Holding 30,000 sf
Paddock Outdoor Holding 22,500 sf
Visitor / Staff Use Area 5,000 sf
Paths 15,000 sf

SPECIES LIST

Giraffe
Southern white rhino
Hartmann's zebra
Grants gazelle
Ostrich
Lesser flamingo
Secretary bird
Hyrax
CONCEPTS:

- Utilizing the existing Musk ox exhibit, holding barns and paddocks, groups of compatible large African mammals will be displayed in a rolling grassland setting. New and modified animal management spaces and barriers will be built behind hills and screening vegetation, leaving unobstructed natural views in all directions.

- A series of pathways and boardwalks will follow the perimeter of the existing lake, bringing guests close to the animals on the shoreline and hillsides. Elevations of the boardwalk will vary, sometimes offering ground-level viewing, in other areas elevating guests to Giraffe-neck height. Rustic shade structures and seating will be found at several points along the pathway.

- Foreground exhibits will highlight small mammals and birds, including Rock hyrax, Secretary birds and a nesting colony of beautiful Carmine bee-eaters in an aviary built around a shoreline mudbank terrace.

- Flocks of Flamingos and Pelicans will roost and feed in the lake shallows, protected by reedbeds and planted buffer areas.

- Special feeding and touching experiences will be offered: a Giraffe feeding platform and a Rhino encounter borna will generate magical moments for guests and revenue for the Zoo.
“Floating islands” will be located in the lake, some bordering the boardwalk pathway, providing biofiltration to keep the water clear and creating an attractive setting for wildlife viewing.

Nestled onto a hillside overlooking the savanna grasslands and lake will be a Tented Camp, open by special invitation only, where events ranging from Scout overnights to corporate team building exercises can be held in a unique “bush” setting. Tents on wooden platforms, an outdoor fire pit and gathering area, restrooms and a “safari chic” Events Lodge with an wrap-around deck are all possibilities.
A narrow ridgeline with a closed canopy of trees provides an excellent setting for presenting a number of African species that live in or near forests. The area transitions naturally to the adjacent grasslands and kopje environments, and forms a central spine linking the three African exhibit zones.

CONCEPTS:

- A number of mixed species exhibits are possible here: Mandrills and Red river hogs; Bongos and Duikers; Swamp monkeys and Otters; Hippos and Sitatungas. Streams and seasonal pools create natural barriers, and in some places glass walls will reveal views above and below waterline.

- A central Fishing Village will feature integrated guest facilities (restrooms, gifts, food) and unique viewing areas where a guest might have an eye-to-eye encounter with hippos from the deck of a partially-sunken boat.

- A Meerkat colony and associated play/learning activity zone will be located next to the Fishing Village clearing.

- From the Fishing Village, there are direct connections to the boardwalk leading down to the grasslands and lake area, a pathway to the Tented Camp and another that enters the rolling landscape of kopjes to the north.
LEGEND

- GRASS / SHRUB
- EXHIBIT AREA
- SERVICE ROAD
- VISITOR PATH
- NEW VISITOR BUILDING
- NEW SERVICE BUILDING
- EXISTING SERVICE BUILDING
- TREE / FOREST
- WATER

PROGRAM

- Outdoor Exhibit Area 101,450 sf
- Conditioned Indoor Holding 10,450 sf
- Paddock Outdoor Holding Paths 3,500 sf
- Future Event Deck 24,170 sf

SPECIES LIST

- Warthog
- Gerenuk
- Cheetah
- African wild dog
- Lion
Some of Africa’s apex predators, and the prey species they rely upon for survival, will be featured in a dramatic landscape centered around an iconic rock formation called a “kopje.” Kopjes are often used by large cats as places to survey the surrounding landscape, and here a pride of lions will have command of the high granite boulders. Other interconnected animal habitats and a winding public pathway will surround the kopje, where an ever-changing cast of animals can be encountered along the way.

CONCEPTS:

- An existing high knoll, surrounded by large spreading oak trees, will become a central exhibit feature for lions, surrounded on several sides by a hidden moat that will allow layered views incorporating the other animal habitats ringing the kopje. Viewing areas will be sited to take advantage of existing trees that provide shade for the lions, giving visitors an up-close experience. The granitic kopje formation will be constructed with great care to provide shade, long views, heated and cooled microclimates, and built-in enrichment opportunities for the lion pride.

- Smaller animals like Warthogs, Gerenuks, Wild dogs, and Cheetahs will share a series of separate exhibits designed to appear contiguous. Hidden gates and chutes will allow the animals to be shifted between these habitats, creating rotational enrichment and variety of experiences for guests. Sheltered viewing blinds will offer close up viewing and behavioral demonstrations.

- Built within the mature forest canopy overlooking a scenic marsh will be an expansive deck for special events, with good connections to service roads, a nearby Group Picnic area, and the Lion and rotational exhibits at the base of the kopje.
KOPJE EXHIBITS
In order to increase the Zoo’s appeal as a premiere Minnesota destination, additional spaces for groups to assemble, dine and play in attractive, semi-private settings within the Zoo’s boundaries are needed. Significant new attendance and revenue will flow from the development of a major Group Picnic Area.

CONCEPTS:
- This Plan identifies an optimal central site for this function, which includes three covered pavilions for up to 400 people each, and a larger covered pavilion for up to 800 people. Restrooms and a servicing facility support the needs of the area, which will be available for rent by corporate, family and community groups.
- The pathway leading to the Group Picnic Area passes the Caribou exhibit. There are opportunities to create other pathways that link the Group Picnic Area to Africa Trail, Adventure Park and the Weisner Amphitheater which offers potential synergies with the Zoo’s summer bird shows and evening concert series.
Development of an Adventure Park will attract new audiences interested in participating in high-energy nature-based activities, taking advantage of the spectacular natural features of the Zoo site. Experience at other institutions indicates that with the right partnerships, significant attendance and revenue increases can be expected.

CONCEPTS:

- Separate experiences for different age groups will be developed, ranging from a short Ropes Course to a “Chutes & Ladders” area for young children, to a much longer elevated zip line that travels over and around the lake.

- Adjacent restroom, ticketing and outfitting areas will be developed.

- Techniques used to install the courses should minimize adverse impacts on the existing forest and lakes, yet optimize the experience of being in the canopy and over the water.

- Winter activities, including snowshoeing on the network of trails.

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<tbody>
<tr>
<td>Zip-Line Overall Area</td>
<td>123,980 sf</td>
</tr>
<tr>
<td>Chutes &amp; Ladders</td>
<td>3,070 sf</td>
</tr>
<tr>
<td>Ropes Course</td>
<td>3,000 sf</td>
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</tbody>
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Connecting three high-use areas of the Zoo—Central Plaza, Tiger Lair and the Weesner Amphitheater—is a scenic and strategically located peninsula projecting into the Main Lake. Currently inaccessible, the space offers the possibility of improving the guest experience in this high traffic area; adding an animal exhibit with an important conservation connection; and providing a very visible demonstration of best environmental practices.

CONCEPTS:

- Future expansion of the Tropics Trail will require relocating the existing seasonal butterfly exhibit and breeding area. The Main Lake’s peninsula will be a good location, as it receives good solar exposure and is sited in a high traffic area of the Zoo. This provides an opportunity to expand and make more visible the Zoo’s commitment to native butterfly conservation.

- Redevelopment of the existing food service and expansion of the adjacent outdoor seating area will take advantage of views over the lake from the park setting of the new Butterfly Pavilion. Evening use associated with the popular Music in the Zoo concert series has great potential.

- Improvement of the water and habitat quality of the Main Lake is a critical goal of the Zoo’s sustainability efforts. Utilizing a variety of biological and engineering techniques, including “floating islands” of water-cleansing vegetation will result in significant improvements in the appearance and function of the Lake, and the process interpreted to Zoo guests.
Under the 2001 Master Plan large sections of the Tropics Trail, one of the Zoo’s original features, were completely renovated using a “Tropical Biodiversity Hotspots” theme. This Plan proposes changes to several additional existing areas, and a significant expansion of the exhibit complex. Many of the Zoo’s most important conservation breeding efforts will be focused on species exhibited in this building. The Tropics Trail has great potential as a unique and attractive guest destination, and as a place to expand the Zoo’s revenue generating capacity.

**CONCEPTS:**

- With other Zoo-wide exhibit changes and the need for renovation, current exhibit spaces for Small-clawed otters, Visayan warty pigs, Tapirs, Red pandas, Gorals, South American birds, Tamarins and butterflies will all require relocation, significant changes and/or new inhabitants.

- The current entry and exit pathways in the Tropics Trail are sterile, hard-edged spaces that need to be “softened” and better utilized as interpretive and guest orientation areas.

- The building’s mechanical systems, skylights, service areas and water systems are in need of major modernization, particularly as proposed new exhibit and guest areas are added to the complex.
TROPICS TRAIL

LEGEND

- VISITOR PATH
- EXHIBIT AREA
- NEW SERVICE BUILDING
- TREE / FOREST
- SERVICE AREA
- EVENTS CENTER
- WATER
- VISITOR VEHICLE ROAD / PARKING
Two existing exhibits and a vacant nocturnal animal gallery will be combined and rebuilt to showcase communities of charismatic and colorful South American animals, adding interest and diversity. New conservation programs with connections to the new exhibit species will be undertaken at the Zoo and in the field.

CONCEPTS:

− New unobtrusive mesh and glass containment systems will enclose the tall “canyon” exhibits just outside of the Tropical Reef underwater gallery. Viewing will be from inside rustic shelters, first at ground level and later from the treetops. On one side of the path, a noisy group of Coati mundis will patrol the streambed and overhanging vegetation of their exhibit.

− Across from the Coati mundis, in the area formerly occupied by Red pandas, a forest pool and beach provide a home to the world’s largest rodent, the Capybara. Actively using the trees and vines overhanging the pool will be a troupe of Spider monkeys, especially visible from the upper treetops level.
TROPICS TRAIL - SOUTH AMERICA
CONCEPTS:

- The former Nocturnal exhibit area will be completely renovated as a showcase for a wide variety of South American reptiles, amphibians, fish and invertebrates. A series of large, multi-species exhibits featuring waterline level viewing will be densely planted and provide micro-habitats for animals ranging from Giant catfish to Emerald tree boas.

- At the end of the passageway, an alcove will be built to facilitate guest encounters with reptiles and other animals, with volunteers and Zoo staff providing assistance and interpretation. Adjacent off-exhibit spaces will be developed to house the program animal collection.
SPECIES LIST

- Pacu
- Basilisk
- Anaconda
- Rainbow boa
- Arrow poison frogs
- Side-necked turtle
- Arapaima
- Boa constrictor
- Caiman lizard
- Green iguana
- Mata mata
- Red-tailed catfish
- Silver arowana
- Sucker-mouthed armored catfish
The Minnesota Zoo has never exhibited any of the great apes, and our guests consistently voice a strong interest in seeing them. Too, the Zoo does not have a full-time special events space available during daytime hours. One of the most ambitious proposals in this plan is to create a facility that would meet both these objectives: a unique thematic event space overlooking a state-of-the-art habitat for orangutans. This complex, built as an extension of the Tropics Trail building, will be a signature destination for the general visiting public and for groups holding business or social meetings at the Zoo.

CONCEPTS:

- A large conservatory-like, climate-controlled space will be added to the north end of the Tropics building. Inside, dense plantings, large constructed tree boles, vine tangles and an incised riverbed with streams and rivulets will form a complex habitat for a group of Orangutans, and in separate but connected exhibits Malayan tapirs, Siamangs, Flying foxes and Small-clawed otters will be encountered.
Connecting passageways above and below the public areas allow Siamangs and Orangutans to travel back and forth between their “home” habitats. Interpretation will focus on the acute threats to the survival of these remarkable animals, driven by the destruction of their habitat for agriculture and other human uses.

Overlooking the Orangutan forest ravine is a large building designed as a “Sumatran Longhouse,” a rustic yet elegant series of spaces dedicated to groups who rent the space and catering services from the Zoo and our partners. The Longhouse center includes a large pre-function lobby, small exhibits, and two large meeting rooms (combinable) with a capacity of 350 people. The balconies of the meeting rooms overlook the Orangutans and Siamangs at eye level in the tree canopy in the adjacent habitat. Catering kitchens, storage and other service areas are located one floor below, with access from the existing service road and staff parking area at ground level. Patrons of the event center have a dedicated entry adjacent to the Zoo’s east parking lot, and there are connections to the interior Tropics Trail as well.

A large outdoor forest environment, bounded by hidden moats and limestone cliffs, will be accessible to the Orangutans, Siamangs and Tapirs during warmer months. The interior public pathway opens up to an outdoor balcony overlooking the habitat, which seems to extend indefinitely into the forest canopy in the distance.

Extensive indoor and outdoor animal holding space will be constructed, providing excellent space for managing and propagating Orangutans, Siamangs, and Tapirs, all of which are extremely threatened in their shrinking home ranges in southeast Asia.
CAVE & OUTDOOR ORANGUTAN FOREST
MINNESOTA ZOO | 2012 MASTER PLAN

The Zoo’s current service yard and associated areas will need to be expanded and improved to meet institutional growth, address asset preservation needs and support sustainability initiatives.

CONCEPTS:

- A new Animal Hospital is needed to meet modern standards of care and a significantly expanded collection.
- The existing Animal Hospital (‘A’ building) will be renovated and repurposed as an administrative space and headquarters for a growing Conservation Department.
- A new Animal Holding/Propagation building with associated outdoor enclosures is needed to support collection sustainability.
- The existing Hay Barn site will be re-purposed to provide Vehicle Storage for protection and maintenance of the Zoo’s vehicle fleet.
- The existing Monorail Barn will be re-purposed as a Hay Barn, centrally located to service animal exhibits on the Asia and Africa Trails, Prairie’s Edge exhibits and the Wells Fargo Family Farm. (See plan pg15.)
- The existing Greenhouse needs to be expanded and renovated.
- ‘B’ Building, which houses administrative and workshop spaces, needs to be modernized and renovated.
- The Compost Pad needs to be expanded to manage larger animal collections and to facilitate processing and distribution of compost. (See plan pg15)
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