



toronto
ZOO

2016

MASTER PLAN

Securing a Sustainable Future





MASTER PLAN

prepared by:

MMM Group Limited + Studio Hanson / Roberts

in consultation with:

Lord Cultural Resources

Schultz & Williams

Balind Architects

Oppenheim Lewis

CEO INTRODUCTORY LETTER

The past twenty-five years has seen unprecedented changes to our environment and biodiversity on our shared planet resulting in the world losing more than 10,000 species a year. Now more than ever, modern accredited zoos are needed to ensure the ongoing survival of many of the world's most vulnerable species, and their habitats, including Canadian species. In our own backyard, species at risk like the Blanding's turtle, eastern loggerhead shrike, eastern massasauga rattlesnakes, black-footed ferrets, wood bison, Vancouver Island marmots, moose and bats, to name just a few, are in desperate need of our help. The Toronto Zoo must make significant investments now and in the future to ensure that wildlife and their habitats are sustainable for future generations.

In 1990, the Toronto Zoo announced an ambitious Capital Master Plan that laid the foundation for the next twenty-five years. The vast majority of those projects were completed and award-winning exhibits were introduced throughout the Zoo's 700 acres. With the completion of that Master Plan in 2015, and the creation of a new five-year strategic plan, it was time to develop a framework for the next 15-20 years that was reflective of the Zoo's new mission, vision, goals and objectives as well as the changing demographics in Canada's most populated region. Coupled with the announcement of the creation of the Rouge National Urban Park (RNUP), which makes us the only zoo in the

world to be located at the gateway to a national park, the timing could not have been better to map out the growth strategy for the next two decades. This provides the Zoo with unlimited opportunities for partnerships with likeminded organizations that share the common mission of sustaining wildlife populations and their habitats for future generations.

The Toronto Zoo is no longer the Zoo of twenty-five years ago where a visitor would come just to see animals from the world. Now, the animals you see throughout the site represent only a portion of the work that is being done here through our programs to support species in the wild. The Zoo is a very dynamic organization providing compelling guest experiences that educate visitors about the animals in our care and also inspires them to take actions to protect them. This is a very exciting time for everyone at the Toronto Zoo – we are very proud of the work we do here, especially with leading veterinary, reproductive and nutritional sciences, education and wildlife care and we look forward to highlighting this critical work to our visitors and the greater community at large through new programming and partnership opportunities.

I invite you to read our Strategic and Master Plans and join us in supporting our mission of being a living centre for education and science, committed to providing compelling guest experiences and

inspiring passion to protect wildlife and habitats. We are confident you will share our vision to be Canada's national leader in saving wildlife to ensure the rich diversity of nature for future generations.

John Tracogna
Chief Executive Officer

December, 2016

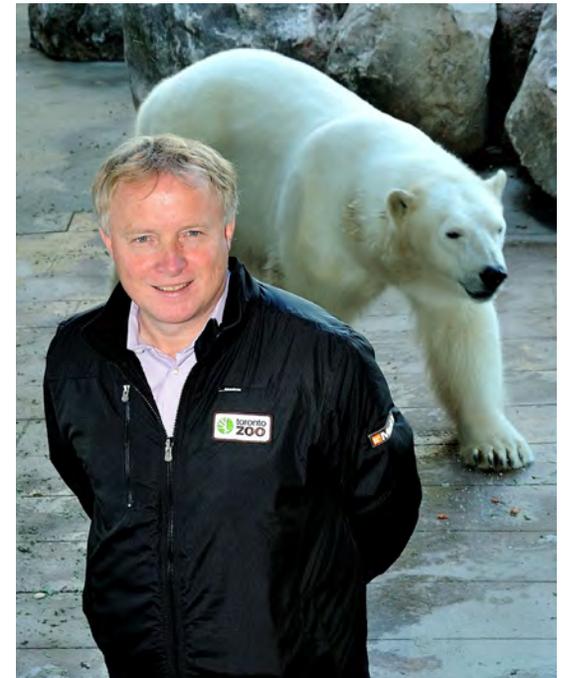


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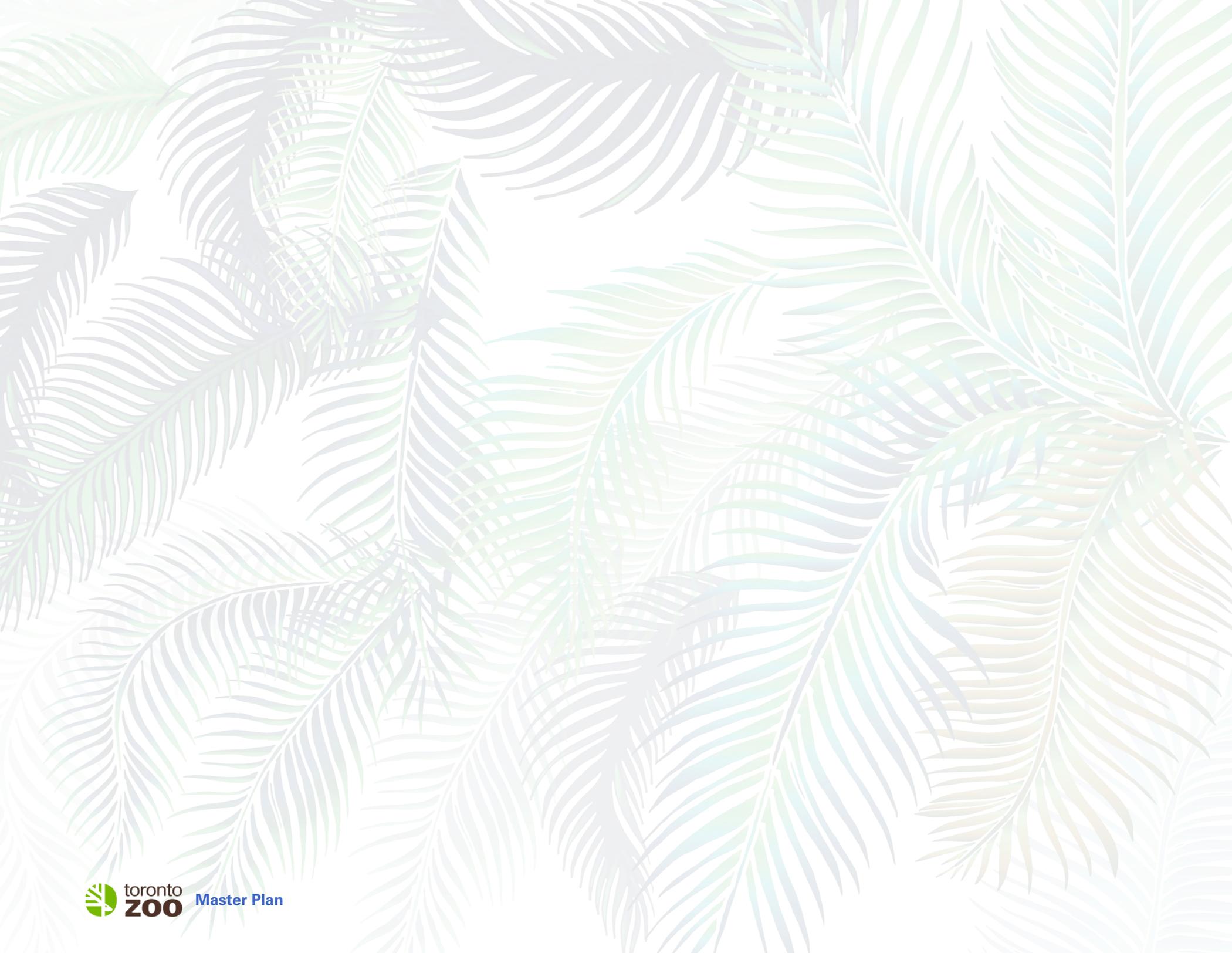
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INTRODUCTION

KEY MESSAGES

The Master Plan will:

- Work in tandem and alignment with the Strategic Plan and its objectives with a particular emphasis on magnifying the Zoo's conservation impact by:
 - » Providing exemplary care to the Zoo's wildlife population, both behind the scenes and in day-to-day engagement with our guests;
 - » Enhancing the guest experience to appeal to a more diverse – and increasingly urban – audience;
 - » Inspiring current and future generations to become active stewards of wildlife and wild places.
- Guide the capital and programmatic development of the Toronto Zoo and will assist the Zoo in maintaining its reputation as a leading zoological organization internationally by guiding focused and cohesive capital investment.
- Facilitate development in a manner that drives higher attendance, earned revenues and compelling educational content if adequate capital investment is made in alignment with the Master Plan.
- Help inform the fundraising objectives of the new Foundation.
- Refocus on Canadian wildlife species.
- Represent a unique piece of major infrastructure and facilitate an opportunity to compliment and integrate a mutual alignment of values, mission and objectives with the Rouge National Urban Park.
- Help build the Greater Toronto Area as a great Region providing easy access to wildlife education/learning and nature based experiences, and by engaging in important wildlife conservation endeavours.
- Benefit human efforts in mitigating the impacts of climate change and promote biodiversity, locally, nationally and internationally.
- Foster a climate of innovation and collaboration with key partners such as conservation and environmental NGO's, key academic institutions, government and private sector partners, and other wildlife organizations, who all wish to enhance the economic prosperity and cultural fabric of the region.
- Assist the Board and its staff in the essential quest to ensure that the Zoo's habitats and holdings continue to meet our evolving understanding of the welfare needs of the animals in our care.



Grevy Zebra Conservation Breeding Program

BACKGROUND

The initial plan for the creation of a zoo for the City came about in 1966 when the Municipality of Metropolitan of Toronto approved the formation of a committee to investigate the feasibility of a large scale zoo located within its municipal boundaries. As a result, in 1969, a master plan was created by Johnson Sustrunk Weinstein and Associates.

The Toronto Zoo opened in 1974, situated on 287 hectares (710 acres) of land in the picturesque Rouge Valley, in northern-eastern Toronto. The Zoo aimed to provide Torontonians with exposure to and an understanding of the world's zoogeographic regions and oceans. The Zoo created several representative zones, including Indo-Malaya, Africa, the Americas, Australasia, Eurasia and the Canadian Domain.

Part of the initial planning of the 1969 plan was completed by Canadian architect, Ron Thom, who also designed the Zoo's two signature structures, the Indo-Malaya and Africa Pavilions, in collaboration with structural engineer Morden

Yolles. These buildings represent “the last heroic, large-scale projects of post-war Canadian Modern architecture”¹ and aimed to create “spaces as non-building-like as possible in a continuous environment of humans, flora and fauna.”² Today they form the Zoo's largest indoor habitats and are the prime destination for mid-winter visits.

In 1986 Marshall Macklin Monaghan Limited (now MMM Group) updated the original Master Plan, and in 1990 the Capital Master Plan was approved by Metro Council and utilized over the following 25 years.

Subsequent major developments include the large, experientially integrated outdoor landscapes of the Savanna and Tundra Trek, however much of the interstitial exhibits and spaces remain relatively unconnected and with limited impact. The Canadian Domain has remained as a long hike down the hill to the banks of the Rouge River, and is comprised primarily of large hoofed stock enclosures. Given the environmental sensitivity of this area and the potential for flooding, future plans will be comprised

of low-impact uses, off-exhibit breeding areas and tour-guided experiences, with major visitor experiences and public learning opportunities moved to the ‘top of the hill’ on the tablelands.

The Zoo, which celebrated its 42nd anniversary in August of 2016, attracts an average of 1.3 million visitors annually, and is one of the largest and most progressive zoos in North America.

This current Master Plan takes the work of previous Master Plans, as well as a number of other plans and studies of the Zoo that have been undertaken over the years, into consideration as part of the background review. It also takes into account the new Toronto Zoo Mission, Vision and Core Values as well as the seven strategic goals identified in the 2015-2020 Strategic Plan.

During the Master Plan preparation, several projects are being undertaken concurrently. As part of the Master Plan a Market Analysis has been developed and the Toronto Zoo Building Audit was completed in early 2016, and informs this report.



CONTEXT MAP FIGURE 1
Rouge National Urban Park Location

CONTEXT

The Toronto Zoo is home to more than 5,000 animals, representing more than 450 species and 300 exhibits with an even larger plant population. The majority of the site governed by the Board of Management of the Toronto Zoo, is currently owned by the Toronto and Region Conservation Authority (TRCA), and a smaller portion 40 hectares (100 acres) is owned by the City of Toronto and managed under a tripartite agreement. The Zoo sits within the Rouge National Urban Park, north of Highway 401, on the forested slopes and tablelands that lie between the Rouge River and the Little Rouge Creek. The site is generally bounded by Old Finch Avenue to the north, Little Rouge Creek to the east, Rouge River to the west and Upper Rouge Trail Park to the south (see Figure 2). An expanded study area that includes the entire Toronto Zoo site and surrounding context of part of the Rouge Valley has been considered in some aspects of analysis. The surrounding area is composed of small farm holdings in the upland areas, as well as larger farms in the valley. There is still considerable agricultural influence in the area with large u-pick farms, as well as meandering forest lands along the rivers. Eventually, a trail

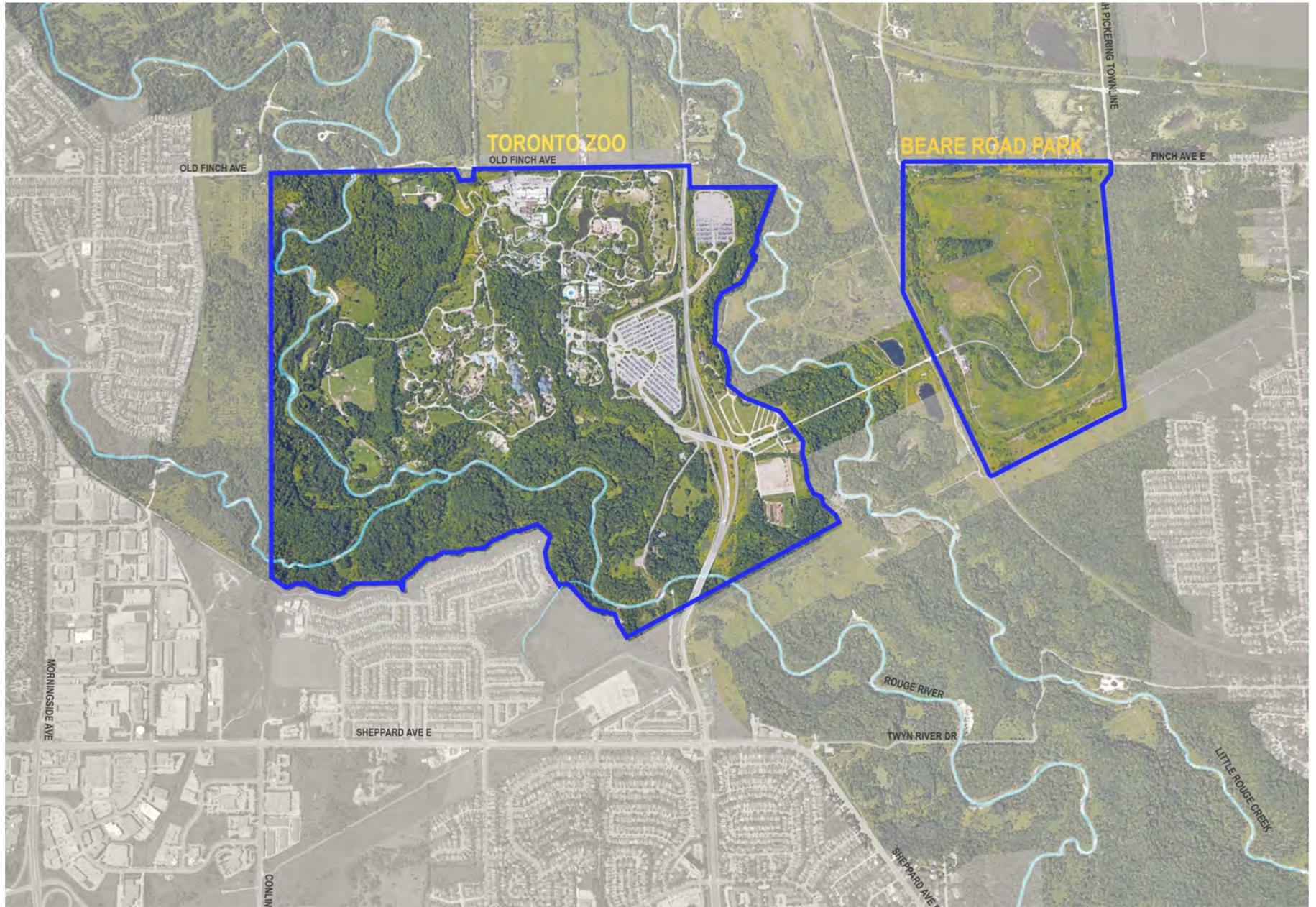
system, combined with conservation and public use programs, will unite the entire area and provide a fertile focus for the Toronto Zoo to collaborate with Parks Canada on native species conservation programs and educational outreach.

Future development under an updated tripartite agreement will include Zoo land to the east of Meadowvale Road where facilities, programming, and visitor experiences support both the Zoo and Parks' conservation and sustainability efforts. Also included is land area to the north of Old Finch Avenue, where relocated facilities will be provided for conservation breeding and reproductive research, and new areas will be lushly planted for browse and nutrition gardens.

In 2011, the Government of Canada announced the creation of the Rouge National Urban Park (RNUP) as part of the national parks system. The Toronto Zoo is located adjacent to the RNUP, which creates a tremendous potential for synergies between the Zoo and the new park.

1. Beth Kapusta and John McMinn, "Engineering Canadian Modernism," *Canadian Architect: The National Review of Design and Practice*, April 1, 2001, <https://www.canadianarchitect.com/features/engineering-canadian-modernism/>

2. Ibid.



SITE CONTEXT MAP FIGURE 2
Adjacency to Parks

METHODOLOGY

The master plan was produced from a ten step process as outlined below. The process was documented in three progressively more detailed reports, an Initial report in the fall of 2015, an interim report in February of 2016 and the final report in early October 2016.

Step 1: Market Analysis Report

The Market Analysis is the first phase of the overall Master Plan that will guide the development of the Toronto Zoo over the next 15-20 years. The Master Plan is to reflect the new mission and vision statements for the Toronto Zoo.

A key difference from previous strategic plans for the Toronto Zoo is that the current plan makes conservation impact the primary focus.

The Market Analysis is set out in the following categories:

- The Toronto Zoo in the context of other zoos
- The Toronto competitive context
- Existing markets for the Toronto Zoo
- Potential markets for the Toronto Zoo
- Zoo, attractions and travel trends

Step 2: Background and existing conditions review and site tour

At the outset of the master plan, selected background materials and data were reviewed, including the 2015-2020 Toronto Zoo Strategic Plan and documents related to Financial, Visioning, Programs / Human Resources, Visitors / Market, Standards / Guidelines, Adjacent Land Use and other zoo master plans.

An observational, photographic and background document review was conducted of existing Zoo facilities including:

- Exhibits
- Off-Exhibit Holding Areas
- Public Spaces & Amenities (washrooms, retail)
- Rental Spaces
- Operations Areas
- Visitor & Services Circulation
- Administrative & Staff Areas
- Programs

During the summer of 2015 master plan team members and Zoo representatives carried out an initial tour of the Zoo site. The tour provided the master plan team with an overview and familiarity with the Zoo prior to a three day staff workshop in September.

Step 3: Identify and review trends

Current zoo planning and design trends and recent developments were presented at the September workshop.

Step 4: Consultations

Over the duration of the master plan process a series of meetings was held with the Steering Committee regarding the emerging content of the Master Plan. In addition a series of face to face interviews with selected management staff and stakeholders was carried out prior to the preparation of the Interim Report.

Meetings were arranged with staff from all areas of the Zoo.

In addition, meetings were arranged with Parks Canada staff to determine opportunities for joint programs and capital projects. The consultation was informed by background reviews and the existing professional familiarity of the local team with the two institutions.



Indian Rhino Conservation Breeding Program

Step 5: Fall Workshop, Master Plan Training Session with Board and Initial Report

The staff workshop brought together members of the master plan team with the Zoo team. Key Zoo staff as well as team members from MMM Group, Studio Hanson Roberts, Lord Cultural Resources, Schultz & Williams and Balind Architects were present.

A work-shop was held in December, 2015 with the Board of Management.

The information gained supplemented the review process and formed the basis for the Initial Report which included a conceptual design approach and initial thoughts about a high level plan.

Step 6: Workshop #3

After completion of the Initial Report, a third workshop was held in February with selected Zoo staff and site design specialists from the MMM Group and Studio Hanson Roberts. Follow-up face to face interviews were conducted with appropriate Zoo staff and key individuals. This workshop considered alternatives to the conceptual design approach and resulted in a preferred alternative.

Step 7: Consolidation and Interim Report

Define the Vision:

- “what is the Zoo in relation to the world of zoos and aquariums?”
- “what is the Zoo in relation to other cultural – green – community organizations in Toronto?”
- “what is the Zoo in relation to the world of animal welfare and conservation organizations?”

After completion of the Initial Report, the team members performed due diligence on the information gained, as well as conducted follow-up phone interviews with appropriate staff and key individuals.

Key aspects were documented and informed by the results of the building audit that is prepared by others. An Interim Report was prepared in February 2016. This report discussed findings, defined planning principles, defined “green” goals and strategies and documented approaches developed at the workshop in February 2016.

Step 8: Complete Development Plan & Prepare Draft Final Report

The conceptual development plan was refined and provided to the Zoo for review and to the Marketing & Financial Planning Consultants for their use in developing recommendations.

Step 9: Complete Financial Plan

A Financial Plan was developed after receiving comments from the Zoo on the Draft Final Plan.

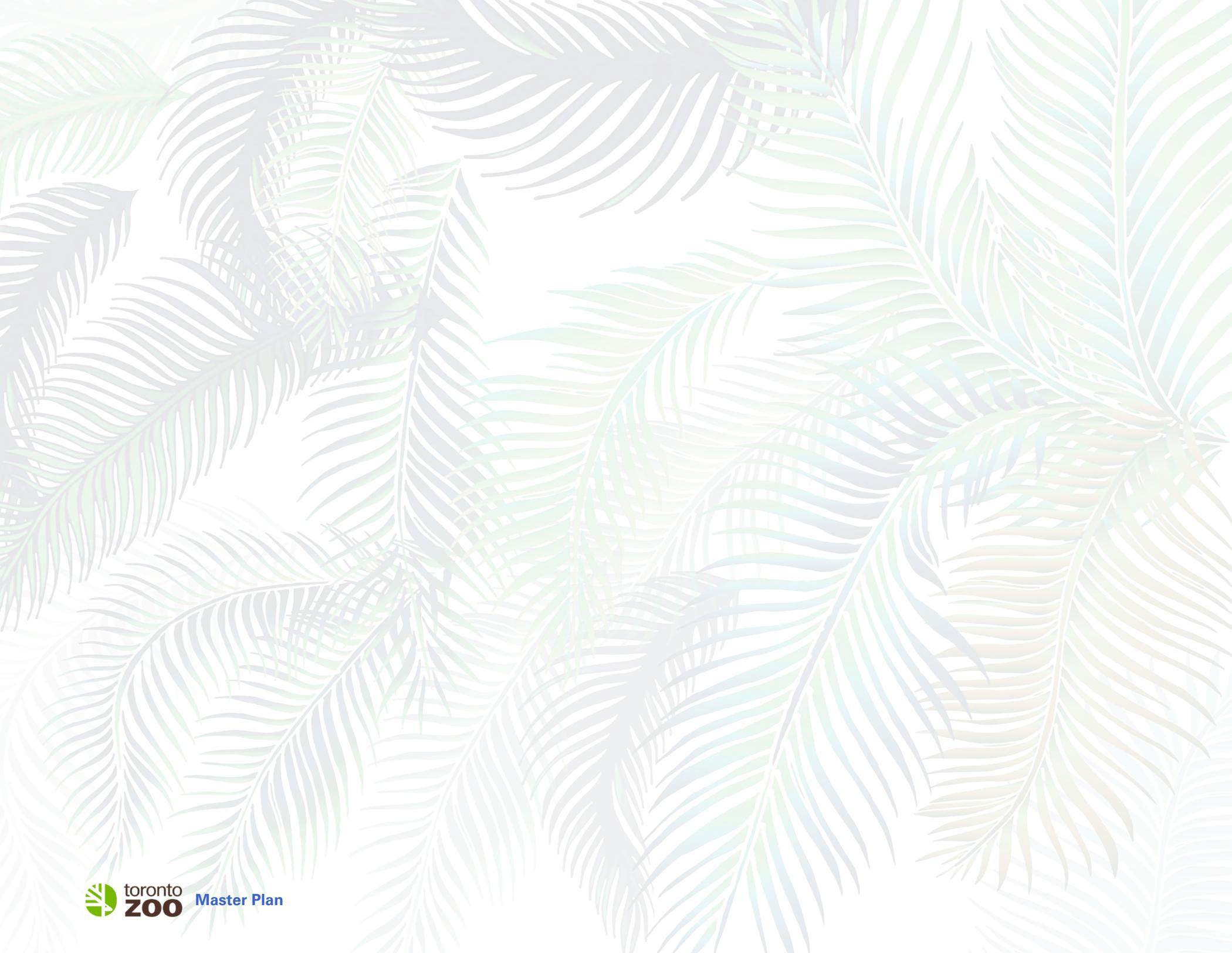
Step 10: Marketing Plan and Final Report

The Final Report refines the direction of the Master Plan and provides a picture of what the Zoo will look and feel like. It provides a list of achievable capital projects and project components within a 15-20 year horizon, and establishes a phasing strategy with associated costs and operational considerations.

A Marketing Plan was developed in parallel with the site design. This Final Report includes illustrative plans and sketches.



Ailurus fulgens - Red Panda





THE VISION

THE VIEW FROM HERE

The Toronto Zoo, located on a high point of land and covering more than 700 acres between the Rouge River and Little Rouge Creek is poised to realize a transformational vision.

Building on its recently completed Strategic Plan and supported by this comprehensive Master Plan which lays out a developmental path for the next 15 to 20 years, it stands ready to take advantage of its history of innovation and move confidently forward with the next steps of reinvestment and renovation that will enable it to take even better care of its animals, its guests and the surrounding native forest that forms such a strong thread running through the Zoo.

With a focus on wildlife conservation and a determination to continue to expand partnerships with local citizens, as well as leading local and international organizations, the Toronto Zoo will strengthen and advance its reputation as a conservation centre of excellence that actively involves its guests and sends them forth with a renewed awareness of the needs of wildlife and wild places, and sense of purpose.

This Master Plan has been produced with input from the Zoo Board of Management and Staff, as well as the Toronto and Region Conservation Authority, City of Toronto, Parks Canada, the University of Toronto Scarborough and numerous other stakeholders. Through such broad outreach and consensus-building, the Toronto Zoo will be able to build upon its international reputation in wildlife conservation to step confidently into a role of one of the most significant places of regional conservation activities and sustainably-managed habitats in the Greater Toronto Area.

The Zoo will be a prime gateway to the ecosystems of the Rouge National Urban Park and the Rouge River watershed. With its evolving education and research facilities, it will be a national destination for research of species at risk and education about native and exotic species and habitat conservation. To support this, the Master Plan envisions not only expanded and enhanced habitat areas for the Canadian and exotic animals in its care, but a revitalized welcome area that reflects the higher purpose of the Zoo, a new learning centre and 4-season children's nature play area, restored wetlands and forests, and a variety of overnight facilities where Canadians can get closer to the nature that is in their midst.

The Master Plan reflects the need for an innovative 21st century wildlife conservation park that is environmentally and fiscally sustainable for the long term. To accomplish this, the Toronto Zoo will move confidently into its role as a world leader advocating for and advancing wild welfare, wildlife conservation and habitat preservation while also delivering enhanced and engaging guest experiences that inspire and educate present and future generations.

LEGEND

SITE

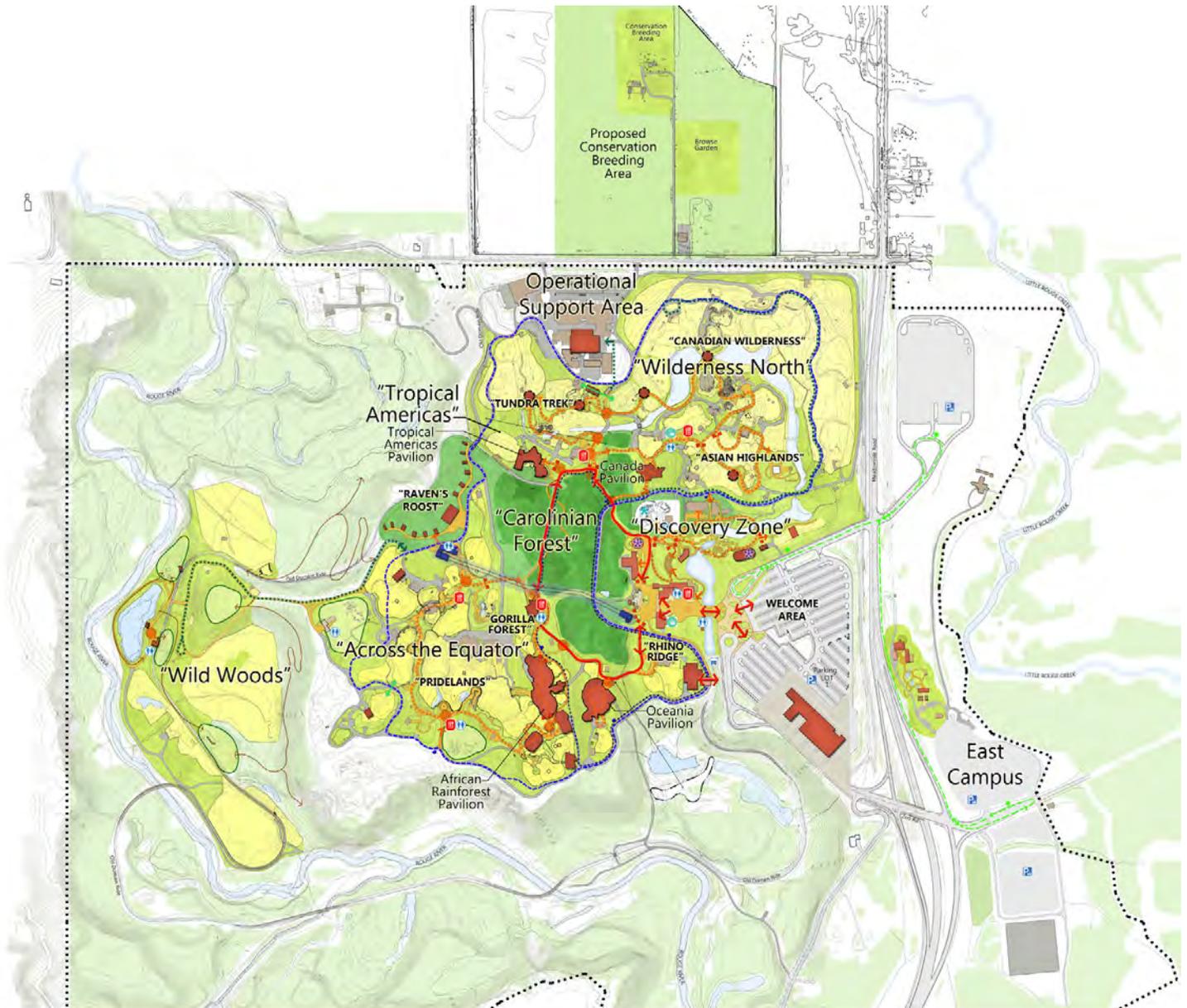
- Animal Area
- Building - New / Re-developed
- Building - Existing
- Service Area
- Water - Existing
- Water - New / Re-developed
- Landscape - Themed
- Landscape - Garden
- Landscape - Mapped Vegetation
- Landscape - Carolinian Forest
- Landscape - Core Woods
- Rockwork
- Existing Contour Lines
- Site Boundary

CIRCULATION

- Visitor - Plaza / Decision Making Point
- Visitor - Gateways
- Visitor Pathway - General
- Visitor Pathway - Core Loop
- Visitor Pathway - Precinct Loop
- Visitor Pathway - Trails
- Service Road
- Public Road
- Gondola Route
- Zoomobile Route
- Zoomobile Station / Stop
- Zoomobile Winter Shuttle
- Special Tour Route
- Shuttle to Overflow Lots
- Shuttle Stop
- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan
Toronto Zoo Master Plan

SCALE = 1:2500 at A4/E
0 10 20 30 40 50 60 70 80 90 100 200 300 400 500
November 2016



FIGURE 3

MISSION AND VISION FOR THE ZOO

OUR MISSION

A living centre for education and science, committed to providing compelling guest experiences and inspiring passion to protect wildlife and habitats.

OUR VISION

Canada's national leader in saving wildlife to ensure the rich diversity of nature for future generations.



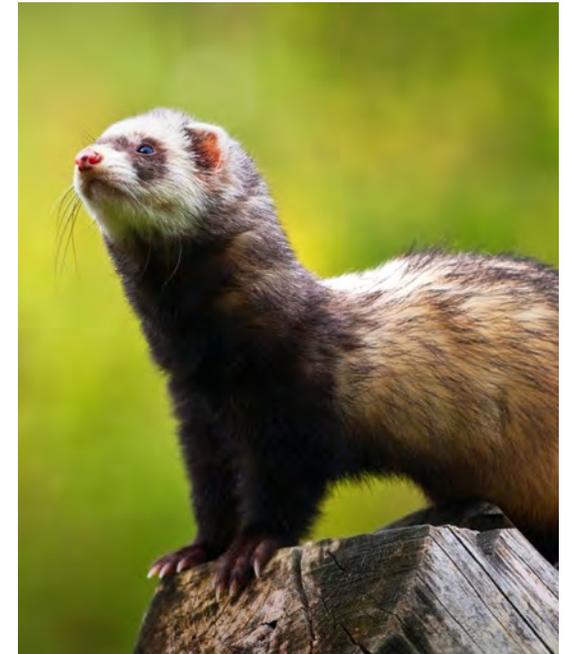
Lanius ludovicianus migrans - Eastern Loggerhead Shrike



Canis lupus arctos - Arctic Wolf



Cygnus buccinator - Trumpeter Swan



Mustela nigripes - Black Footed Ferret

CORE VALUES FOR THE ZOO

The following Core Values of the Toronto Zoo were developed in the 2015-2020 Strategic Plan to ensure that the evolving plan for the Toronto Zoo continues to be true to the Vision:



EXCELLENCE

We ensure the highest standard of care for wildlife, provide excellent guest service and create fun and transformational experiences that connect people to nature.

CONSERVATION

We are committed to practicing and promoting activities and actions that benefit wildlife and the environment.

INNOVATION

We encourage creativity, strive to think differently and turn our ideas into actions.

COLLABORATION

We conduct ourselves in a manner that fosters respect and teamwork among staff, volunteers and our partners to achieve our mutual goals.

INTEGRITY

We are transparent and committed to best practices and leading by example.

PASSION

We are proud, energetic and passionate about saving wildlife and will inspire others to value the critical role of our Zoo.

GOALS AND OBJECTIVES

Seven goals emerged in the strategic planning process and represent the Zoo's strategic direction for the next five years.

Fourteen selected objectives are addressed directly in this master plan.



GOALS

GOAL 1 - CONSERVATION IMPACT

Advance to a zoo-based conservation centre of excellence

GOAL 5 - STRATEGIC ALLIANCES

Maximize existing partnerships and identify new opportunities

GOAL 2 - GUEST ENGAGEMENT

Enhance the guest experience to appeal to a more diverse audience and inspire conservation action

GOAL 6 - PEOPLE

Create an organizational culture that attracts, engages and retains highly motivated staff and volunteers

GOAL 3 - GOVERNANCE

Enhance the governance structure

GOAL 7 - UNDERSTANDING & CARING

Increase awareness, understanding and support of the Zoo as a centre for conservation excellence

GOAL 4 - FINANCIAL STABILITY

Build an organization that is fiscally and environmentally sustainable for the long term

OBJECTIVES

Establish the Toronto Zoo as the national leader in wildlife conservation, with a focus on Canadian species and habitats.

Achieve a sustainable wildlife population with a high degree of biodiversity within the Zoo.

Provide exemplary care to the Zoo's wildlife population.

Invest in renewal of facilities and infrastructure to meet and exceed industry standards.

Revitalize existing exhibits and amenities and develop new memorable experiences, to increase support for the renewed mission of the Zoo.

Advance accessibility on the Zoo site.

Create various opportunities for new audiences to connect with and support the new mission and to increase revenue and attendance.

Increase earned revenue through the creation of new experiences and programs.

Develop a strong partnership with the Rouge National Urban Park.

Develop other strategic alliances using a diverse platform of conservation actions and stewardship programs.

Establish compelling opportunities for partners, sponsors and donors to support wildlife and habitats in our priority areas and our conservation focus.

Provide learning and development programs that meet the identified needs of staff and volunteers to allow us to excel in our roles.

Assess the Toronto Zoo brand and re-position to align with the new mission, vision and goals.

Through school and education programs, inspire current and future generations to become active stewards of wildlife conservation.

PRINCIPLES

Moving towards the future, the Toronto Zoo's Master Plan will enable the Zoo to continue to build upon the many successes of the last 42 years while concentrating on key directives of the Strategic Plan, namely focusing on the care, conservation and interpretation of Canadian animals and habitats while also nurturing a sustainable diversity of the world's wildlife and their attendant learning opportunities; advancing accessibility and the ability of the Zoo to meet the needs of Toronto's diverse residents; and creating a zoo-based conservation centre of excellence that can achieve tangible conservation outcomes on a number of inter-related fronts.

The Master Plan has been informed by the Strategic Plan, the Zoo's mission, its physical setting and the nature of the animals in its care, as well as a thorough understanding of international trends in zoo design. In addition, the Plan relies heavily on an understanding of the evolving market forces in Toronto and the world at large in order to continue to deliver meaningful experiences of discovery and learning for the region's changing families.

The goal of the Master Plan is to provide a capital improvements and program road map for the people and the organization to use in carrying out the goals and objectives of the Strategic Plan. The net outcomes of all of these efforts can be concisely summarized as follows (and as shown in the Strategic Intent Diagram):

- **Tangible Conservation Outcomes**
- **Excellent Care of Our Animals**
- **Inspiring Guest Experiences & Learning Opportunities**
- **Financial Sustainability**

The transformation envisioned in the Master Plan can be summed up in the following series of principles:

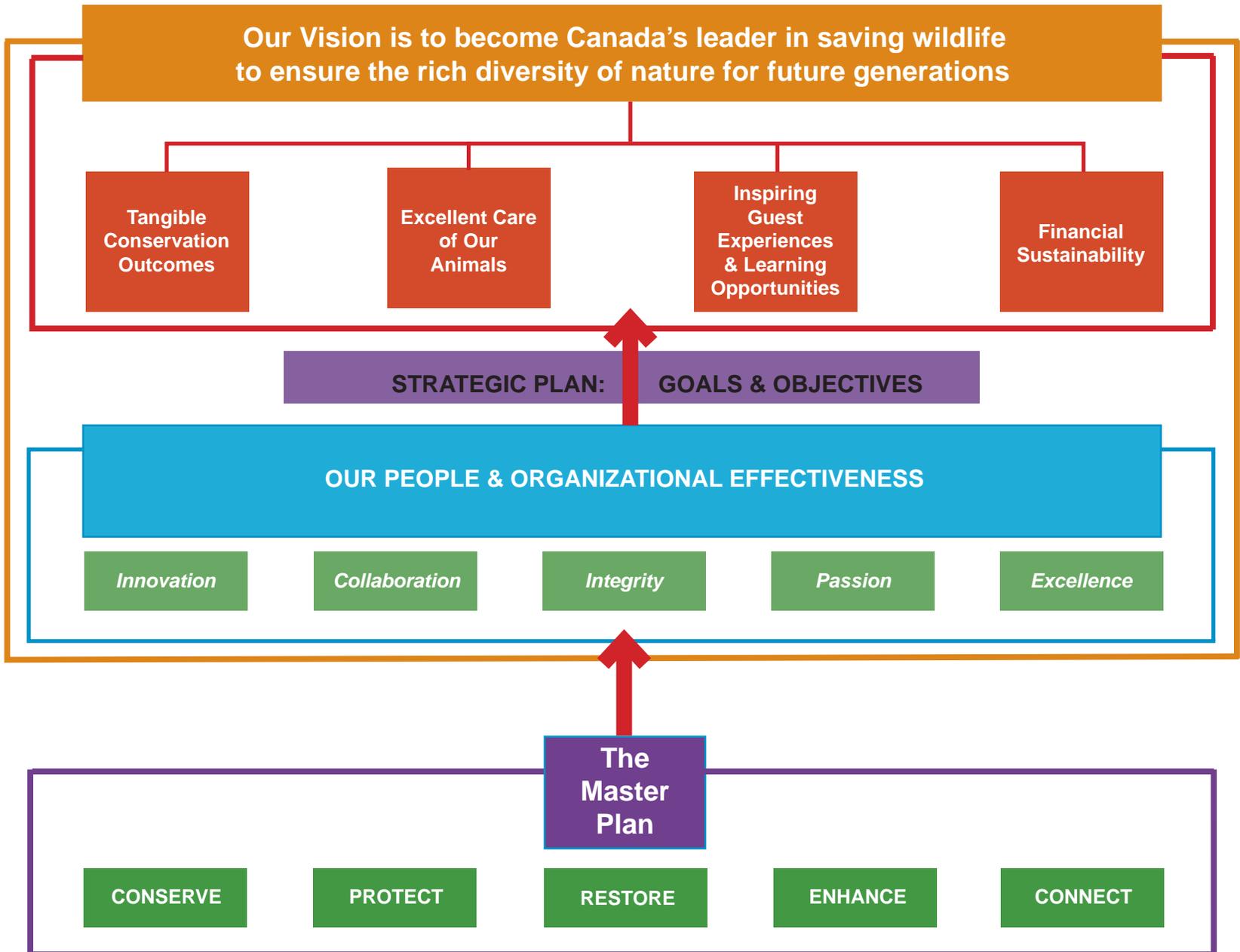
- **Conserve**
- **Protect**
- **Restore**
- **Enhance**
- **Connect**

These principles, more fully described below, tie the Master Plan back to the Strategic Plan through an overarching vision and action plan of CARE: Care for the animals | Care for the guests | Care for the environment | Care for Staff and the institution.

Conserve essential Ecosystem Characteristics

Conservation is the primary function of what the Zoo does. It will conserve wildlife in wild places and inspire the community to understand and value wildlife and their habitats.

It will be recognized as the preeminent public park in Toronto rooted in a mission of conservation. Specific outcomes for biodiversity and ecosystem health will be established and tied to achievable targets that will be established and monitored throughout all areas of the Toronto Zoo.



Protect sensitive Habitat and Animal Welfare

Animal welfare is fundamental and the Zoo will manage and care for animals and habitat exceptionally. Ensure that all exhibits and upgrades are appropriate for the species and confirm this with up-to date science-based advice.

Sensitive habitats will be identified and designated for user experiences of research and conservation supplemented with interpretive signage. These will include Areas of Natural and Scientific Interest (ANSI's) and identified species at risk habitat.

Consult scientific information available in other zoological institutions and academia. Consider multi exhibits for species such as social carnivores to allow for separation of animals as required for ensuring their welfare. Ensure that the animals' physical and psychological needs are met. Provide choice of access to the natural elements as well as natural change and environmental challenge that encourages curiosity and engagement. Ensure that staff members can safely and easily engage in maintenance, care and training, which enables animals to lead rich and fulfilling lives without undue stress or injury.

Restore the Waterways and Natural Forest Habitat

The waterways, wetlands and natural forest habitat will be restored to a level of ecosystem health that is appropriate to a conservation-based institution. User experience of these domains will include all the permitted uses in the sensitive habitat plus foot paths, trails and other low-impact human use.

Enhance the interface between Animal Habitats, Programs and Guest Experiences

The Zoo will provide a series of programmed and free-choice experiences and site based learning opportunities. It will accommodate opportunities for relaxed enjoyment as well as active engagement. The circulation system will be adaptive, flexible and fully accessible.

Connect People to Nature

The Zoo will maintain the highest quality visitor experience to connect visitors with animals, staff and mission. The Zoo will also connect its conservation work with the values and aspirations of the community by establishing a sensible plan that provides strategic and well-orchestrated investment over time.

The Zoo will connect with surrounding neighbourhoods, Rouge National Urban Park and the City. The Master Plan identifies opportunities for improved pedestrian connections from the Rouge National Urban Park and adjacent municipal infrastructure.

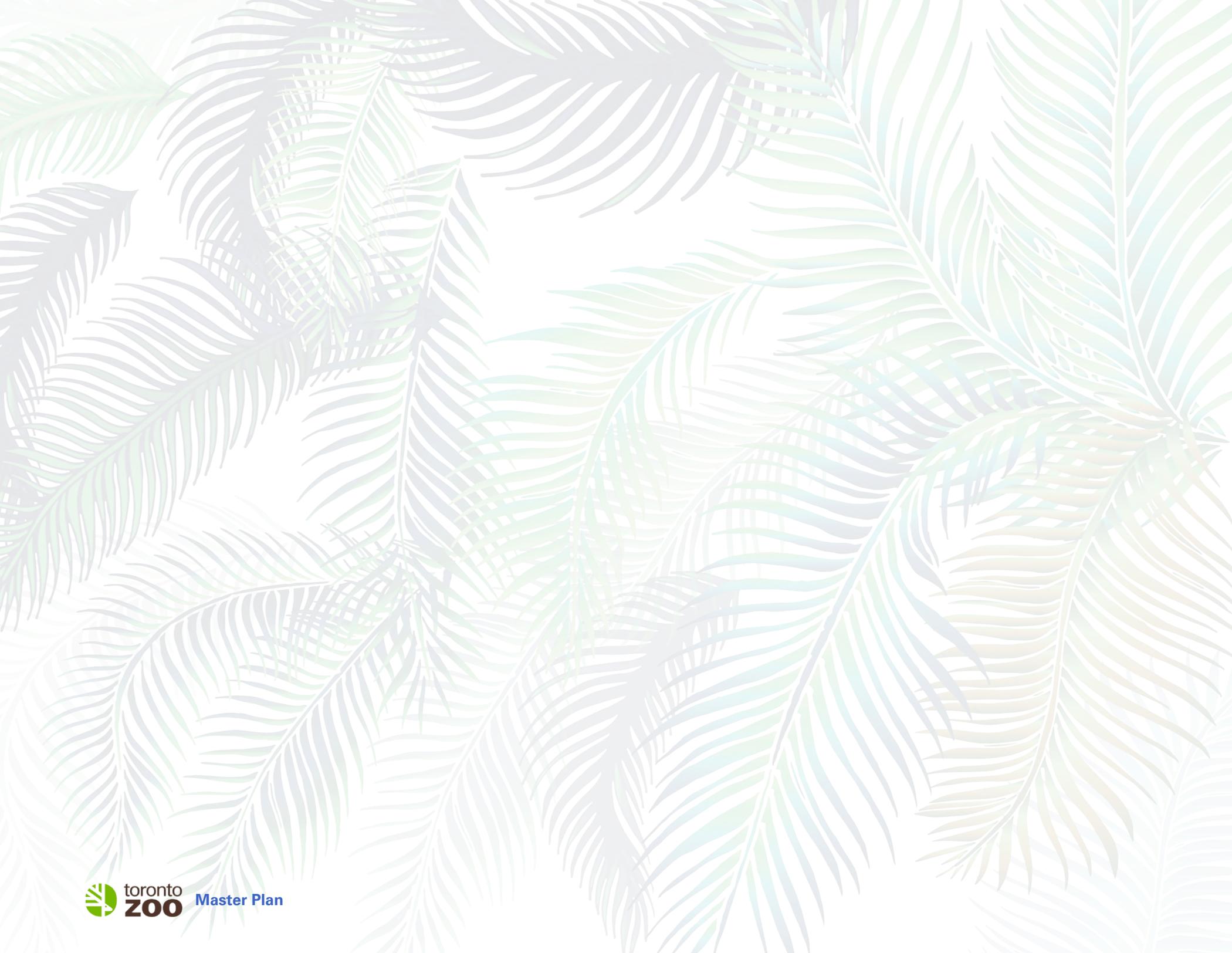
Improved bicycle and transit access that links the Zoo to existing municipal infrastructure is critical.

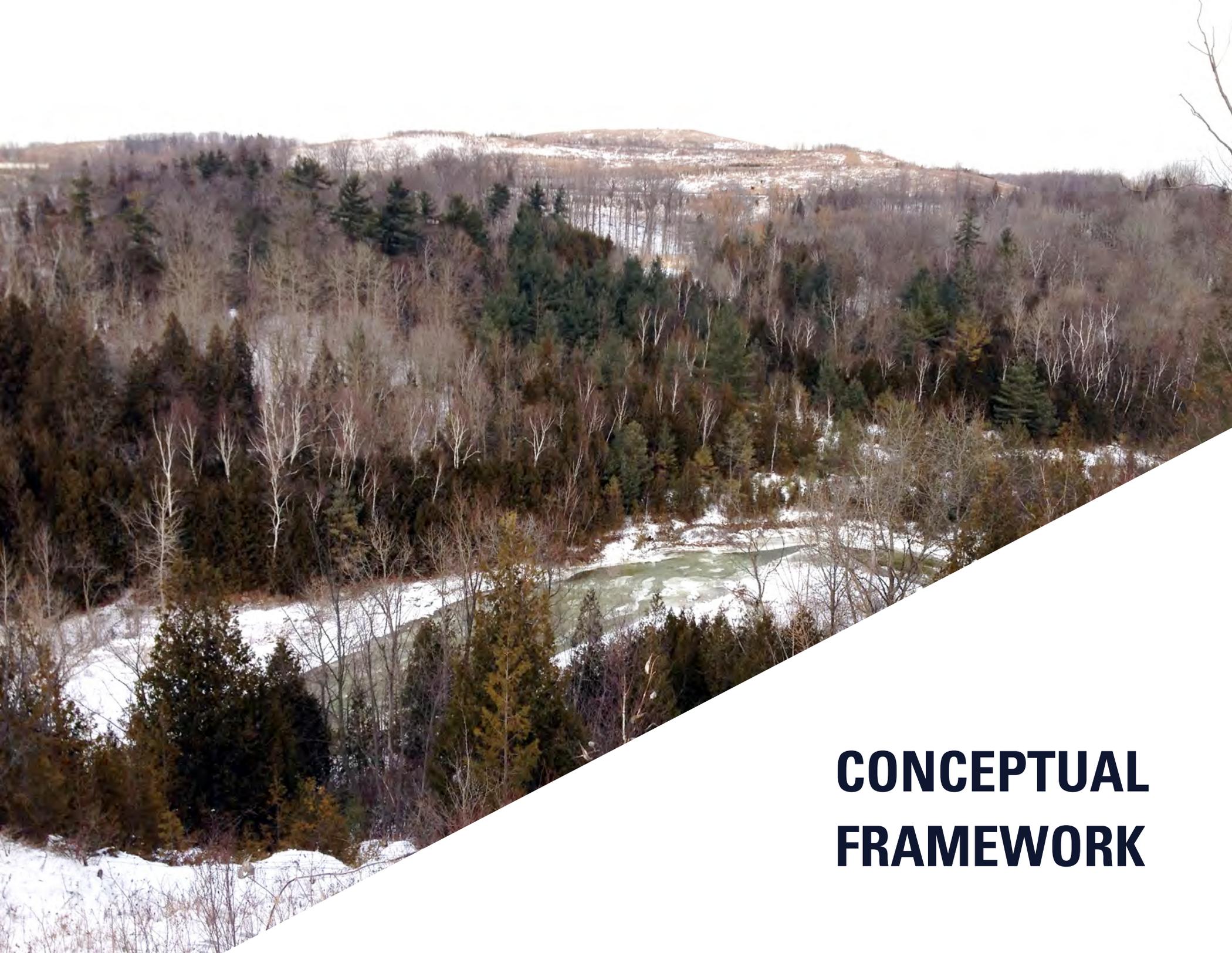
A Mobility Management Committee (MMC) should be created comprised of the Toronto Zoo, Rouge National Urban Park, University of Toronto Scarborough Campus, Centennial College and others to communicate about upcoming events and coordinate the variety of activities and festivals that the Zoo and others will mount.

The MMC should coordinate shuttle services and bike share opportunities at municipal transit stops, the Rouge National Urban Park and other points of origin and destinations.



Dendrobates azureus - Blue Poison Dart Frog





CONCEPTUAL FRAMEWORK

A STRONG FOUNDATION FOR CHANGE

Recent planning at the Toronto Zoo has enabled the Zoo to coalesce and condense some of the more far-flung exhibits and public experiences, and to clarify and simplify the service and pedestrian circulation systems. This Master Plan is designed to continue to build upon these earlier endeavours with specific areas of added emphasis, including:

- Clarify the story and main messages of the Toronto Zoo.
- Clarify the nature and extent of major animal habitat and experience zones.
- Further develop clear pedestrian circulation systems that are fully accessible and able to be expanded or contracted, depending on the weather.
- Resolve the Zoo entry and access issues to provide a smooth functioning and delightful experience for all.
- Incorporate “hot spots” throughout the Zoo to provide ample opportunity for Discovery and Learning staff to engage with guests via informal presentations. Such spots should also contain ample opportunity for seating and relaxation for adults, as well as “nature play” for kids.

- Recommend further revenue generation opportunities that are in keeping with the natural character, style and messaging of the Zoo.
- Build upon opportunities provided by the adjacency of the Rouge National Urban Park.
- Enable exceptional animal care, welfare and breeding programs, including providing the highest quality, flexible animal spaces and enrichment opportunities.
- Provide facilities that enable staff to function at the highest level of efficacy, safety and professionalism.
- The Toronto Zoo and Parks Canada jointly entered into a process to assess joint needs and opportunities for the future in terms of a shared educational and visitor orientation facility. The facility would provide a much-needed venue to fulfill each organization’s requirement for education, conservation, and establishing a connection to nature for individuals, community and school groups, and residents.



Conservation and Care, Toronto Zoo



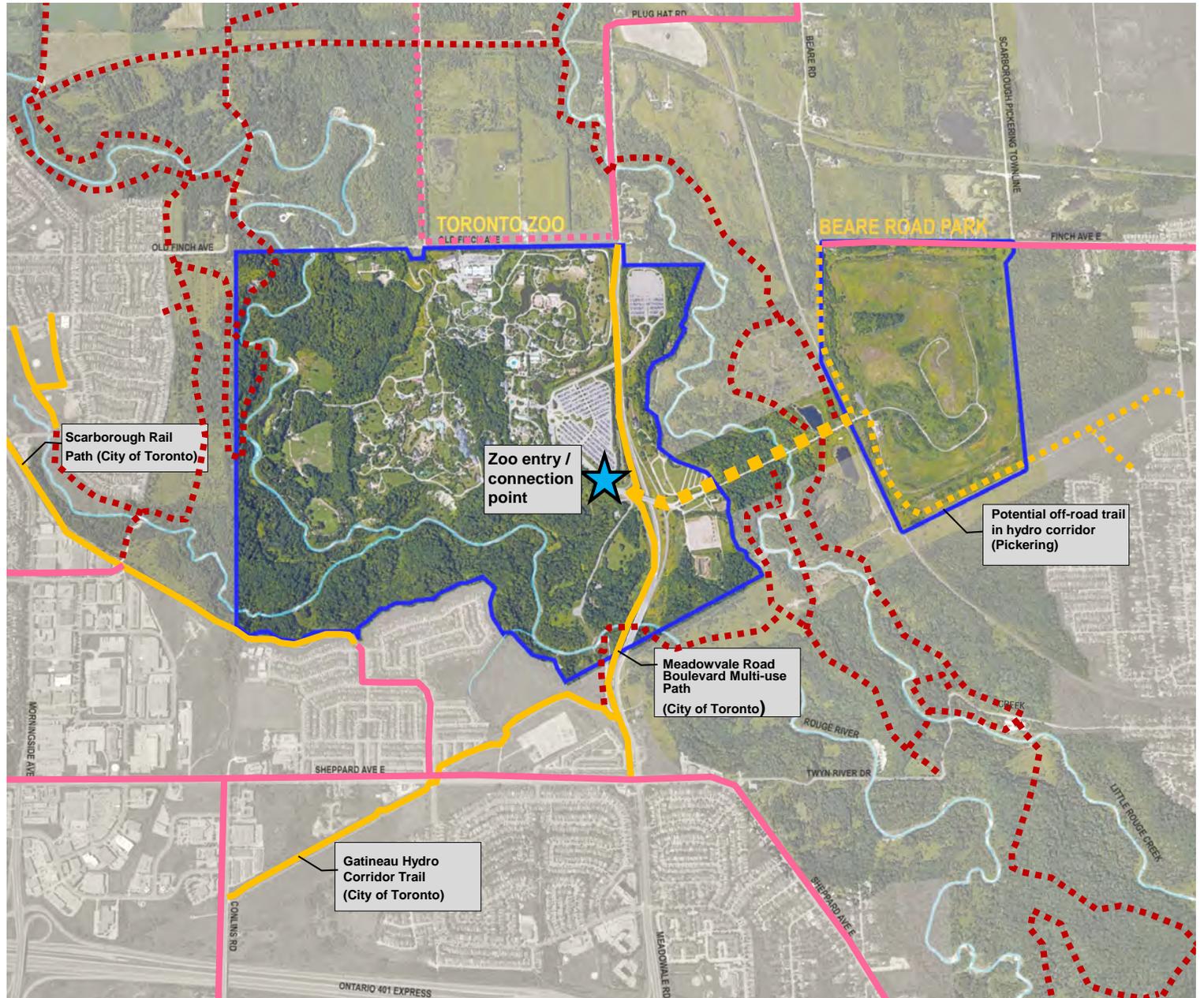
Nature Play and Discovery



Wildlife Health Centre

Legend

- Existing Off-road Multi-use Trail
- - - Potential Off-road Multi-use Trail
- On-road Cycling Route (from approved municipal master plan)
- - - Potential On-road Cycling Route (not currently part of municipal master plan)
- - - Existing Trails and Possible Opportunities
- Access Route



CONNECTIONS PLAN FIGURE 4

Existing Condition

SUMMARY OF THE MASTER PLAN

The Zoo site has been divided into six focal areas that are differentiated on the basis of the following:

- The level of public access versus back-of-house operations;
- The degree of observable exhibit habitat for animals in our care versus free-range habitat for at-large native species;
- The focus on guest services versus animal habitats.

	Public Access	Back-of-House	Exhibit Habitat	Native Habitat	Guest Services Focus
Welcome Area	High	Low	Low	Low	High
Core Habitat Area	Low	Low	High	High	Low
Wild Woods	Low	Low	Low	High	Low
East Campus	Low	Low	Low	High	Low
Conservation Breeding Area	Low	Low	Low	Low	Low
Operational Support Area	Low	High	Low	Low	Low

Each area exists essentially independently of the others while being tied together by a carefully choreographed circulation system that enables them all to act in support of the Zoo’s mission and vision.

These areas include the following:

- **Welcome Area:** The Zoo’s front door.
- **Core Habitat Area:** The prime visitor experience and learning landscape.
- **Wild Woods:** An area set aside for guided group experiences, learning activities within the Zoo’s Rouge River landscape.
- **East Campus:** Remote parking and opportunities for a festival area and lodging to support a better integration with the Rouge National Urban Park.
- **Conservation Breeding Area:** An off-public-view area for the Zoo’s conservation breeding programs, as well as support for the Zoo’s existing animal populations.
- **Operational Support Area:** Back-of-house maintenance, operations and administration areas required for the Zoo’s smooth functioning.

The Master Plan will enhance and restore significant habitat for local and regional wildlife, provide camping and outdoor trails as well as improve the connectivity of the Zoo to neighbouring wildlife and urban systems. Opportunities exist for a boutique lodge and destination restaurant to be developed in partnership with the private sector. The existing arrival and entrance spaces will be redeveloped with a design approach that will introduce visitors to a reinvigorated public space that showcases living systems approaches to infrastructure shared Toronto Zoo / Rouge Park education / orientation facility. Sustainable food systems will be incorporated into the restaurant brand and together these publicly accessible amenities will provide a redesigned introduction and welcome to the Zoo.

The reimagined Welcome Area in conjunction with the East Campus Area on the tableland east of Meadowvale Road that overlooks the Little Rouge River will enhance the reputation of the Zoo in the local community who provide partnership and revenue opportunities outside of the pay-per-use experience of the Core Habitat Area.

Each of these six areas are comprised of several Zones, that are described in the following pages.

LEGEND

SITE

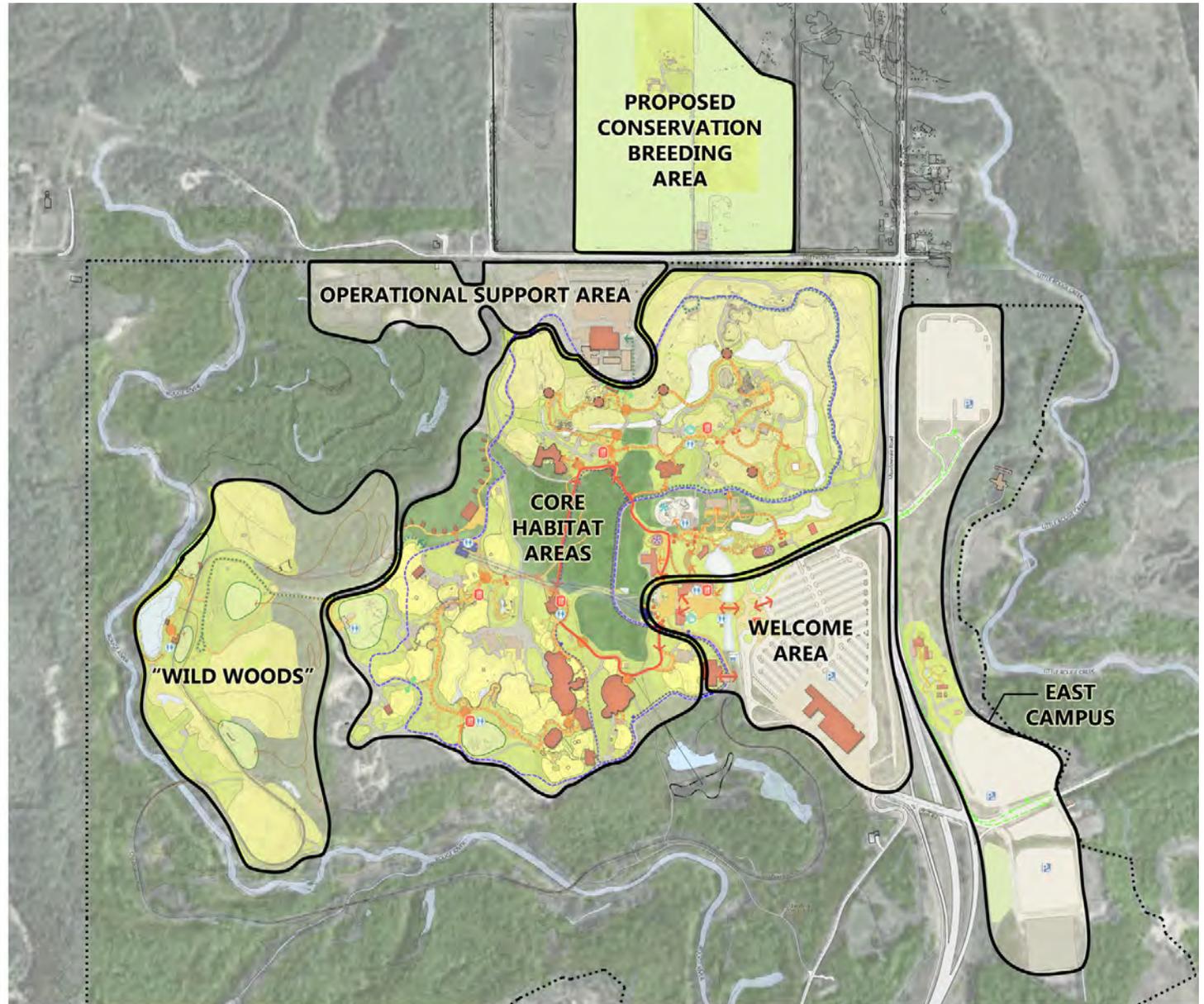
- Animal Area
- Building - New / Re-developed
- Building - Existing
- Service Area
- Water - Existing
- Water - New / Re-developed
- Landscape - Themed
- Landscape - Garden
- Landscape - Mapped Vegetation
- Landscape - Carolinian Forest
- Landscape - Core Woods
- Rockwork
- Existing Contour Lines
- Site Boundary

CIRCULATION

- Visitor - Plaza / Decision Making Point
- Visitor - Gateways
- Visitor Pathway - General
- Visitor Pathway - Core Loop
- Visitor Pathway - Precinct Loop
- Visitor Pathway - Trails
- Service Road
- Public Road
- Gondola Route
- Zoomobile Route
- Zoomobile Station / Stop
- Zoomobile Winter Shuttle
- Special Tour Route
- Shuttle to Overflow Lots
- Shuttle Stop
- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - Zoo Focal Areas
Toronto Zoo Master Plan

SCALE = 1:2500 at Arch B
0 10 50 100 200 300 400 500
November 2016



FIGURE 5

FOCAL AREAS OF THE MASTER PLAN

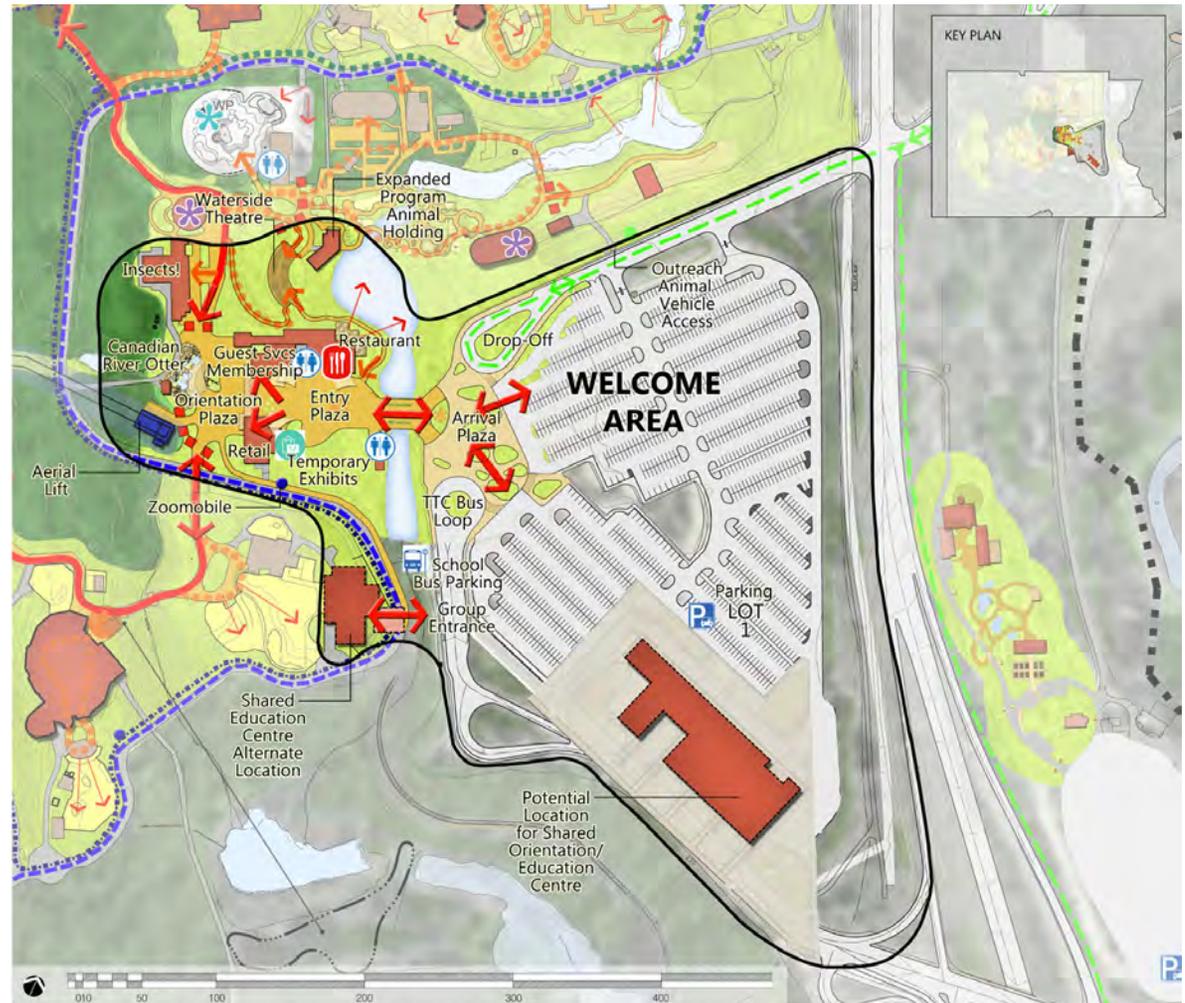
WELCOME AREA

The Welcome Area is set up to provide essential guest services to both Zoo visitors and visitors to the adjacent Rouge National Urban Park. It is an area where functionality matters, as well as the quality of the experience, because it is the first and last “touch point” for guest engagement with both facilities and, as such, is the prime locale for expressing the Zoo’s mission and evincing the over-riding principle of CARE that has informed the development of the physical Master Plan.

Guests’ first experience of the Welcome Area is in the Parking Area, an area of coming and going and getting ready. Parking will continue to be handled within the main lot, as well as a series of remote, overflow lots that will be linked to the Arrival Plaza by a ZooTram that runs during peak visitation periods. This will ensure that, regardless of the final destination, visitors can gain easy access to the front doors of both the Zoo and the Park, as well as the refreshments and education facilities that lie in close proximity to the Zoo’s entry.

Additional areas of the Welcome Area include:

- Arrival Plaza
- Entry Plaza
- Orientation Plaza



Master Plan - Welcome Area
Toronto Zoo Master Plan

November 2016



FIGURE 6

LEGEND

SITE

- Animal Area
- Building - New / Re-developed
- Building - Existing
- Service Area
- Water - Existing
- Water - New / Re-developed
- Landscape - Themed
- Landscape - Garden
- Landscape - Mapped Vegetation
- Landscape - Carolinian Forest
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- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Zoo Welcome Area
Toronto Zoo Master Plan

SCALE = 1:300 AT ARCH E
0 10 20 30 40 50 M
November 2016



FIGURE 7

ARRIVAL / DEPARTURE PLAZA

The Arrival Plaza is the main meeting place for people coming together out of their individual cars and public transportation vehicles, and taking on the communal role of “Zoo guest”. It is a place that is firmly rooted in the surrounding Ontario landscape, and channels visitors effortlessly and graciously to and from the Entry Plaza.

Drop-off will be provided for regularly scheduled Toronto Transit Commission (TTC) bus service, as well as school buses and personal vehicles that includes the following:

- Convenient drop-off close to the Entry Plaza and Group Entry of the Zoo for private cars, public transportation and school buses.
- Waiting and pick-up areas for parent/guardians of children attending Zoo programs.
- Zoo Shuttle to overflow parking lots, and between the Zoo and Park entry during peak periods.
- Easy access for pick-up and drop-off of Zoo outreach animals from the Kids Zoo back of house.





Toronto Zoo Welcome Area

ENTRY PLAZA

The Entry Plaza will operate as a “free campus” where visitors can arrive, make decisions about their day at the Zoo, purchase tickets, seek information and regroup prior to passing through the ticketed perimeter of the Zoo. Ticket sales and ticket-taking will continue to be further automated over time, but guests will always be able to count on a friendly face to welcome them.

The facilities that will be freely available include washrooms, ticket sales and information, a restaurant/café with an outdoor deck overlooking the lake and a second floor rentable event centre, gift shop and rental facilities, and a central iconic sculpture / gathering area.



Toronto Zoo Otter Display

ORIENTATION PLAZA

The Orientation Plaza lies just beyond the ticket-taking gateway and becomes a prime decision-making point for determining how visitors will start their day at the Zoo. As in all aspects of the Welcome Area, experience is critical and a lack of commercial clutter will reinforce the quality and commitment to the conservation efforts of the Zoo. A Canadian river otter family acts as the welcoming icon and, in concert with Zoo volunteers and guides, provides guests with the breathing space to start their journey.

At this point, visitors will have the option to continue on their walking journey around the Zoo, choose to board the Zoomobile for an introductory tour or access to more remote parts of the site, or avail themselves of an aerial tram that offers a shortcut to and from the upper ridge animal habitats. In the winter, the Zoomobile will offer a shorter trip through the core of the Zoo that enables visitors to quickly get to the Zoo’s indoor pavilions or to visit the Canadian animals in their outdoor habitats.





Toronto Zoo Orientation Plaza

CORE HABITAT AREA

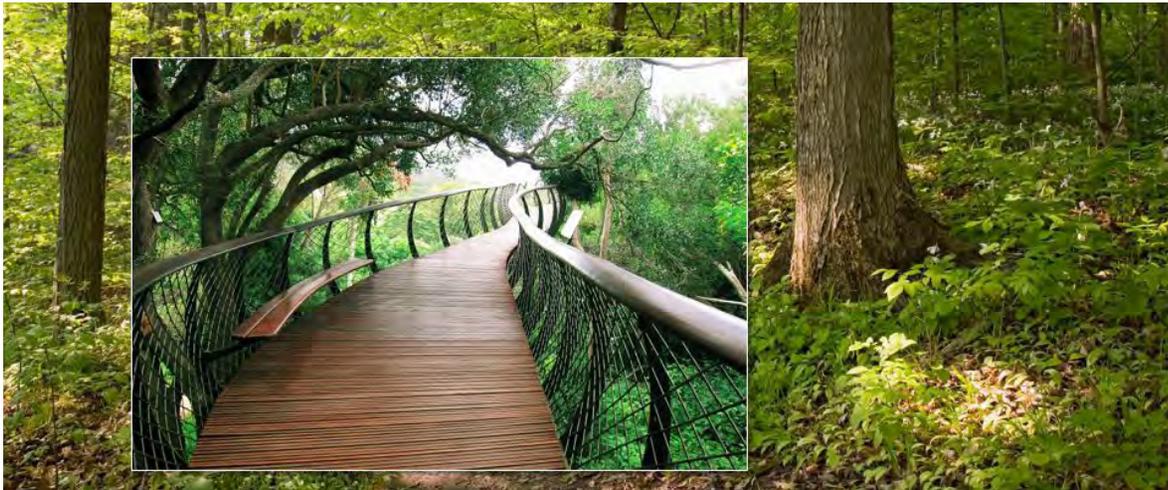
- Across the Equator
- Wilderness North
- Tropical Americas
- Carolinian Forest
- Discovery Zone

The Zoo's core habitats will continue to be refined, defined, blended and merged in concert with the Zoo's commitment to animal and visitor well-being. The goal will be to condense the walk but not the visitor experience to provide a series of 20-30 minute loops that can be linked together as a linear sequence for first-time visitors, or as a series of free-choice experiences to visit "old friends" by repeat visitors and members. Such intensive experiences and site-based learning opportunities will be supplemented by generous shelter, shade rest, relaxation and refreshment options, as well as 'natural play' spots to encourage visitors to unhurriedly enjoy their time.

The experience loops will be comprised of primarily zoogeographic, immersive habitats (animals from similar geographic regions: African Savanna, etc.) that provide unique opportunities to Torontonians to the wealth of species in the tropical and temperate regions where the Zoo is actively engaged in situ and ex situ conservation work. In addition to being able to get up-close and observe animals in natural surroundings and dynamic social groupings, visitors will be able to learn more about the natural and human history that has brought us to "The Present", as well as personal stories, science and conservation activities, and policy work that is aimed at working together to save species from extinction.

The Zoo has extensive experience in caring for a range of animals with either a minimum of shelter (cold-adapted), or that require summer/winter ameliorations similar to those that make us comfortable.

Recognizing that we need to meet and exceed evolving animal care standards and guest expectations, it is intended that priority planning and phasing of habitat renovations and additions will remain flexible.



Proposed Thematic Experiences

LEGEND

SITE

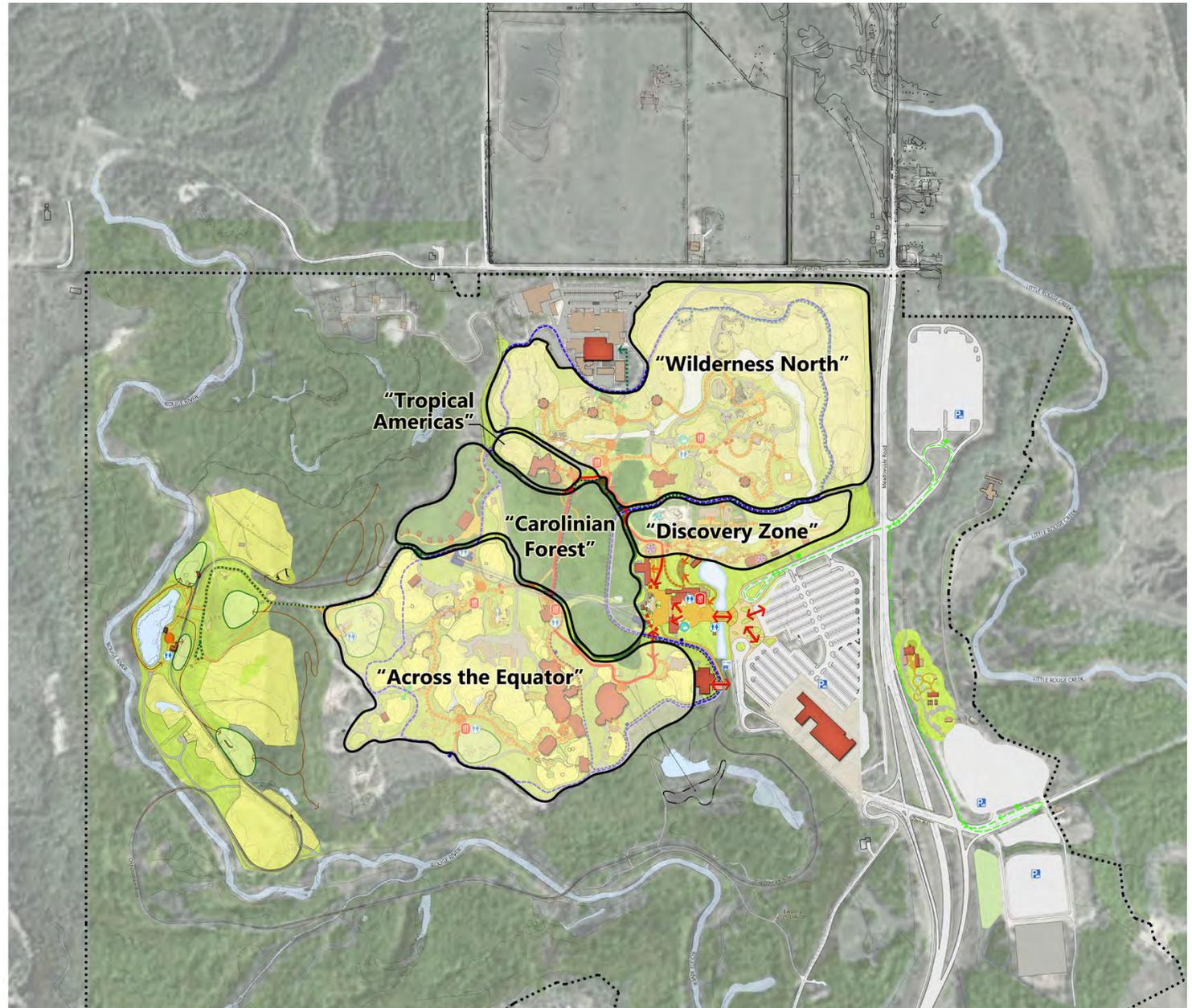
- Animal Area
- Building - New / Re-developed
- Building - Existing
- Service Area
- Water - Existing
- Water - New / Re-developed
- Landscape - Themed
- Landscape - Garden
- Landscape - Mapped Vegetation
- Landscape - Carolinian Forest
- Landscape - Core Woods
- Rockwork
- Existing Contour Lines
- Site Boundary

CIRCULATION

- Visitor - Plaza / Decision Making Point
- Visitor - Gateways
- Visitor Pathway - General
- Visitor Pathway - Core Loop
- Visitor Pathway - Precinct Loop
- Visitor Pathway - Trails
- Service Road
- Public Road
- Gondola Route
- Zoomobile Route
- Zoomobile Station / Stop
- Zoomobile Winter Shuttle
- Special Tour Route
- Shuttle to Overflow Lots
- Shuttle Stop
- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - Core Habitat Area
Toronto Zoo Master Plan

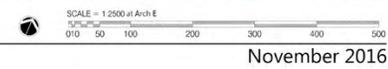


FIGURE 8

ACROSS THE EQUATOR

The southern portion of the Zoo's core habitat will maintain its focus on animals and habitats from warmer climates. Originally envisioned as focusing exclusively on the African Savanna and Indo-Malaya regions, the Master Plan envisions a broader definition of the latter to include all of the Oceania region so that the Zoo is better able to represent the animals and conservation activities of the Australasian as well and the Indo-Malayan region. In addition, the Savanna has been renamed "Pridelands" to reflect the enhanced stature of the Lion habitat and interpretation of the role of carnivores in maintaining the health of the herds and the landscape.

Renovations in both will include enlargement of selected habitat areas, the development of mixed species areas as appropriate, rotational exhibits to provide more overall space and enrichment for carnivores, back-of-house improvements, and accessibility and facility upgrade improvements.

The renovation of the two 1970's-era Ron Thom pavilions are of particular interest: each requires substantial improvements to infrastructure to bring

the buildings up to energy and accessibility code while, at the same time, providing more indoor space and choice for a core group of animals. It is envisioned that the provision of more light for animals and plants plus better insulation values can be accomplished through the retro-fitting of the roof structure with a multi-layered ETFE membrane while maintaining the same structural approach and building aesthetics.

Rebuilding of the Indo-Malaya ramp will enable easy and direct access from the Pavilion to the ridgeline above where the African Rainforest Pavilion sits.

The creation of a winter tram circulation route that links together the Zoo's major pavilions and utilizes the service bridge as a year-round route will enable the Zoo to care for and better cater to its winter visitors, providing them with a condensed experience with animals in a close-in experience. It is envisioned that the bridge can be kept as a serviceable part of the circulation system through the use of regular applications of a calcium magnesium acetate or through the use of hydronic or electrical heat sources.

Ancillary buildings that no longer serve the needs of the animals, staff or visitors will be removed (Macaque building and "Malayan Woods"), thus allowing the edges of the existing ravine to be restored to enable the Carolinian Forest to continue to flow through the Zoo.



LEGEND

SITE

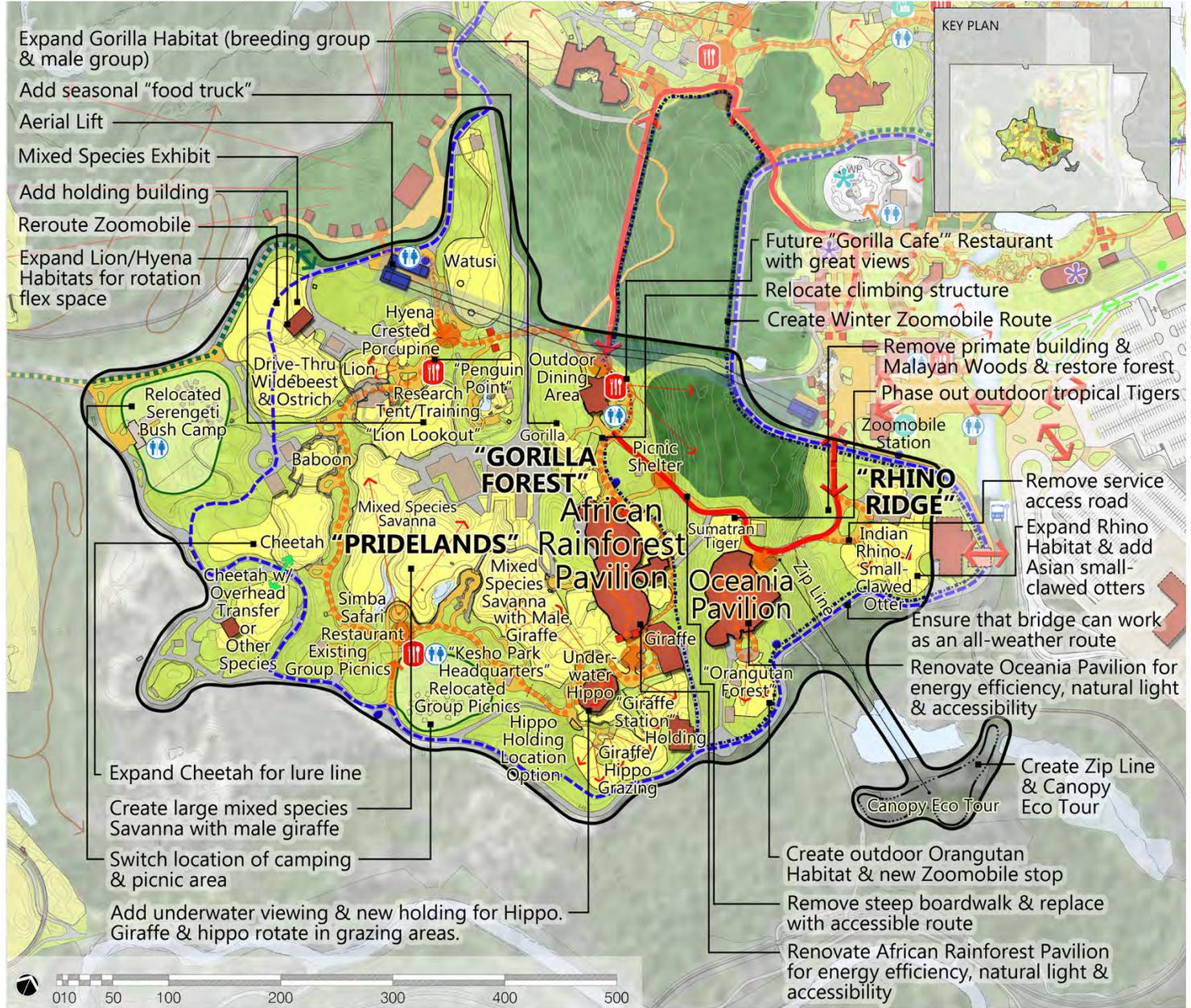
- Animal Area
- Building - New / Re-developed
- Building - Existing
- Service Area
- Water - Existing
- Water - New / Re-developed
- Landscape - Themed
- Landscape - Garden
- Landscape - Mapped Vegetation
- Landscape - Carolinian Forest
- Landscape - Core Woods
- Rockwork
- Existing Contour Lines
- Site Boundary
- View Lines

CIRCULATION

- Visitor - Plaza / Decision Making Point
- Visitor - Gateways
- Visitor Pathway - General
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- Visitor Pathway - Precinct Loop
- Visitor Pathway - Trails
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- Public Road
- Gondola Route
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- Zoomobile Station / Stop
- Zoomobile Winter Shuttle
- Special Tour Route
- Shuttle to Overflow Lots
- Shuttle Stop
- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - "Across the Equator"

Toronto Zoo Master Plan

November 2016



FIGURE 9

“African Rainforest” Pavilion

The African Rainforest Pavilion demonstrates the rich biodiversity of this region, from terrestrial iconic species through the aquatic ecosystems that this region depends on. The focal species for this pavilion will highlight threats to the imperiled wildlife that rely on this critical habitat. The themes of this pavilion will draw attention to the extent of the Zoo’s involvement in conservation projects in this part of the world.

“Oceania” Pavilion

The reinvented Oceania Pavilion will focus not just on Indo-Malayan species but also on other important areas of the South Pacific. This area will showcase the uniqueness of island flora and fauna, and will demonstrate the richness of these global biodiversity “hotspots”, including Komodo dragon and key species relocated from the existing Australasia Pavilion.

“Rhino Ridge”

The existing Rhino habitat will be expanded to include more area, as well as a family of Asian small-clawed otters as part of a mixed species exhibit.

“Gorilla Forest”

The existing exterior Gorilla habitat will be redeveloped and expanded to provide an extensive landscape that offers choice, retreat and stimulation for the Zoo’s resident family.

“Pridelands”

This area was renovated and expanded in 1998 and continues to work well for visitors in the summer months when animals are outside and the Simba Safari lodge is open.

Proposed improvements include:

- Development of a major mixed species savanna through the consolidation of several single-species habitats. The species would include white rhinos, gazelle, zebra and younger male giraffe that are extraneous to the family herd. Concurrent with this redevelopment is the expansion of back-of-house holding area to enable superior care, especially during the winter.
- Expansion of the cheetah habitat to provide space for demonstrating more natural behaviours.

- Expansion of the lion habitat to allow for a large social pride, as well as a bachelor group, and rotational space for hyaena.
- Development of an indoor-outdoor habitat for hippos and visitors with underwater viewing and rotational shared grazing area with the giraffe herd.
- Establishment of giraffe and lion areas as mid-winter end-point destinations to shrink the space that visitors believe is open – only to discover that there are no animals in the habitats and nothing is open.



Orangutan



Mixed Species Habitat, Emmen Zoo

WILDERNESS NORTH

“Tundra Trek”, “Canadian Wilderness” & “Asian Highlands”

With the new Strategic Plan focusing on Canadian Species, the Toronto Zoo is launching Wilderness North Experience to enable more visitors to experience the vast diversity of species in their habitats native to Canada.

The northern portion of the Zoo will be renovated to accommodate the experience of all of the Canadian animals with a special subset that showcases comparative animals from the highlands of the Himalayas and Manchuria. Most of these animals will be supremely adapted to the Toronto climate and thus, the exhibits will be focused on the outdoors with warming structures to enable year-round use by visitors.

These separate destinations will be redeveloped as a coherent immersive experience that focuses on Canadian animals and their vulnerable counterparts from comparable boreal and high latitude/altitude regions of the Northern Hemisphere.

Proposed improvements include:

- Expansion of “Tundra Trek” to include more room for northern herd animals.
- Development of a Bear Centre that includes space for grizzlies and provides for greatly expanded space for the Polar bear by virtue of rotational exhibits and expanded holding for males.
- Drawing upon the CLR Plan for the “Canadian Wilderness”, the former Eurasia area will be redeveloped to provide a denser, more visitor-friendly/animal welfare-focused home for the Zoo’s Canadian, Manchurian and Himalayan species. There will be an additional weather-sheltered structure created that highlights the region’s smaller species and celebrates the Zoo’s conservation work on behalf of Northern species.
- Conservation herds will be maintained on the far side of the ponds, providing a rich visual backdrop, as well as an area for the Zoomobile tour and special excursion tours to encounter herds of animals.
- The purpose of the new ‘Canada Pavilion’ will be to draw attention to Canada’s species at risk and highlight the many current and future conservation programs the Toronto Zoo is undertaking, with various strategic partners, to save these species. Some examples of these programs include many excellent cooperative efforts on the breeding and release of such species as the black-footed ferret, Blanding’s turtle, Oregon spotted frog, Atlantic salmon, and eastern loggerhead shrike. With ever-changing and increasing threats to Canadian species, the focus of these programs will change and evolve to address needs as they arise.

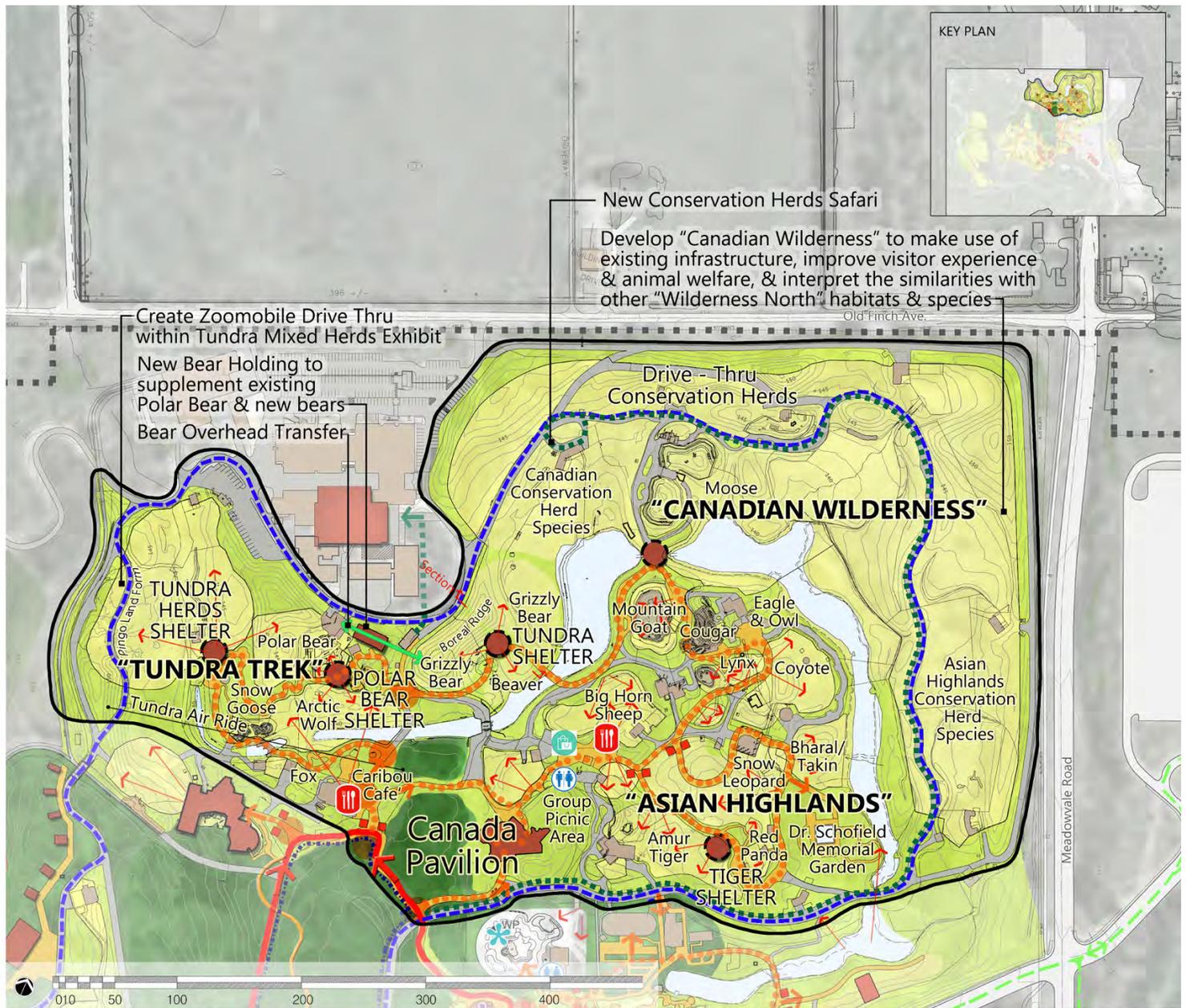


LEGEND

- SITE**
- Animal Area
 - Building - New / Re-developed
 - Building - Existing
 - Service Area
 - Water - Existing
 - Water - New / Re-developed
 - Landscape - Themed
 - Landscape - Garden
 - Landscape - Mapped Vegetation
 - Landscape - Carolinian Forest
 - Landscape - Core Woods
 - Rockwork
 - Existing Contour Lines
 - Site Boundary
 - View Lines

- CIRCULATION**
- Visitor - Plaza / Decision Making Point
 - Visitor - Gateways
 - Visitor Pathway - General
 - Visitor Pathway - Core Loop
 - Visitor Pathway - Precinct Loop
 - Visitor Pathway - Trails
 - Service Road
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 - Gondola Route
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 - Zoomobile Station / Stop
 - Zoomobile Winter Shuttle
 - Special Tour Route
 - Shuttle to Overflow Lots
 - Shuttle Stop
 - Multiple-use Route
 - Parking - Visitor
 - Parking - Bus

- VISITOR AMENITIES**
- Water Play Area
 - Play Area
 - Washrooms
 - Food
 - Retail

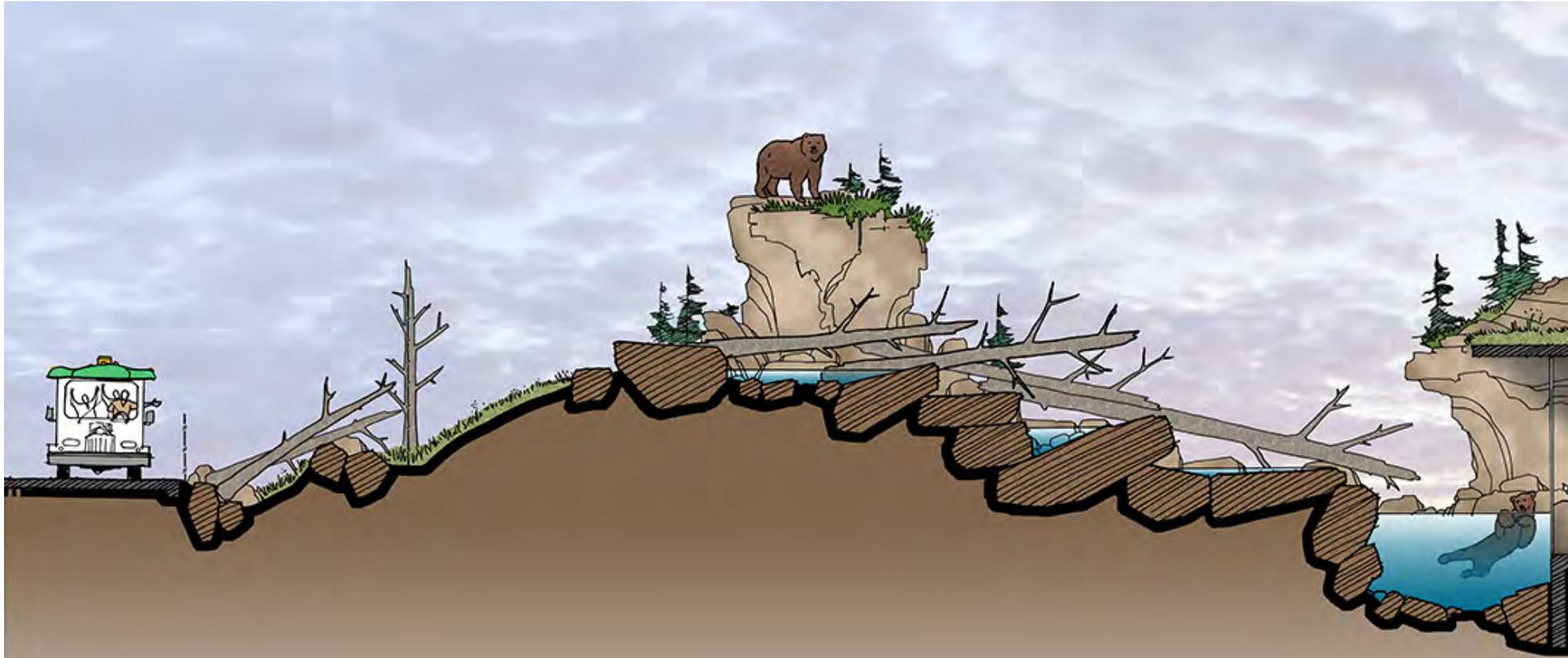


Master Plan - "Wilderness North"
Toronto Zoo Master Plan

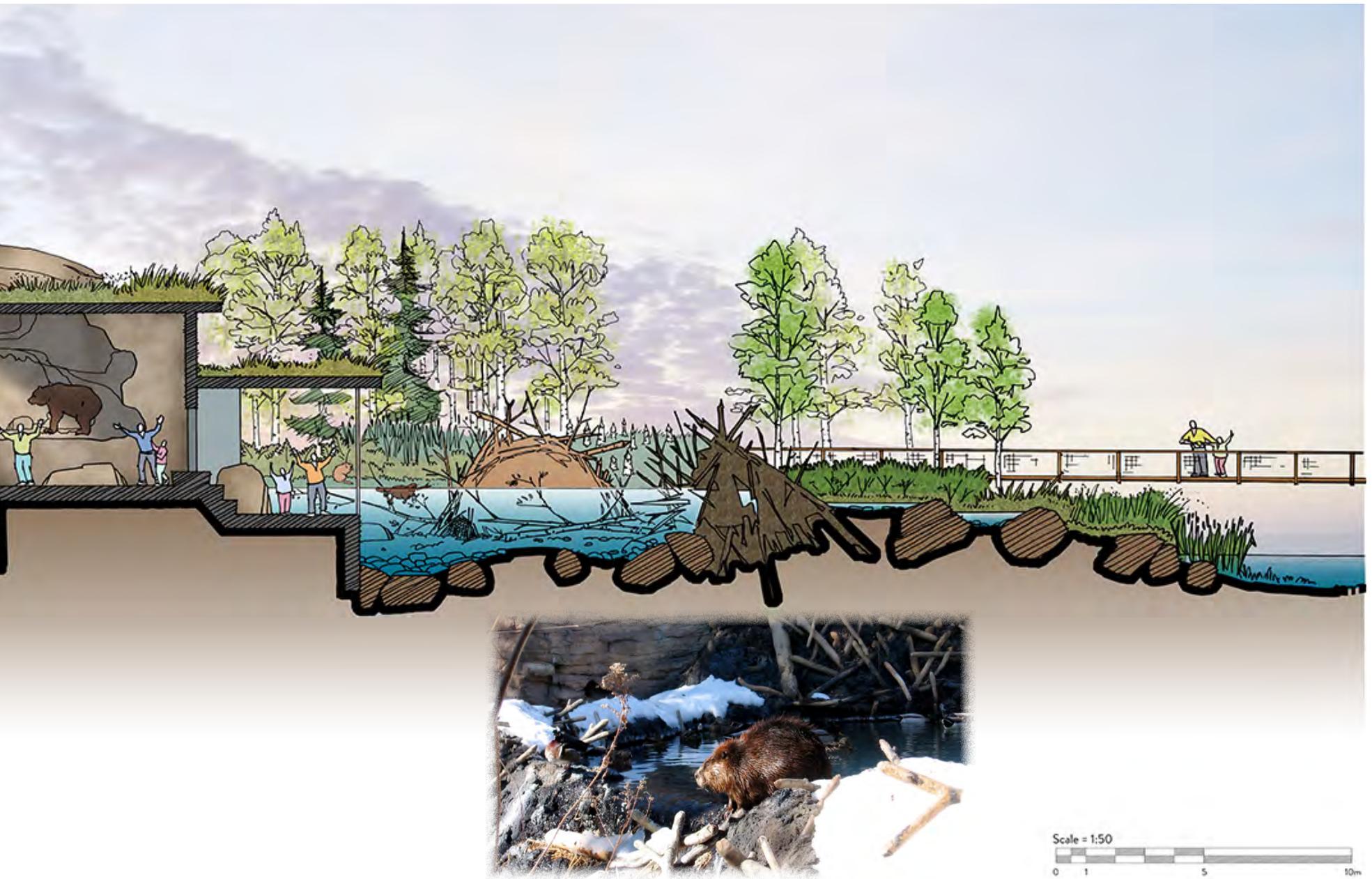
November 2016



FIGURE 10



Ursus arctos ssp. - Grizzly Bear



Castor canadensis - North American Beaver

Canadian Wilderness Zone

TROPICAL AMERICAS

The existing “Americas Pavilion” and exhibits will be renovated to provide full accessibility and address energy efficiency while also narrowing the focus of the interpretation and exhibits to highlight the species and conservation imperatives of tropical South and Central America, particularly those species that have an evolutionary or seasonal migratory relationship with Canada. It will act as another intriguing indoor space where visitors can come nose-to-nose with diverse animals of our world in a climate-mediated space.



Leontopithecus rosalia - Golden Lion Tamarin



Panthera onca - Jaguar



Toronto Zoo Keeper with Parrot

LEGEND

SITE

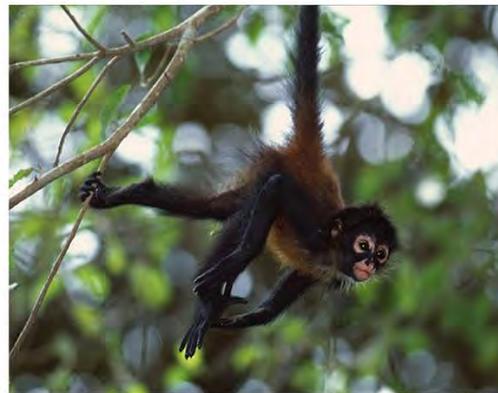
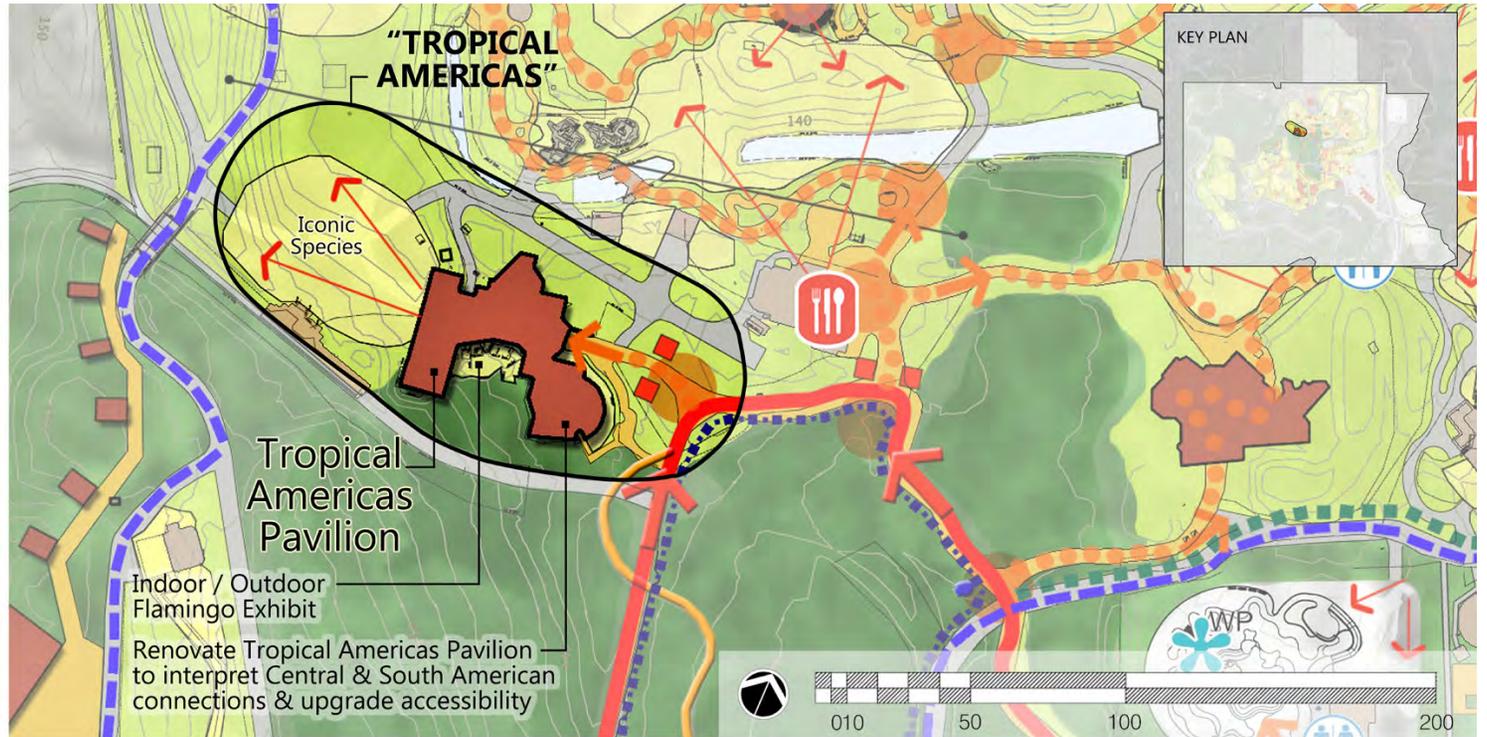
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- Food
- Retail



Black-Handed Spider Monkey
Ateles geoffroyi



American flamingo
Phoenicopterus ruber



Capybara
Hydrochoerus hydrochaeris



**Americas Pavilion:
Future “Tropical Americas Pavilion”**

The area around the existing Americas Pavilion is physically separated from both the “Pridelands” savanna habitats at the top of the hill as well as the adjacent “Tundra Trek” that will become part of the larger “Wilderness North” region. It would be difficult for it to act as a gateway experience to either area and will be considered on its own.

The building itself is interesting and can be renovated to be fully accessible. The protected indoor setting supports a renewed vision for the care, display and interpretation of smaller Australian and neo-tropical species. In this way, another intriguing area can be developed that provides critical indoor space for visitors, displays smaller species in an environment conducive to their welfare, and interprets the big changes that the Earth has undergone, and continues to undergo, giving perspective and context for current changes that are happening around us.



Phoenicopterus ruber - American Flamingos



Tropical Americas Pavilion

CAROLINIAN FOREST

The central, native forest core of the Zoo provides an area of calm and quiet, and a place where the free-ranging plants and animals that make their home in the Rouge River valley make their presence felt to all Zoo visitors.

To maintain the integrity of the forest, development within this area will be limited to weed management, interpretation, pavement repair and the development of an “accessible ‘boardwalk’ that winds its way gently through the trees, support on strategically-placed pilings that do not disturb the integrity of the forest floor.

Raven’s Roost

“Raven’s Roost” is a natural extension of the Carolinian Forest experience. Sitting amongst the trees along the ridgeline overlooking the Rouge Valley, “Raven’s Roost” will become a year-round family and small-group ‘glamping’ retreat where they can gather to relax and learn more about the dynamics of the surrounding natural environment and the work that the Zoo is doing to support wildlife both here and around the world.



Raven’s Roost - Overnight in the Trees

LEGEND

SITE

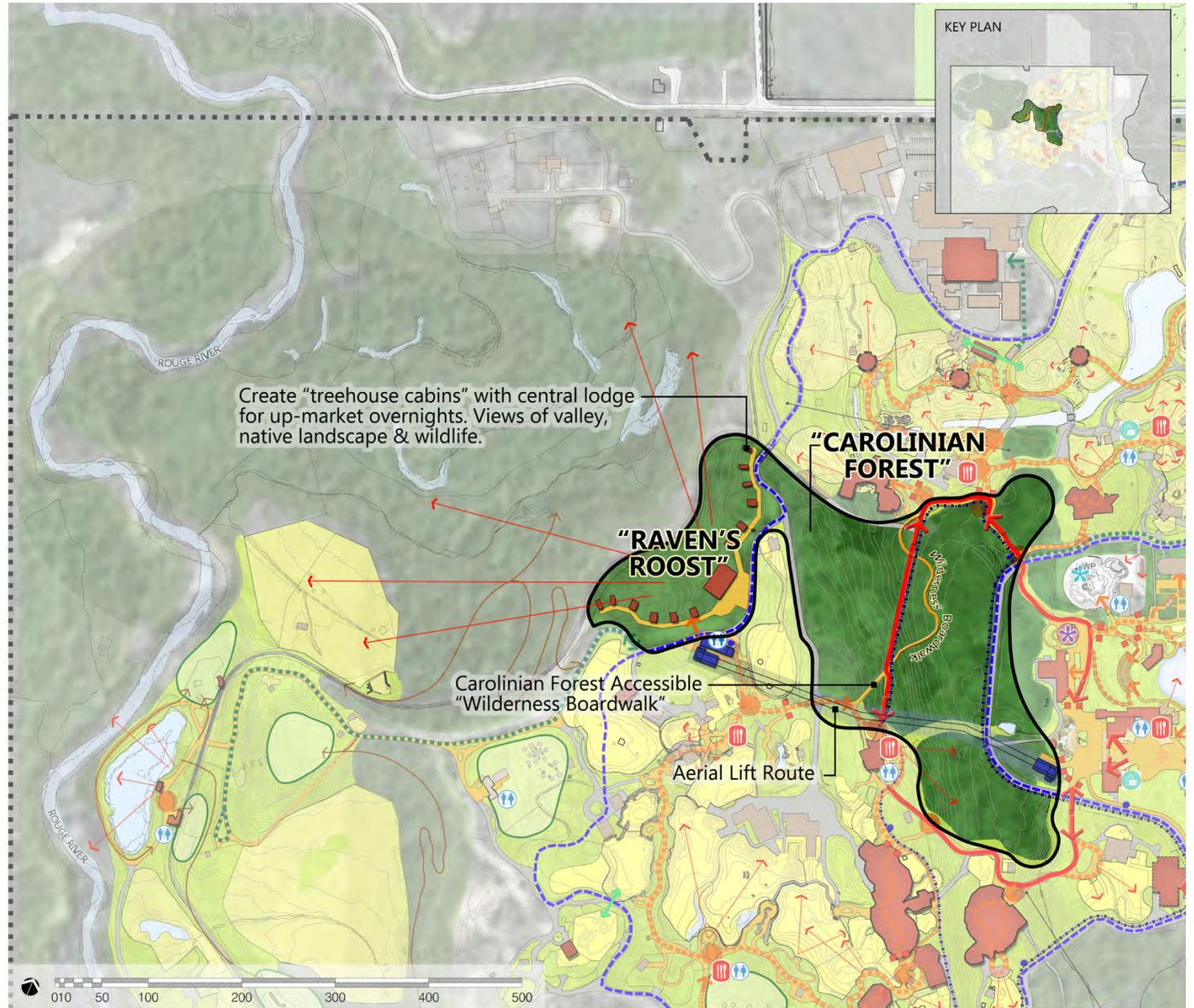
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- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - "Carolinian Forest"
Toronto Zoo Master Plan

November 2016



FIGURE 12

DISCOVERY ZONE AND SPECIAL ANIMAL AMBASSADORS

The existing “Discovery Zone” will be expanded to include more year-round, nature-based programs and activities to meet the needs of local parents and caregivers, as well as enhanced facilities for program animals and seasonal domesticated animals. Improvements will include the following:

- A relocated year-round carousel at the entry to the Discovery Zone.
- A 4-season indoor play and program space will provide a destination in all weather for a short visit or to complement a longer journey of discovery through the Zoo.
- Program animal holding and training space adjacent to the Waterside Amphitheatre.
- Outreach animal holding and care area.
- An expanded and updated water play area.
- A special events lawn and picnic area for families and group.



Toronto Zoo Keeper with Red-tailed Boa Constrictor

LEGEND

SITE

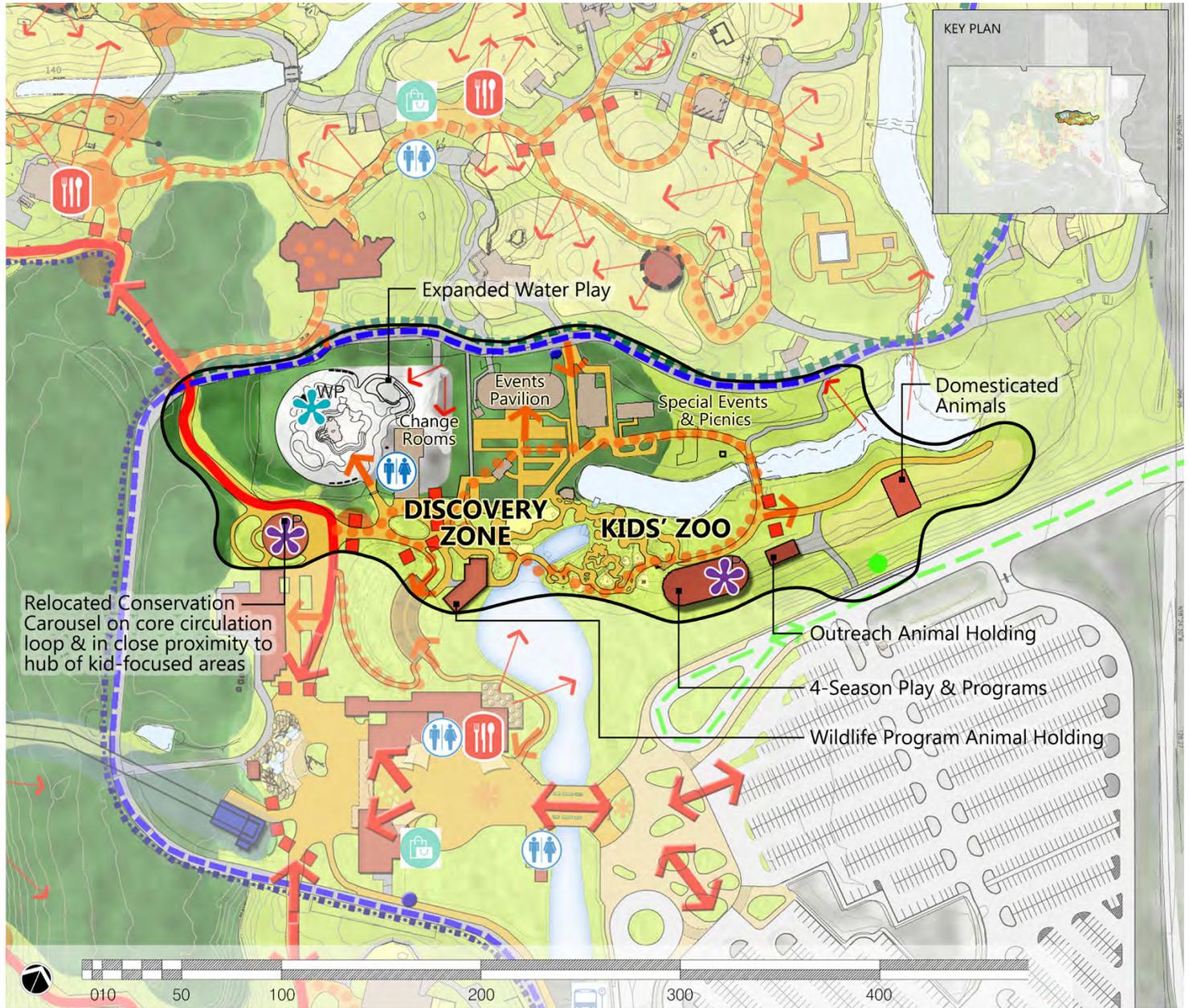
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VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - "Discovery Zone"
Toronto Zoo Master Plan

November 2016



FIGURE 13

“Kids Discovery”

Kids Discovery Indoor Play will be a new feature within the children’s zone that acts as a play and learning space for young children, and a gathering space for their parents – especially on inclement days when everyone needs to get out of the house.

One option is for the Kids Zoo to be expanded to include Canadian heritage farm animals that are easily approachable by young children in a guided situation so that they have the opportunity to learn about care giving and care taking.

“Bugs!”

Invertebrates and other small creatures will be celebrated in this hugely interactive and engaging discovery and learning space. Much like “Micropia” at the Artis Zoo in Amsterdam, and at London Zoo and Cincinnati Zoo’s celebrated insect houses, visitors will be able to experience and go deeper in their appreciation for the diversity of the micro-world around us.

“Program Animals”

Animals used for outreach programs and Zoo presentations are key to delivering to visitors the Zoo’s mission and message about care giving. Providing sufficient space for their year-round housing and training will ensure that staff are able to care for them in an exceptional manner.



Hymenopus coronatus - Pure White Orchid Mantis



Dolomedes plantarius - Fen Raft Spider



Zoo Kid with Madagascar Hissing Cockroach



Toronto Zoo

WILDLIFE HEALTH CENTRE DESCRIPTION AND PURPOSE

In 2017, the Toronto Zoo will open its new state-of-the-art Wildlife Health Centre. This significant capital project is an investment in the well-being of the animals in our care as well as an ongoing commitment to scientific research in veterinary medicine, nutrition and reproductive technologies. Creating a facility of this size and scope is at the heart of our expanded vision and will further position the Toronto Zoo as a world leader in wildlife care and conservation.

The construction includes leading-edge sustainable construction techniques, materials and technology, designed to LEED silver standards. When complete, the Wildlife Health Centre will be one of the largest exotic animal medical facilities in Canada at approximately 4550 m² (50,000 sq. ft.) of interior space –including the hospital, quarantine and research facilities. The Centre will be easy to maintain in a hygienic state and provide ample room for the treatment of animals, post-operative care and modern diagnostic and research equipment. Veterinary staff will now be able to handle larger species, such as gorillas and polar bears, at the Centre rather than in their habitats on-site.

In addition to the health care services, the Wildlife Health Centre is also home to the Zoo's reproductive physiology lab, numerous conservation breeding programs, turtle head start programs, Amphibian Rescue Centre (ARC), a veterinary residency program, high school co-op programs and many research projects with universities, colleges, government and non-government agencies.

A viewing area for visitors on guided tours will provide a behind-the-scenes look into wildlife health practices and conservation research which will give visitors a more thorough understanding of the significant work being done at the Toronto Zoo to ensure the ongoing survival of so many of the worlds' most vulnerable species, particularly those native to Canada.



Reproductive Physiology



Wildlife Health Centre

WILD WOODS

As part of condensing the walk between the core offerings of the Zoo without diminishing the overall stay time of effect, the Master Plan envisions the Zoo's valley lands (former "Canadian Domain") being returned to uses that do not rely on day-to-day access by the Zoo's visitors. All Canadian Domain animal habitats would be moved into the new "Wilderness North". However the large meadow enclosures would be maintained to insure the breeding capability and herd health of a number of the Zoo's native herd species.



Thus the original Canadian Domain will transition into a value-added landscape for special group use and conservation education. Holding and shelters for the animals will be improved with an eye to being light on the land, and moving them to higher ground to insure safe retreat from high water in the Rouge River.

Overnight group wilderness camping and day camp areas will be developed in select areas that



stay out of prime habitat area and are light on the land. Trails and programs will be developed to insure that all of Toronto's children, and their families, have the opportunity to spend time in the woods and discover the value of the natural framework that surrounds the City.

Weston Pond will continue to be managed as a seasonal breeding area for a variety of wildlife including Trumpeter Swans.



LEGEND

SITE

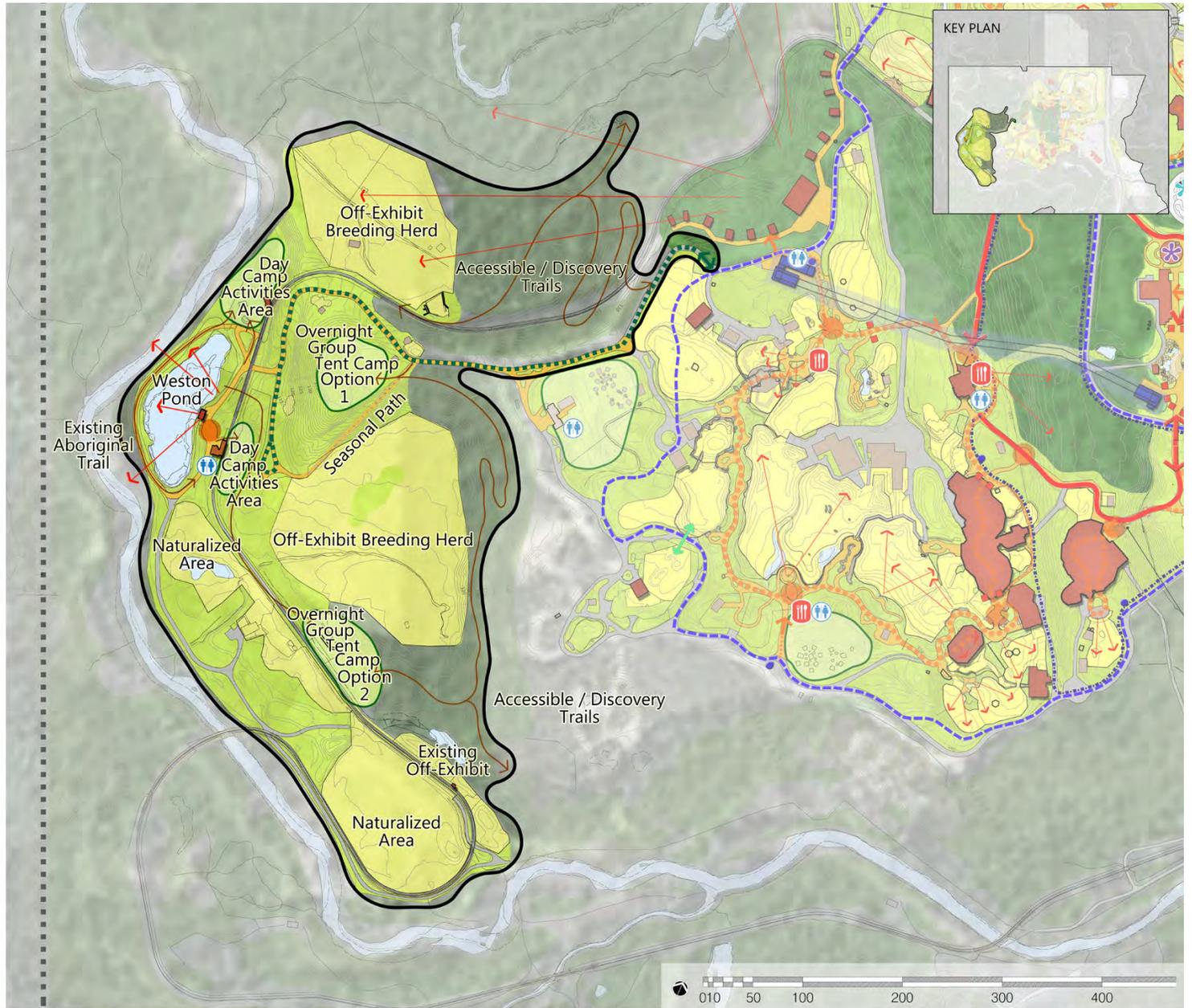
- Animal Area
- Building - New / Re-developed
- Building - Existing
- Service Area
- Water - Existing
- Water - New / Re-developed
- Landscape - Themed
- Landscape - Garden
- Landscape - Mapped Vegetation
- Landscape - Carolinian Forest
- Landscape - Core Woods
- Rockwork
- Existing Contour Lines
- Site Boundary
- View Lines

CIRCULATION

- Visitor - Plaza / Decision Making Point
- Visitor - Gateways
- Visitor Pathway - General
- Visitor Pathway - Core Loop
- Visitor Pathway - Precinct Loop
- Visitor Pathway - Trails
- Service Road
- Public Road
- Gondola Route
- Zoomobile Route
- Zoomobile Station / Stop
- Zoomobile Winter Shuttle
- Special Tour Route
- Shuttle to Overflow Lots
- Shuttle Stop
- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - "Wild Woods"
Toronto Zoo Master Plan

November 2016



FIGURE 14

EAST CAMPUS

- Festival
- Browse Demonstration

FESTIVAL

On the east side of Meadowvale Road, overlooking the Little Rouge Creek valley, stands an iconic structure that symbolizes the recent past of human use of the surrounding landscape: The Red Barn. Currently used for off-exhibit breeding of many of the Zoo's smaller conservation breeding species, it sees no public use, but holds a dominant position on the ridgeline.

The Master Plan envisions the relocation of the conservation breeding functions to the north of Finch Road and the possible future redevelopment of the Red Barn and its immediate area as a native plant horticulture and education centre that can serve as a beautiful locus for learning, functions and events, including seasonal farmers' markets and fairs that spread into the adjacent parking areas, providing yet another reason for the community to visit and become aware of the partnership between the RNUP and the Toronto Zoo.

As a horticultural facility it could celebrate the rich agricultural history of the Rouge Valley, as well as the diverse matrix of native plants and

those horticultural varieties that exist in peace with the natives and provide additional color, diversity and food sources for pollinators and other native wildlife.

This area would be connected to the Zoo and the entry to the RNUP by a shuttle that runs among the various main and overflow parking areas, and potentially even an overpass from the main parking area at the entry to the Zoo.

The transformation of this area is not included in the master plan implementation schedule. Details would need to be determined following discussions with RNUP about joint festival area.

BROWSE DEMONSTRATION

At the Toronto Zoo browse is now recognized as an essential dietary and welfare item for many wildlife species. Some browse products are purposely farmed outdoors and some area preserved for winter feeding. Others are collected from lawns and / or forested areas or grown in gardens or greenhouses, pavilions,, or staff office areas and some are purchased. The demand for browse is

high and variable, but for some wildlife species, particularly invertebrate and mammalian browsers, more specialized species of browse and areas to grow these area required.

A small browse demonstration area is proposed beside the future Biogas facility in Parking Lot 4. The use of browse offers some important educational opportunities:

- A small browse plantation is animal welfare orientated and could promote visitors understanding through demonstrations, complimented by visitor assisted browse feeding on site.
- An opportunity exists for us to demonstrate how specialized animal food (e.g. medicinal plants, vegetables, etc.) can be propagated in a greenhouse with heat generated as a bi-product from a biogas facility using zoo-poo recycling into biogas digest. This would show how both food and energy can be generated from waste diversion.

LEGEND

SITE

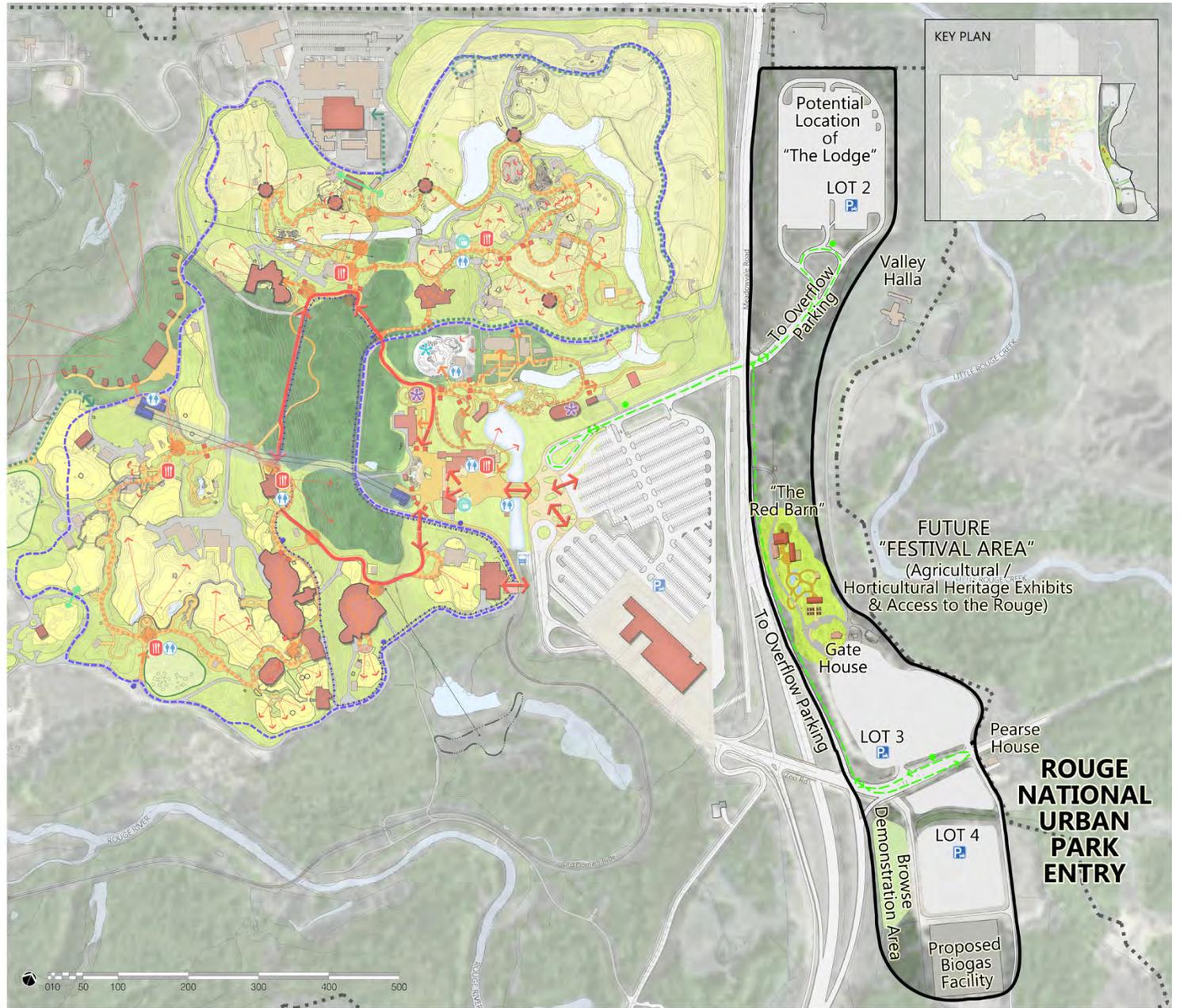
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- Landscape - Core Woods
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- Site Boundary
- View Lines

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- Special Tour Route
- Shuttle to Overflow Lots
- Shuttle Stop
- Multiple-use Route
- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - "East Campus"

Toronto Zoo Master Plan

November 2016



FIGURE 15

CONSERVATION BREEDING AREA

- Off Exhibit Breeding Area

A portion of the acreage north of Finch Road and opposite the Operations Complex is envisioned as the future home of a world class centre for the Zoo's endangered species ex-situ breeding programs, replacing the existing remote facilities in the Red Barn.

In addition, a protected browse propagation area is proposed in close proximity to the Zoo Operations Complex as part of the Zoo's approach to providing the highest level of care for the animals in its care.



Marmota vancouverensis - Vancouver Island Marmot

LEGEND

SITE

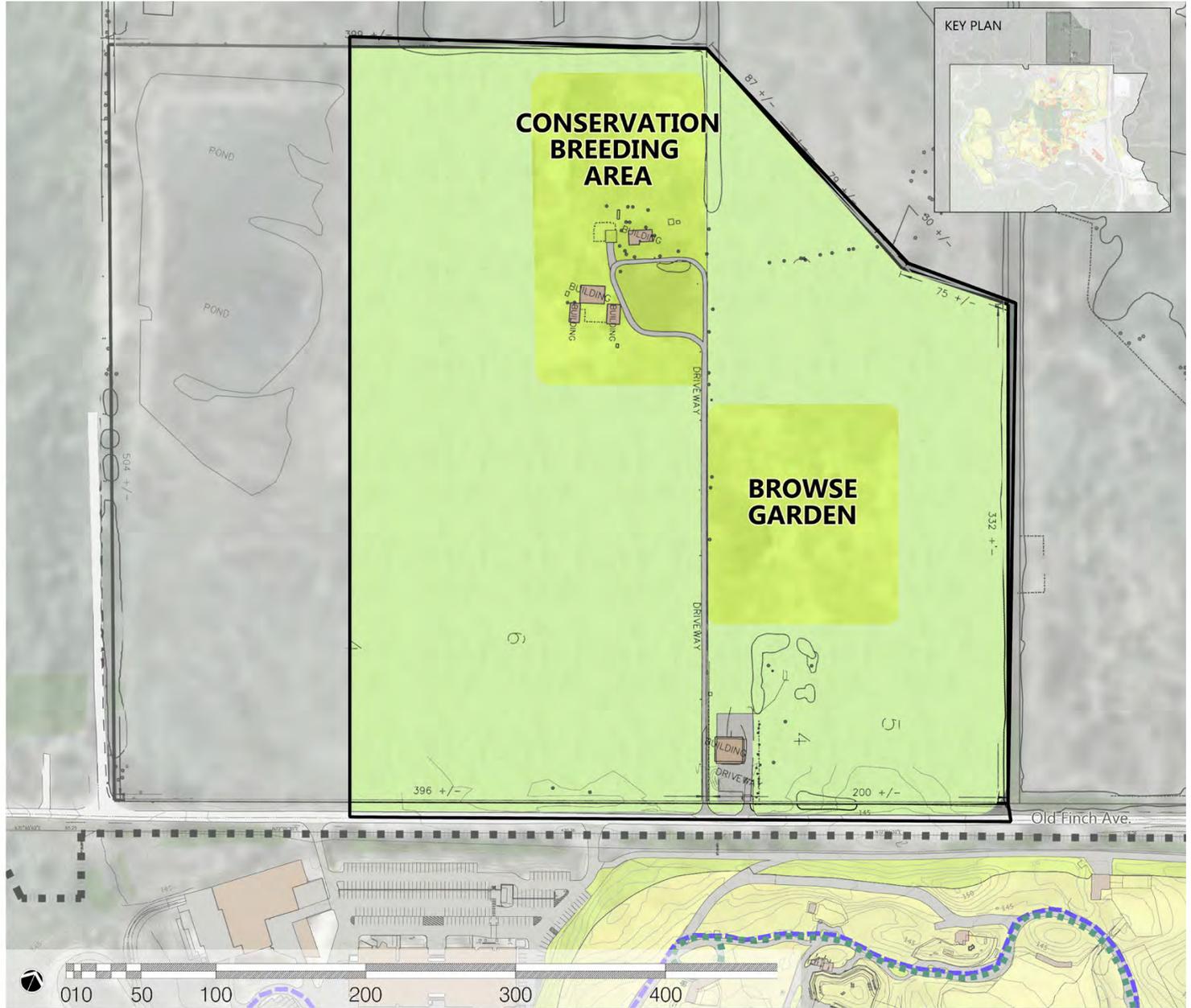
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- Parking - Visitor
- Parking - Bus

VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - "Proposed Conservation Breeding Area"
Toronto Zoo Master Plan

November 2016



FIGURE 16

OPERATIONAL SUPPORT AREA

Back-of-house areas will continue to be investigated for obvious efficiency, circulation and capacity opportunities as the plan unfolds. Key components that have been currently identified include making best use of the new Wildlife Health Centre, the addition of a new food services storage and logistics building, and the renovation of the existing food services area into a shared warehouse for Retail store, and Zoo Supplies.

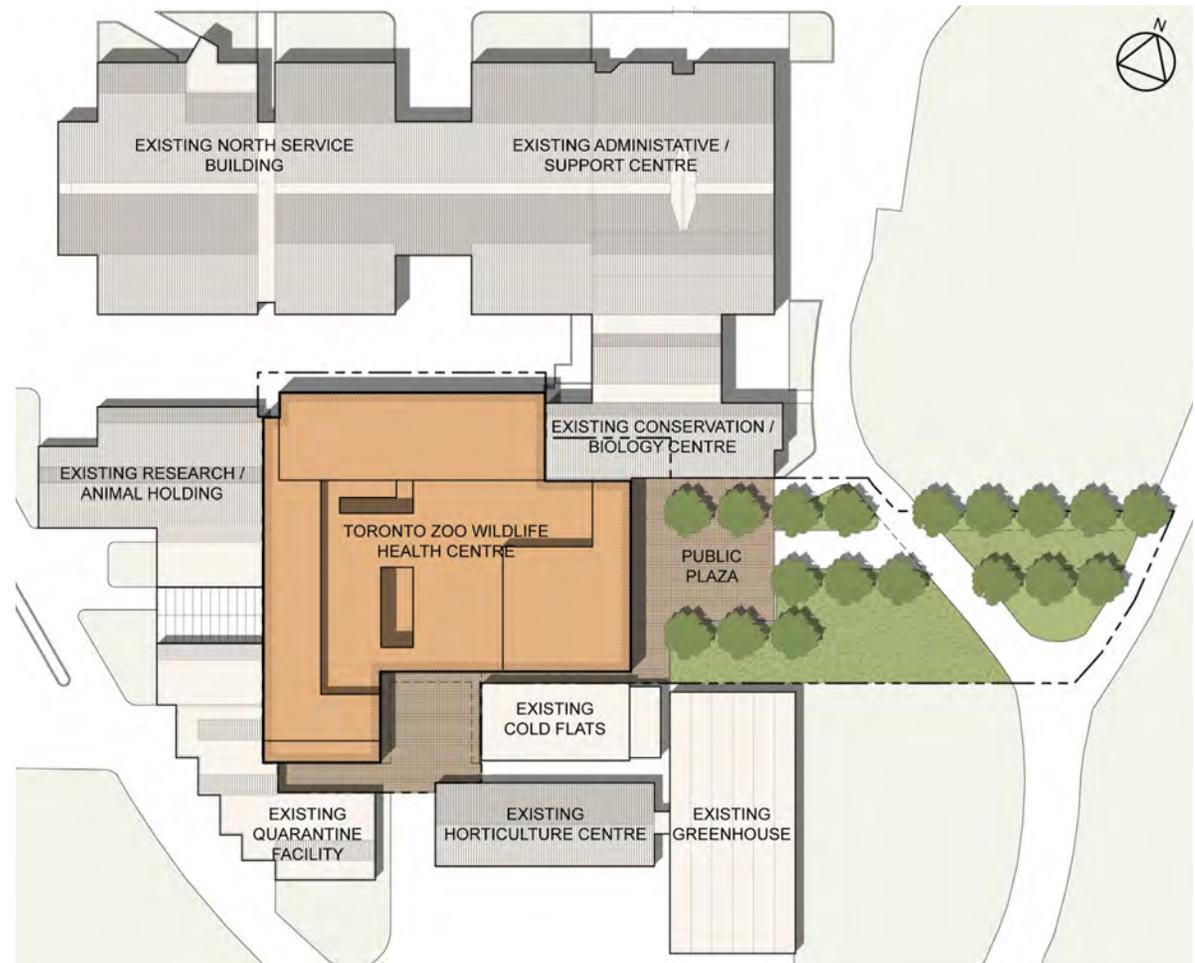
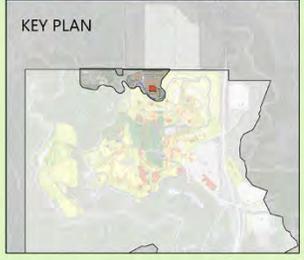


FIGURE 17

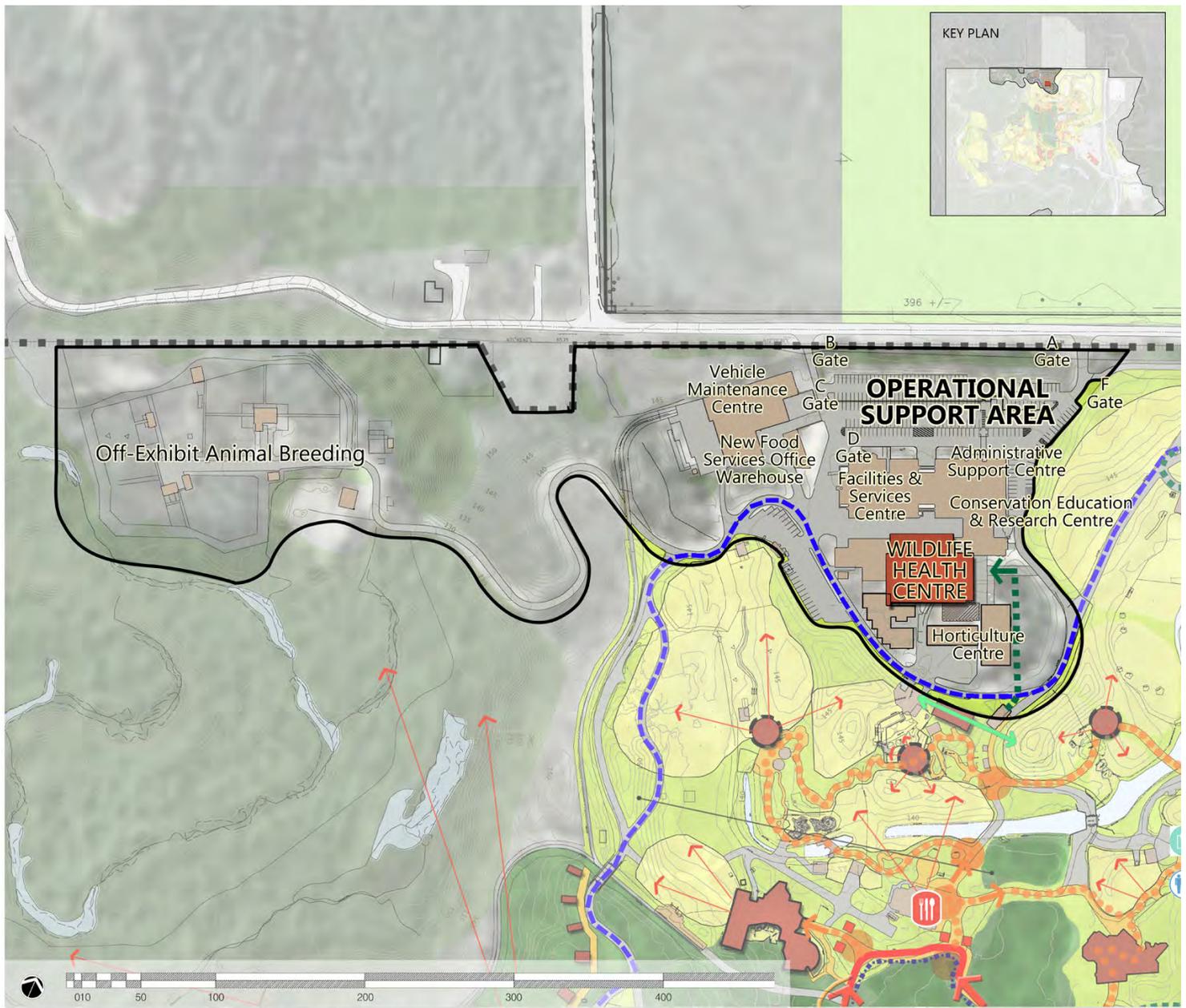


LEGEND

- SITE**
- Animal Area
 - Building - New / Re-developed
 - Building - Existing
 - Service Area
 - Water - Existing
 - Water - New / Re-developed
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- VISITOR AMENITIES**
- Water Play Area
 - Play Area
 - Washrooms
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 - Retail

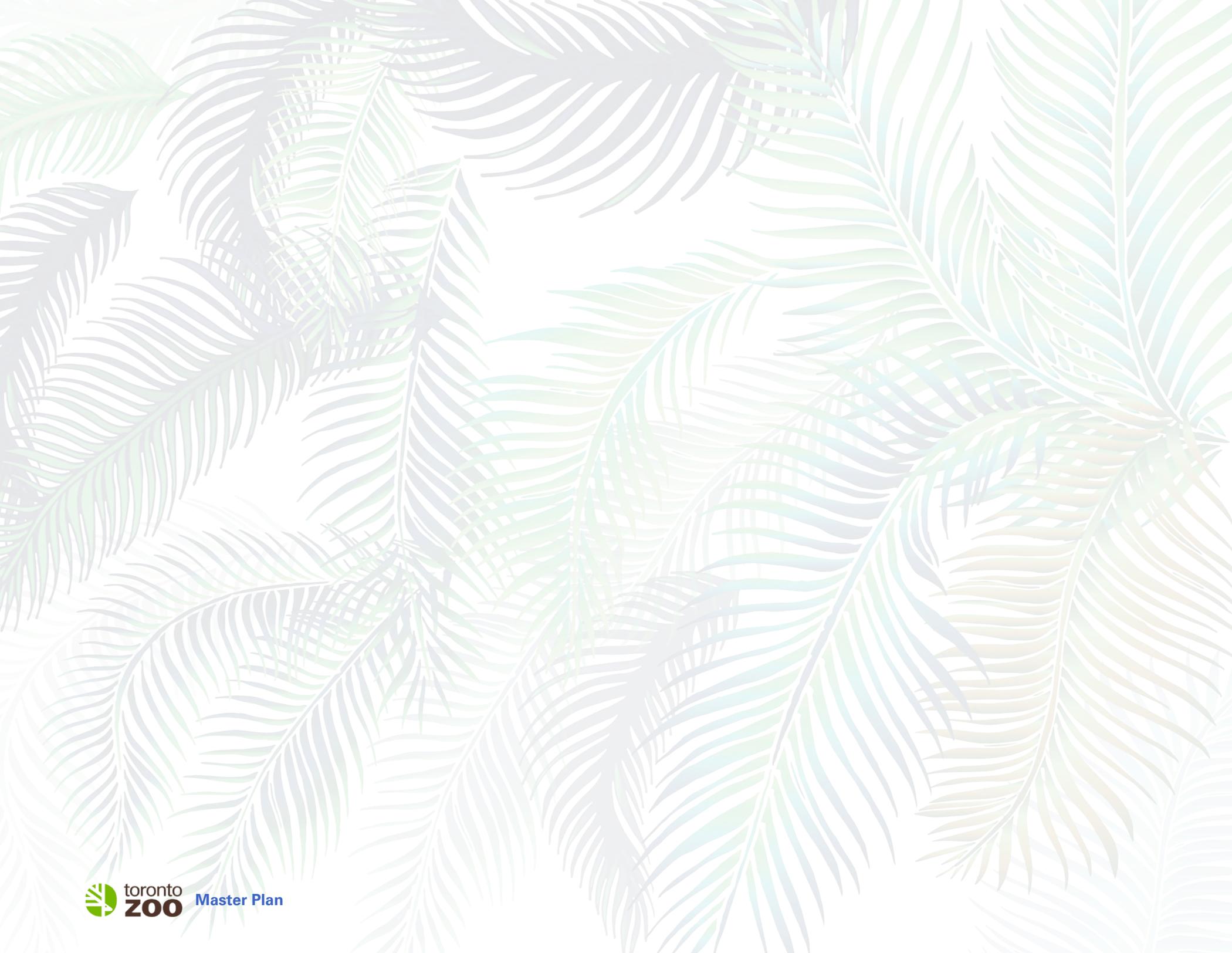


Master Plan - "Operational Support Area"
Toronto Zoo Master Plan

November 2016



FIGURE 18





PROGRAM AND USE

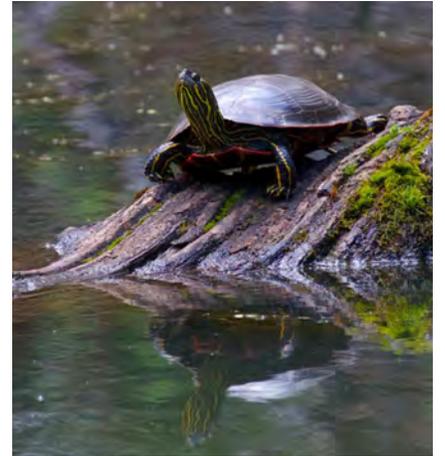
VALUE-ADDED EXPERIENCES

The Zoo has the opportunity to develop multiple value-added experiences that will, when appropriately placed, well-planned and well-executed, provide options for further revenue generation.

WETLAND WALK

A guided walk and significant learning experience will be provided to introduce visitors to Canadian species with a focus on some of the wetland habitat and species that currently are or historically were native to the Rouge River and riparian system. Local species will include Canadian Otter (which was extirpated as recently as the 1950's), birds, turtles, amphibians as well as a rich palette of native plant species. The local species and habitat will provide a preferred introduction to the Rouge National Urban Park for many visitors from outside of Canada and opportunities for shared learning and funding with Parks Canada should be explored. Restoration efforts and funding should also be pursued that will support this tour being marketed as an in depth and first class experience to a range of visitors that the Zoo has identified as representing an expanded market.

The walk will be primarily boardwalk with shoreline sections for viewing of diverse plant communities and larger animals such as moose that require a more discrete viewing public. In addition to the native wetland experience, a “constructed wetland” using biotechnologies such as the Living Machine will provide an expanded experience and could be branded as a half day or full day intensive offering. The paid tour and learning experiences also provide a self-funding mechanism for the necessary fundamental work of bringing the waterways and wetlands to functional level that is appropriate to the Zoo’s conservation mandate and brand.



Turtle Island

FOOD & REFRESHMENT

A variety of dining options throughout the Zoo provide great food and views. They present food choices and packaging that are consistent with the Zoo's messaging and mission, and highlight Canadian fare and/or feature menus. Dining facilities range in size, style and seasonality, including:

- Fine dining / upscale café / beer and wine garden at the Entry;
- Family dining restaurant (existing Africa Restaurant / future "Gorilla Café") open year-round with the capacity for large groups in thematically appropriate surroundings;
- Area specific, themed cafés with sheltered seating ("Caribou Café", "Grizzly Café");
- Seasonal food trucks that can be moved off-site when not in use (rather than presenting visitors with the look and feel of being closed) ("Lion Overlook", Entry);
- Catered dining and events, made possible with sufficient on-site commissary capacity.

OVERNIGHT STAYS

- Group camping continues to be offered for the Serengeti Bush Camp in a new, more private location with dedicated facilities adjacent to "Pridelands", as well as potentially two new camping areas designated within "Wild Woods". The eventual number of areas and facilities will be determined through a market demand study as the Rouge River National Urban Park comes on-line. Each camp area would be located in a unique setting and have a light footprint on the land that could be easily dismantled for the season or as demand dictates. They would provide unique opportunities for individuals and groups to come together to enjoy the outdoors, learning about wildlife and sharing wild places respectfully and responsibly.
- High-end glamping in "Raven's Roost" provides luxury treetop cabins for rent, featuring stunning views over the valley in a unique, Canadian Carolinian forest canopy experience. A group dining area will provide meals and a place to gather after an evening experience of going behind the scenes to meet the animals. The experience should offer excellent views, great food and be consistent with the mission, messaging and story.
- A potential new lodge and conference center located east of Meadowvale Road within the overflow parking area would have ridge top views of the valley and across to the conservation herds. The lodge actualized through outside investment, but benefits from close proximity and association with the Zoo and a uniquely Canadian experience in the Rouge National Urban Park. Animal exhibits, such as a Great Lakes fish tank, quality theming and unique dining experiences augment the ambience of the facilities.
- The full costing is not used in the programming as the Toronto Zoo would look to partner with an external hotelier to provide the facilities.



Tree House Ravens Roost



Illustration of High End Glamping

GROUP GATHERING

Several types of rentable group gathering areas have been envisioned by the Master Plan:

- **Group Picnic Areas**
- **Meeting / Function Rooms**
- **Birthday Party Rooms**
- **Changing Exhibits and Special Events**

Each of these areas provides not only a regular revenue stream for the Zoo, but also, by virtue of their siting and association with the Zoo as a leading conservation organization, will attract families and groups who are drawn by the Zoo's mission and motivated by a desire to support it.

Group Picnic Areas:

Pridelands Picnic Area

- Adjacent to the existing Simba Safari Lodge and washrooms, it can host large groups in close proximity to the Savanna animals.

Discovery Picnic Area

- Located within the Children's Zoo, it can host school groups and special events in close proximity to washrooms and shelter.

Meeting / Function Rooms:

Waterside Restaurant – 2nd Floor:

- Located immediately adjacent to the Entry Plaza, the 2nd floor can host meetings of up to 200 people in a divisible space overlooking the Entry Lake. In addition, the downstairs restaurant is easily rentable for evening functions.

The Red Barn:

- On the far side of Meadowvale, the Red Barn can be developed to create several medium-sized rooms with adjacent outdoor spaces to host meetings of up to 50 people and weddings.

Birthday Party Rooms:

Birthday Party Rooms:

- Two party rooms and associated washrooms will be located in the Discovery Learning Centre. Party rooms provide rental opportunities for birthdays, weddings, and other events. Close proximity between the Carousel, "Bugs!" and "Kids Discovery" Indoor Play space create opportunities for fun-filled events that can be enjoyed year round.

Changing Exhibits and Special Events:

- A new HVAC-equipped "sports tent" enclosure will be erected and will host everything from changing exhibits to Zoo fund-raisers, day camps and special events



Sunset Segway Tours

LEGEND

SITE

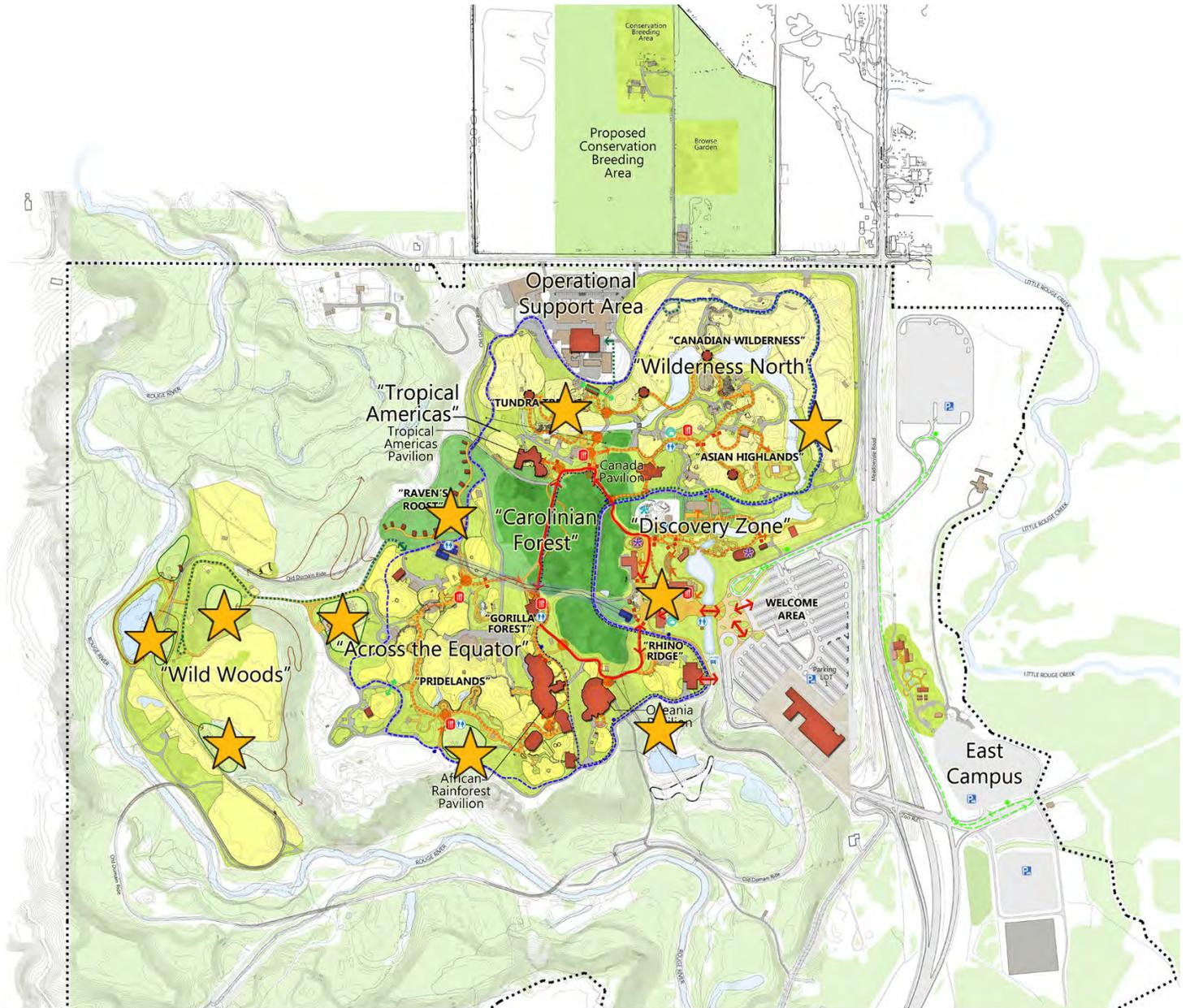
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CIRCULATION

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VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - Value Added Experiences
Toronto Zoo Master Plan

SCALE = 1:2500 at Arch E
0 10 50 100 200 300 400 500
November 2016



FIGURE 19

ADVENTURES

Select activities are enabled through appropriate rides that do not diminish visitor or animal experience of the exhibits, and through adventure play, such as the Eco-adventure tree-top trekking tour and zip line taking Zoo guests deeper into the Rouge Valley. Tree-top experiences are renowned for creating very little footprint in the natural environment, allowing the guests taking the tour to gain a greater appreciation for the environment. The tours have the ability to educate while also being environmentally friendly.

GIFTS

A primary Zoo gift shop located at the Zoo's entry/exit does not require visitors to exit through it, but is so inviting that they cannot help but to stop at the end of their visit to commemorate an excellent day. A garden gift shop and café associated with the Park facilities on the east side of Meadowvale Road appeals to avid or budding gardeners and some of the senior community. It expands the retail product line the Zoo can provide while encouraging sustainable gardening and wildlife-friendly products, such as bat boxes.

PROGRAMS & EVENTS

Paid programs, classes, lectures and events take place throughout the Zoo, supported by new and updated facilities. They are consistent with the Zoo's messaging and mission, and help to support co-aligned Parks programs.



Eco Tour



Toronto Zoo Gift Shop

SITE CIRCULATION

Pedestrian circulation will be redeveloped to create fully accessible routes throughout the Zoo. This has been mandated to occur by 2025, but it is also in the best interest of the Zoo as it considers the needs of not only the disabled community, but also the needs of both young families and senior citizens. The accessible Core Loop will circulate from the Entry to link up the Indo-Malaya Pavilion, the African Rainforest Pavilion, the Gorilla Café, the Carolinian Forest Walk, the Caribou Café, Kids Discovery Zone and back to the Entry. Individual exhibit precinct loops will encompass 20-30 minute walks and include the future “Oceania”, “Gorilla Forest”, “Pridelands”, “Wilderness North”, “Kids Discovery” and “Bugs!”.

Additionally, accessible trails, as well as challenge trails will be developed through the forested hillslope above the Rouge River, linking the various ponds together for guided hikes and bird watching, as well as access to “Wolf Woods”.

Visitor-focused vehicular transportation will be organized to provide the following options:

- Remote Parking and Facilities Transport Route: roofed tram service that operates to link visitors arriving at remote parking spaces with the Entry, as well as visitors who wish to gain easy access to the Red Barn area, the Rouge, or the future Lodge on the east side of Meadowvale Road.
- Carolinian Forest Treetops Transport Route: Should the need be determined, an aerial gondola link between a “transportation hub” adjacent to the Orientation Plaza and the Twiga Retail Store & Snack Bar could be established to provide an easy way to divide up a visit and get back to the Entry. Interpretation in the gondolas could provide information on the nature and care of the central and surrounding Carolinian forest that from the backdrop and framework for the Zoo. This route is potentially capable of being extended across Meadowvale Road to connect with the proposed Festival Area to supplement the Zoo Parking Shuttle loop.
- Summer Zoo Transport Route: combination ride / transportation linkage that provides

Zoo-wide back-of-house / alternative views of animals and their habitats, and interpretation about what is going on at the Zoo.

- Winter Zoo Transport Route: a new route that would cover the Core Zoo Area during winter holidays and weekends, and keep visitors from having to walk too far in inclement conditions. It would require a link from the “Gorilla Forest” entry along the east side of the building to connect up with the Giraffe Service Access Road. Additionally, it would require that the Tram Bridge become an all-weather vehicular circulation link.
- Conservation Breeding Herds: Up-Close: Safari-style vehicle for special group excursion for close-ups and feeding of the Zoo’s conservation herds.
- “Wolf Woods” Transport Route: Tram route to take special groups and their equipment up and down the slope that leads to “Wolf Woods” from the upper tablelands.

Each of these could be evaluated for whether they are “free” services with the costs included in the price of admission or “value-added” services that can be selected and paid for separately.

LEGEND

SITE

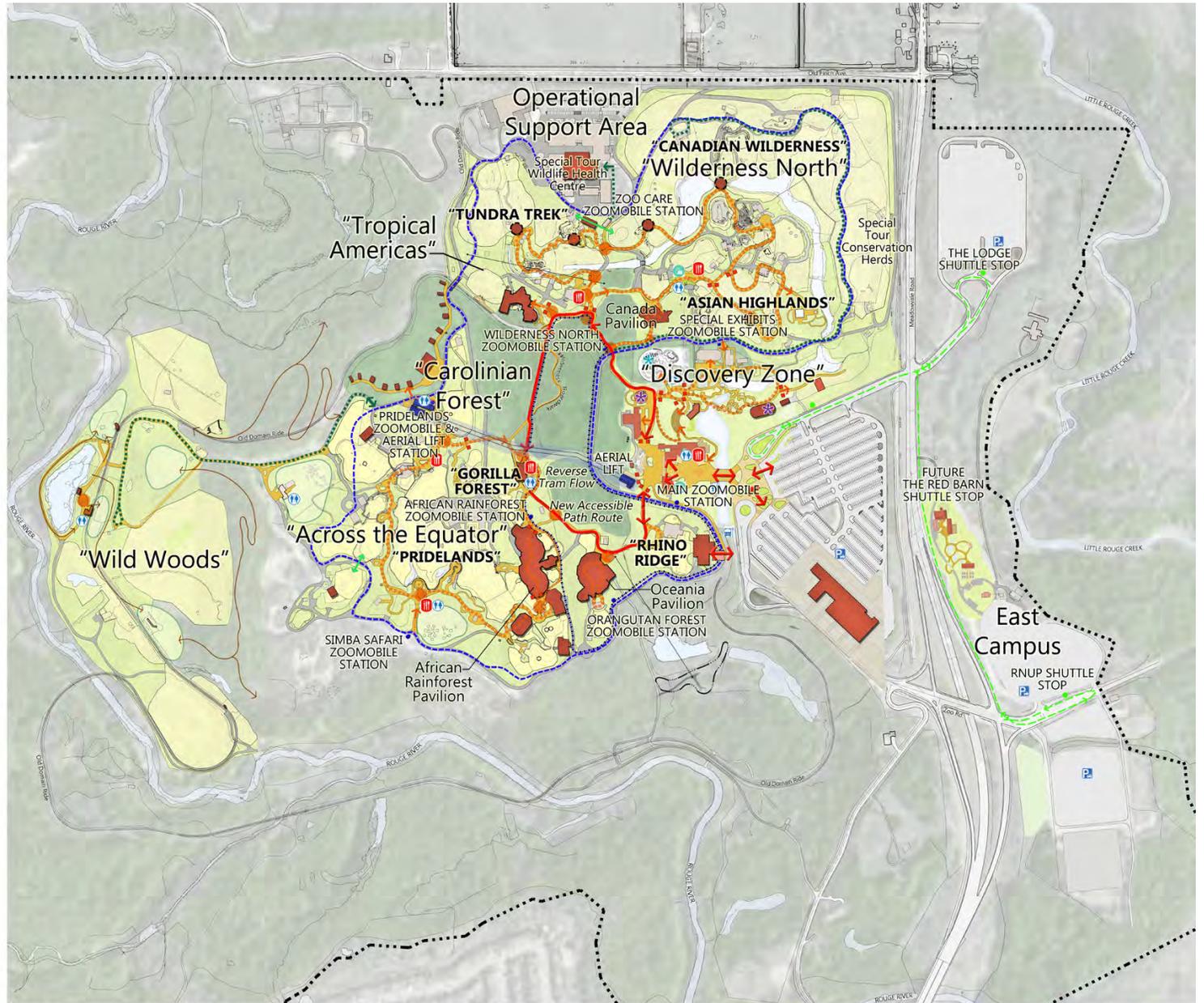
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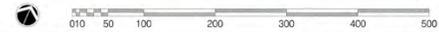
VISITOR AMENITIES

- Water Play Area
- Play Area
- Washrooms
- Food
- Retail



Master Plan - Circulation Plan

Toronto Zoo Master Plan



November 2016



FIGURE 20

TOURS & TRANSPORTATION

- The Zoomobile tour continues to run on a modified route that provides for excellent views and experiences while minimizing overlap with other general circulation routes. A shortened loop can provide key connections without the back-of-house and exhibit tours. during the off-season, allowing for a weather protected visit to the Zoo and a connection to the major pavilions.
- Special tours provide guided access for small groups to experience certain highlighted areas, such as the conservation herds or the Wildlife Health Centre. Staff give behind-the-scenes information and interpretation, and perhaps facilitate interactive animal experiences, such as feeding conservation herd hoofstock.
- An aerial lift from the Zoo entry up the forested slope to the top of the tablelands takes advantage of an existing clear corridor through the trees. It gives visitors an enjoyable ride as they travel easily and directly to the gateway to some of the “must see” animals in the Zoo’s African Rainforest and “Pridelands” as well as an expedited return to the Front Entrance.
- A Zoo Shuttle provides easy loop transportation from remote parking locations, overflow parking, the Festival Area and the future Lodge to the front door of the Zoo. It would run on a regular schedule throughout the peak season



Special Small Group Tours, Northwest Trek, WildlifePark, Eatonville, Washington

LEGEND

SITE

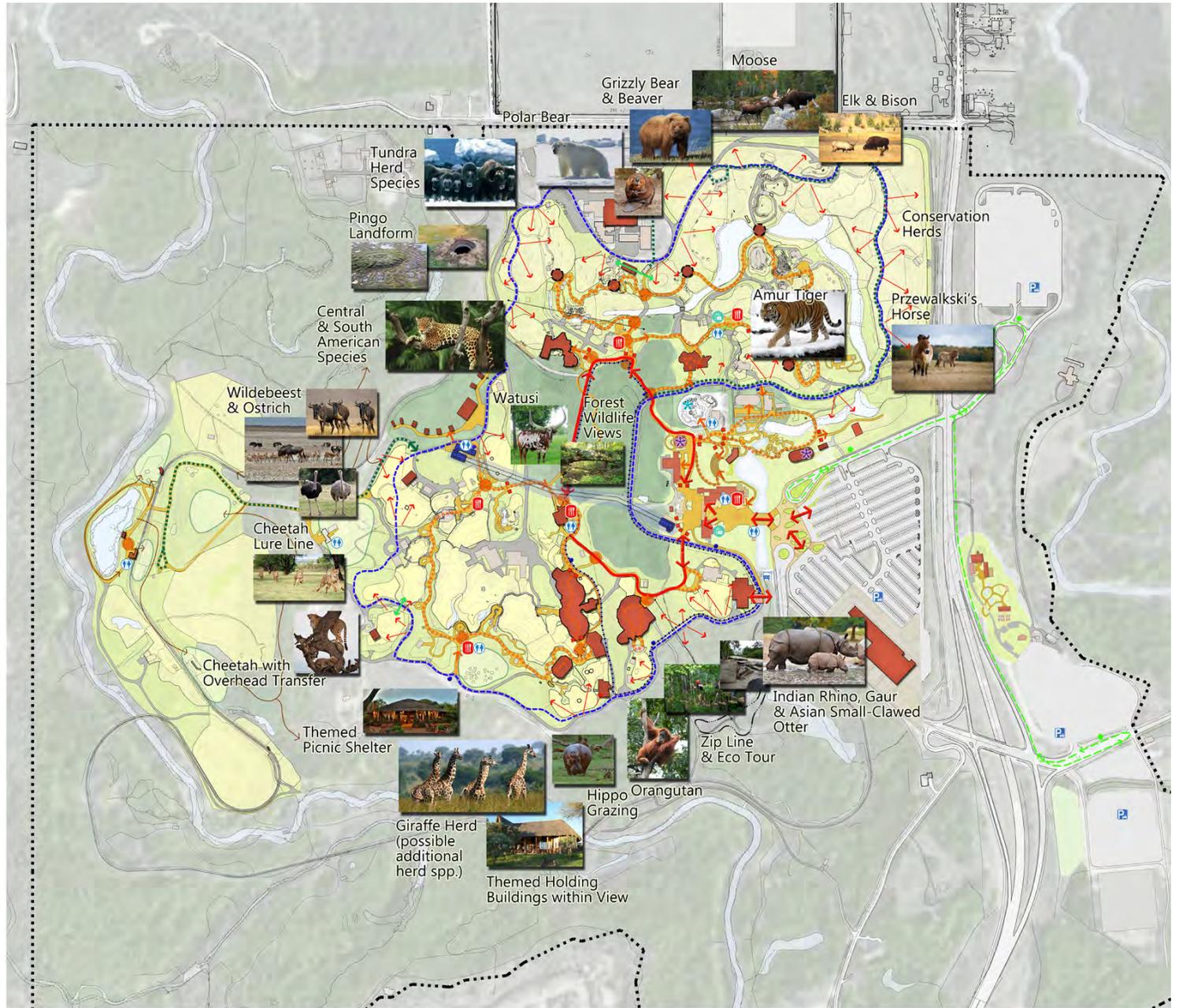
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VISITOR AMENITIES

- Water Play Area
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Master Plan - Zoomobile Views Highlight Plan

Toronto Zoo Master Plan



November 2016



FIGURE 21

PARKING

In addition to minimizing the parking footprint the Zoo will green that footprint. All new parking will be designed and constructed to the Toronto Green Standard or a higher Toronto Zoo standard. An objective will be a more natural water and temperature regime which will be achieved by the extensive use of porous pavement and bio-swales.

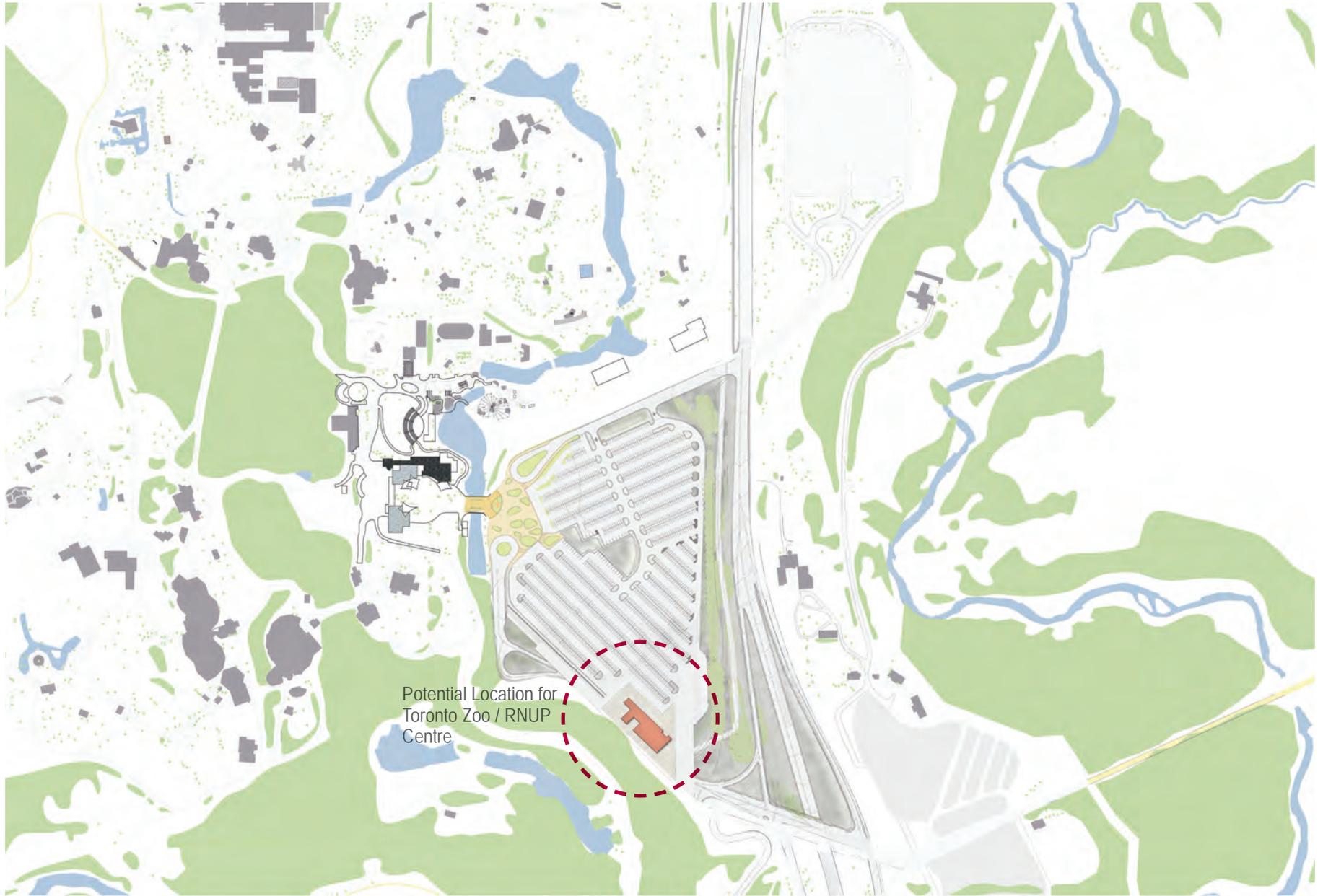
Parking will be provided for Zoo visitors, with the potential for future Rouge National Urban Park (RNUP) visitors. Current (2016) capacity provides sufficient parking for all but peak days for Zoo visitors. During peak use, the challenge becomes one of traffic, vehicles waiting for passenger pick-up, and expectations management. With the addition of RNUP visitors and/or the removal of any parking spaces for the development of an education centre or lodge, this problem would be exacerbated and could trigger the requirement for a parking structure to minimize the walking distance for Zoo guests.

Primary visitor parking will remain located west of Meadowvale Road, close to the Entrance Plaza, proposed restaurant, Learning Centre and Rouge National Urban Park Shared Use facility.

Parking on the east side of Meadowvale Road is currently configured in two major areas. A large paved lot is located in the north with an entrance drive located directly opposite from the driveway to the Arrival/Departure Plaza. The master plan considers this lot to be a potential redevelopment location for a boutique lodge. Existing parking that would be displaced may be replaced with a parking structure in the main lot. Because the area is already paved, there would be minimal disruption to natural systems. A business feasibility study should be developed that takes into consideration the business model for the lodge as a turn key operation in the context of the business model of the Zoo. Prior to that, a review of regulatory requirements including setback dimension from top of bank, local species inventories, geotechnical and servicing constraints would need to be undertaken.

Two smaller overflow parking areas are located south of the Red Barn and west of Pearse House in the proposed Festival Area. These are currently

primarily overflow parking or dedicated to the users of the existing buildings. A series of discrete, appropriately scaled parking areas that are conducive and sympathetic to a pedestrian scaled use should be considered for this area. The parking locations should be developed using permeable surfaces and clearly defined stalls that maximize the efficiency and minimize the per car footprint. Deciduous, native species trees should be planted to shade the vehicles and provide trans evaporative cooling through the leaf canopy. Whenever feasible, the trees should be grown from seed local to the Rouge River riparian zone. The layout of stalls and trees should be designed so that exposure of the vehicles to southern and western sun is minimized.



Potential Location for
Toronto Zoo / RNUP
Centre

ENTRANCE PARKING CONCEPT

FIGURE 22

HABITAT PLAN

WETLAND & WATER

The waterways and wetlands of the Zoo offer an extraordinary opportunity to connect past and present the Toronto Zoo and Rouge National Urban Park wildlife and habitat conservation and experience. As recently as the mid 1950's River Otter (*Lontra canadensis*) was present in the Rouge River. A resilient, playful and intelligent species, otter will make a re-appearance as a signature species in the redesigned Entrance Plaza. They are however, extremely intolerant of pollution, and this provides an excellent learning opportunity to make connections to the history of the Rouge River, the wild species and habitat that traditionally occupied it and the impact of humans on those species and habitat.

Restoration of the Zoo's waterways and wetlands will provide better links between conservation, ecology, visitor experience and water quality. In addition to the Canadian species exhibits such as the Otter exhibit, opportunities will be provided to make connections with the restaurant, a possible wetland walk, bird watching and stormwater re-use technologies such as Living Machines.

STORM WATER

Shallow groundwater around the perimeter of the site flows laterally in a general southerly direction and in response to the contours of the river bank.

Much of the exhibit portion of the site drains to a series of ponds and swales constructed along the perimeter of the site. The parking lot drains to perimeter swales. Based on a visual review of the maps and a physical review of the most readily accessible portions of the site, it appears that the swales discharge to a stormwater management pond located at the south portion of the site west of Meadowvale Road and into storm sewers. We infer that the stormwater pond was originally constructed for erosion and sediment control during the construction of the Zoo when the ground was bare, stripped of vegetation and there was a high risk of sediment wash-off during rainstorms. The majority of the site is now stable with little risk of sediment wash-off during storms, however the animal holding areas and other areas, especially those that are paved, continue to require stormwater management.

Currently there is a stormwater management pond south of the bank on the west side of the main parking lot. We have not evaluated the condition or performance of this pond. It should be monitored for sediment build-up and its current capacity for active storage confirmed. There are a series of smaller ponds and streams on the site that have visible water quality issues. Based on discussions with zoo staff, we understand that strategies are under consideration to address these and other storm water quality issues. A Zoo Waterway Quality Study was commissioned in 2004 and the Master Plan will take the recommendations from that study into account.

All storm sewers and the entire Zoo property drains into the Rouge River. The eastern storm facilities outlet into the on-site ponds located within the Zoo properties, which in turn convey flows to the Rouge River. The western portion of the site nearest to the Rouge River discharges directly into the Rouge River or into a small tributary leading to the Rouge River.

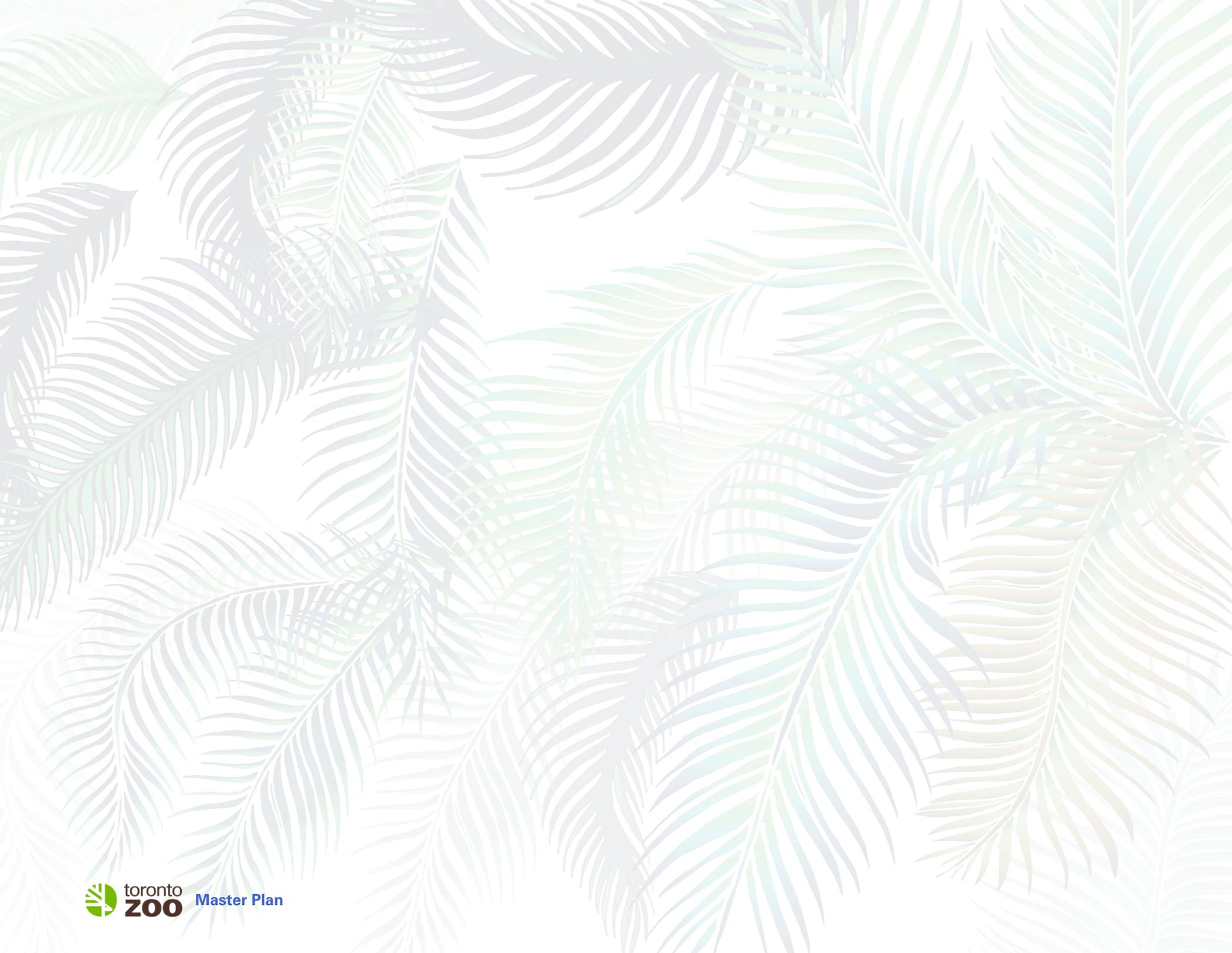
Legend

- Water Course / Pond / Wetland
- Forest / Tree / Woodland
- Meadow



HABITAT

FIGURE 23





IMPLEMENTATION

PHASING PLAN AND COST SUMMARY

INTRODUCTION

The following Phasing Diagrams and Cost Summary have envisioned a series of prioritized projects over the next 15 years: between 2017 and 2032. This prioritization has been based upon the Strategic Plan Goals and an evaluation of critical elements that will improve animal welfare, educational opportunities, and visitor circulation and comfort while attempting to establish a reasonable flow of funds to accomplish this important work. The scope of this work includes facility upgrades, habitat renovation and expansion, new facilities to house new programs, and enhancement of revenue generation opportunities that can support both the physical campus of the Zoo as well as its ongoing conservation programs.

Each project references line item cost estimates that are fully documented in the Toronto Zoo Full Costs Spreadsheet that have been provided to the Toronto Zoo staff and summarizes the projected design and construction costs in 2016 dollars. In all cases, these numbers should be considered as target budgets that should be escalated and confirmed through a scoping and preliminary conceptual design process prior to the formalization of a designated construction cost.

The estimated design and construction timelines are necessarily general in nature and reflect common assumptions for completing similar work within similar climatic conditions.

PHASING SEQUENCE

The four major phases are predicated on the following:

- Consolidate the visitor experience to make it easier for guests of all ages to get the most out of a visit to the Zoo without undue fatigue or discomfort.
 - Focus the institution's conservation and conservation education on Canadian animals that do well in Toronto's climate and which tie into the messaging of the surrounding Rouge National Urban Park.
 - Provide better winter circulation options to assist guests in getting around the Zoo comfortably.
- Provide a more welcoming and better functioning guest arrival and entry experience that reinforces the Toronto Zoo's values.
 - Celebrate visitor's transit through the "core woods" to put them in closer touch with the natural habitat that surrounds the Zoo.
- Reinvest in the Zoo's iconic structures and animal habitats to improve welfare and meet the Zoo's accessibility and sustainability goals.
 - Create more opportunities for engagement for the families of young children, including those families who live close by and can make use of these opportunities on a regular basis.
- Complete key animal habitat expansion and renovation, including the Savanna and African Rainforest areas.
 - Expand the Zoo's conservation breeding and operations capabilities.

PHASING PLAN

DRAFT Master Plan Phasing Diagram & Distribution of Project Budgets

9-Nov-16

Phase	Description	Strategic Plan Goal	160801 - Full Ref. Cost Sheet Ref. #	Master Plan Capital Improvements Budgets								
Prelim.	DESIGN & CONSTRUCT EXTERIOR ORANGUTAN HABITAT	1, 2	1, 2	CAD 4,000,000								
1	A COMPLETE "WILDERNESS NORTH"	1, 2, 5, 7			2017	2018	2019	2020	2021			
	<i>Complete the conversion of the "Eurasia" exhibit zone to a comprehensive habitat that interprets the diversity of the "Canadian Wilds" experience and contrasts those species to key high altitude / cold-adapted species from Asia.</i>											
	Design of the Canada Pavilion		2.5	CAD 11,473,100								
	Construction of the Canada Pavilion											
	Design of "Wilderness North" Elements (incl. River Otter & Carousel relocation)		2.1-2.4, 2.6-2.8	CAD 20,514,100								
	Construction of "Wilderness North" Elements											
	B IMPROVE WINTER CIRCULATION	2										
	<i>Complete the construction of a core area ZooMobile route that can be put into service during the Winter to facilitate Guest comfort.</i>											
	Design & Construction of Winter ZooMobile Route		6.4.1	CAD 526,900								
	Design & Construction of Accessible Ramp from Indo-Malaya Pavilion		7.3	CAD 1,327,600								
	C EXPAND DISCOVERY & LEARNING OPPORTUNITIES	2, 5										
	<i>Construct a new facility that will support formal learning opportunities within the Zoo while also supporting the learning and sharing goals of the surrounding Rouge National Urban</i>											
	Design & Construction of Shared Education / Orientation Centre		3.1	CAD 15,000,000								
2	A REDEVELOP THE ENTRY & CORE VISITOR EXPERIENCES	2, 4						2021	2022	2023	2024	2025
	<i>Re-visions & re-invigorate the Zoo entry experience to facilitate a welcoming experience where ticketing does not interfere with the special Canadian sense of place, where the values of the Zoo are on public display, and where guest services are easily obtainable.</i>											
	Design & Construction of New Entry Elements		1.1 - 1.4, 1.10, 1.12 - 1.13, 4.4.1	CAD 11,840,580								
	Design & Construction of New Restaurant/Café at Entry		1.8, 1.9	CAD 8,827,200								
	Design & Construction of New Aerial Lift		1.14	CAD 16,190,280								
	B GET IMMERSSED IN THE CAROLINIAN FOREST	1, 2, 7										
	<i>Enable guests to enjoy the experience of being surrounded by the Carolinian Forest.</i>											
	Design & Construction of "Raven's Roost" Treetop Cabins		8.1, 8.3	CAD 6,501,100								
	Design & Construction of "Carolinian Forest Boardwalk"		8.2	CAD 724,400								

Legend:
■ : Design
■ : Construction
■ : Internal Zoo Design/Construction

CAD 48,841,700

CAD 44,083,560

DRAFT Master Plan Phasing Diagram & Distribution of Project Budgets

9-Nov-16

Phase	Description	Strategic Plan Goal	160801 - Full Ref. Cost Sheet Ref. #	Master Plan Capital Improvements Budgets	2024	2025	2026	2027	2028	2029	2029	2029	2029	2031	2032		
3	A REINVEST IN SIGNATURE ANIMAL EXPERIENCES		1, 2														
	<i>Begin the process of renovation and re-investment in the Zoo's iconic structures & animal habitats.</i>																
		Renovation of the "Indo-Malaya Pavilion" to the "Oceania Pavilion"		5.1, 5.4	CAD 26,946,000												
		Design & Construction of "Rhino Ridge" Improvements		5.2, 5.3	CAD 2,612,300												
		Renovation of the "Americas Pavilion" to the "Tropical Americas Gallery"		9.1	CAD 11,768,800												
		Design & Construction of "Insects!" (after new Giftshop is complete)		4.3	CAD 2,109,800												
	B	CREATE MORE ENGAGEMENT OPPORTUNITIES FOR THE ZOO'S YOUNGEST GUESTS		2													
		<i>Expand the opportunities for imaginative play in natural surroundings & holding / training areas for animal ambassador programs.</i>															
			Water Play Expansion		4.6	CAD 389,900											
			4-Season Play & Program Space		4.7, 3.3	CAD 2,841,400											
		Wildlife Program Area Improvements		4.5	CAD 1,523,900												
	C	CONTINUE CIRCULATION & GUEST SERVICES IMPROVEMENTS		2													
		<i>Complete improvements to the Entry area.</i>															
			New Gift Shop		1.11	CAD 1,951,200											
		Renovated ZooMobile Stop at Entry		1.6	CAD 325,300												
4	A COMPLETE KEY ANIMAL HABITAT EXPANSION & RENOVATION		1, 2, 7														
	<i>Reinvest in expanding & renovating animal habitats & back-of-house care facilities within "Across the Equator" zone.</i>																
		Savanna Improvements		6.1, 6.6, 6.7, 6.9	CAD 13,094,500												
		African Rainforest Improvements		6.4, 6.2	CAD 14,219,200												
	B	EXPAND THE ZOO'S CONSERVATION BREEDING & OPERATIONS CAPABILITIES		1													
		<i>Use the North Campus to consolidate & expand the Zoo's conservation breeding & browse production capabilities.</i>															
			Conservation Breeding & Browse Production Area Improvements		11.2	CAD 2,000,000											
		Operations Complex Improvements		12.1 - 12.5	CAD 3,349,500												

CAD 50,468,600

Legend:
■ : Design
■ : Construction
■ : Internal Zoo Design/Construction

CAD 32,663,200

COST SUMMARY

Toronto Zoo							
2016 Master Plan Cost Summary							
18-Nov-16							
Phasing Priority				Budget Sheet Ref. #	Master Plan Capital Improvements Budget	Partnership Opportunity	Notes:
1.0 Entry & Circulation Improvements				CAD 23,711,880			
2	1	Parking area improvements		1.1	CAD 4,000,000		
2	2	New Plazas		1.2, 1.3, 1.4	CAD 3,943,100		
3	3	Renovated ZooMobile Stop		1.6	CAD 325,300		Revenue
3	4	New Washrooms		1.7	CAD 767,600		
2	5	New Guest Services, Membership, Offices, Tickets		1.10	CAD 942,600		Revenue
3	6	New Gift Shop		1.11	CAD 1,951,200		Revenue
2	7	New Information & Security		1.12	CAD 316,080		
1	8	New Canadian River Otter		1.13	CAD 2,411,500		
1	9	Carousel Relocation		4.4.1	CAD 227,300		
2	10	New Restaurant / Café / Play Area		1.8, 1.9	CAD 4,000,000	CAD 4,827,200	Revenue
2	11	New Aerial Lift Transportation & Ride		1.14		CAD 16,190,280	(not incl. in Capital Budgets)
2.0 Canadian Wilds / "Wilderness North" Improvements				CAD 31,987,200			
1	1	Infrastructure & Circulation Upgrades		2.1	CAD 632,200		
1	2	Expand Tundra Trek		2.2	CAD 3,441,400		
1	3	New Boreal Ridge - Bear Centre of Excellence		2.3	CAD 5,760,600		
1	4	New Beaver		2.4	CAD 1,332,300		
1	5	New Canada Pavilion		2.5	CAD 11,473,100		
1	6	Renovate existing Eurasia exhibits for Asian Highlands (not incl. Amur Tiger)		2.7, 2.8	CAD 5,000,000		
1	7	Renovate Conservation Herds to accommodate photo safaris		2.9	CAD 1,000,000		Revenue
1	8	Renovate existing Eurasia exhibits for Canadian Animals		2.10	CAD 2,975,000		
1	9	Expand tent camping opportunities in the Rouge Valley		7.3	CAD 372,600		Revenue
3.0 Discovery & Learning Improvements				CAD 15,000,000			
1	1	Shared Education / Orientation Centre (Zoo portion)			CAD 15,000,000	CAD 15,000,000	Shared
4.0 Discovery Zone Improvements				CAD 7,615,000			
3	1	Infrastructure Upgrades		4.1	CAD 223,100		
3	2	"Insects!"			CAD 2,109,800		
3	3	Water Play Expansion		4.6	CAD 389,900		
3	4	4-Season Play & Programs		3.3, 4.7	CAD 2,841,400		Revenue
3	5	Wildlife Program Area Improvements		4.5	CAD 1,523,900		
1	6	Winter ZooMobile Route connections @ African Pavilion		6.4.1.1-3	CAD 526,900		
5.0 Carolinian Forest Circulation & Experience Improvements				CAD 7,225,500			
2	1	"Ravens' Roost"		8.1, 8.3	CAD 6,501,100		Revenue
2	2	"Carolinian Forest" Boardwalk		8.2	CAD 724,400		

Toronto Zoo												
2016 Master Plan Cost Summary												
18-Nov-16												
Phasing Priority					Budget Sheet Ref. #	Master Plan Capital Improvements Budget	Partnership Opportunity	Notes:				
6.0 Savanna Improvement						CAD 13,094,500						
4		1	Infrastructure Upgrades		6.1	CAD 1,368,500						
4		2	Hippo Exhibit & Holding		6.6	CAD 8,000,000						
3		3	Mixed Herds & Holding		6.7	CAD 1,500,000						
4		4	Lion Expansion / Rotational Predators exhibit / Seasonal Café		6.9	CAD 2,226,000						
7.0 Indo-Malaya Area Improvements: "Oceania"						CAD 34,885,900						
1		1	Complete exterior orangutan habitat construction			CAD 4,000,000						
3		2	Complete renovation of the building to support a thriving tropical forest for Orangutans, Komodo Dragons and other species, upgrade all roofing and mechanical systems and accommodate accessibility standards.		5.1, 5.4	CAD 26,946,000						
3		3	"Rhino Ridge" Improvements		5.2, 5.3	CAD 2,612,300						
3		4	New Accessible Ramp from Indo-Malayan to upper ridge		5.4.1	CAD 1,327,600						
8.0 South America Improvements						CAD 11,768,800						
9.0 Africa Rainforest Improvements						CAD 14,219,200						
4		1	Building upgrades per Indo-Malaya standards + exhibit upgrades.		6.4	CAD 12,000,000						
4		2	Gorilla Outdoor Expansion		6.2	CAD 2,219,200						
10.0 Conservation Breeding & Browse Production Improvements						CAD 2,000,000						
4		1	Small animal breeding facilities									
4		2	Browse plantations									
11.0 Operations Support Improvements						CAD 3,349,500						
4		1	Food / Retail Warehouse		12.1, 12.5	CAD 2,000,000						
4		2	Infrastructure Improvements		12.2-4	CAD 1,349,500						
12.0 Festival Area Improvements						CAD 12,904,200						Revenue
Totals:						CAD 160,857,480	CAD 48,921,680					

CONCLUSION

It is important to recognize that the Master Plan is a living document. It provides a snapshot in time of the physical and programmatic development that will occur over the next fifteen or twenty years. As the Toronto Zoo changes, the social, political, economic and physical context will change as well. New opportunities will present themselves. The Master Plan will need to be revisited in parallel with the ongoing development of strategies and business models for the Toronto Zoo. The impact and success of each phase of Master Plan implementation should be assessed against the strategic goals of the Toronto Zoo and adjustments to the implementation strategy made to ensure it aligns with broader goals.

The Master Plan provides overall design direction that moving forward will be supported by detailed design development for each project. The project, network and Master Plan scale design strategies should be evaluated individually and collectively at the end of each fiscal year and findings incorporated into upcoming budgets and the business model. The importance of developing the design and budgets in greater detail well in advance of construction drawing and design documentation cannot be understated.

The individual projects described in the Master Plan are connected by a systemic network of mobility and environmental improvements. It is recommended that the system level improvements and strategies be re-evaluated at least every 3-5 years. Implementation of the Master Plan Report recommendations and a close understanding of the design inputs that went into the development will ensure that the detailed design meets the requirements of the various stakeholders and approval agencies, preserves and enhances the ecological integrity of the site, provides for the level of care required by the animals, fulfills the needs and desires of the community, the experiential expectations of visitors and guests and takes advantage of the unique opportunities and potential of the Toronto Zoo.



Lynx canadensis - Canada Lynx

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