



SALISBURY ZOO MASTER PLAN

January 15, 2016

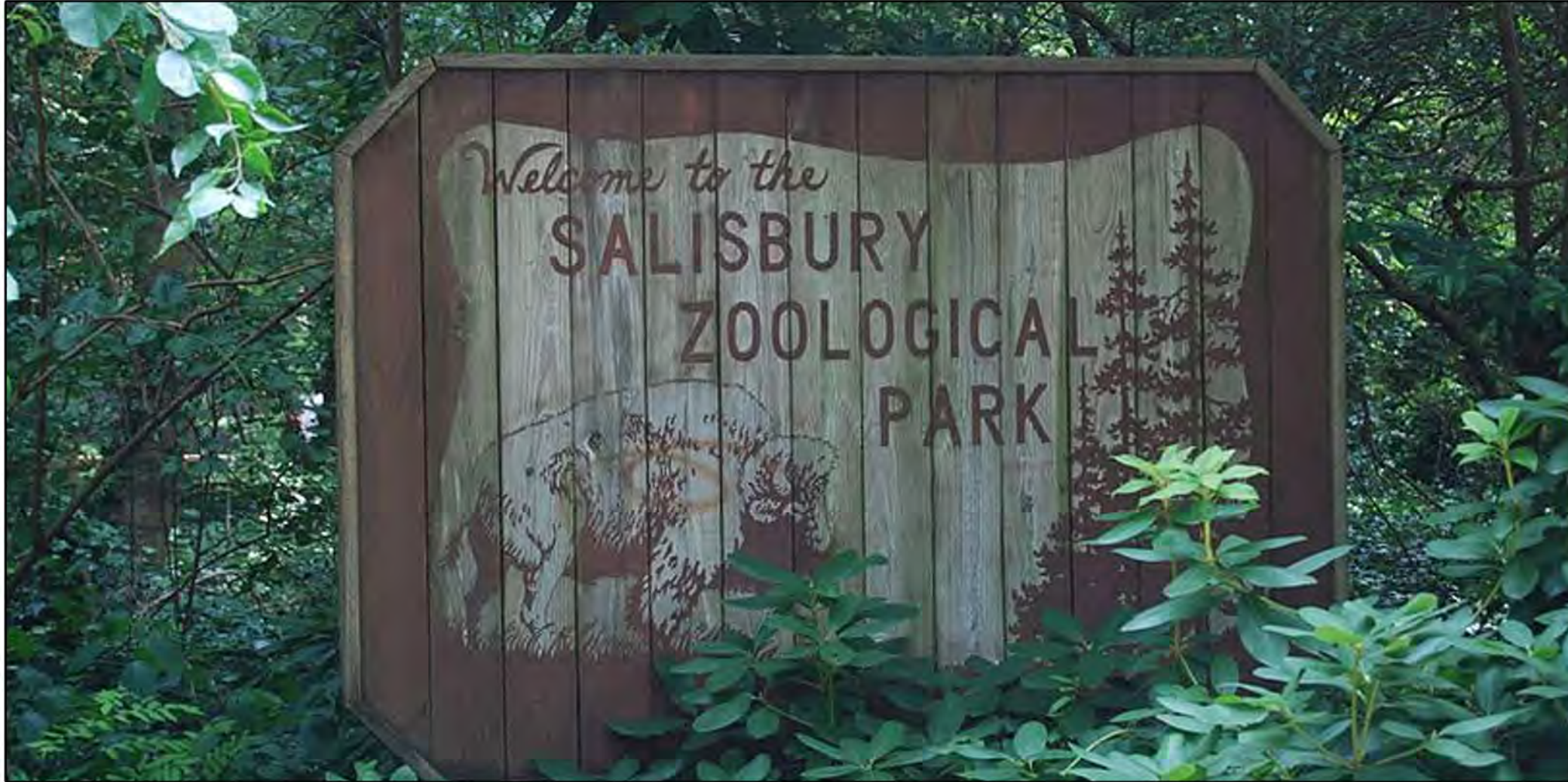
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Executive Summary



Mission:

The Salisbury Zoological Park is committed to enhancing our quality of life by providing a friendly, relaxing environment where educational and recreational opportunities come together through participation and interaction. With its animals, staff, volunteers, and park-like setting, the Zoo encourages appreciation of wildlife and inspires conservation of our natural world.

Vision:

In all of its endeavors, the Salisbury Zoo will:

- Embrace a commitment to positive change, planned growth, increased accessibility;
- Foster the desire for sustainable wildlife conservation;
- Be a relevant, responsive, and trusted partner enjoying the full support of all of its stakeholders

Values:

- Exceptional Animal Care- We maintain the highest standards in our responsibilities with our animals and the resources that we use.
- Respect- In all of our interactions with our visitors, volunteers, and employees we will be committed to the highest principles of mutual respect.
- Integrity- We value the trust of our community and operate in an honest, reliable, and conscientious manner.
- Accountability- We will be responsible and transparent to all of our stakeholders. We hold ourselves accountable in all that we do from caring for animals to providing our customers with a valuable experience. We strive to maintain our accreditation by the Association of Zoos & Aquariums.
- Community Asset- We are a recreational, educational, and economic development asset to our community.
- Stewardship- We maintain the highest standards in our responsibilities with resources that we use.
- Accessible Experience- We are accessible to all members of the community.

Big Idea:

We are a zoo and our guests expect to see animals and to have fun. Our guests have a fundamental affinity to the natural world that is self-reinforcing and can be enhanced through their experiences and actions. Our core business is the planning and production of enriching living world experiences that inspire our audience and that foster the development of caring attitudes. Our success is associated with our capacity to create motivation that causes people to appreciate and, ultimately, to care for the sustainability of the natural world.

Key Principles:

- We must provide a clean and safe environment conducive to family and other core social interactions.
- Experiences are the primary products of the zoo. The best experiences are:
 - Authentic
 - Spontaneous
 - Shared with family and friends
 - Support experiential learning opportunities
- People develop caring attitudes through their experiences.
- Caring is the profound perception of the interconnections, interdependencies, and mutual benefits that exist between an individual and the living world.
- Our mission outcome is the development of motivation that encourages individuals to take informed actions that positively impact the sustainability of the living world.
- We must understand our guests. From that understanding we can plan and provide satisfying experiences that are delivered efficiently and synergistically.
- We must define, measure, and monitor our products in a way that allows continual improvement.

Brand Image:

The Zoo is safe, clean and family friendly. The Zoo reflects excellence in the manner in which it cares for its living collection and in the service it provides its guests. The Zoo provides an intimate and relaxing atmosphere in which to consume fun and enriching experiences



History, Background & Analysis

The Evolution of the "Best Little Zoo in North America"

Our little Zoo has a very unique story. Records show that the Salisbury Zoo was established in 1954. Before our Zoo became a zoo it was a marshy area flooded by a dam that created Humphrey's pond. The City of Salisbury purchased the 168 acre property in 1926 because it contained a major source of water. The City was not only interested in the water but also wanted to make a park for the City. This property connected two sides of the community and helped make a beautiful park for the City's residents. A Salisbury Park Commission was established to oversee the park.



In 1933 the Civil Works Administration employees construct what is now known as the "Holly Circle"

During the early 1950's unwanted wild animals were released into the Salisbury Municipal Park. City Public Works employees began to take care of these animals, building makeshift cages and enclosures. One of first animals to appear was a white-tailed deer fawn which was bottle fed and cared for by City employees. Soon after a black bear was given to the park. The animal population grew and early donations from residents from Maryland, Delaware and Virginia included: skunks, raccoons, turkeys, owls, peacocks, rabbits, goats, monkeys, ocelots, dingoes and waterfowl.



Zoo Keeper, Victor Volkemer bottle feeds "Ollie" the elephant. The Zoo kept "Ollie" for a very short period and transferred him to the National Zoo where more exhibit space was available for this large animal.

In 1954 the animal population had grown so much so that the City of Salisbury decided to hire its first zoo keeper. The new "Zoo" was born. Local merchants donated food; money was donated by visitors, and support was provided by the City of Salisbury. Over the next ten years other animals were added to the collection including bison and llamas.

In the early 1960's, City officials realized the need to expand and to provide an environment suitable for the animals. The Salisbury Zoo Commission was established in 1967 to assist with the development of the Park. Fences were extended, shelters were built and professional landscaping begun. In 1970 the first professional zoo director was hired.

In 1972 a local car dealer, Oliphant Car Dealership, donated a baby elephant called "Ollie" from Thailand. That same year the Salisbury Zoo became a member of the American Association of Zoological Parks and Aquariums, now known as The Association of Zoo's and Aquariums (AZA). Two female Andean bears and one male were acquired.

In 1977 "The Friends of the Salisbury Zoo" was formed to assist in fundraising. A "Volunteer Zoo Education Committee" also was formed. In the 1980's the Spider monkey, ocelot, sloth and waterfowl exhibits were built. The ESBA Education Center was built in 1995. The Zoo's gift shop was later added. In 2007 the Richard and Patricia Hazel Delmarva Trail was built featuring red wolf, beaver, turkey, white-tailed deer, wood duck and bison.

In 2009 the Delmarva Zoological Society was established to help fund needed improvements. The "Renew the Zoo" capital campaign began and the annual "Just Zoo It" campaign through regional schools debuted.

Today the Salisbury Zoo encompasses over 12 acres within the city park along a tributary of the Wicomico river. It has remained one of the few municipal Zoological Parks providing **FREE** admission and parking to its community.



Andean bears were brought into the Zoo's animal collection in the late 1970's. Pictured to the left is "Alba" female Andean bear born at the Zoo in 2015.



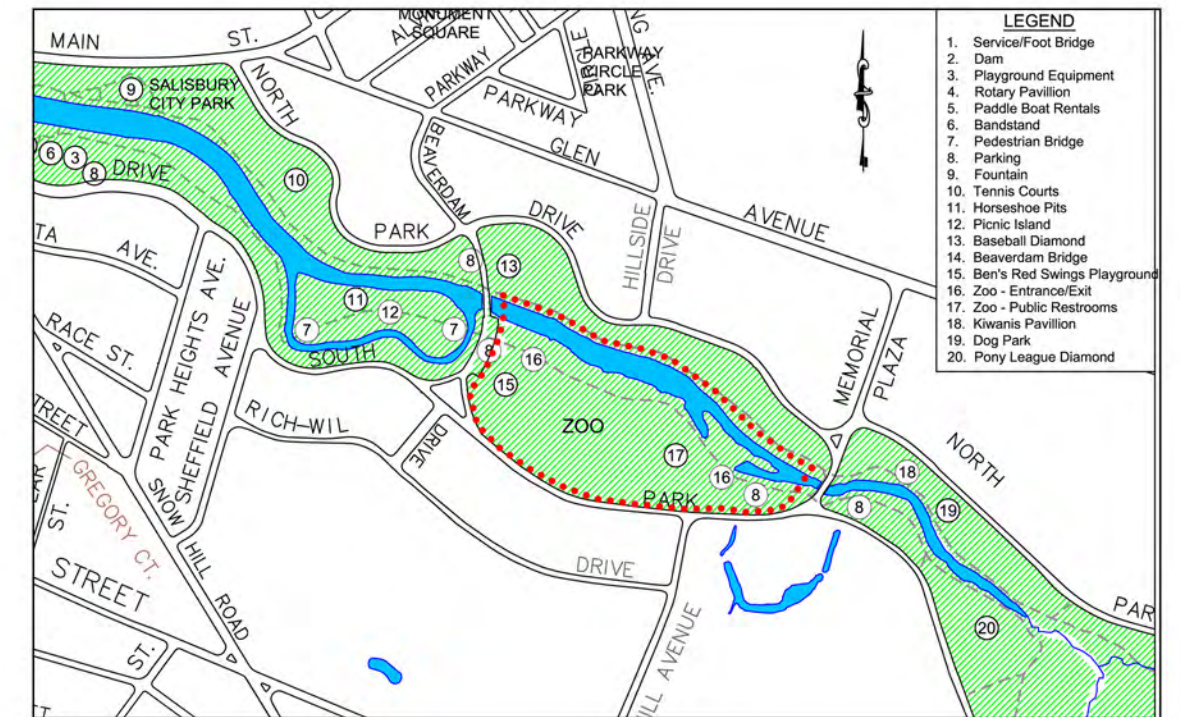
Red wolves were acquired in 2007. The Zoo participates in the Red wolf Species Survival Plan, a conservation initiative to save them from extinction.



Existing Conditions



EXISTING ZOO EXHIBITS

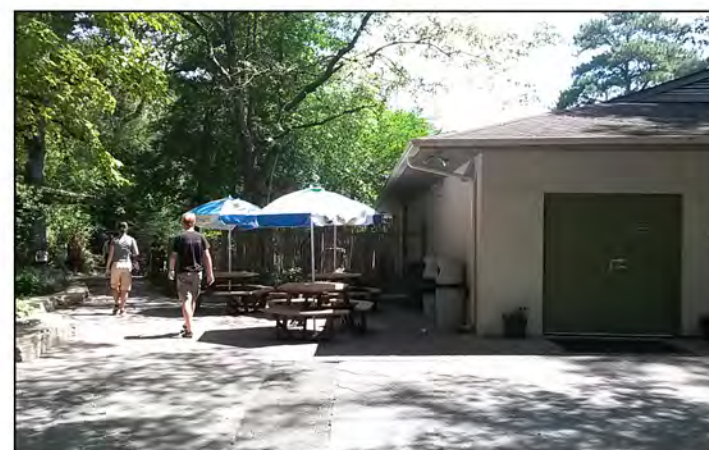


LOCATION PLAN

The Salisbury Zoo was founded in 1954 when an informal collection of animals was placed on permanent exhibition in the City Park. The Zoo's present form principally resulted from improvements made in the 1970's. The Zoo is funded through the Salisbury City Council and is accredited by the Association of Zoos and Aquariums. The Salisbury Zoo Commission, appointed by the Mayor and the City Council, helps to provide policy oversight and to provide funding for the Zoo's educational programming. The Delmarva Zoological Society, a separate not-for-profit corporation, provides financial support for capital improvements to the Zoo.



EAST ENTRY



SNACK BAR



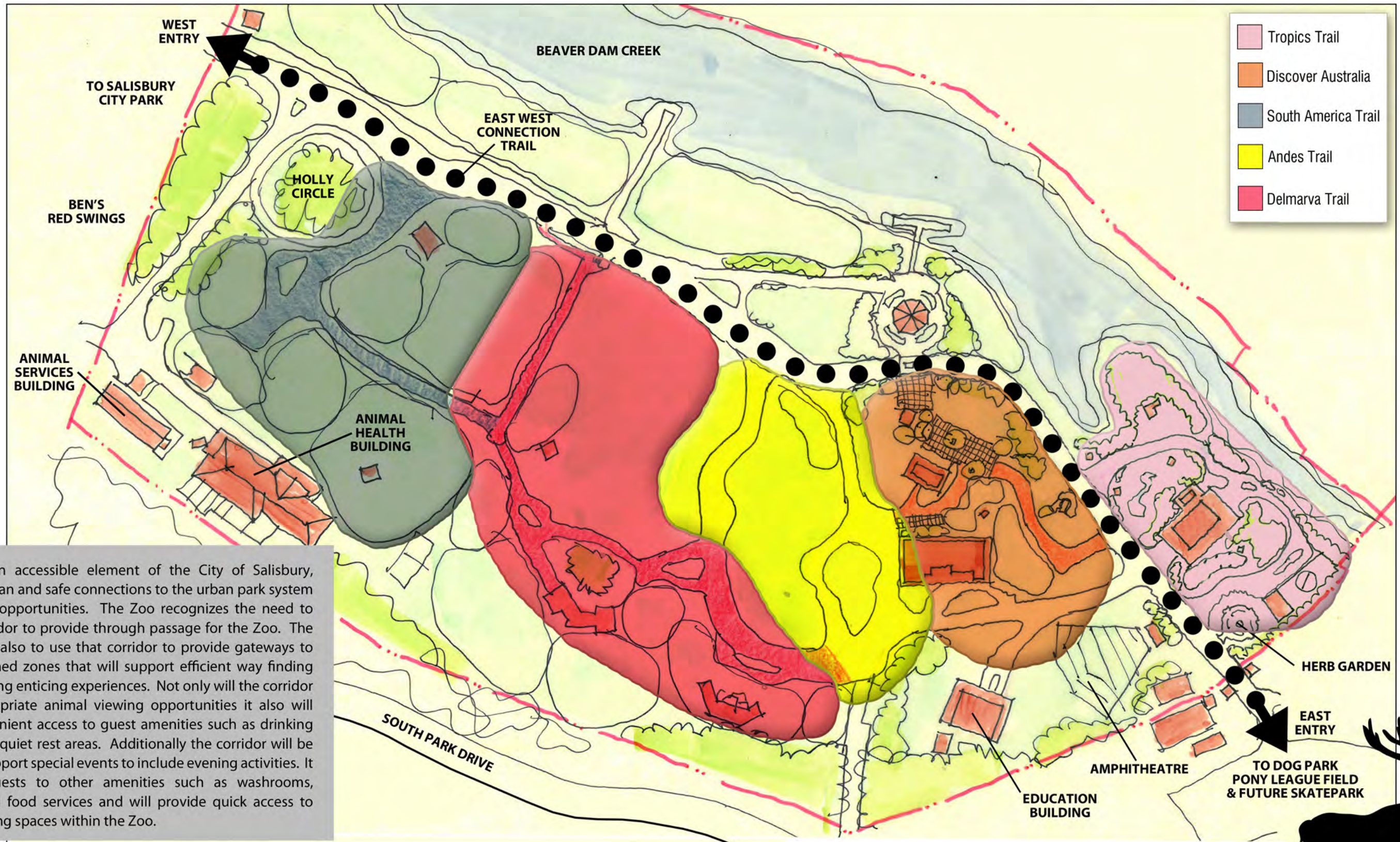
EDUCATION BUILDING



RESTROOM BUILDING

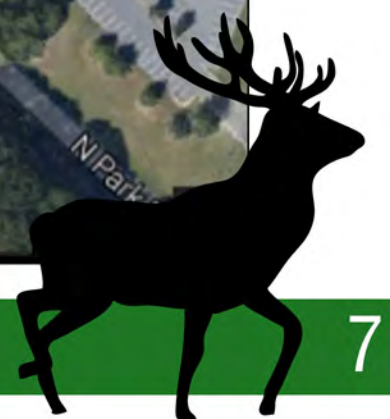
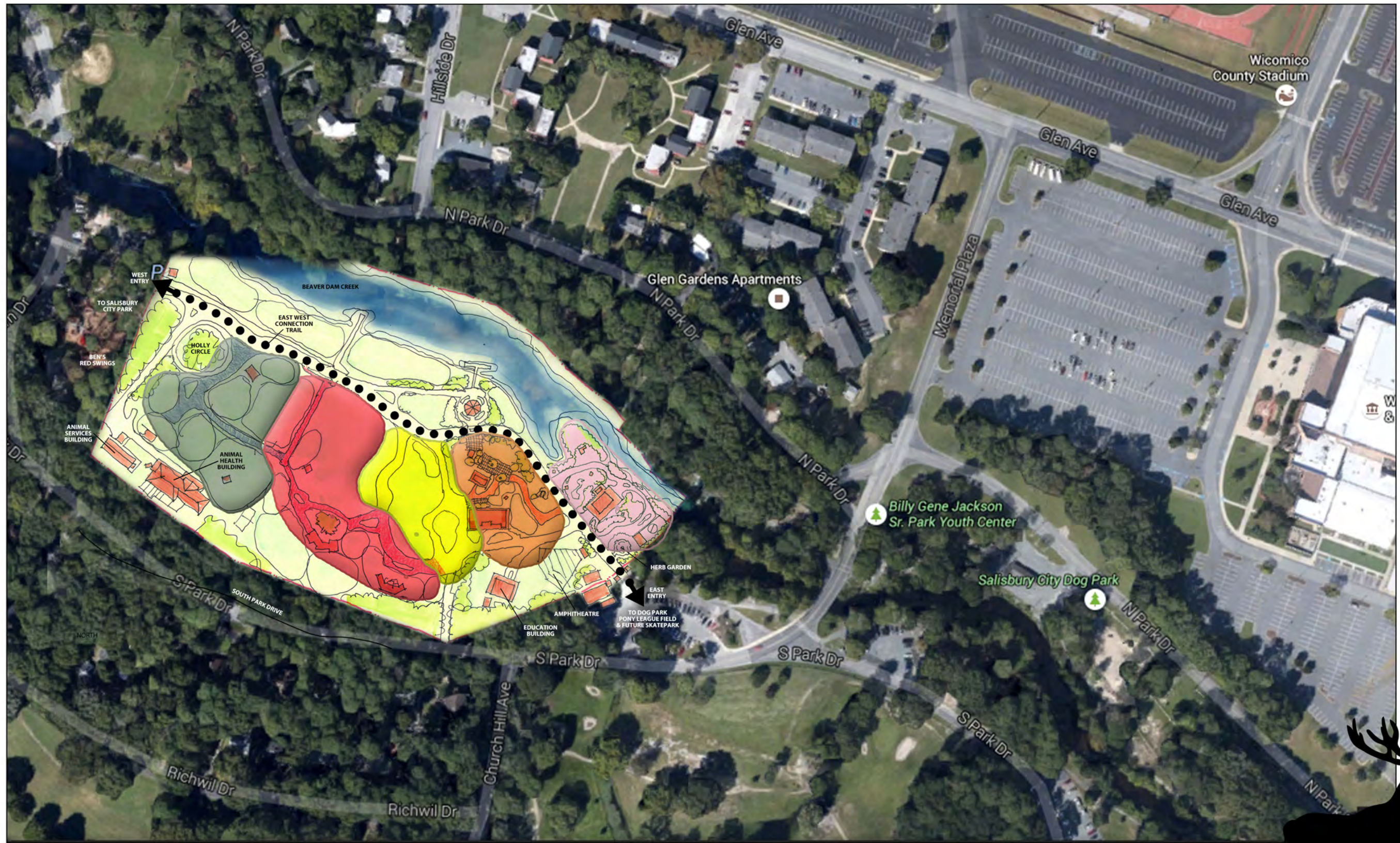


Conceptual Site Plan



The Zoo is an accessible element of the City of Salisbury, supporting clean and safe connections to the urban park system and its many opportunities. The Zoo recognizes the need to sustain a corridor to provide through passage for the Zoo. The Zoo proposes also to use that corridor to provide gateways to uniquely themed zones that will support efficient way finding while presenting enticing experiences. Not only will the corridor provide appropriate animal viewing opportunities it also will provide convenient access to guest amenities such as drinking fountains and quiet rest areas. Additionally the corridor will be adapted to support special events to include evening activities. It will direct guests to other amenities such as washrooms, shopping, and food services and will provide quick access to public gathering spaces within the Zoo.

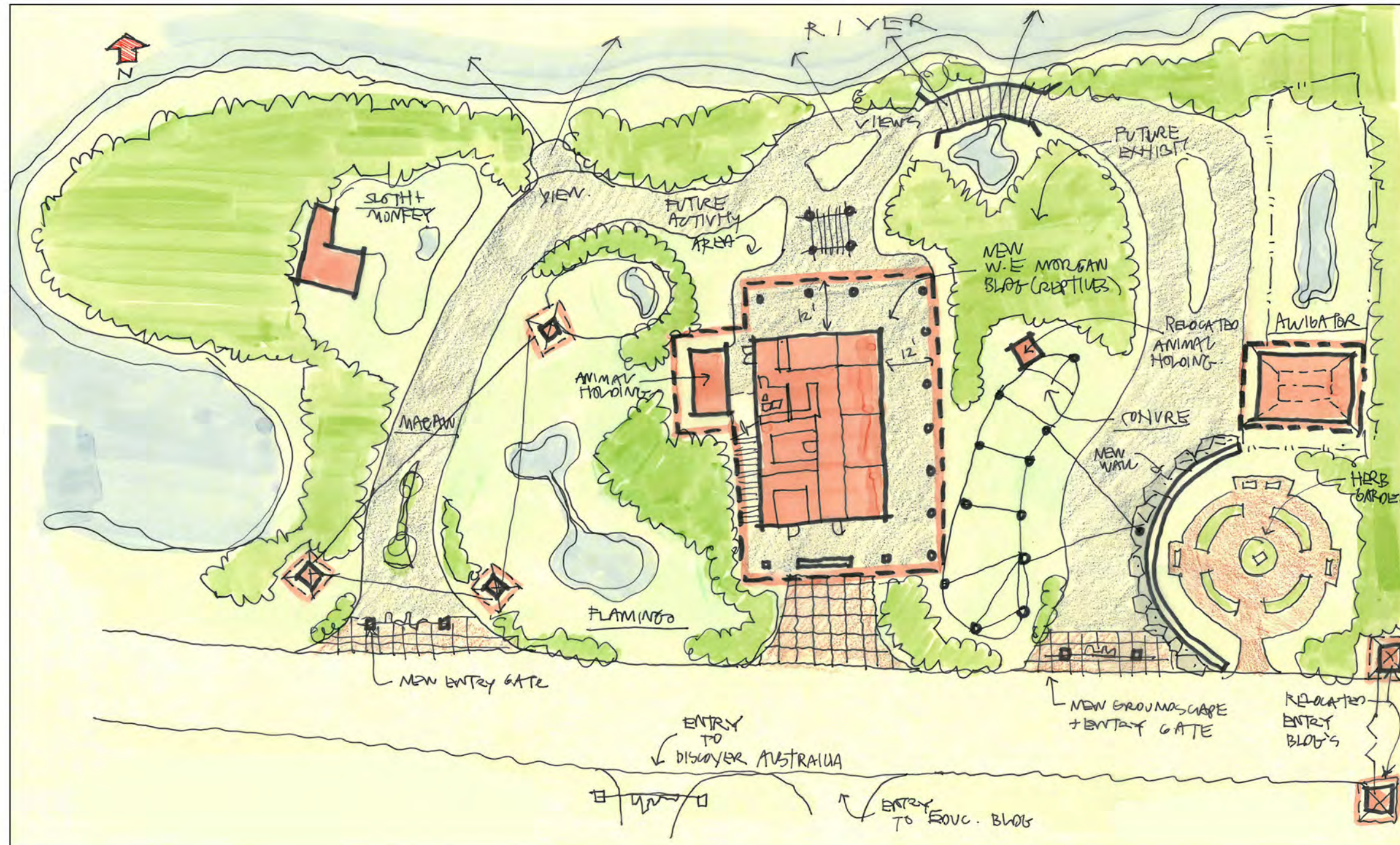
Conceptual Site Plan-Context



Master Plan



Master Plan Enlargement - Tropics Trail



The Tropics Trail provides a clearly distinguished and iconic segment of the Zoo that immerses guests into an exotic and lush environment. The Tropics Trail provides readily consumable animal viewing opportunities that present animals that will be seen as unique, exotic, and distinct from the guest's home. It will include options for physical activities and memory moments. It will house the Zoo's primary reptile/amphibian collection.

The Tropics Trail will be exciting and memorable—all the things a Zoo should be. Your experiences in the Tropics Trail will be fun and memorable and you will want to come back. It will transport you to a different part of the world.

The Tropics Trail is green and lush like the tropics. The vegetation and settings will convince guests they are in a new natural world setting that houses unique creatures. Visually and experientially it will be segregated from the rest of the Zoo.

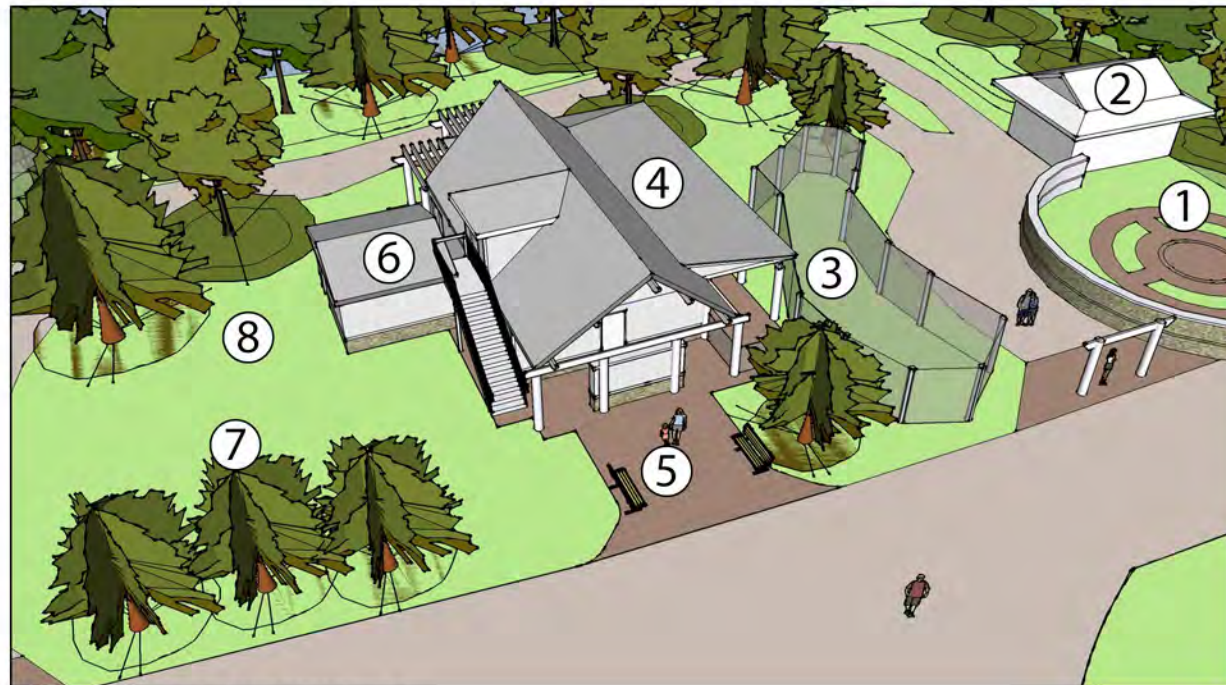
The living world is marked by diversity. The tropical regions of the world are home to much of this diversity. Diversity can be an essential factor in the sustainability of our world.

Animals:

- American Alligators • Flamingos • Sun Conure flock • Macaw • Small primates—tamarins, marmosets • Ocelot • Sloth • Tropical reptiles and amphibians.

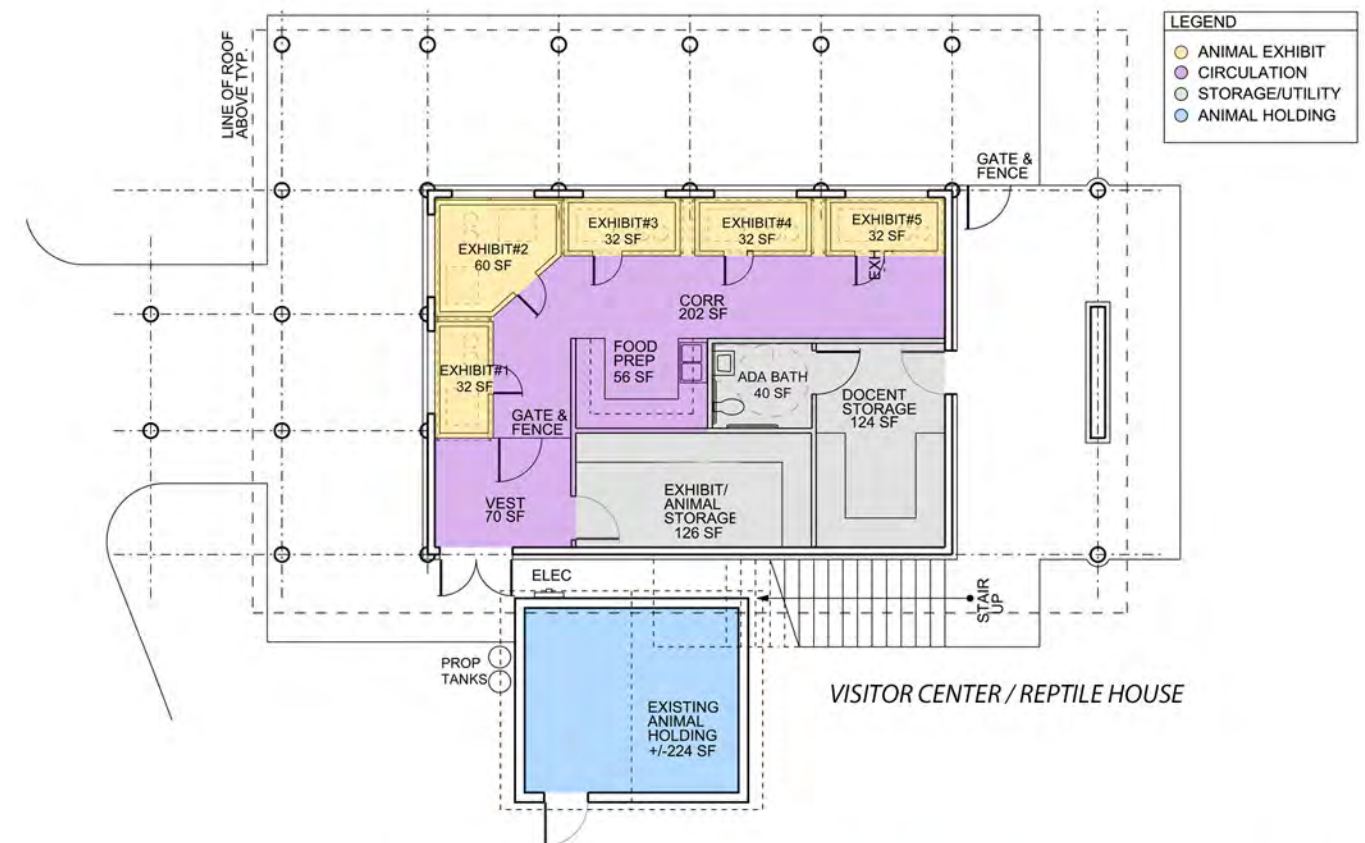


Tropics Trail Detail



VISITOR CENTER AERIAL PERSPECTIVE

- ① Herb Garden
- ② Alligator
- ③ Conure
- ④ Reptile Exhibits
- ⑤ Docent Area
- ⑥ Animal Holding
- ⑦ Flamingo
- ⑧ Macaw



VISITOR CENTER PERSPECTIVE

The Tropics Trail provides a readily accessible set of animal experiences quickly after guests enter the Zoo through the main (east) entrance.

Through the Reptile Facility the Tropics Trail provides a significant "WOW" experience for the Zoo. This might be associated with a large reptile such as an anaconda or a Burmese python.



HERB GARDEN



Tropics Trail Detail - South Entry / W.E. Morgan Center Reptile House



SOUTH ELEVATION



NORTH ELEVATION

Activity Types:

- May include spontaneous opportunities for interaction with staff and volunteers including engagement with program animals. This should highlight reptiles.

- Include a structured space for small group gatherings/presentations

- Way finding: The entrance to the Tropics Trail needs to mesh appropriately with the east entrance gate. Guests must be able to quickly find and enter the Tropics Trail without bypassing Discover Australia or missing the Public Zone.

- Photo/memory: Will include multiple locations that support posing for a "souvenir" photo by guests or provide animal exhibit photo opportunities that are clearly distinguishable as a Salisbury Zoo visit.

- Appropriately framed photo opportunity for the flamingo exhibit

- o Use of "Hang like a Sloth" as a photo opp.

- Have a large reptile graphic on new reptile building (life size large snake?) for photo opp.

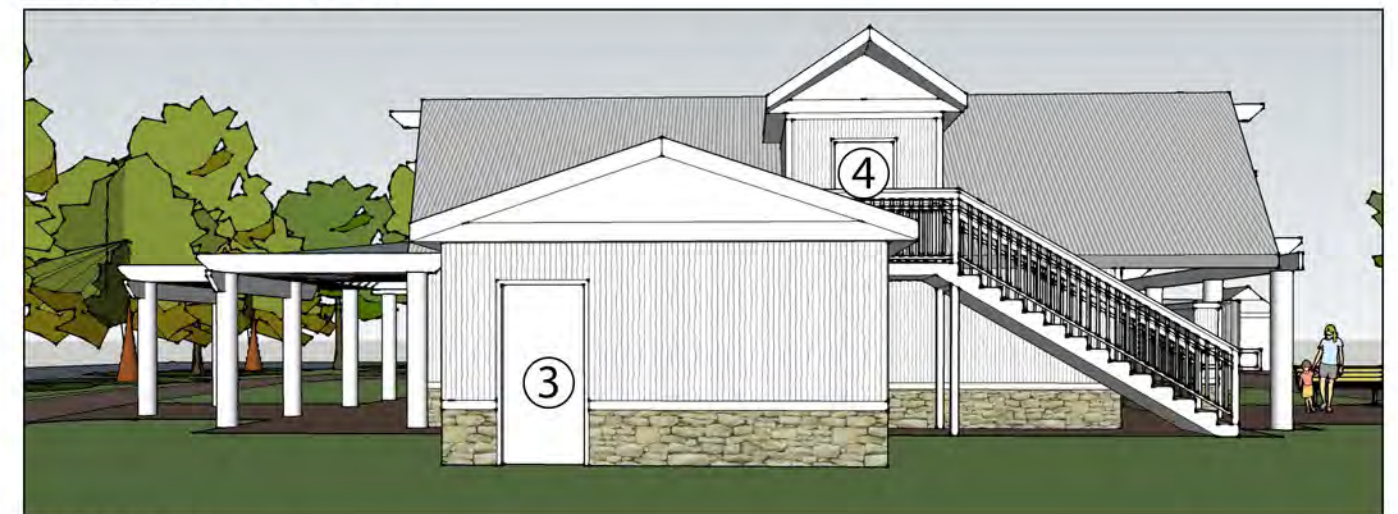
- Alligator skull by alligator exhibit.

- Interact with Staff: Program the area of new reptile facility as enhanced opportunity to engage with staff and docents with program animal presentations.

- Immersion: Consistently configure Trail to provide guests with a sense of immersion in the Tropics. Maintain lush vegetation and configured sight lines to heighten sense of walking in a tropical forest.

- Experiential Learning: Have at least two interactive components at the new reptile facility that provide active experiences that focus on the importance of conservation.

- Viewing: Consistent opportunities to view visible collection animals in exhibits.



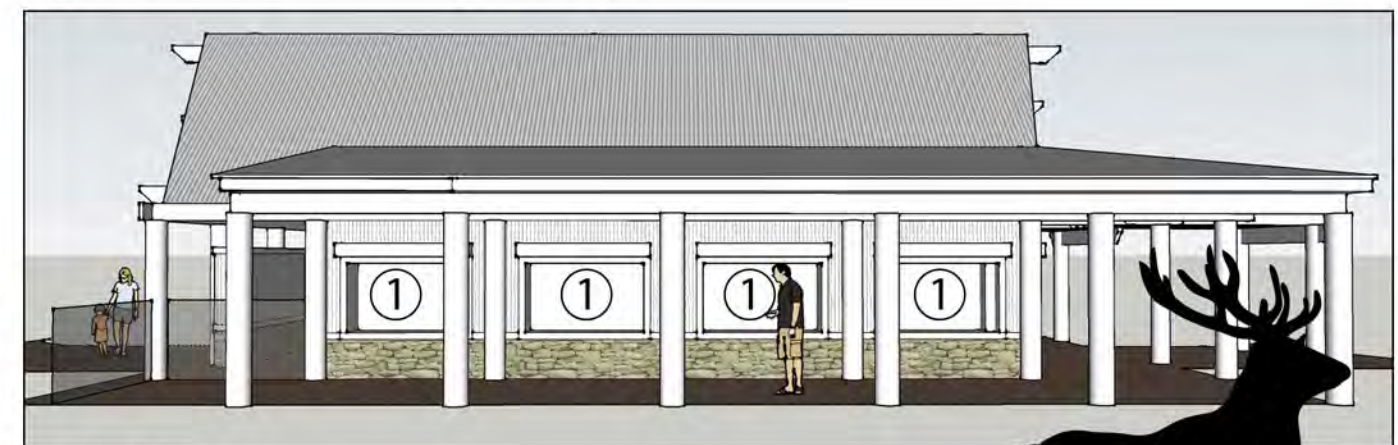
WEST ELEVATION

① Reptile Exhibit

③ Animal Holding

② Docent Area

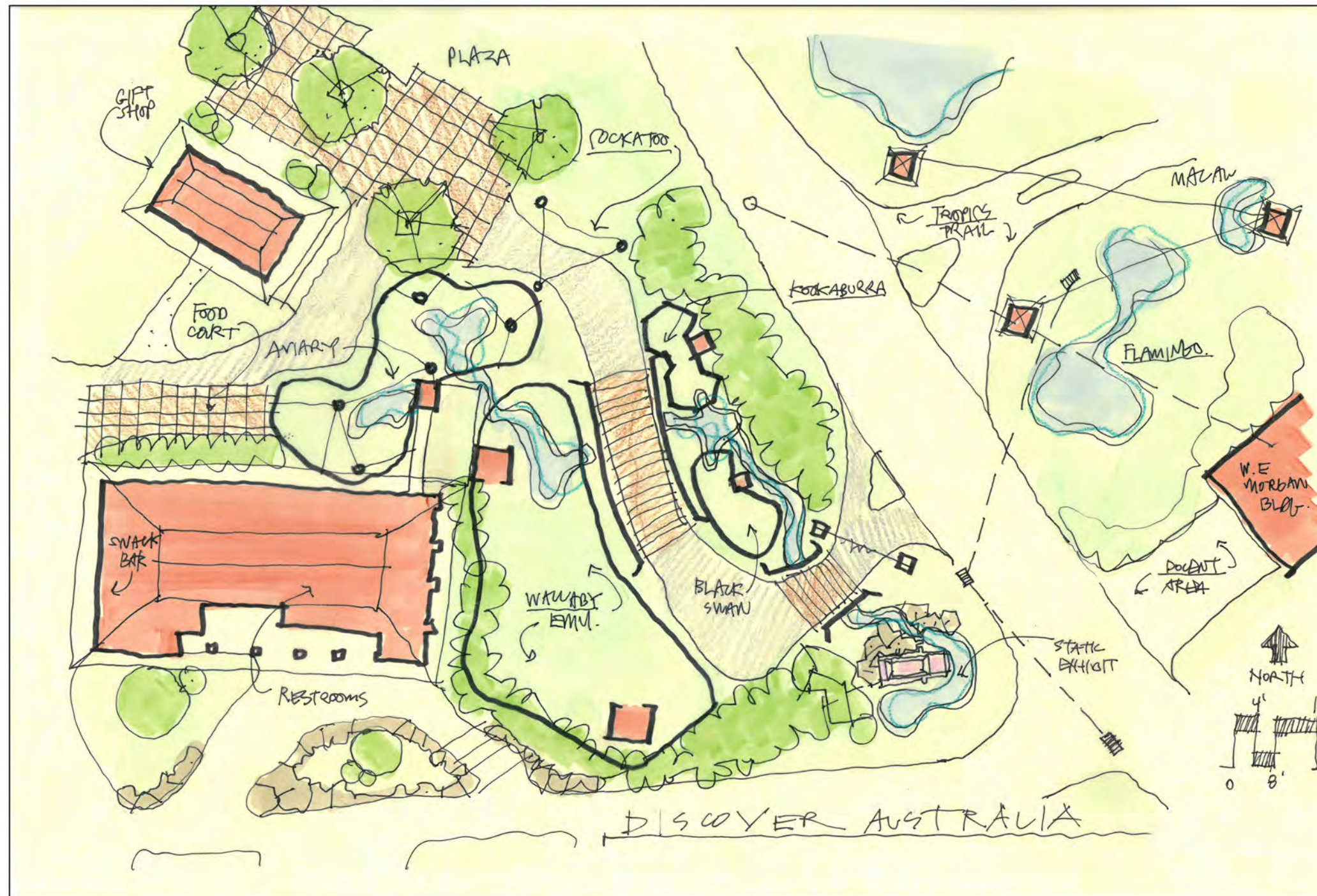
④ Storage



EAST ELEVATION



Master Plan Enlargement - Discover Australia



Discover Australia

Discover Australia is located near the east entrance. It will utilize a colorful and attractive zone entrance to excite and attract guests entering from the main entrance. For guests entering from the west it will provide a short and readily consumable conclusion to the Zoo visit. In both cases it will provide an engaging entrance to and backdrop for the primary public services and gathering space for the Zoo. It will be visually a colorful, "high energy" section to compliment the events and activities of the public gathering area. This Zone may also house the Zoo's gift shop. It will be memorable because its aviary will provide a unique up close and personal experience for Zoo guests that is distinctive within Zoo offerings.

A visit to the Zoo is not only fun but can introduce guests to new and surprising elements of our world. Have fun while you meet new and exotic creatures.

Discover Australia is colorful and vibrant while using motifs that are generally representative of aboriginal style artwork. Discover Australia presents a somewhat stand alone experience that can be quickly consumed. It complements the multipurpose public spaces that it adjoins and provides a distinctive and exotic backdrop for public gatherings.

Animals:

- Bennett's Wallabies
- Main Aviary
 - Spotted Whistling Duck
 - Eastern Rosella
 - Australian Crested Dove
 - Straw-Necked Ibis
- Side Aviaries
 - Black Swan
 - Kookaburra
 - Cockatoo



Discover Australia - Aviary



AERIAL PERSPECTIVE



AVIARY ADJACENT TO SNACK BAR



ENTRY FROM GIFT SHOP PLAZA

Functional Role:

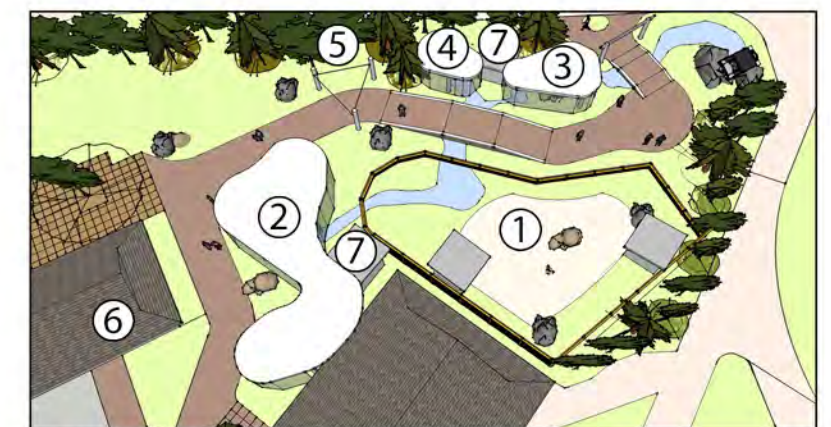
- Provides a quick and readily consumable animal experience near the main entrance.
- May provide a culminating experience for guests who entered by west gate
- Is compatible with the production of special and non-routine events
- Located near the primary public gathering space for the Zoo
- May be exposed to evening and non-routine events.
- Collection components must be suitable for evening and event activities or have housing that shelters them from such activities.
- Potentially houses the Zoo's gift shop
- Pathways in and around the Discover Australia zone must be carefully configured to avoid duplication and the by passing of other zone entrances.
- Current entrance to Tropics Trail may be positioned to "compete" for the attention of guests entering east gate.
- Current exit for Tropics Trail could cause guests to miss Australia.
- Integration into the Public Zone as well as the entrance to the Delmarva Trail may be challenging.
- Current secondary entrance from the Corridor needs careful consideration.

Activity Types:

- Physical activity: challenge kids to "jump like a wallaby" with a measured site that allows guests to compare their best jump distance to that of a wallaby.
- Interact with animals: aviary may provide limited opportunities, under keeper or staff supervision, to help feeds birds and experience a portion of the collection up close.
- Interaction with volunteers: Education animal collection to include at least one Australian animal suitable for public presentations and guest engagement. May include spontaneous opportunities for interaction with staff and volunteers including engagement with other program animals.
- Way finding: Australia will occupy a key area near the main entrance and the main public gathering area of the Zoo. It will need to support the movement of guests into other zones of the Zoo.
- Photo/memory: Will include at least one location that supports posing for a "souvenir" photo by guests that is clearly distinguishable as a Salisbury Zoo visit. Option: Wallaby cut out for guests to pose with for photos. To be placed so that it is readily accessible during special events.
- Viewing: The wallaby area will provide easy access for casual viewing of the wallabies and their enclosure. The aviary will provide viewing opportunities unique within the Zoo.



VIEW ALONG TRAIL

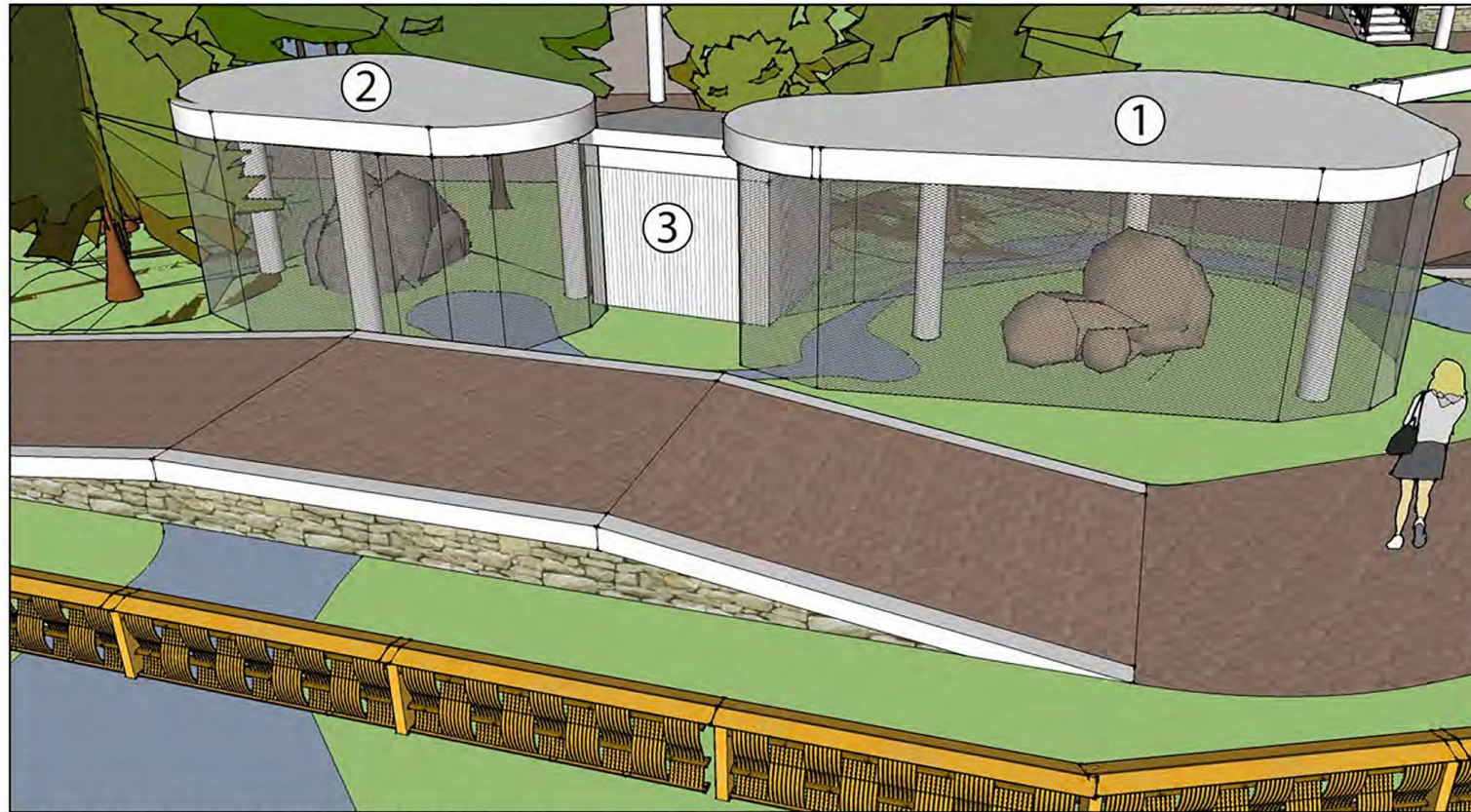


DISCOVER AUSTRALIA AERIAL SITE PLAN

- | | |
|--------------|------------------|
| ① Wallaby | ⑤ Cockatoo |
| ② Aviary | ⑥ Gift Shop |
| ③ Black Swan | ⑦ Animal Holding |
| ④ Kookabura | |



Discover Australia - Kookaburra / Black Swan



VIEW OF KOOKABURRA AND BLACK SWAN AVIARIES



KOOKABURRA

Kookaburra ②

Kookaburras are native to woodlands and open forests in Australia, where they perch in large trees and nest in cavities of tree trunks and branches. They keep the same territory year-round, and family groups gather together to announce the boundaries with their distinctive calls. Laughing kookaburras also have different, shorter calls used for finding others, courtship, raising an alarm, showing aggression, and begging for food. The laughing kookaburra is the largest member of the kingfisher family and was once called the giant kingfisher.

③ Animal Holding



BLACK SWAN

Black Swan ①

- Black swans are a large species of waterfowl. They are mostly black and have red bills. They appear entirely black, however their flight feathers are white.
- They are from Southern Australia, but they are also very popular in other parts of the world as ornamental birds.
- They have very long necks that are 'S' shaped. Their necks contain 22-25 vertebrae, humans and many mammals only have 7.
- The black swan's role in Australian culture extends to the first founding of the colonies in the eighteenth century. The black swan is featured on the flag, and is both the state bird and state emblem of Western Australia; it also appears in the Coat of Arms and other iconography of the state's institutions.



VIEW OF AVIARY



Master Plan Enlargement - Pavilions



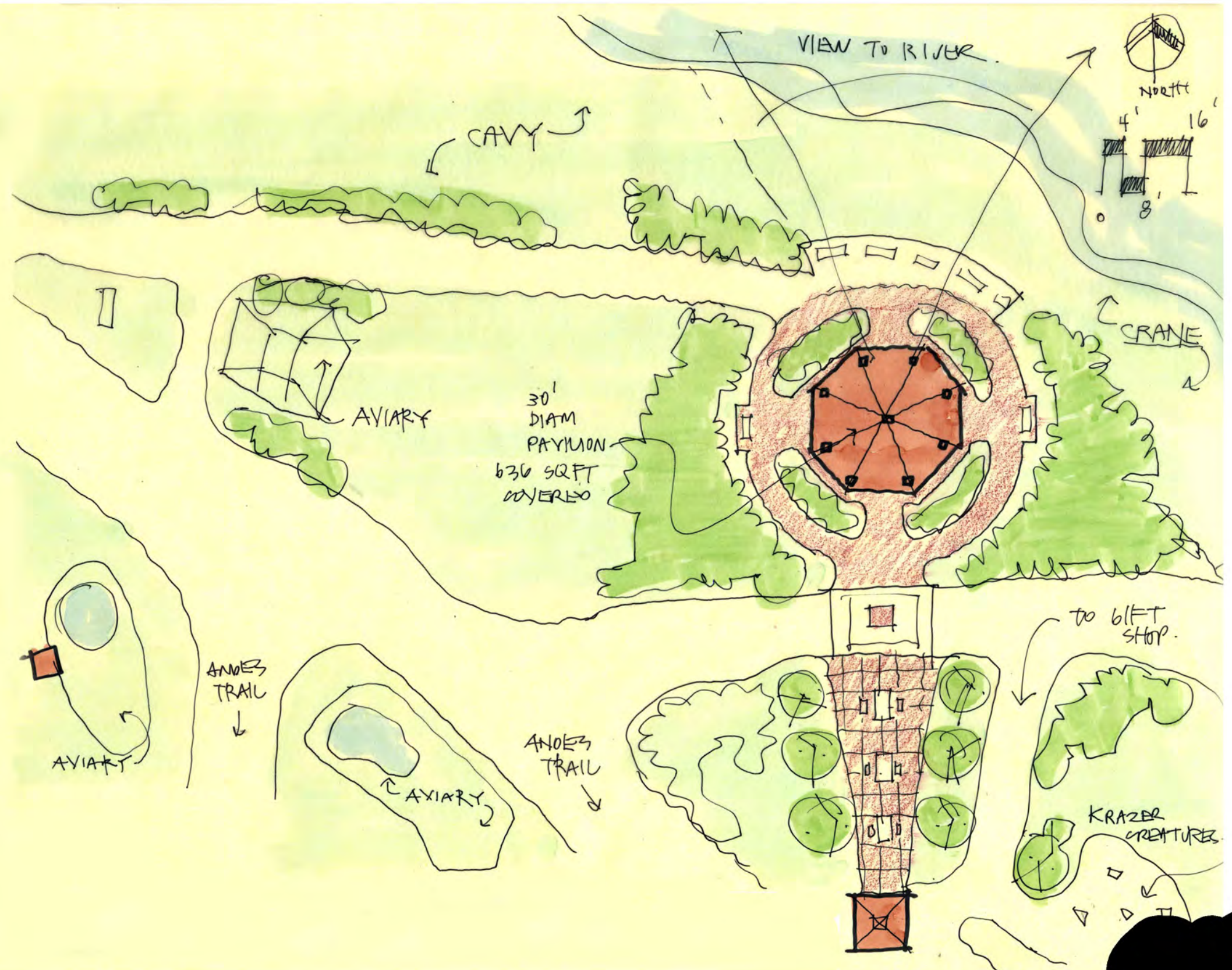
PRECEDENT 1



PRECEDENT 2



PRECEDENT 3



Implementation & Future Challenges

IMPLEMENTATION ELEMENTS	FUTURE CHALLENGES
DISCOVER AUSTRALIA: FUNDED THROUGH DELMARVA ZOOLOGICAL SOCIETY	NOT FUNDED <ul style="list-style-type: none"> • REFINE ADJACENCIES AND INTEGRATION INTO CITY PARK AND OTHER CITY ELEMENTS • EVALUATE PARKING AND PARKING OPTIONS <ul style="list-style-type: none"> ◦ DAILY USE ◦ SPECIAL EVENTS • REPLACE CURRENT ADMINISTRATIVE FACILITIES • OPTIONS FOR FUTURE GROWTH.
<ul style="list-style-type: none"> • FINALIZE PATHWAY AND EXHIBIT COMPONENTS LAYOUT • RECONFIGURE WALLABY YARD • CONSTRUCT AVIARY IMPROVEMENTS • CONSTRUCT LANDSCAPE IMPROVEMENTS AND STATIC EXHIBIT 	
MORGAN VISITORS CENTER: FUNDED THROUGH DELMARVA ZOOLOGICAL SOCIETY	
<ul style="list-style-type: none"> • FINALIZE PROJECT SITE LAYOUT • DEVELOP SPECIFICATIONS, CONSTRUCTION DOCUMENTS, AND BID PROJECT COMPONENTS • CONSTRUCT BUILDING SHELL • CONSTRUCT DOCENT FACILITIES • CONSTRUCT COLLECTION SPACE AND EXHIBITS 	
SPECIAL EVENT PAVILION: NOT FUNDED	
<ul style="list-style-type: none"> • DEVELOP BUSINESS PLAN 	



Appendix - Reptile House / Aviary Design Narratives

The following is an overview of the structural basis of design and concept design for the proposed "Reptile House" and Aviaries at the Salisbury Zoo, Salisbury, Maryland. These are based upon the architectural concept designs. The "Reptile House" is a two story building with animal housing on the first floor and storage on the second. The aviaries are open canopies supported by large timber columns with a net enclosure.

1. BASIS OF DESIGN – "REPTILE HOUSE" & AVIARIES

1.1. Design Criteria

- 2015 International Building Code with local amendments
- ACI 318-11 – Building Requirements for Reinforced Concrete
- ASCE 7-10 – Minimum Design Loads for Buildings and Other Structures
- TMS 402-11 / ACI 530-11 / ASCE 5-11 & TMS 602-11 / ACI 530.1-11 / ASCE

6-11 Building Code Requirements and Specifications for Masonry Structures

1.2. Design Loads

1.2.1. Dead Loads

- | | |
|-----------------------------|---------|
| • Concrete | 150 pcf |
| • First Floor | 20 psf |
| • Floor Framing & Sheathing | 10 psf |
| • Exterior Walls | 12 psf |
| • Roof Framing & Sheathing | 5 psf |
| • Roofing | 10 psf |
| • Ceiling | 5 psf |
| • Mechanical / Collateral | 5 psf |

1.2.2. Live Loads

- | | |
|---------------|---------|
| • First Floor | 100 psf |
| • Storage | 50 psf |
| • Roof | 30 psf |

1.2.3. Snow Loads

- | | |
|--------------------------|----------------------|
| • Snow (Pg): | 20 psf |
| • Importance Factor (I): | 1.0 (Aviaries – 0.8) |

1.2.4. Wind Loads

- | | |
|-------------------------|------------------------------|
| • Risk Category | II (Aviaries - I) |
| • Basic Wind Speed (V): | 120 mph (Aviaries – 110 mph) |
| • Exposure | B |

1.2.5. Seismic Loads

- | | |
|-----------------------------|-------------------|
| • SS | 0.093 |
| • S1 | 0.045 |
| • SDS | 0.099 |
| • SD1 | 0.071 |
| • Risk Category | II (Aviaries - I) |
| • Seismic Site Class (soil) | D (assumed) |
| • Importance Factor | 1.0 |
| • Seismic Design Category | B |

1.3. Deflection Criteria

- | | |
|---------|-----------------------------------|
| • Floor | L/360 Live Load, L/300 Total Load |
| • Roof | L/300 live Load, L/240 Total Load |

1.4. Material Specification

1.4.1. Concrete

- | | |
|-----------------------------|---------------------|
| • Footings | 3000 psi |
| • Interior Slab on Grade | 3500 psi |
| • Reinforcing Steel | ASTM A615, Grade 60 |
| • Welded Wire Reinforcement | ASTM A185, Grade B |

1.4.2. Timber

- | | |
|----------------------|----------------------------|
| • 2x Framing | Spruce-Pine-Fir No. 1 or 2 |
| • Large timber posts | Southern Pine |

1.4.3. Masonry

- | | |
|-------------|----------|
| • CMU Block | 1900 psi |
|-------------|----------|

2. SYSTEM NARRATIVE – REPTILE HOUSE

2.1. Foundations

- At this time, a geotechnical report has not been prepared for the site and building. We have based our foundation design around continuous and isolated, shallow spread footings with masonry foundation walls. A geotechnical investigation is to be completed to verify this assumption.

2.2. First Floor

2.2.1. Slab on Grade

- Slab on grade for the first floor shall consist of a 5" concrete slab on 4" crushed stone.

2.2.2. Wall Framing (Option #1)

- Exterior walls shall be reinforced masonry walls.

2.2.3. Wall Framing (Option #2)

- Exterior walls will be 2x6 pressure treated bearing, shear walls with ½" pressure treated plywood sheathing.

2.3. Second Floor (Storage)

2.3.1. Floor Framing

- The floor framing will be conventional wood framing.

2.3.2. Wall Framing

- Exterior walls will be 2x6 pressure treated bearing, shear walls with ½" pressure treated plywood sheathing.

2.4. Roof

2.4.1. Roof Framing

- Roof framing to consist conventional wood framing and 5/8" plywood sheathing on rafters. For the porches, the roof will consist of large exposed timber beams and columns supporting wood framed roof.

3. SYSTEM NARRATIVE – AVIARIES

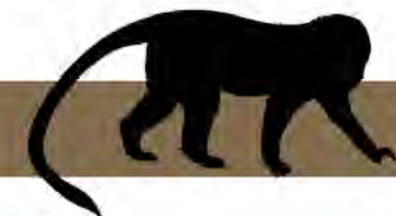
3.1. Foundations

- At this time, a geotechnical report has not been prepared for the site and building. We have based our foundation design around isolated, pole embedment footings. A geotechnical investigation is to be completed to verify this assumption.

3.2. Roof

3.2.1. Roof Framing

- Roof framing to consist of conventional wood framing and 5/8" plywood sheathing on the top and bottom of the joists. The joists will be supported by wood framed beams which are supported by the large timber columns embedded into concrete footings.



Appendix - Reptile House / Aviary Design Narratives

Design Objectives

The main objective for the MEP design of the building is to provide the most efficient solution to the user's requirements, while meeting all required codes and standards. Systems operation and control will be designed to be user friendly. Final system selection will be decided upon by the design team during the Construction Documents phase of the project.

Mechanical and Plumbing Equipment Intent:

Option 1: Ductless Split System Heat Pumps:

- Provide an approximately 3 ton ductless split system(s). Outdoor air (OA) would be introduced through a flat plate ERV directly to the spaces.
- Outdoor heat pump to be located at grade alongside the existing animal holding building.
- A separate 1 ½ ton ductless split system to be provided for the existing animal holding area as required.
- Controls to be manufacturer supplied thermostats. ERV to be controlled by a time clock with a manual override.

Option 2: Split System Heat Pumps:

- Provide a 3 ton split system heat pump for the main building, including ductwork and outdoor air provided by a flat plate energy recovery ventilator (ERV).
- Indoor unit to be located on the second floor.
- A separate 1 ½ ton ductless split system to be provided for the existing animal holding area as required.
- Outdoor heat pump to be located at grade alongside the existing animal holding building.
- Controls to be a single thermostat mounted in the corridor space. ERV to be controlled by a time clock with a manual override.

Reptile Exhibit Cases:

- Provide utility connections as required to the vendor supplied exhibit cases; power, water and sanitary.

Exhaust Fans:

- Exhaust air to be handled by the ERV, including the toilet exhaust.

Electric Unit/Wall Heaters:

- Electric wall heaters provided with mounting brackets, and integral thermostats. Provided at the exterior entrance and the vestibule.

Domestic Water Heating System:

- Domestic hot water will be supplied by an electric water heater.

Plumbing:

- Provide 3 exterior hose bibs.
- Provide interior hose bib(s). Provide a hot water hose bib if requested by Salisbury Zoo.

Water Efficiency:

- Description: Low flow water closets (1.28 gpf), lavatories (.5 gpm) shall be provided.

Assumptions Made

Item	Description of Assumption	Value (units)
1	Summer outdoor air design dry bulb/wet bulb	93.0°F DB / 77.0°F WB
2	Winter outdoor air design dry bulb	13.0°F DB
3	Room temperature setpoints (summer/winter) General	75°F / 70°F
4	Room humidity setpoints General	< 60%
5	Glass U-value/shading coefficient Storefront Fixed Windows	.62/.70 .39/.62
6	Wall R-value	R22
7	People sensible/latent heat generation (Btuh/person) Office Work	245/205
8	Lighting usage	ASHRAE 90.1-2010
9	Outdoor air ventilation rate	IMC 2012
10	Cooling/heating load design program	Carrier HAP-4.9

Electrical Equipment Intent

Power:

- A 240 volt, single phase, 200-400 ampere service will be provided. A single panelboard will be used to distribute power to various branch circuits serving the receptacle, lighting and HVAC.
- Power will be extended to all the manufactured exhibit displays and circuit breakers will be GFI.

Basic Materials:

- All conductors to be copper and the use of type MC cable is acceptable for #8 conductors and smaller installed in ceiling spaces or walls; all other wiring to be installed in conduit per NEC. Wiring devices to be commercial grade with stainless steel cover plates. Panel boards to utilize copper bussing and bolt on breakers. Safety switches to be heavy duty type for 60A and larger.

- Convenience outlets will be located in the common areas. GFI type receptacles will be located above the food prep counter, on the exterior on both sides and in other areas susceptible to high moisture. All exterior devices will have weatherproof enclosures.

IT:

- IT to consist of outlet location with conduit raceway to accessible ceiling space for installation of wiring and device by third party vendor. Conduits will be provided for incoming service conductors.
- Outlets will be located on the exterior and equipped with weatherproof enclosure.

Lighting:

- Predominate source of light will be from LED fixtures. Fixtures in exposed to high humidity levels will be enclosed and gasketed and UL labeled for damp locations. The lighting power density will be in accordance with COMcheck.
- Lighting in exhibits will be provided as part of the manufactured display enclosure.

Space Average Lighting Levels

Space	Footcandles	Where Measured	Fixture Type
Food Prep	40	30" Above Floor	LED
Storage	10	30" Above Floor	LED
Bathroom	20	30" Above Floor	LED
Corridor	20	30" Above Floor	LED

Emergency Lighting:

- Code required emergency egress lighting will be provided by select fixtures being connected to emergency power circuits extended from the emergency power distribution system. Exit signs will utilize LED lamps.

Exterior Lighting:

- Exterior entrances and egress paths will be illuminated with a combination of bollards and post top mounted fixtures. Predominate source of light will be LED fixtures of type and style to enhance ambiance of building.
- Emergency lighting will be provided on the exterior of all exits.

