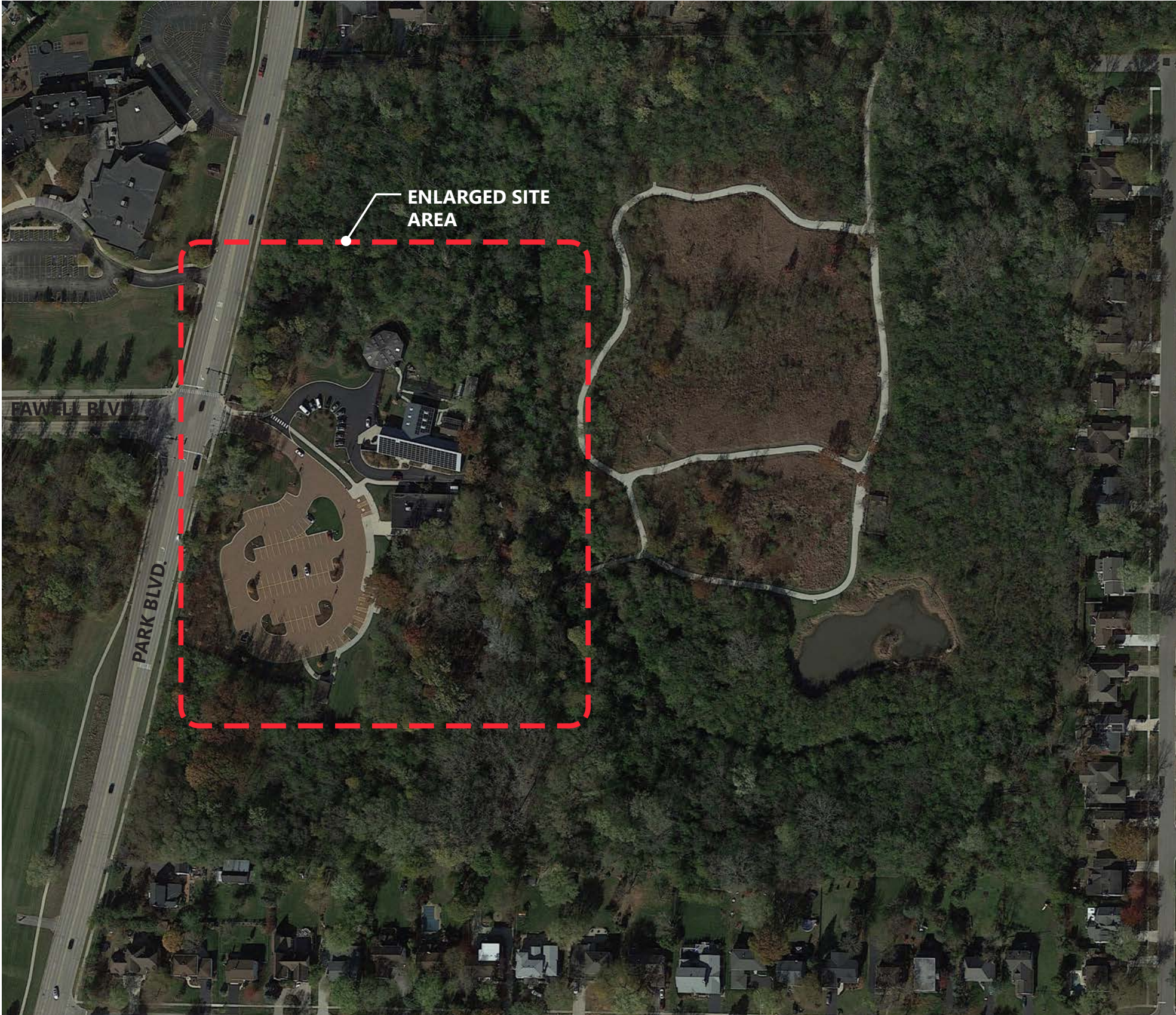




FOREST PRESERVE DISTRICT OF DUPAGE COUNTY | **WILLOWBROOK WILDLIFE CENTER**

BOARD MEETING  
09.14.2021

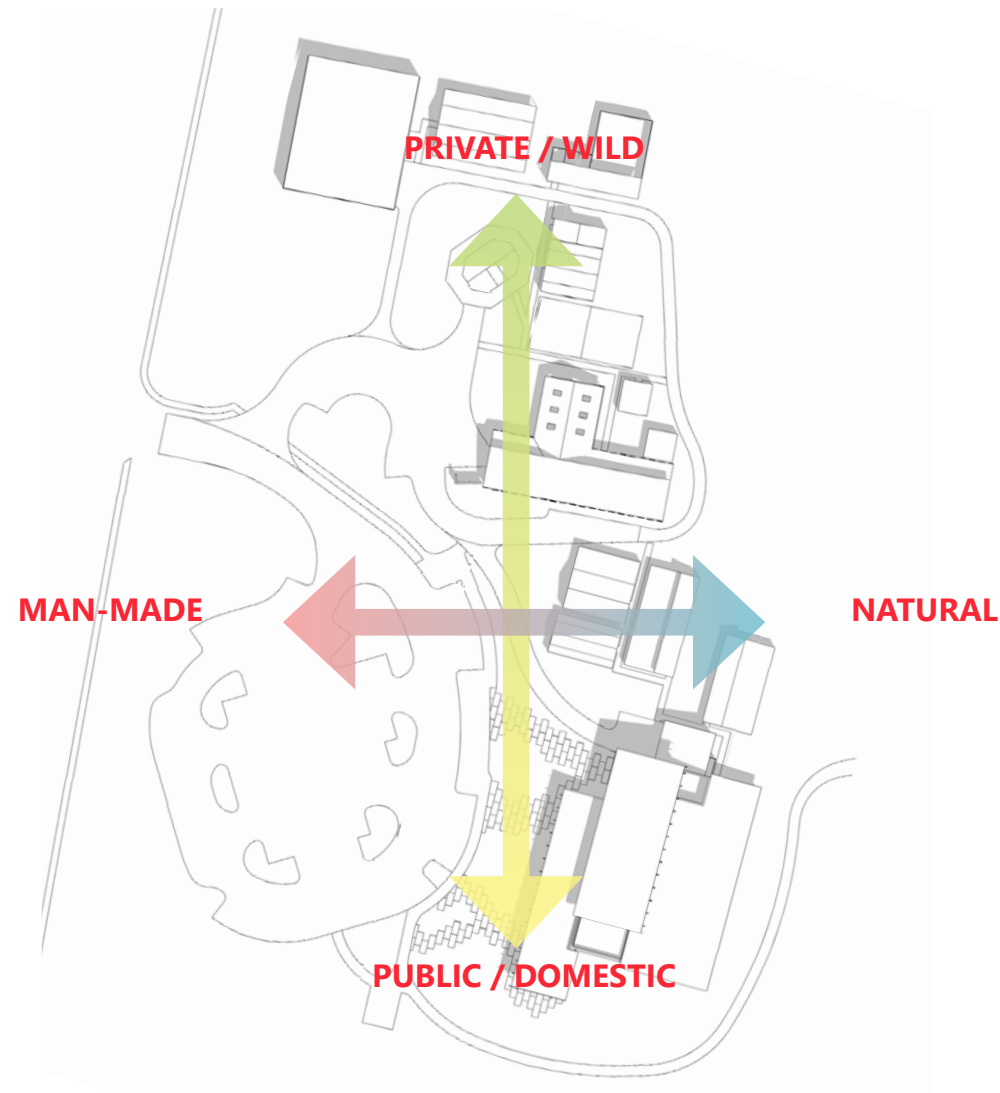
WILLOWBROOK WILDLIFE CENTER  
**EXISTING SITE**



# WILLOWBROOK WILDLIFE CENTER PROPOSED SITE DIAGRAM



**1. A CONTINUUM OF EXPERIENCES FOR ALL INHABITANTS**



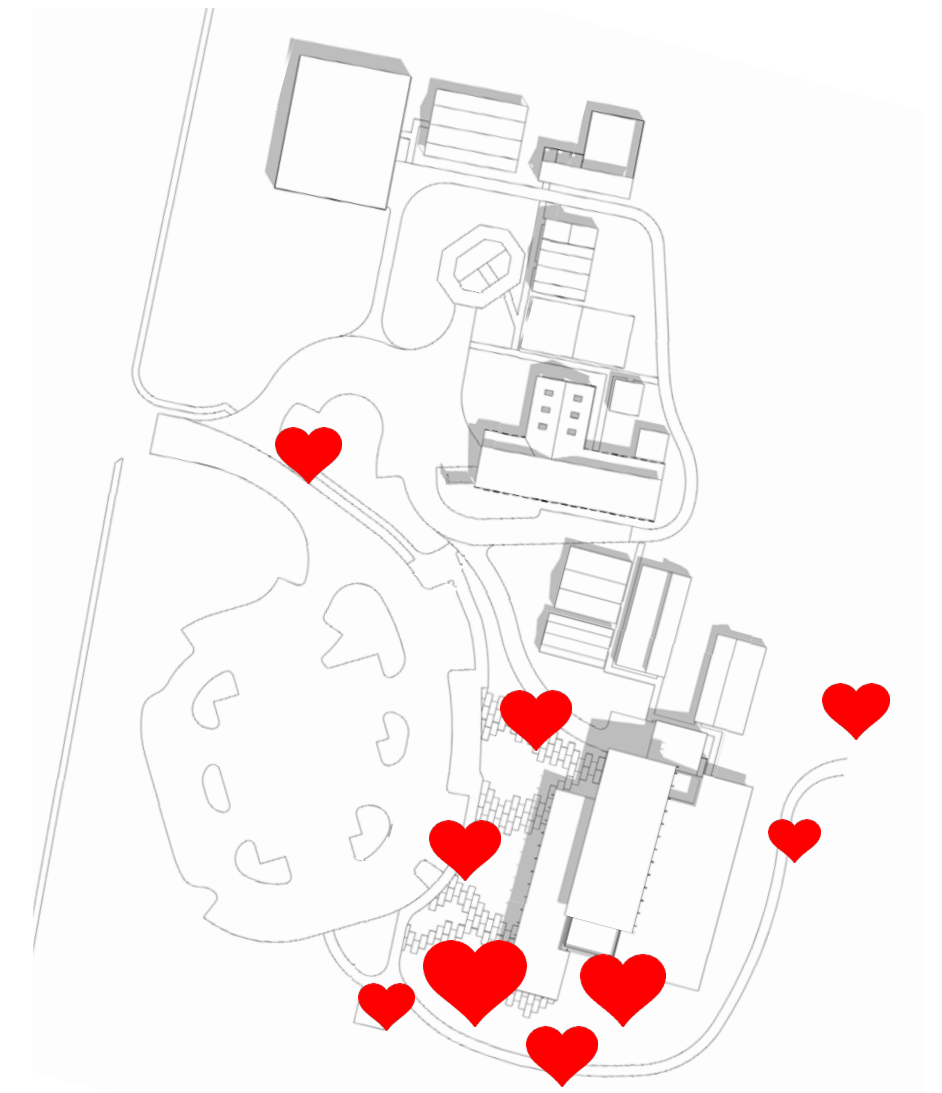
The layout of the facility should blur interior environment with the outdoors to allow inhabitants to experience and connect with nature. As animals move through the facility they can gradually work their way towards autonomy to survive independently in the wild.

**2. SUPPORTING SUSTAINABILITY**



From the orientation of the site components and the careful consideration of the site conditions to the engineering of each element, the new facility should embrace sustainability and act as a leader in the field of sustainable development.

**3. ENGAGE AND INSPIRE HARMONY WITH OUR ECOSYSTEM**



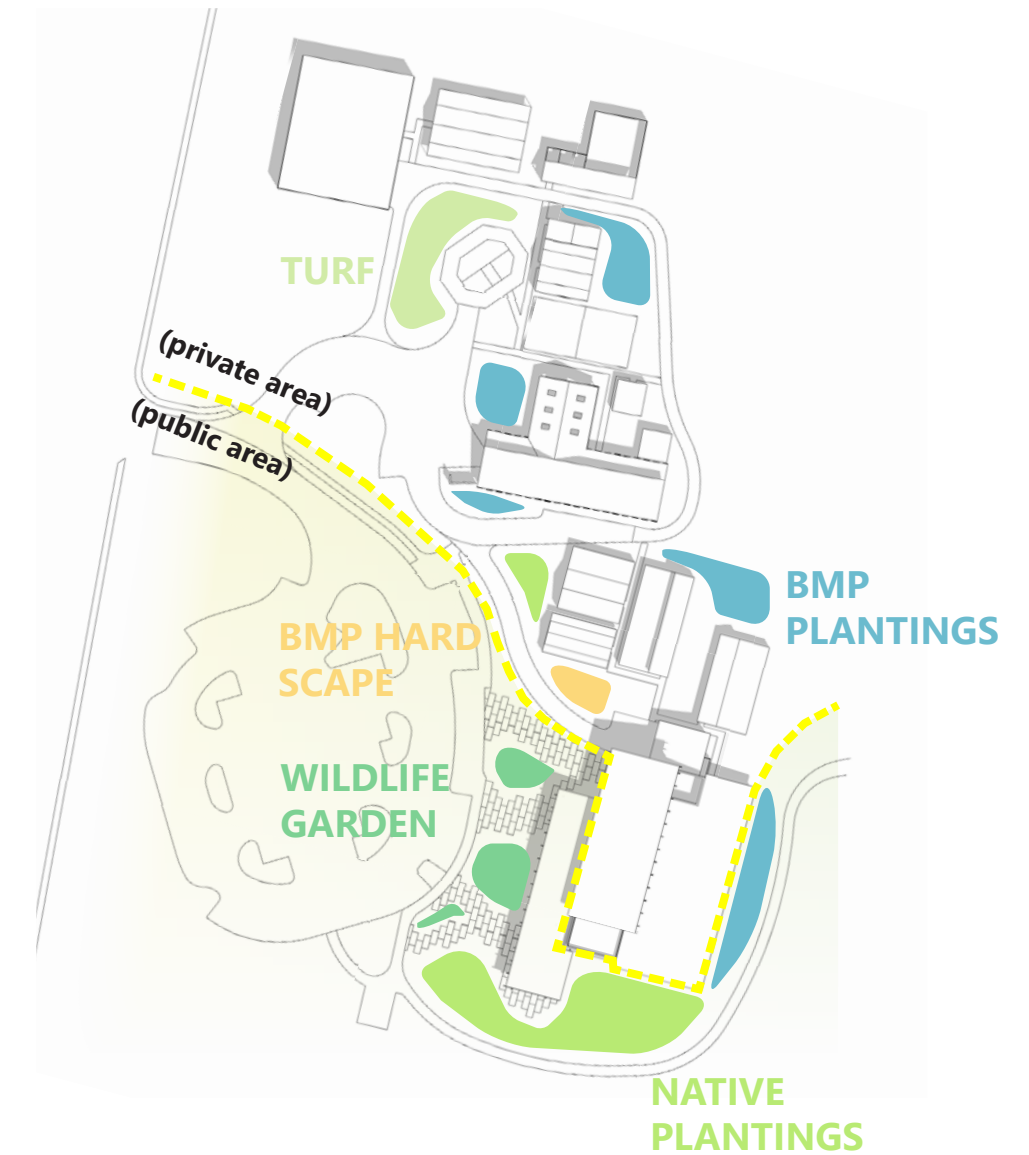
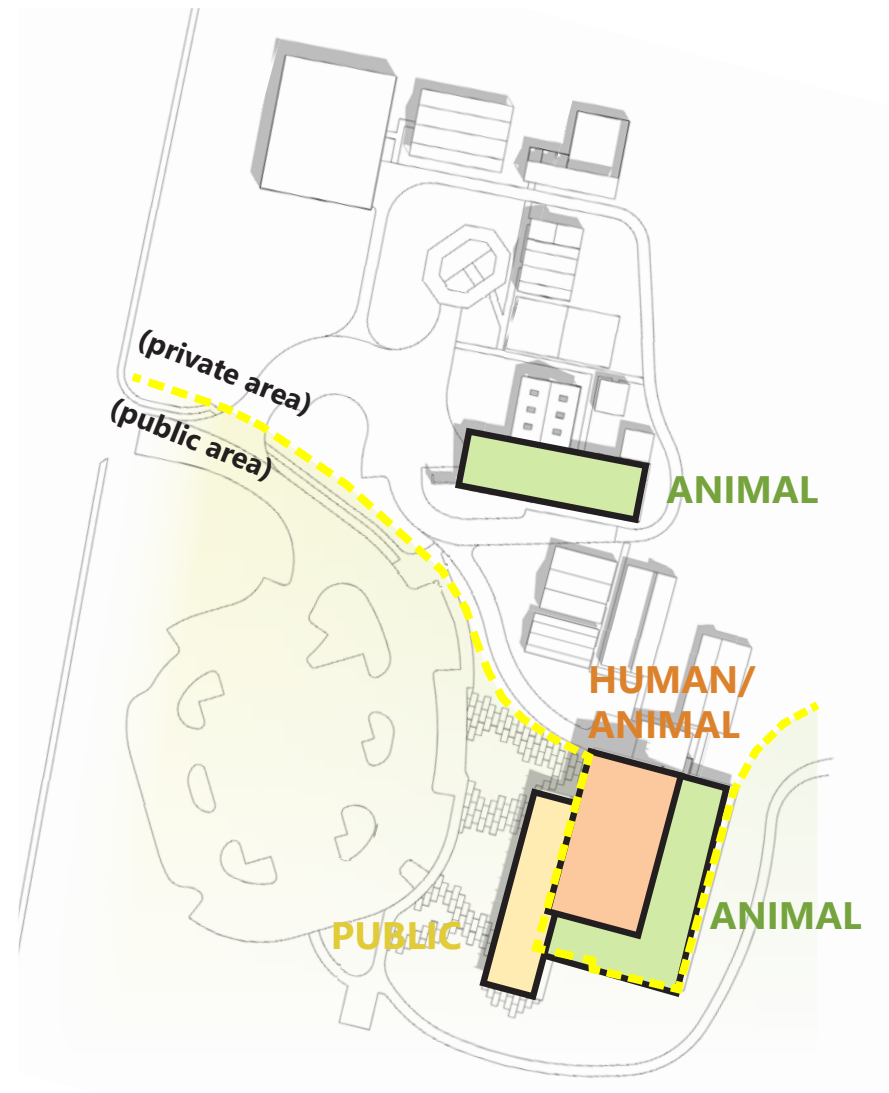
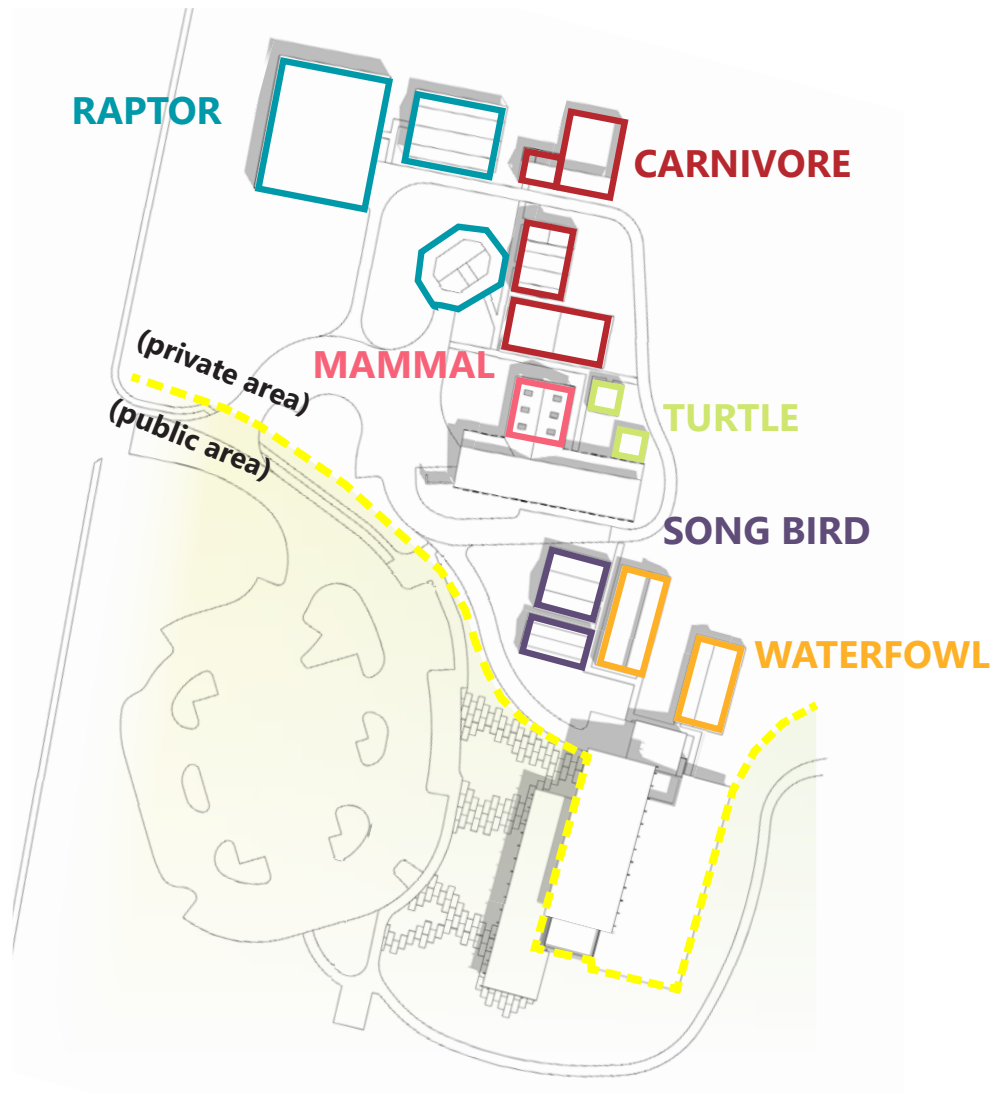
Create an atmosphere that inspires the public and staff to live in harmony within our ecosystem and act as good stewards of our environment.

# WILLOWBROOK WILDLIFE CENTER SITE ORGANIZATION

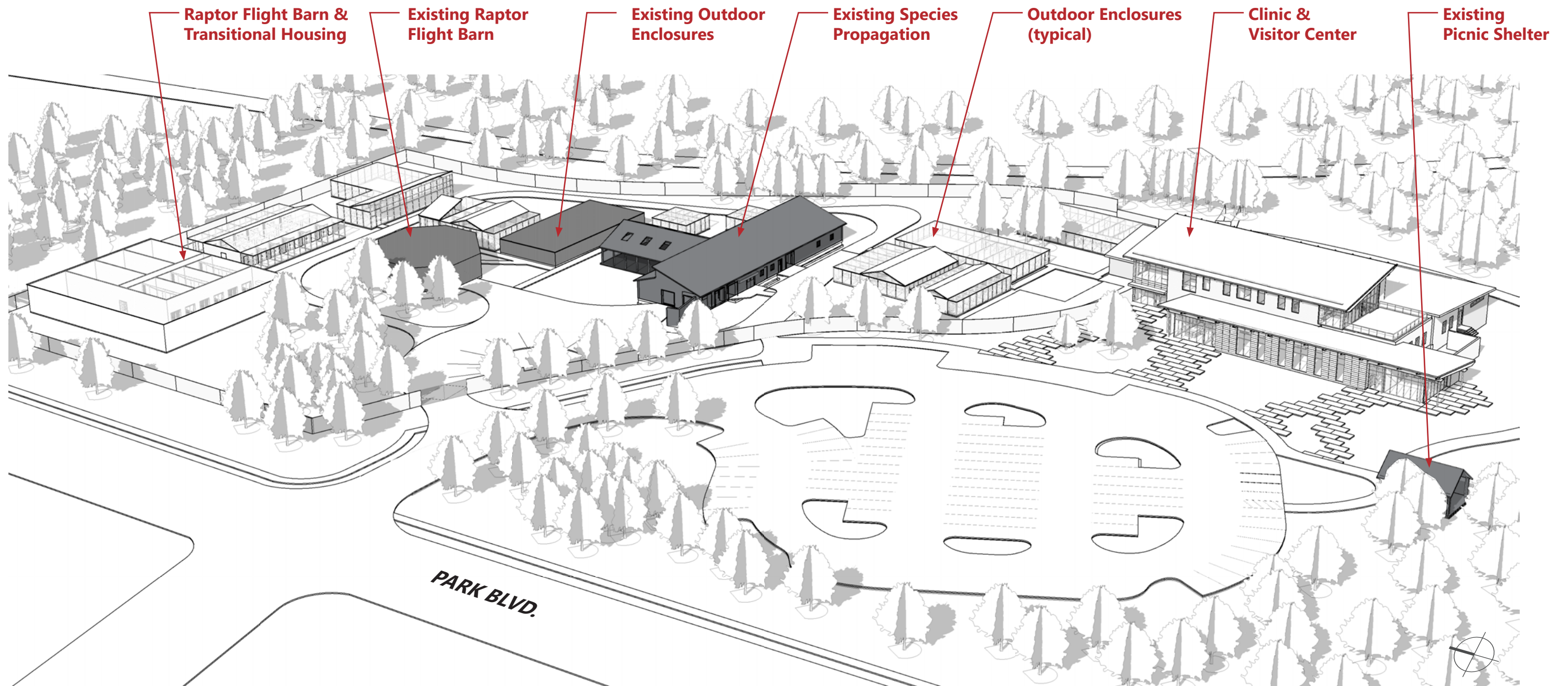
## 1. OUTDOOR PROGRAM ORGANIZATION

## 2. INDOOR PROGRAM ORGANIZATION

## 3. LANDSCAPE ORGANIZATION



# WILLOWBROOK WILDLIFE CENTER PROJECT MASSING



# WILLOWBROOK WILDLIFE CENTER ENLARGED SITE PLAN

- (A) Clinic and Visitor Center
- (B) Entry Plaza
- (C) Outdoor Learning
- (D) Outdoor Rehabilitation & Isolation Runs
- (E) Wildlife Gardens
- (F) Native Buffer Garden
- (G) Reconfigured Interpretive Trail
- (H) Service Drive
- (I) Song Bird Housing (Including Resident)
- (J) Day Duck and Aquatic Mammal Ponds Enclosure
- (K) Large Waterfowl Enclosure
- (L) Large Carnivore Enclosure
- (M) Large Carnivore Transitional Enclosure
- (N) Existing Species Propagation Building
- (O) Turtle Enclosure
- (P) Existing Mammal Enclosure
- (Q) Resident Carnivore Enclosure
- (R) Existing Enclosure
- (S) Small Carnivore Transitional Enclosure
- (T) Existing Raptor Barn
- (U) Raptor Flight & Raptor Transitional Barn
- (V) Resident Raptor Outdoor/Indoor Enclosure
- (W) Resident Raptor Outdoor Enclosure
- (X) Expanded Rescue Parking
- (Y) Existing Staff Parking
- (Z) Existing Visitor / Staff Parking
- (1) Existing Shelter
- (2) Fencing w/ Gates
- (3) Native Landscape / BMPs
- (4) Wetland
- (5) Glen Crest Creek



WILLOWBROOK WILDLIFE CENTER  
VIEW TO INTAKE & ENTRY FROM DROP-OFF





WILLOWBROOK WILDLIFE CENTER  
VIEW FROM PICNIC SHELTER



WILLOWBROOK WILDLIFE CENTER  
**VIEW FROM TRAIL**



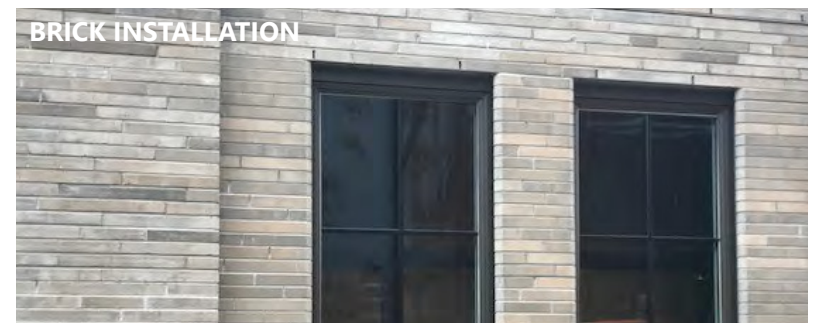
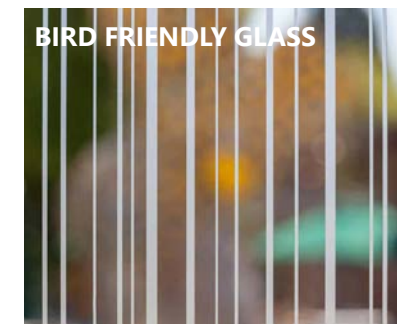
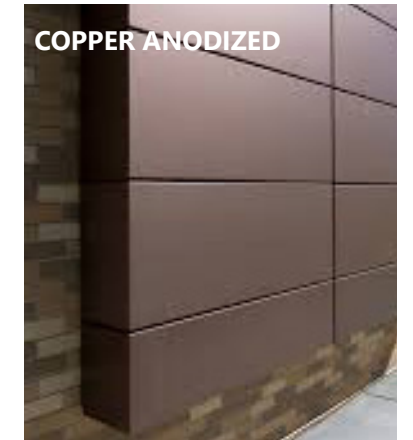
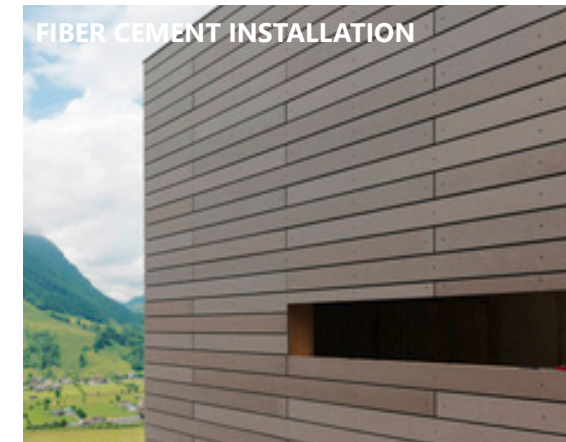
WILLOWBROOK WILDLIFE CENTER  
VIEW FROM SOUTH EAST TRAIL



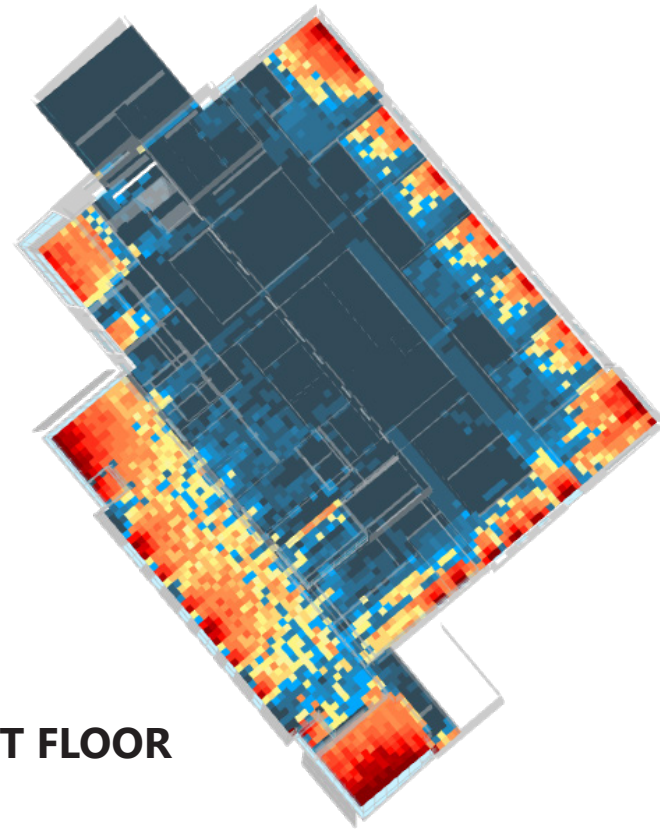
WILLOWBROOK WILDLIFE CENTER  
**VIEW FROM SITE ENTRY**



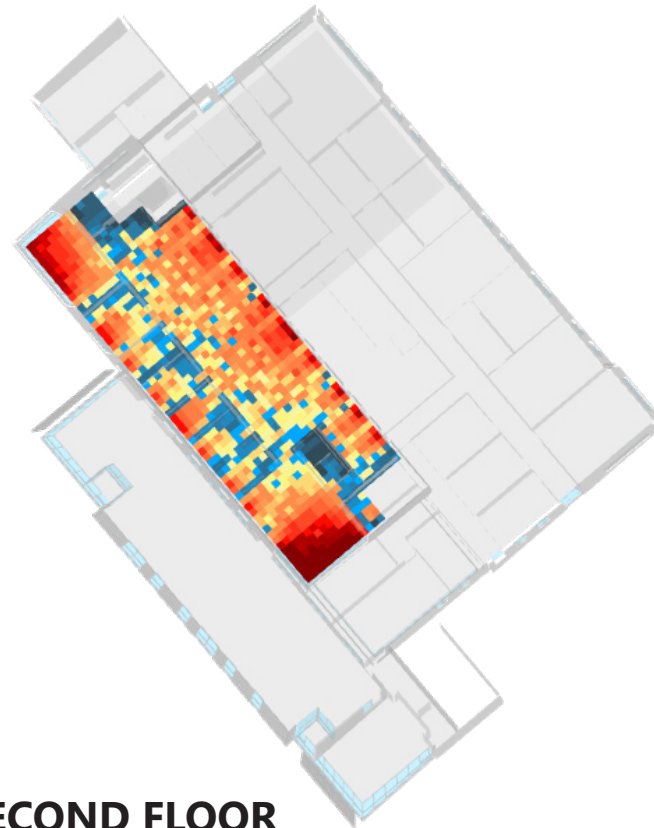
# WILLOWBROOK WILDLIFE CENTER PROPOSED EXTERIOR MATERIAL PALETTE



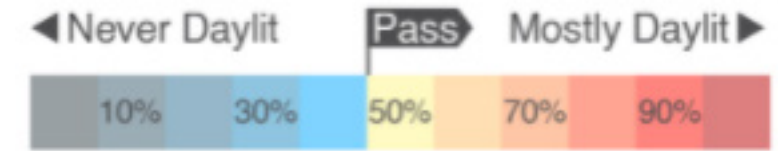
# WILLOWBROOK WILDLIFE CENTER DAYLIGHT OPTIMIZATION STUDY



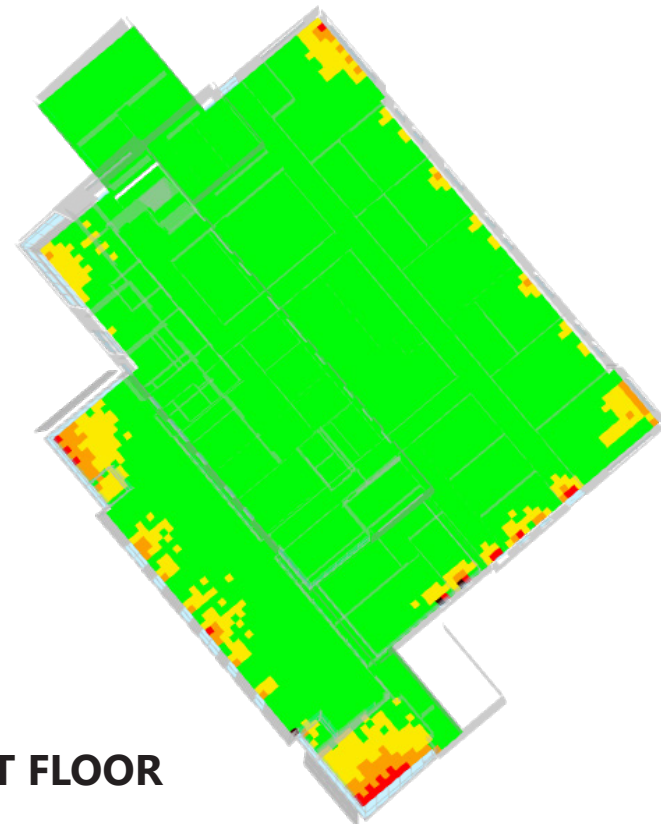
FIRST FLOOR



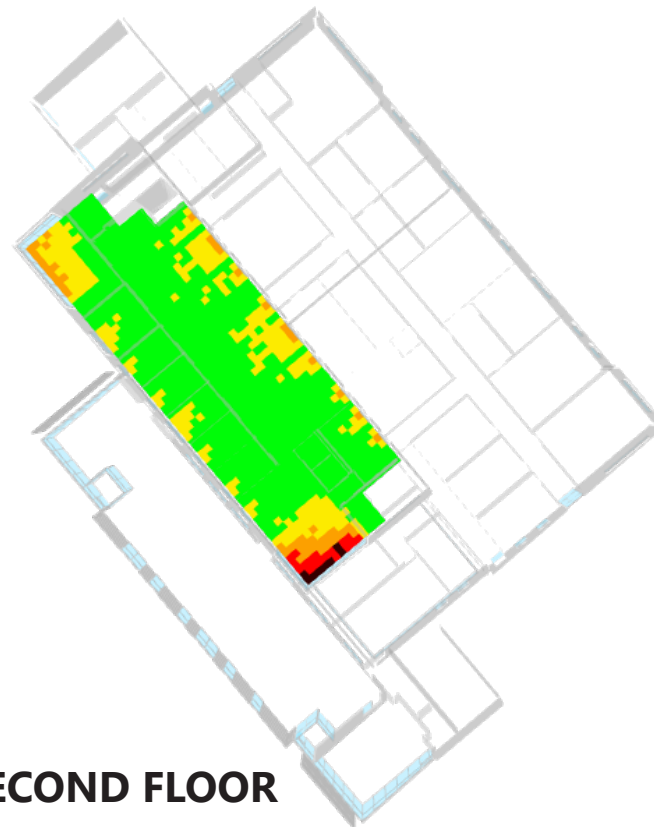
SECOND FLOOR



Spatial Daylight Autonomy (sDA) measures spaces that receive 30fc of light for at least 50% of the day. For the project this calculates to 24% which does not meet the recommended minimum of 55%. The shortfall is primarily due to having internal spaces without windows. The required close spatial relationships of the project drive the compact layout and daylight preference has been given to areas consistently occupied with people and animals. Solatube or borrowed lites are proposed to further enhance daylight within the interior of the building.



FIRST FLOOR



SECOND FLOOR







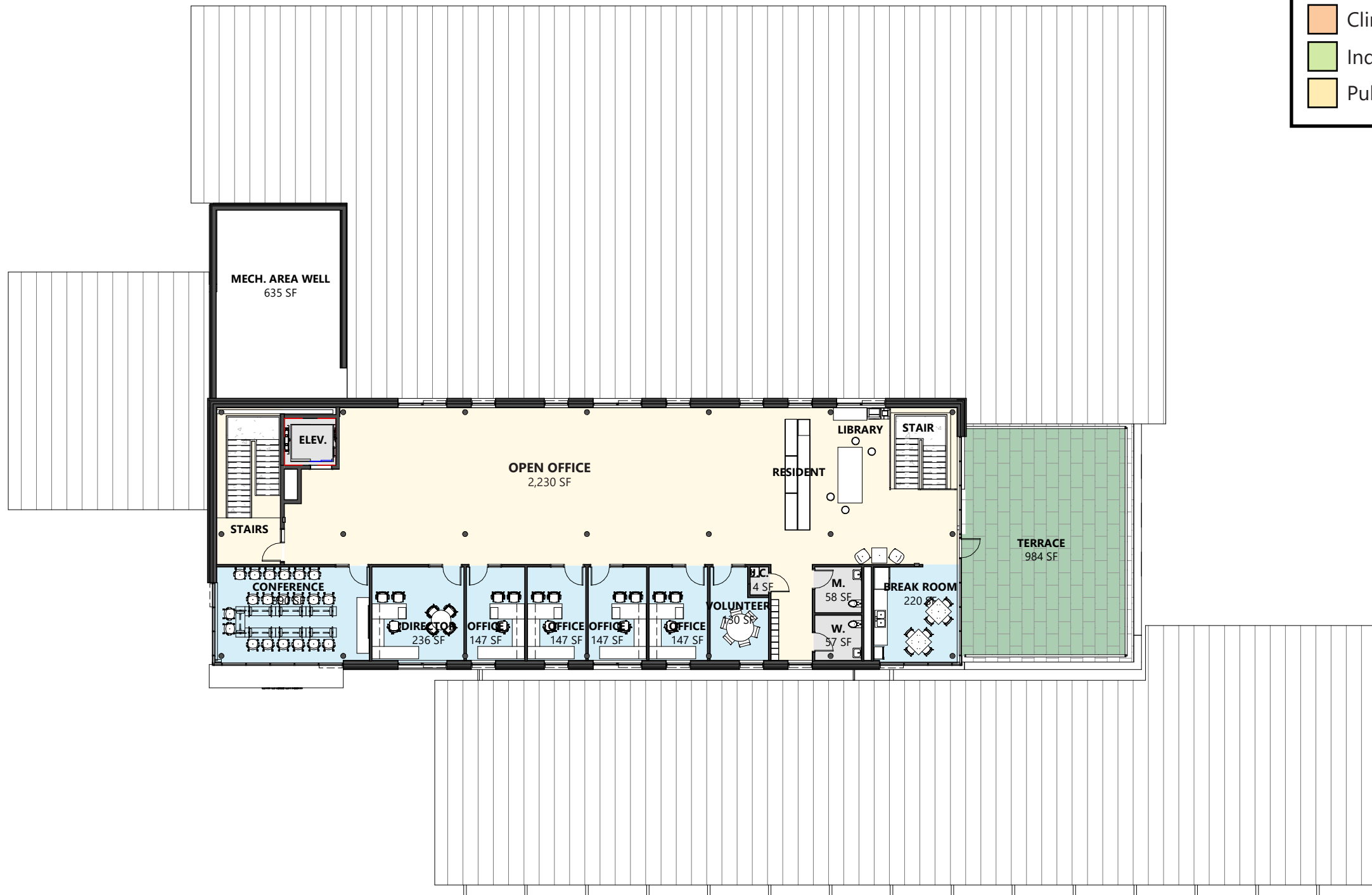
Annual Sunlight Exposure (ASE) measures glare. Areas in green are shown to have less than 10% ASE and do not require addressing. Areas greater than 10%, depending on use, require mitigation measures such as roller shades.

# WILLOWBROOK WILDLIFE CENTER FIRST FLOOR PLAN



# WILLOWBROOK WILDLIFE CENTER SECOND FLOOR PLAN

	Administration
	Clinic Area
	Indoor Rehabilitation / Housing Area
	Public Areas & Education





# WILLOWBROOK WILDLIFE CENTER INTERIOR FINISHES



- 1 EPOXY FLOORING WITH INTEGRAL BASE
- 2 HARD CEILING FINISH
- 3 PAINTED CMU WALLS
- 4 LVT FLOORING
- 5 CASEWORK MATERIAL
- 6 PAINT COLOR PALETTE EXAMPLE
- 7 WOOD STRUCTURE

WILLOWBROOK WILDLIFE CENTER  
INTERIOR VIEW - EXHIBITS



WILLOWBROOK WILDLIFE CENTER  
INTERIOR VIEW - CLASSROOM



WILLOWBROOK WILDLIFE CENTER  
INTERIOR VIEW - OPEN OFFICE

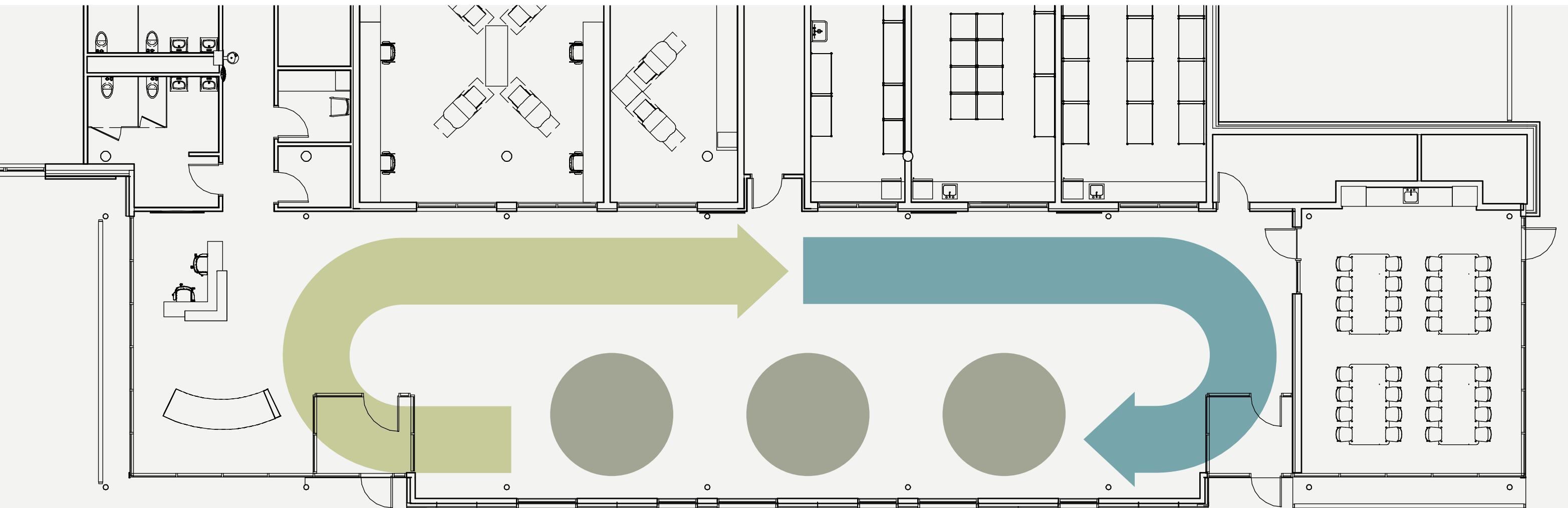


## CONTENT ZONES

 Drop-off to Release/Euthanasia

 Human Impact/Behavior

 Animals & Habitats

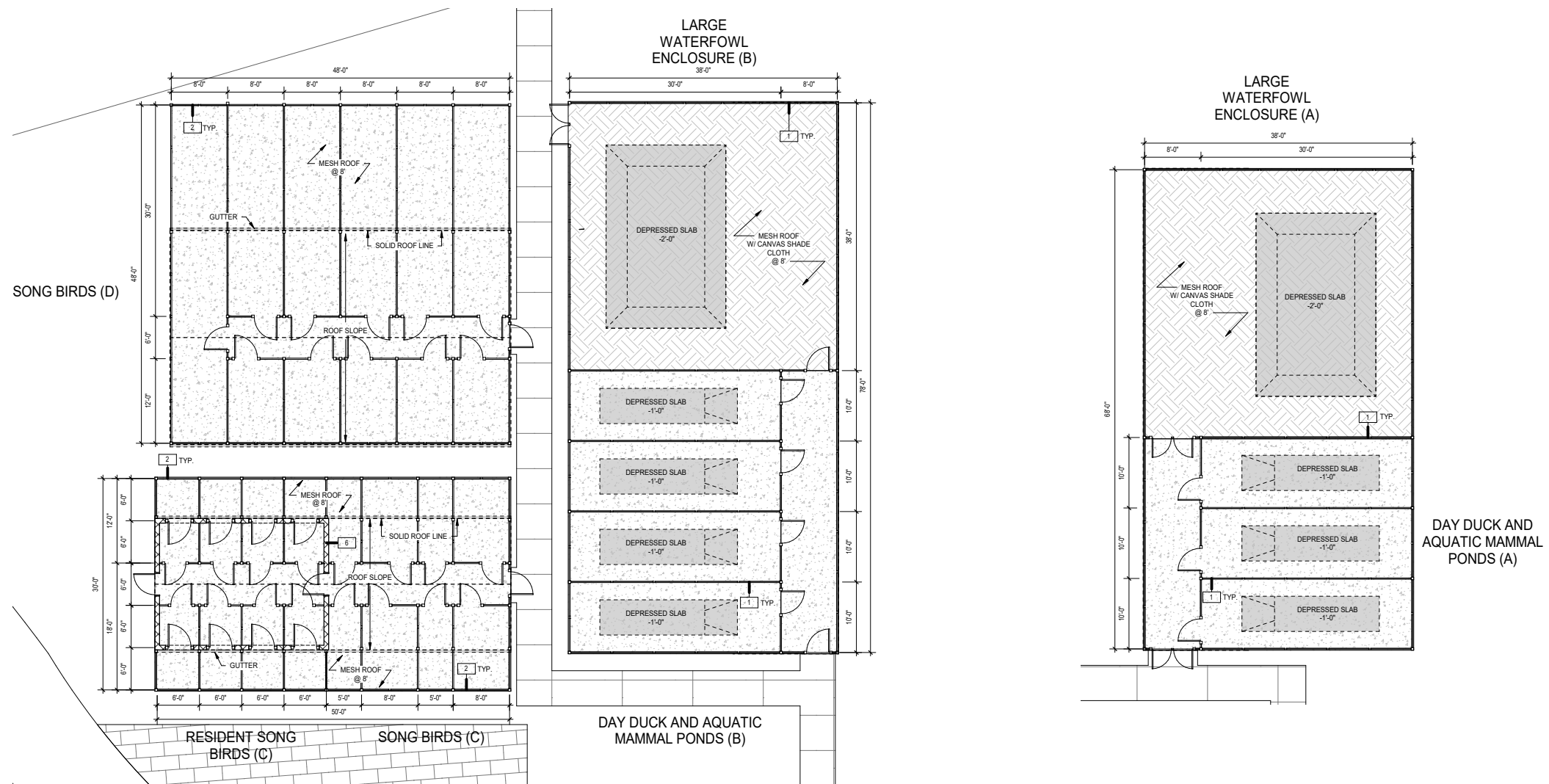


# WILLOWBROOK WILDLIFE CENTER EXHIBIT DESIGN CONCEPT

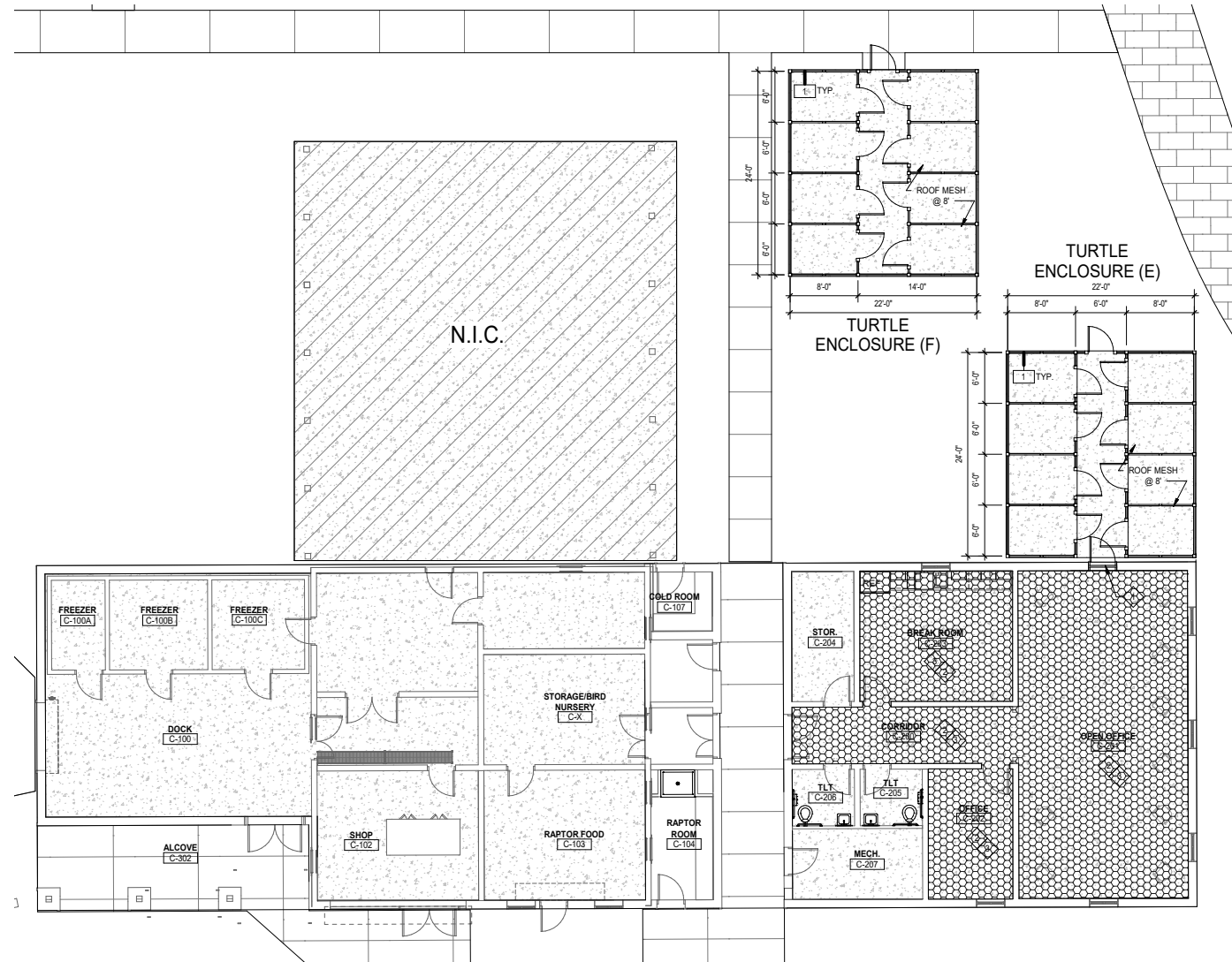
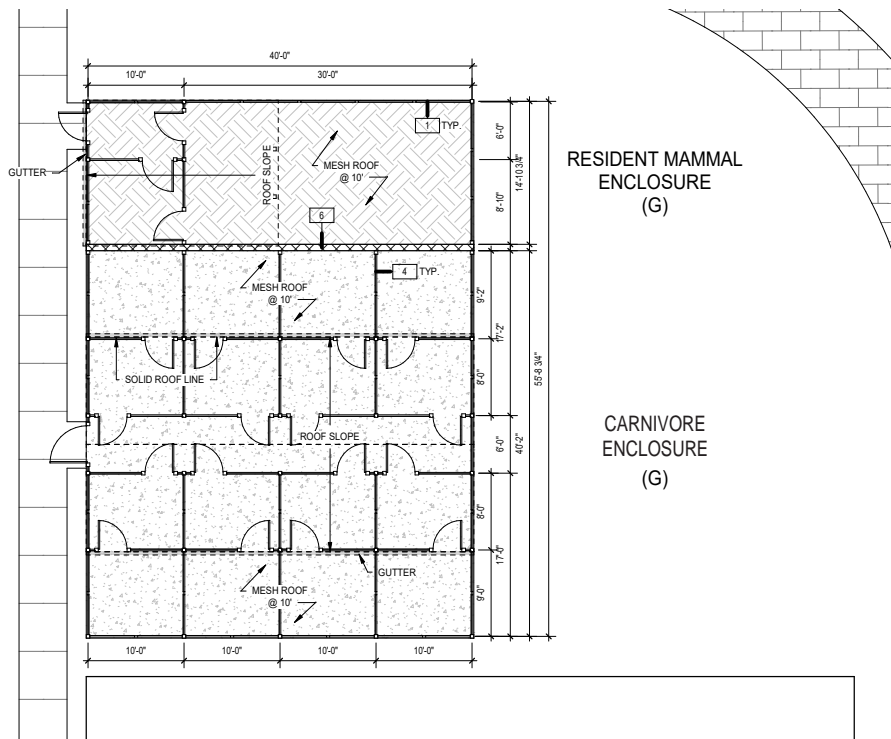
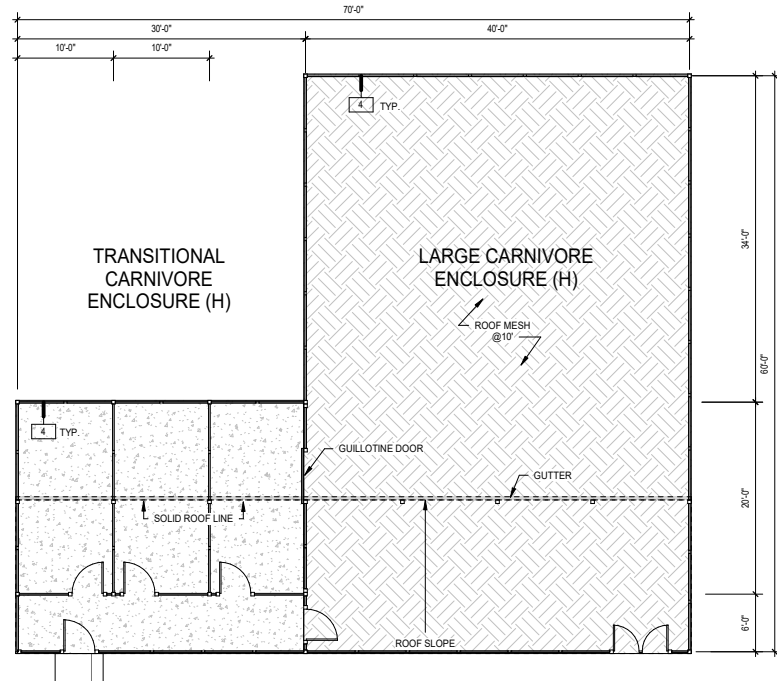


Visitor touchpoints include large digital display, window rails with static or digital interfaces, informational window panels, modular slat display walls, and wingspan and map interactives. Live-edge benches and environmental graphics complete the exhibit space.

# WILLOWBROOK WILDLIFE CENTER ENCLOSURES: SONG BIRD & WATERFOWL

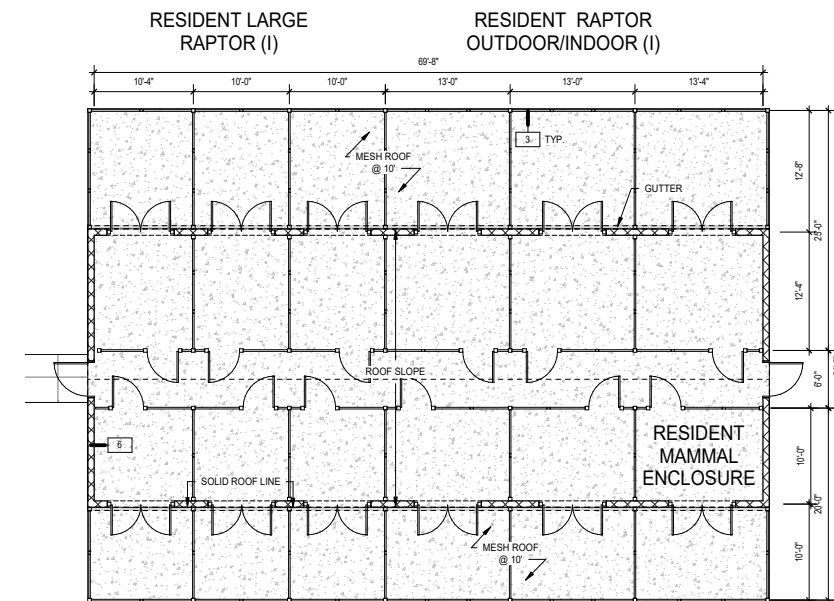
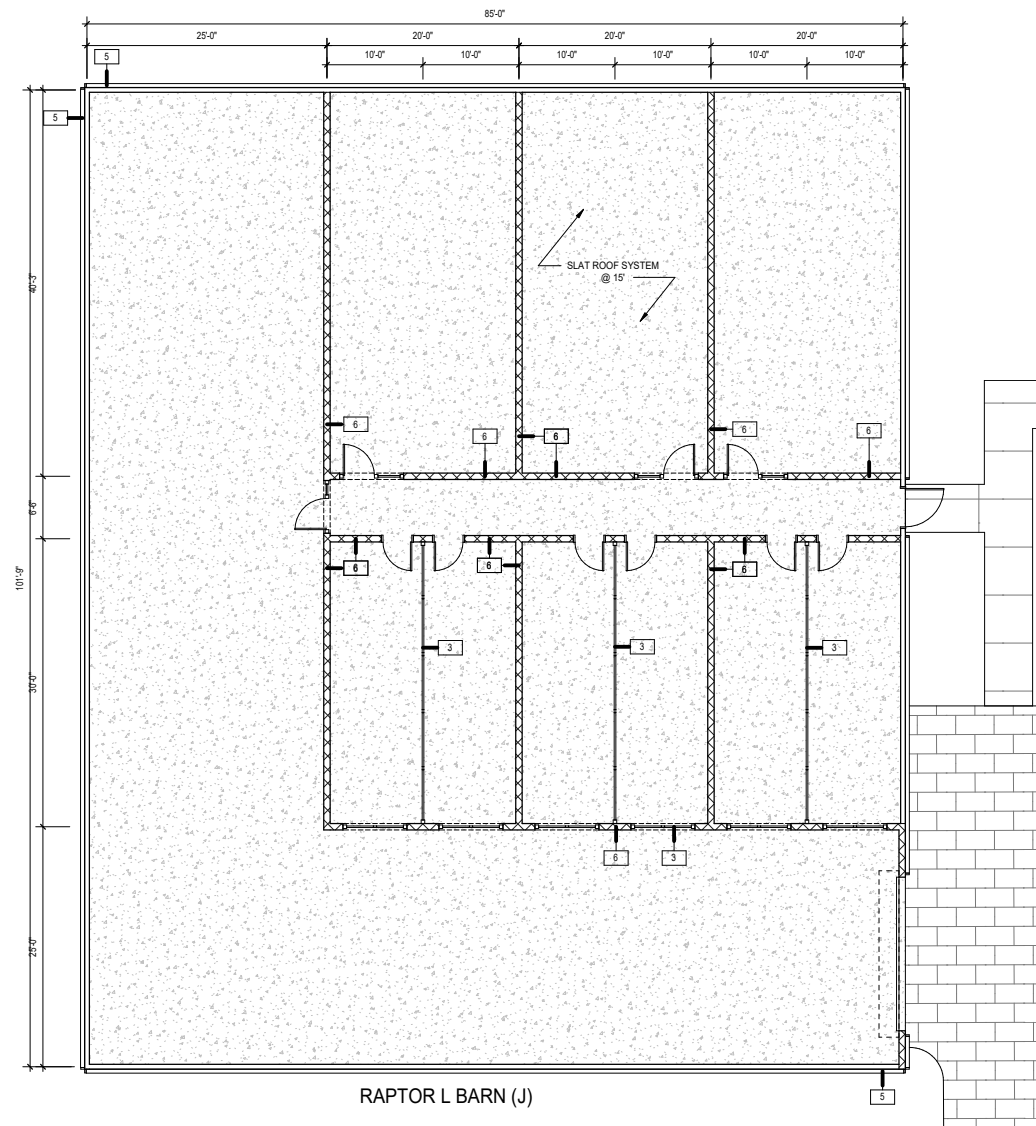


# WILLOWBROOK WILDLIFE CENTER ENCLOSURES: CARNIVORE & TURTLE





# WILLOWBROOK WILDLIFE CENTER ENCLOSURES: RAPTORS



# WILLOWBROOK WILDLIFE CENTER SUSTAINABLE FEATURES

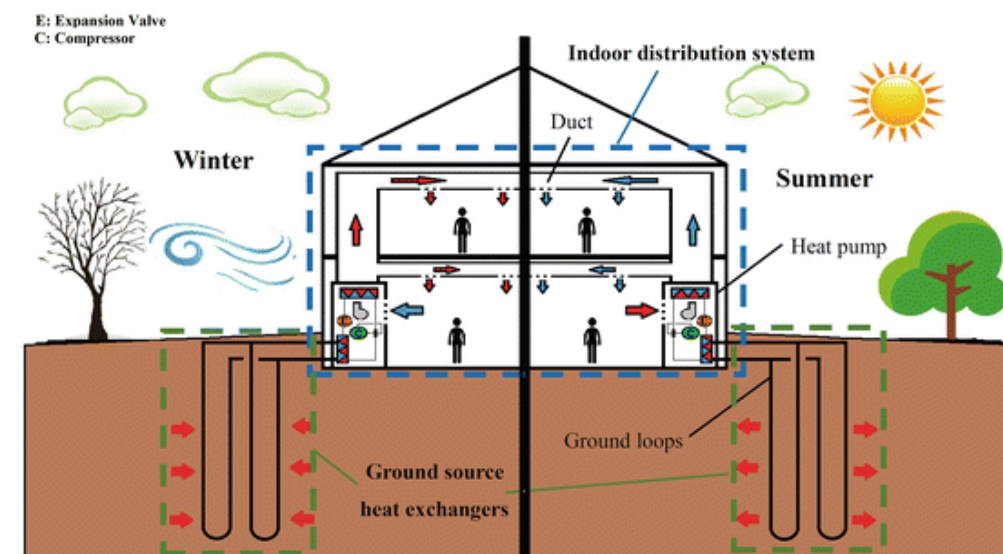
## Features included within the current project scope:

- NATIVE & DROUGHT TOLERANT PLANTINGS
- BMPS FOR STORM WATER POLLUTION PREVENTION AND RAINWATER CONTROL
- HEAT ISLAND REDUCTION
- SOLAR-READY STRUCTURE AND INFRASTRUCTURE
- BIRD FRIENDLY GLASS
- HIGH PERFORMANCE BUILDING ENVELOPE
- DAYLIGHT OPTIMIZATION
- LOW-VOC MATERIALS
- RECYCLED MATERIALS
- LOW EMBODIED CARBON MATERIALS
- HIGH EFFICIENCY MECHANICAL SYSTEMS
- LOW-FLOW PLUMBING FIXTURES
- REDUCED LIGHTING POWER DENSITY
- DARK SKY LIGHTING DESIGN



## Potential sustainable features:

- PHOTO VOLTAIC PANELS
- GEOTHERMAL
- SOLAR HOT WATER
- RAINWATER HARVESTING
- EV CHARGING STATION



# WILLOWBROOK WILDLIFE CENTER LEED POTENTIAL

Y ? N  
1 0 0

Credit Integrative Process 1

1	2	13	Location and Transportation	16
		0	Credit LEED for Neighborhood Development Location	16
1			Credit Sensitive Land Protection	1
		2	Credit High Priority Site	2
		5	Credit Surrounding Density and Diverse Uses	5
		5	Credit Access to Quality Transit	5
	1		Credit Bicycle Facilities	1
		1	Credit Reduced Parking Footprint	1
	1		Credit Green Vehicles	1

6	3	0	Sustainable Sites	10
Y			Prereq Construction Activity Pollution Prevention	Required
1			Credit Site Assessment	1
	1		Credit Site Development - Protect or Restore Habitat	2
	1		Credit Open Space	1
2	1		Credit Rainwater Management	3
2			Credit Heat Island Reduction	2
1			Credit Light Pollution Reduction	1

6	3	2	Water Efficiency	11
Y			Prereq Outdoor Water Use Reduction	Required
Y			Prereq Indoor Water Use Reduction	Required
Y			Prereq Building-Level Water Metering	Required
2			Credit Outdoor Water Use Reduction	2
3	3		Credit Indoor Water Use Reduction (35% 3pts, 40-50% 4-6pts)	6
		2	Credit Cooling Tower Water Use	2
1			Credit Water Metering (2 submeters; boiler, reclaimed, washout)	1

15	8	10	Energy and Atmosphere	33
Y			Prereq Fundamental Commissioning and Verification	Required
Y			Prereq Minimum Energy Performance	Required
Y			Prereq Building-Level Energy Metering	Required
Y			Prereq Fundamental Refrigerant Management	Required
3	1	2	Credit Enhanced Commissioning (+1 for MBCx)	6
12	4	2	Credit Optimize Energy Performance (38% 15pts, 42-50% 16-18pts)	18
		1	Credit Advanced Energy Metering	1
		2	Credit Demand Response	2
		3	Credit Renewable Energy Production (10% 3pts)	3
	1		Credit Enhanced Refrigerant Management (confirm no VRF)	1
	2		Credit Green Power and Carbon Offsets	2

7	1	5	Materials and Resources	13
Y			Prereq Storage and Collection of Recyclables	Required
Y			Prereq Construction and Demolition Waste Management Planning	Required
		5	Credit Building Life-Cycle Impact Reduction	5
2			Credit Building Product Disclosure and Optimization - Environmental Product Declarations	2
1	1		Credit Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
2			Credit Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit Construction and Demolition Waste Management	2

9	5	2	Indoor Environmental Quality	16
Y			Prereq Minimum Indoor Air Quality Performance	Required
Y			Prereq Environmental Tobacco Smoke Control	Required
2			Credit Enhanced Indoor Air Quality Strategies	2
3			Credit Low-Emitting Materials	3
1			Credit Construction Indoor Air Quality Management Plan	1
1		1	Credit Indoor Air Quality Assessment	2
1			Credit Thermal Comfort	1
1	1		Credit Interior Lighting	2
	3		Credit Daylight	3
	1		Credit Quality Views	1
		1	Credit Acoustic Performance	1

4	2	0	Innovation	6
3	2		Credit Innovation	5
1			Credit LEED Accredited Professional	1

1	1	2	Regional Priority	4
1			Credit Regional Priority: Enhanced IAQ (2pts)	1
		1	Credit Regional Priority: Advanced Energy Metering/Protect or Restore Habitat	1
	1		Credit Regional Priority: Rainwater Management (3pts)	1
		1	Credit Regional Priority: High Priority Site/Building Life-cycle	1

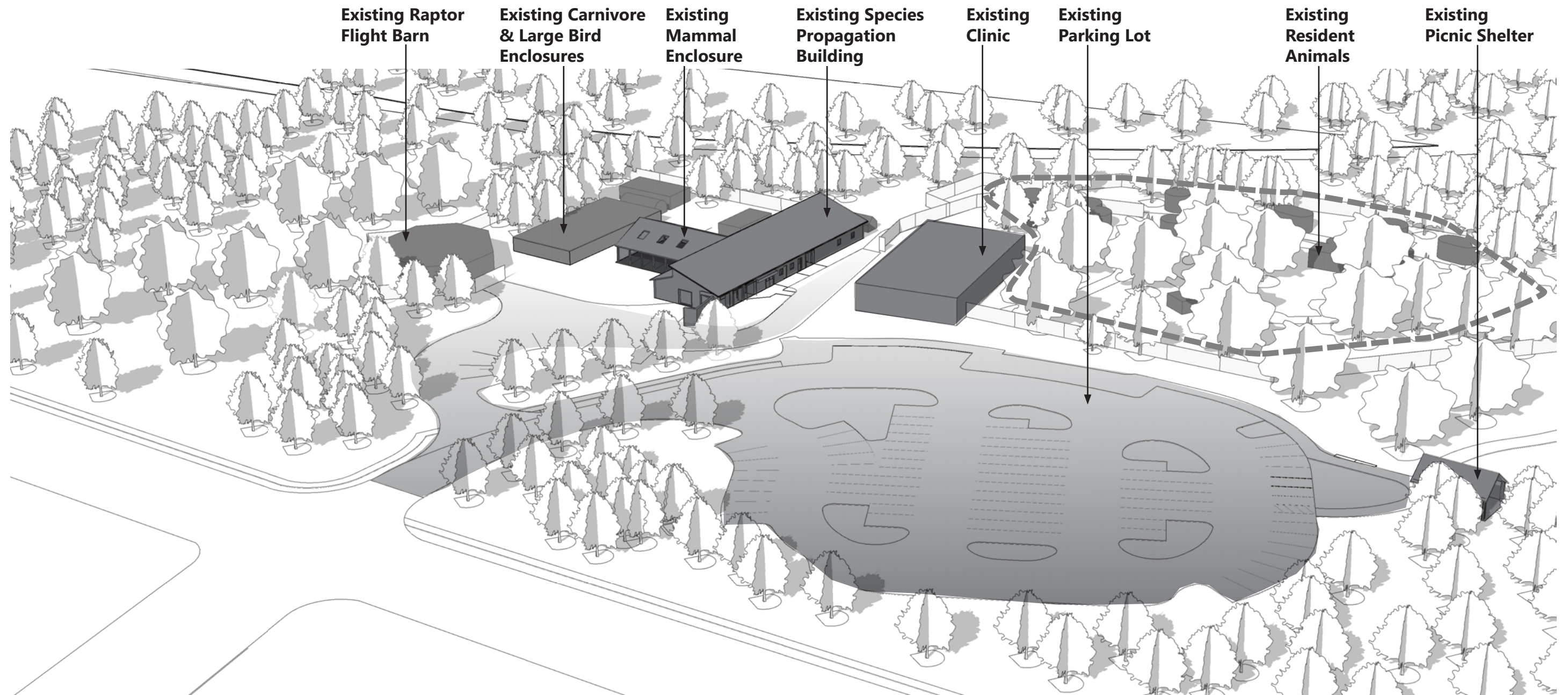
**50 25 34 TOTALS** Possible Points: **110**  
**Certified:** 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110



# EXISTING FACILITIES

2021

# WILLOWBROOK WILDLIFE CENTER PHASING DIAGRAM



# PHASE A

Summer 2022 (Standard Schedule)

# WILLOWBROOK WILDLIFE CENTER PHASING DIAGRAM

Small Carnivore Transition + Resident Carnivore [G]

Large Carnivore Enclosure [H]

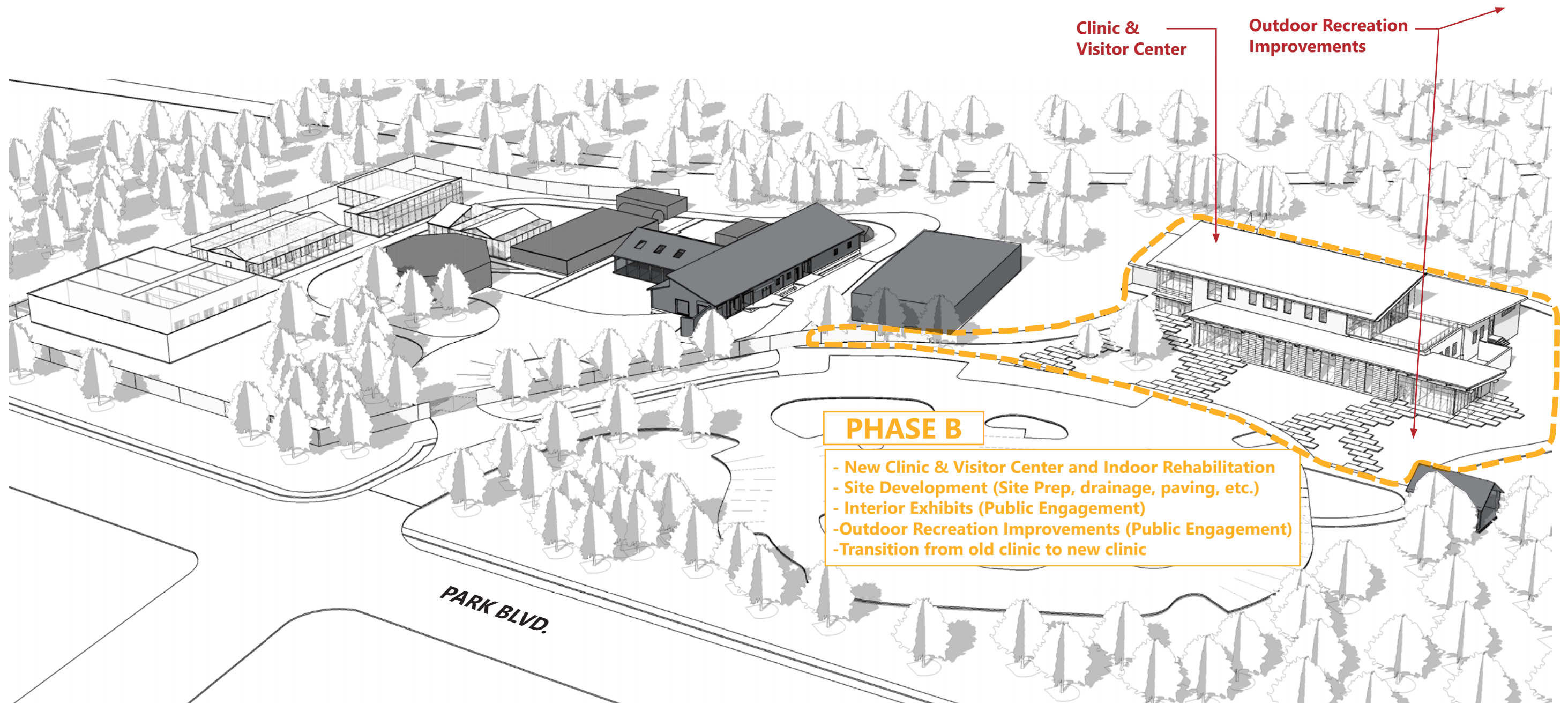
Resident Raptor Enclosure [I]

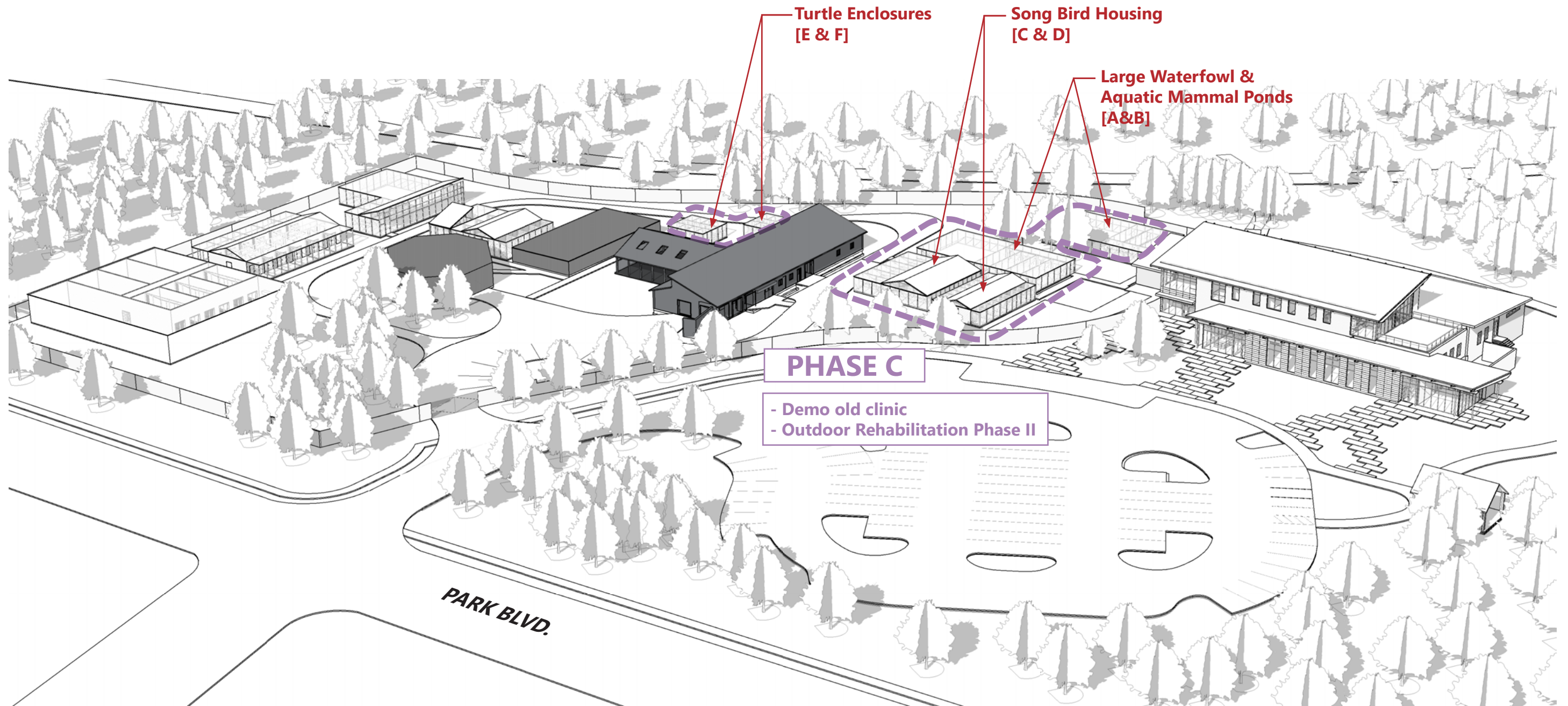
Raptor Flight Barn [J]  
(Essential/Phase Alternate)

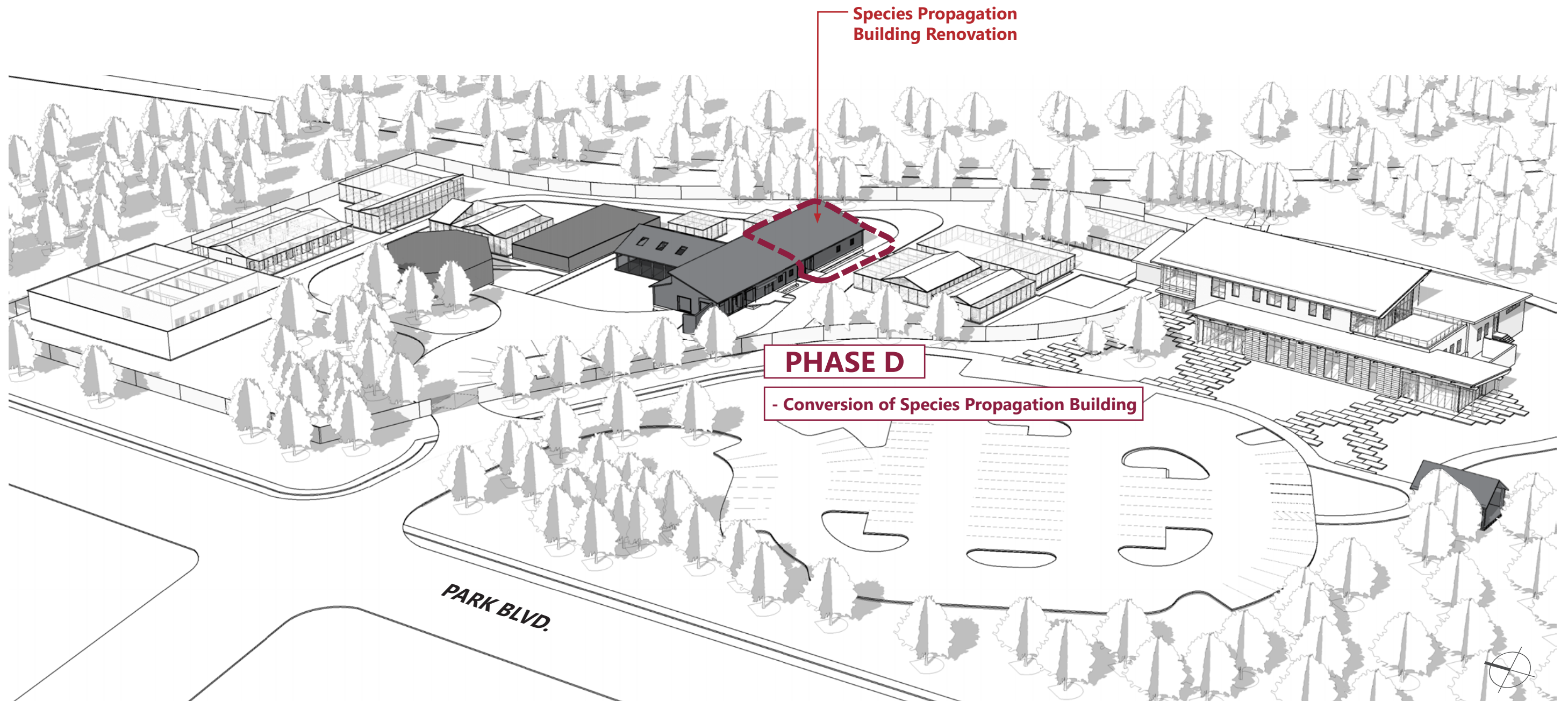
## PHASE A

- Outdoor Rehabilitation Phase I
- Removal of Dilapidated Enclosures
- Relocation of Existing Resident Animals to New Enclosures

PARK BLVD.





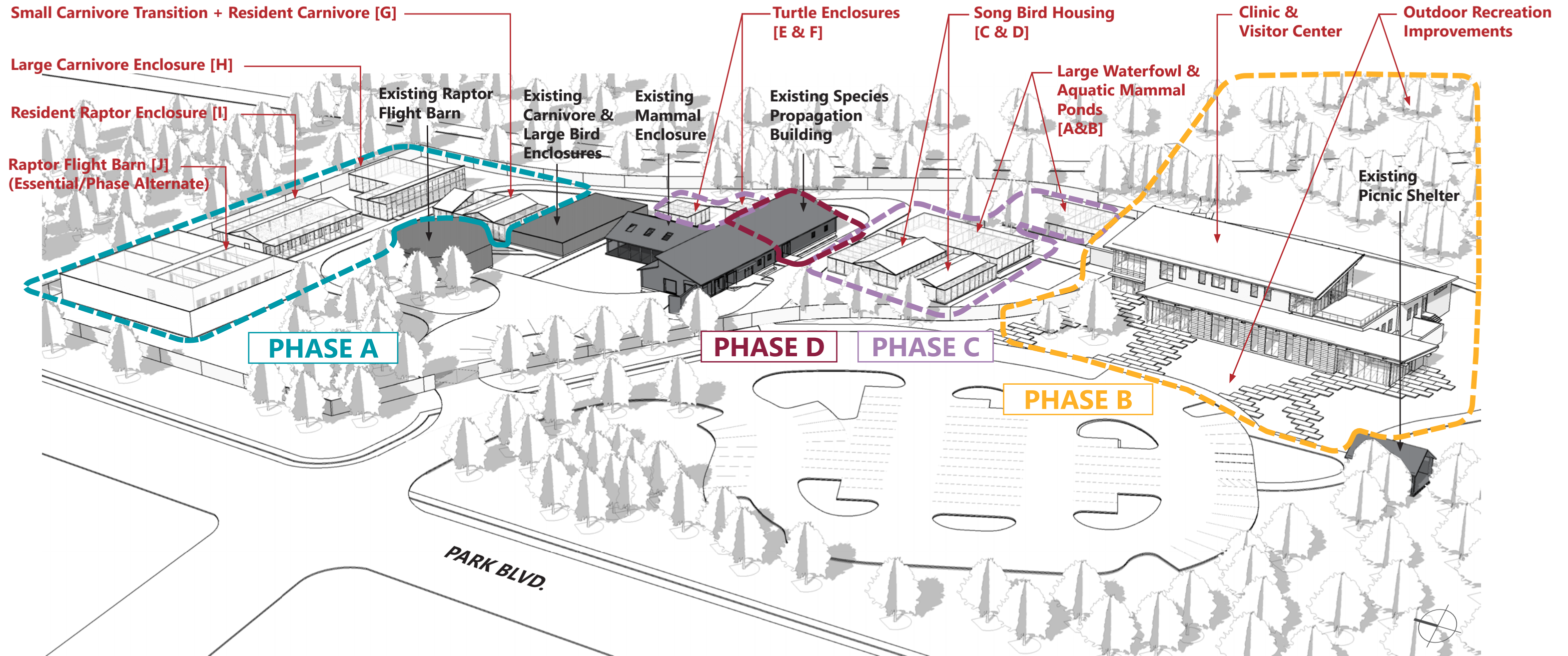




# PHASE A THROUGH D

Completion January 2025 (Standard Schedule)

# WILLOWBROOK WILDLIFE CENTER PHASING DIAGRAM



WILLOWBROOK WILDLIFE CENTER  
**COST BUDGET SUMMARY**

Phase	Item Description	Critical Items (Immediate Need)	Critical Items (Flexible To Phase)	Desirable Items (Priority Alternates)	Alternate Items (Other Considerations)
A	<b>Outdoor Rehabilitation Phase I</b>				
	Mammal, Carnivore, Transitional Rehabilitation Enclosures (Structures G, H, I)	\$ 1,670,000.00			
	Large Raptor Barn Enclosure (Structure "J")		\$ 1,381,500.00		
	A/E Design Fees, Permits, And Other Soft Costs	\$ 140,650.00	\$ 113,750.00		
	<b>Subtotal Phase A:</b>	<b>\$ 1,810,650.00</b>	<b>\$ 1,495,250.00</b>	<b>\$ -</b>	<b>\$ -</b>
B-1	<b>New Building</b>				
	Clinic and Visitor Center	\$ 14,023,300.00			
	*Interior Exhibits (Public Engagement)		\$ 370,000.00	\$ (250,000.00)	
	Photovoltaic (PV) Panels - Limited Area On Clinic/Visitor Center			\$ 162,580.00	
	Rainwater Harvesting System			\$ 380,000.00	
	EV Charging Station			\$ 35,000.00	
	Interior Sliding Doors			\$ 100,000.00	
	Outdoor Terrace (Non-Public)				\$ 55,240.00
	Photovoltaic (PV) Panels - Optimal Area On Clinic/Visitor Center				\$ 637,420.00
	Ground Source Heat Pumps (Geo-Thermal)				\$ 1,200,000.00
	Solar Hot Water System				\$ 280,000.00
	Generator				\$ 270,000.00
	Partial Basement				\$ 1,500,000.00
	A/E Design Fees, Permits, And Other Soft Costs	\$ 1,485,850.00			
<b>Phase B-1:</b>	<b>\$ 15,509,150.00</b>	<b>\$ 370,000.00</b>	<b>\$ 427,580.00</b>	<b>\$ 3,942,660.00</b>	
B-2	<b>Site Development</b>				
	Site Preparation, Drainage, and Paving	\$ 1,500,000.00			
	**Outdoor Recreation Improvements (Public Engagement)		\$ 431,150.00	\$ (100,000.00)	
	A/E Design Fees, Permits, And Other Soft Costs	\$ 89,850.00	\$ 25,850.00	\$ -	\$ -
<b>Phase B-2:</b>	<b>\$ 1,589,850.00</b>	<b>\$ 457,000.00</b>	<b>\$ (100,000.00)</b>	<b>\$ -</b>	
<b>Subtotal Phase B:</b>	<b>\$ 17,099,000.00</b>	<b>\$ 827,000.00</b>	<b>\$ 327,580.00</b>	<b>\$ 3,942,660.00</b>	
C	<b>Outdoor Rehabilitation Phase II</b>				
	Old Clinic Demolition	\$ 98,400.00			
	Songbird, Turtle, Waterfowl Enclosures (Structures B,C,D,E,F)	\$ 1,426,800.00			
	Waterfowl Enclosure (Structure A)		\$ 276,650.00		
	A/E Design Fees, Permits, And Other Soft Costs	\$ 119,200.00	\$ 22,150.00		
<b>Subtotal Phase C:</b>	<b>\$ 1,644,400.00</b>	<b>\$ 298,800.00</b>	<b>\$ -</b>	<b>\$ -</b>	
D	<b>Species Recovery Building Conversion</b>				
	Interior Renovations (Existing Workspace to Lab and Storage)	\$ 76,900.00			
	Upgraded Screen Wall Along North Parking Lot			\$ 130,000.00	
	A/E Design Fees	\$ 4,000.00			
<b>Subtotal Phase D:</b>	<b>\$ 80,900.00</b>	<b>\$ -</b>	<b>\$ 130,000.00</b>	<b>\$ -</b>	
	<b>A/E Schematic Phase Design Fees Current Contract:</b>	<b>\$ 435,000.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
	<b>Grand Total:</b>	<b>\$ 21,069,950.00</b>	<b>\$ 2,621,050.00</b>	<b>\$ 457,580.00</b>	<b>\$ 3,942,660.00</b>

Staff base recommendation includes all items in critical columns as they are essential to Willowbrook's animal care operations. Bid documents to provide flexibility in evaluating project costs based upon actual bid results, funding availability, and other external factors.	\$ 23,691,000.00
Staff additionally recommends items in desirable item column to be added as alternates as they will enhance Willowbrook's animal care operations and visitor experience. Can generally be easily considered or added at anytime prior to construction and can be determined based upon actual bid results, funding availability, and other external factors.	\$ 457,580.00
Staff recommends the other alternate considerations but acknowledge they are not essential to Willowbrook's animal care operations. If to be considered these items would need to be approved at the start of the design development phase as the impact to the structure is significant and they couldn't be added or removed at a later date easily.	\$ 3,942,660.00

\*Indicates FPDDC pursuing IDNR 2023 Public Museum Grant

\*\* Indicates FPDDC pursuing IDNR 2022 OSLAD Grant

Note all construction item cost projections include a contingency ranging between 8-10% and include cost escalation factors between 3-8% for construction appropriate to work starting in 2022, 2023, and 2024 as outlined in past estimated construction schedules.

Wilowbrook Widlife Center Masterplan Phase II Improvements			
Project No.: M-340-000			
Supplemental Funding Sources			
13-Sep-21			
Source Type	Item Description	Amount	Year Available
	<b>In-Hand</b>		
FPDDC Fund	FPDDC Willowbrook Fund	\$ 562,000.00	2021
Non-Profit	DuPage Community Foundation	\$ 922,000.00	2021
Non-Profit	Friends of the Forest Preserve	\$ 516,000.00	2021
FPDDC Fund	Mains Endowment	\$ 1,500,000.00	2021
	<b>Subtotal:</b>	\$ 3,500,000.00	
	<b>Pledged</b>		
Private	Fikar Gift	\$ 50,000.00	2021
Private	Bork Gift - (2 years remaining)	\$ 190,000.00	2022/2023
	<b>Subtotal:</b>	\$ 240,000.00	
	<b>Upcoming Funding Opportunities</b>		
Grant	2021 IDNR Open Space Land Acquisition (OSLAD) Grant	\$ 400,000.00	2022
Rebate	Commonwealth Edison Energy Efficiency Program	\$ 35,000.00	2023/2024
Rebate	*Commonwealth Distributed Generation Rebate (PV)	\$ 15,000.00	2023/2024
Grant	**2022/2023 IDNR Public Museum Grant (PM)	\$ 750,000.00	2023/2024
	<b>Subtotal:</b>	\$ 1,200,000.00	
	<b>Potential Supplemental Source Totals:</b>	\$ 4,940,000.00	
	<b>Additional Opportunities Being Explored</b>		
Grant	***Illinois DCEO Grants	TBD	TBD
Credits	****Illinois Power Agency Sale of Energy Credits (SRECS)	TBD	TBD

\* Depends upon scale of PV system installed. This could vary from \$15,000 - \$75,000

\*\* Depends upon next notice of funding opportunity in 2022 or 2023

\*\*\* If a net zero facility is pursued there is potential funding up to 2 million dollars available in DCEO grants. This would require construction of the large raptor barn, geothermal system and optimal PV system.

\*\*\*\* Depends upon scale of PV system installed, megawatt hour production, and availability of program dollars.

