

# Olbrich Botanical Gardens Expansion Project 1

Existing Conservatory

Existing Lobby

New Greenhouse

New Learning Center

Existing Atrium

New Garden Courtyard, Tram Pickup, and Tram Path



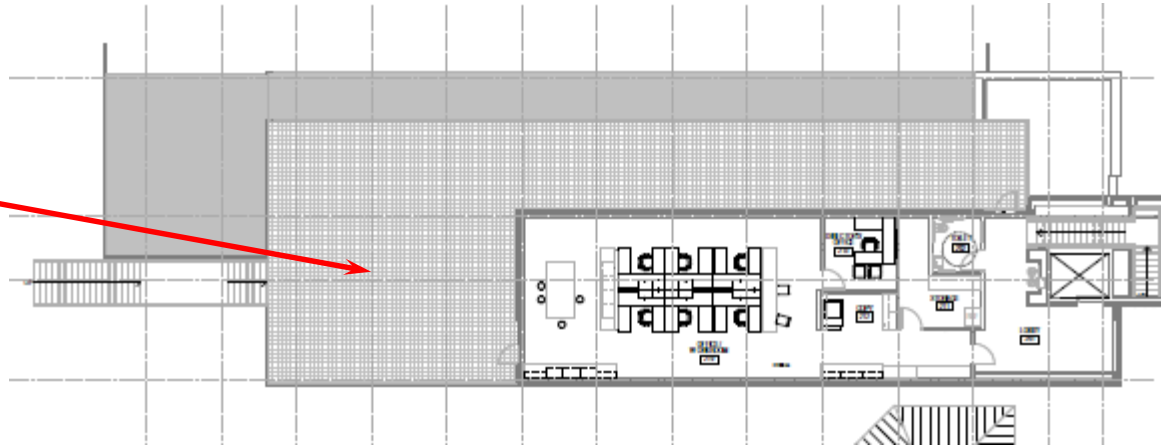
# Learning Center Floor Plans

Estimated cost  
of construction

**\$ 4,219,442**

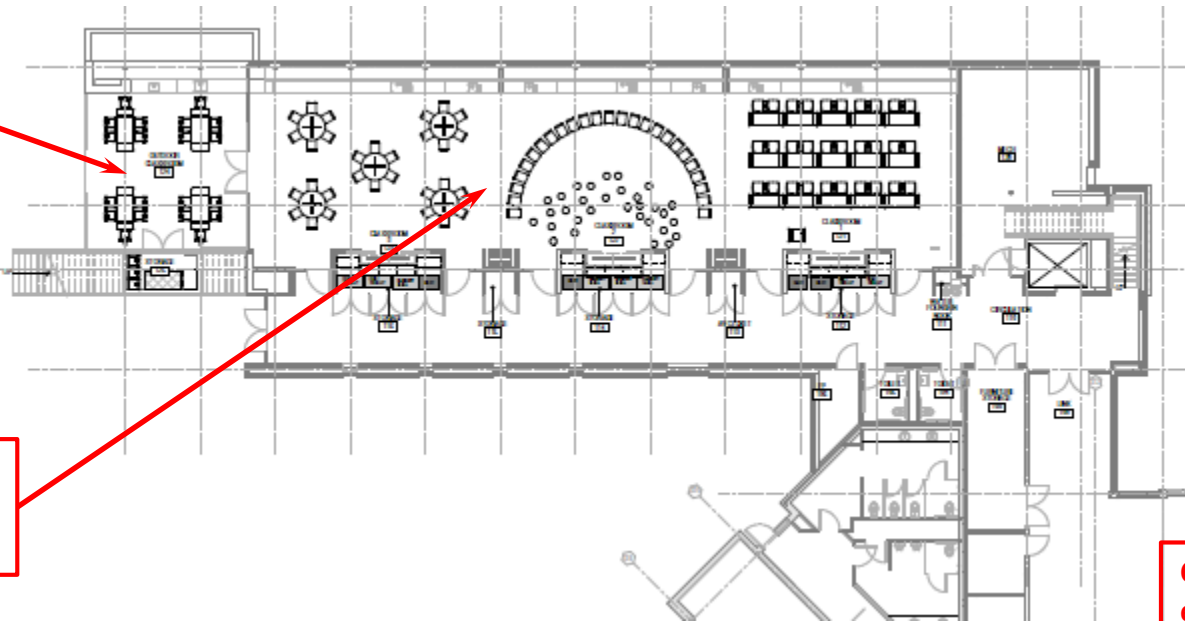
(assuming a standard  
foundation, with fire  
suppression)

Observation Deck  
Open to the Public



Second Floor - Learning Center Staff Offices

Outdoor  
Classroom



Interior Classroom, can  
be configured to 1, 2,  
or 3 spaces

Connects to  
existing Lobby

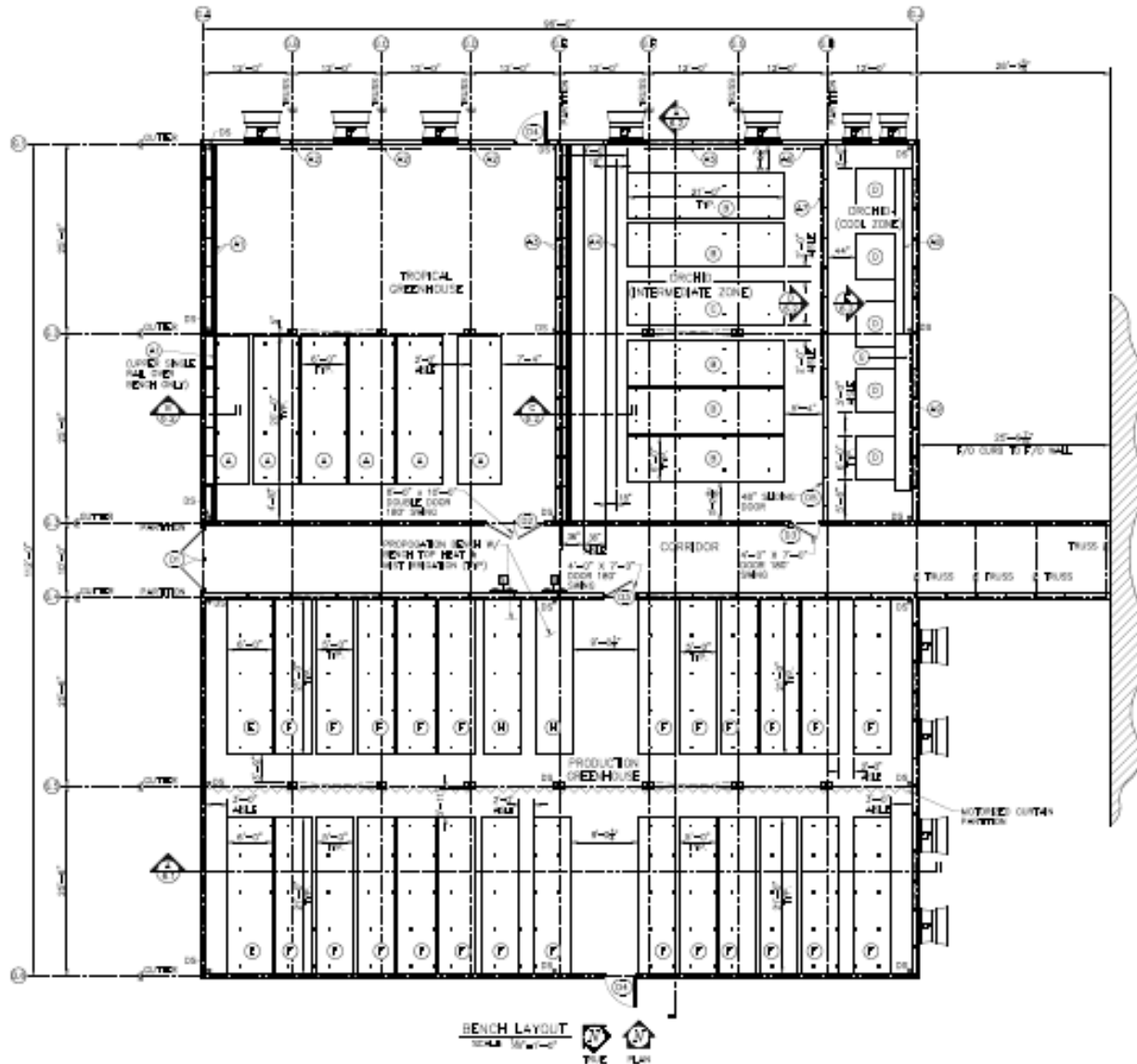
First Floor - Learning Center Classrooms

# Greenhouse Floor Plan

Estimated cost  
of construction

**\$ 3,830,116**

(assuming a standard  
foundation, non-  
combustible, no fire  
suppression required)



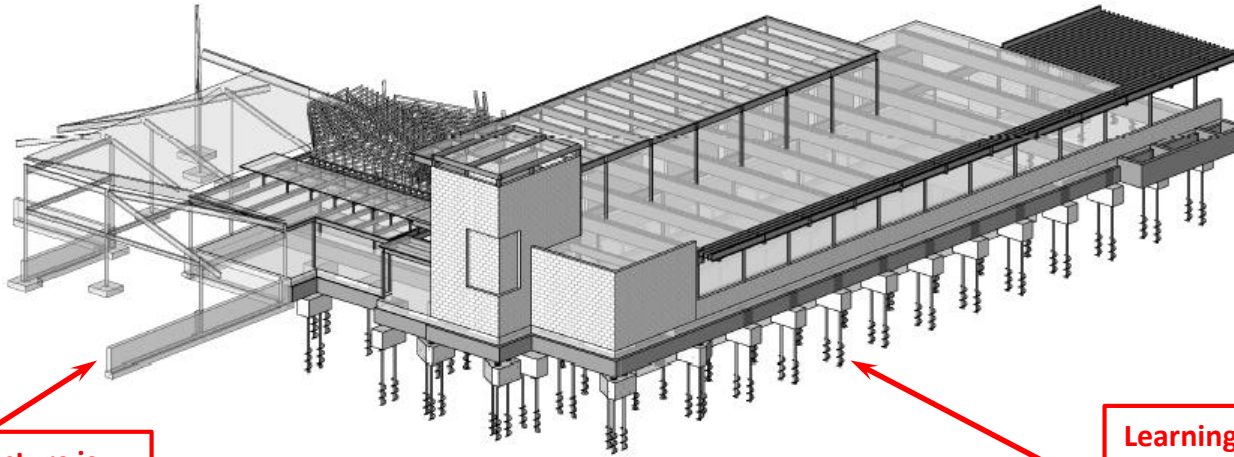
**New Greenhouse is approximately the same size as the existing structure it is replacing.**

# Foundation System

Estimated cost  
of construction

**\$ 1,273,381**

(over cost of standard  
foundation; this is  
Learning Center and  
Greenhouse  
combined)



Existing structure is  
traditional spread  
footing

Learning Center and  
Greenhouse will be using  
helical piers topped with a  
modified concrete foundation

## Extra Excavation for a Standard Foundation:

- Excavation to about 15 feet deep
- Excavation area adds additional 20 feet to each side of footprint
- Significant dewatering
- Replace with engineered fill
- Adds approximately 3-4 months to the construction schedule
- Requires additional WDNR permits

**Vs.**

## Helical Pier Foundation:

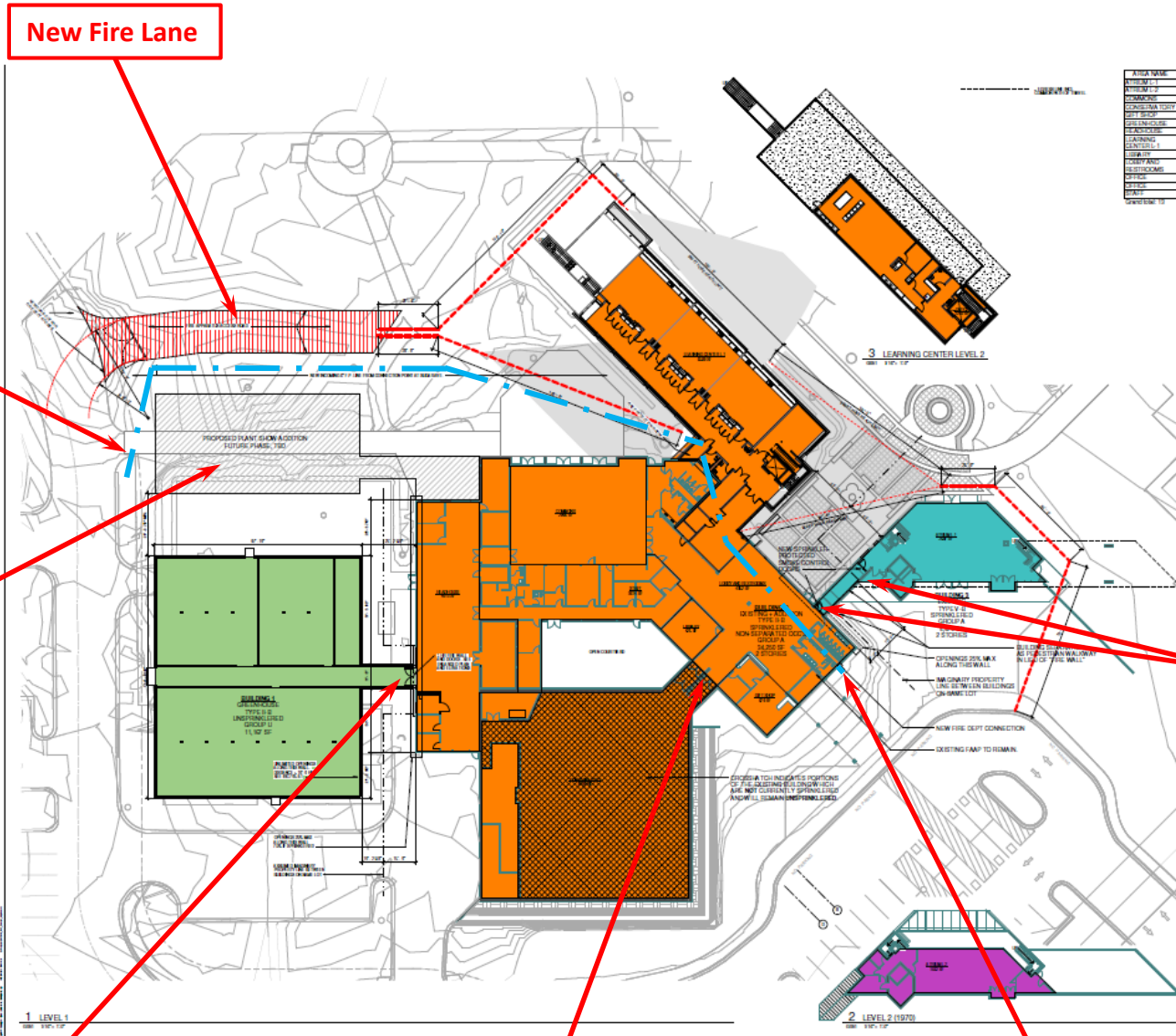
- Excavation between 5 & 8 feet deep
- Excavation area adds additional 5 feet to each side of footprint
- Minimal dewatering
- Replace with engineered fill
- Does not add time to construction schedule

# Fire Code and Life Safety Requirements

Estimated cost of construction

\$ 313,219

(does not include sprinkler requirements for new Learning Center)



New Fire Lane

New 6" Sprinkler Main

Future Plant Show Pavilion

1 hour smoke doors, (qty. 2)

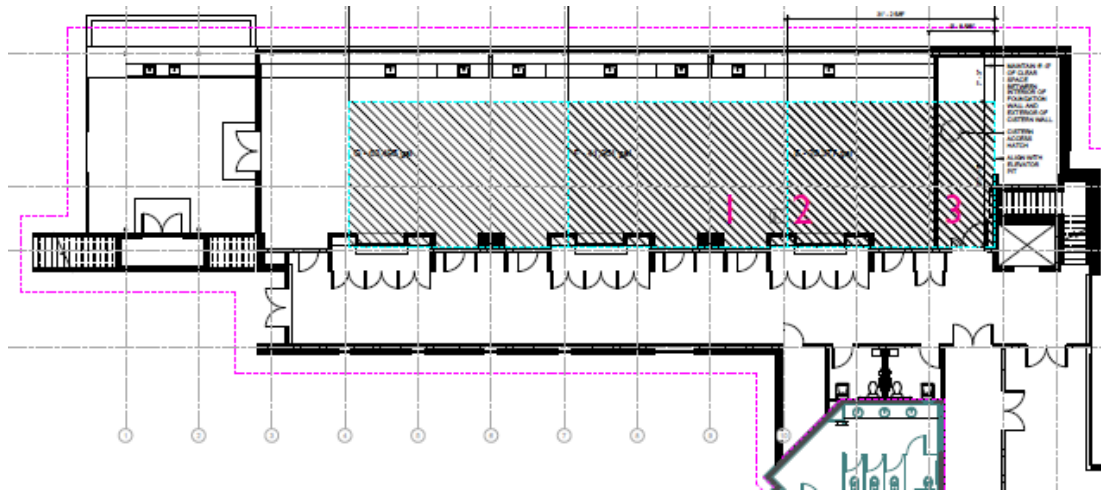
3 hour construction at connecting door

2 hour FP, 2 pair of 2 doors, glass entry type

Fire Department Connection with 4" main line to front entrance

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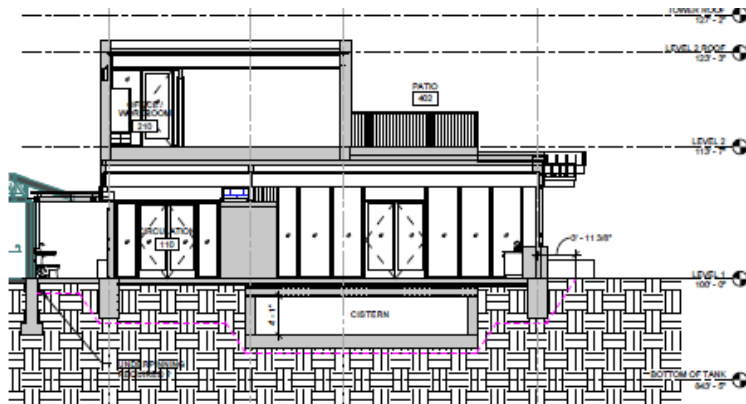
# Storm Water Management - Cistern



Estimated cost  
of construction

**\$ 323,628**

(includes cistern,  
piping, and  
equipment)



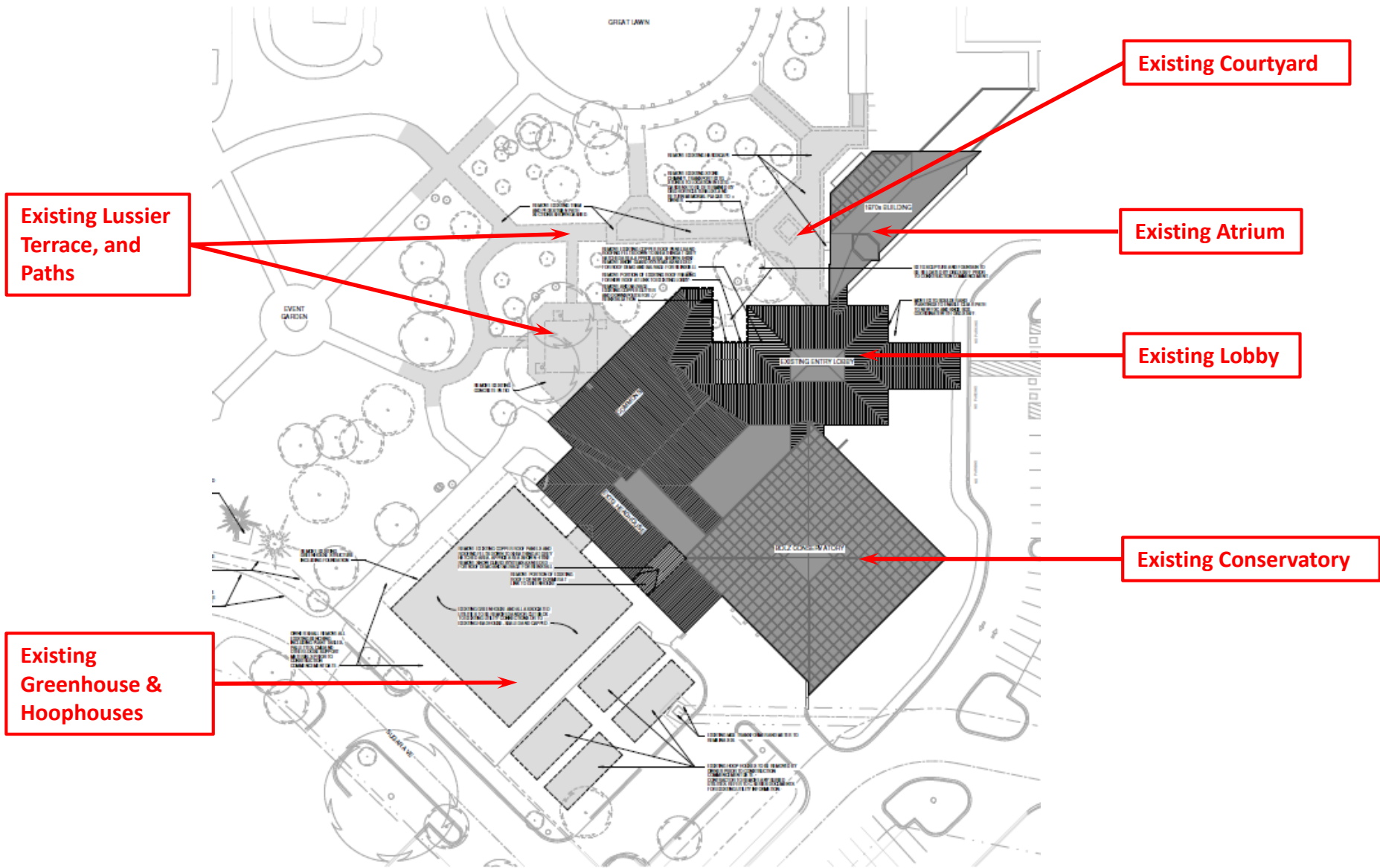
- Cistern collects 95% of the roof water which currently is piped directly to Starkweather Creek
- When empty will handle the 100 year storm event per City of Madison Ordinances (incl. estimated future Plant Show Pavilion roof)
- Water will be used as primary plant water source for plants in the Greenhouse and Conservatory (339,000 gal./year)
- Reduces water consumption from the aquifer by 447,000 gal. per year
- Reduces clean water waste to MMSD by 149,000 gal. year
- Replaces the need to put a 30' by 100' by 3' detention pond within the gardens
- Will have a small detention pond to handle overflow, pre-filter discharge, and as an educational opportunity

**Cistern Capacity = 60,000 gallons**



**X 6**

# Olbrich Botanical Gardens Existing Site Plan

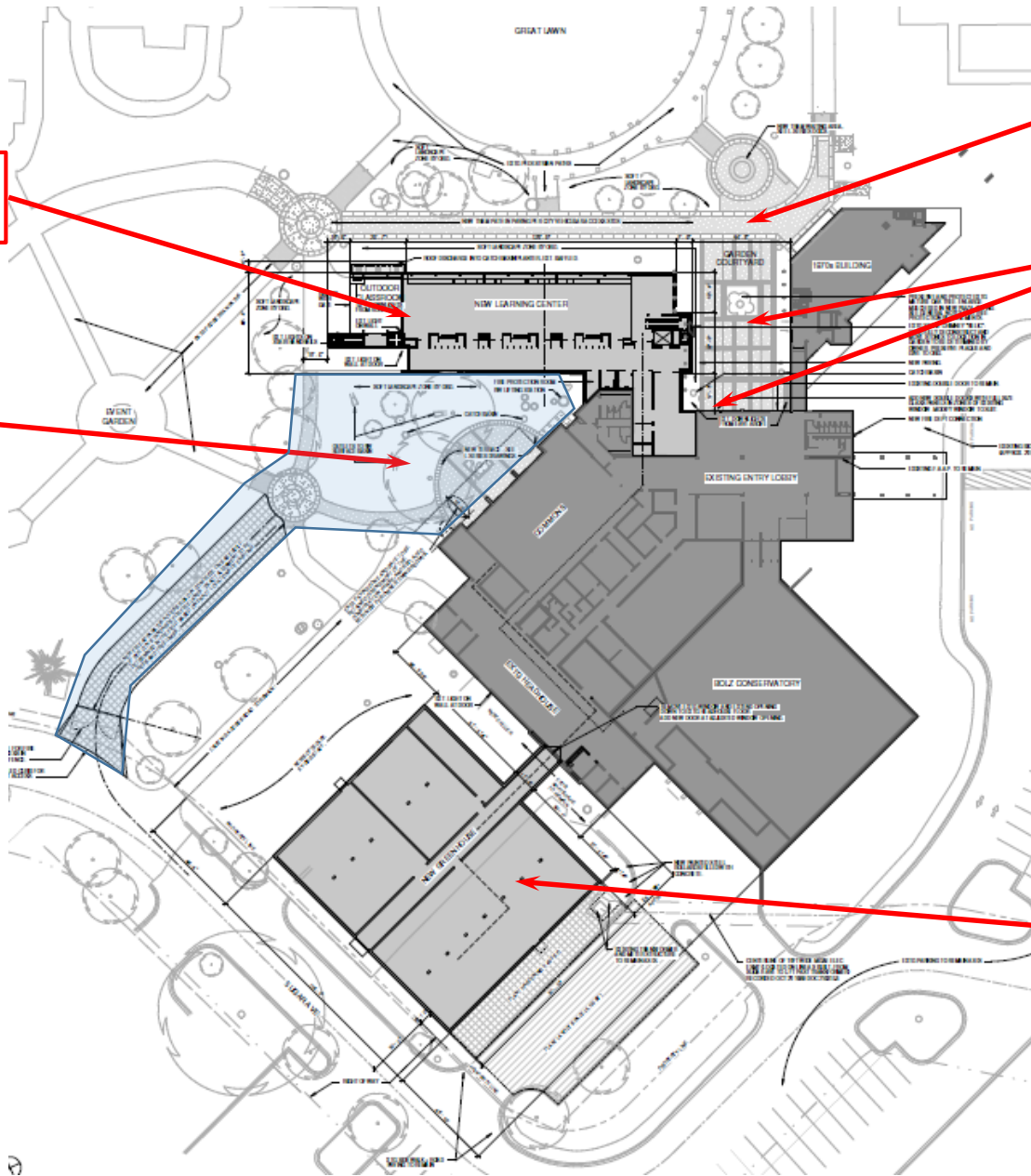


# Relocate/Reconstruct Existing Hardscape

**New Learning Center**

**New Lussier Terrace and Paths**

**Shaded area is needed for construction access**



**New Tram Pickup Point and Main Path to be relocated by construction**

**New Courtyard and additional door from Lobby to improve garden access.**

**Estimated cost of construction**

**\$ 184,941**

(does not include fire access lane)

**New Greenhouse**



# Budget Amendment Summary



<b>Original Project Budget</b>	<b>\$10,000,000.00</b>	2017/2018; \$5M City & \$5M Olbrich Botanical Society
Design & Soft Costs	(\$1,620,000.00)	Costs expensed or reserved through construction
Learning Center	(\$4,219,442.00)	Estimated construction costs
Greenhouse	<u>(\$3,830,116.00)</u>	Estimated construction costs
<b>Balance Remaining</b>	<b>\$330,442.00</b>	Indicates a positive balance on project to date
Helical Foundations	(\$1,273,381.00)	Learning Center and Greenhouse combined
Fire Code & Life Safety	(\$313,219.00)	Learning Center and Greenhouse combined
Storm Water Management	(\$323,628.00)	
Reconstruct Hardscape	<u>(\$184,941.00)</u>	
<b>Estimated Project Shortfall</b>	<b>(\$1,764,727.00)</b>	To be cost shared 50/50 City Parks and OBS per resolution