The City of Waco
Gibbon Lake Update

10.20.2026

Brendan Wiley, Zoo Director, Cameron Park Zoo

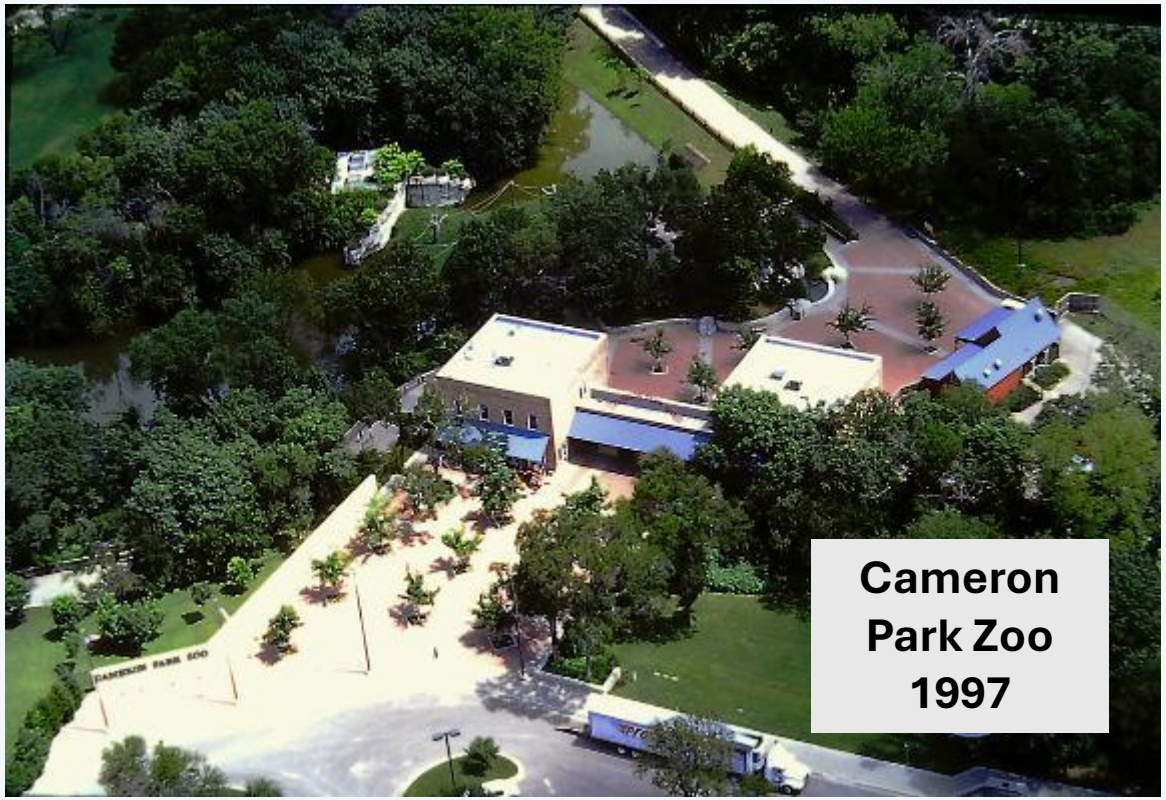
Charles Leist, City Engineer and Director, Infrastructure Services

Purpose of Presentation

- Background
- The Residents
- The Challenge
- The Solution
- Current Status
- What’s Next

Gibbon Lake Background

Background

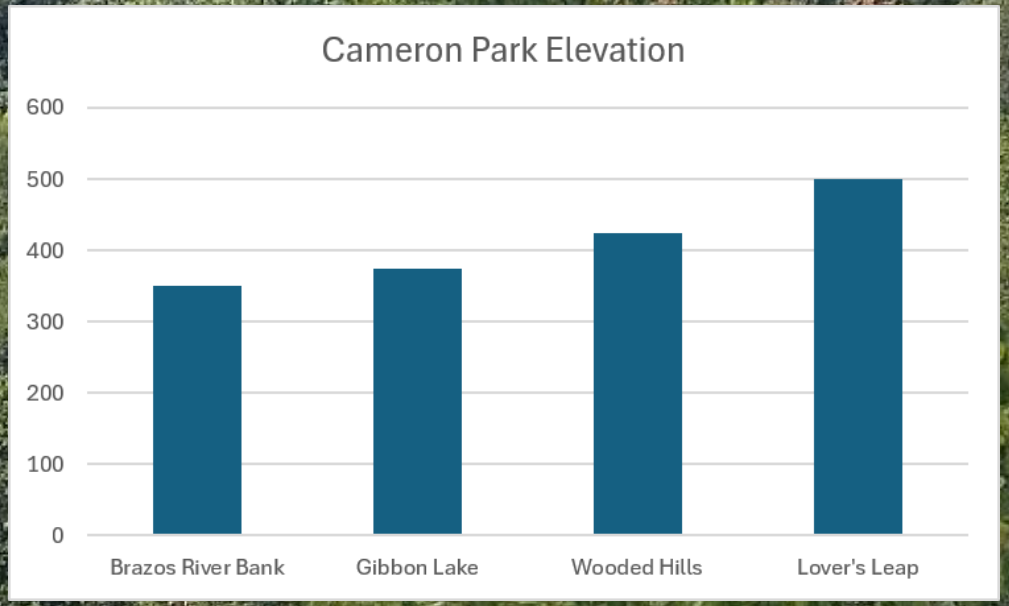


- Zoo opened at Cameron Park location in 1993.
- Site specifically chosen for its natural aesthetic feel.
- Utilized natural topography to create emotional connections.

Background - Timeline

- 1992 – Gibbon Lake Construction.
- 1993 – Cameron Park Zoo Opens.
- 1999 to 2002 – Significant drought.
- 2005 to 2006 – Significant drought.
- 2010 to 2015 – Significant drought.
- 2011 – Lemur Island and Lemur Deck constructed.
- 2021 to 2025 – Significant drought
- 2023 – Inability to sustain water level in lake.

Background – Effect of Topography



With every drought, Gibbon Lake moves on this limestone bluff.

Gibbon Lake Residents







Lar Gibbons

- Spike – Age 41
- Gracie – Age 39
- Charlie – Age 7



Red-roughed Lemurs

- Weasley – Age 20
- Esther – Age 17









Ring-tailed Lemurs

- Crystal Light – Age 16
- Capri Sun – Age 16
- Skittles – Age 11


Our Community

Cameron Park Zoo Mission

- Together, we exist to protect wildlife and wild places by connecting people to nature.
- Our vision is a world where people and animals thrive together.

The Challenge



Gibbon Lake – 2024 Drone Image

How bad of a leak was it?

- Approximately 1 million gallons of water per day was going into Gibbon Lake.
- Until meters were installed on the mains leading to the zoo in FY23, water fees did not match water usage.
- Metered usage of combined water sources and associated sewer fees had an annual value of $3.3 million.

Shutting Down Gibbon Lake

An unpopular decision:

- While the decision was unpopular the lake was not sustainable.
- Lemurs were relocated.
- Gibbons got a new day yard.
- Animal Care staff managed and monitored the psychological wellbeing of the animals.
- Infrastructure Services investigated solutions.

Funding the solution was within the savings.

The Solution

Understanding The Issue To Solve It

Understanding the Cameron Park Zoo's water systems with a little help from a lot of departments.

- Understanding how the Cameron Park Zoo was built.
- Knowing where every meter existed.
- Isolating usage patterns.
- Testing water everywhere.
- Daily meter readings.
- Pursuing potential alternate solutions.

Discovery Point – It wasn't a single issue. It was multiple issues that needed to be addressed concurrently.

Project Goals and Budget

Goals:

- **Reconstruct islands and stabilize banks.**
- **Rehabilitate decks.**
- **Eliminate leaks in lake through foam injections and clay patches.**
- **Operate solely with pretreated and recycled water.**
- **Update supporting systems around the lake.**

Budget

- **FY25 CIP - $1.6 million**

Bank Stabilization

- Earthwork to re-establish islands to original grades
- Installation of gabion mattresses to prevent future erosion






Foam Injection

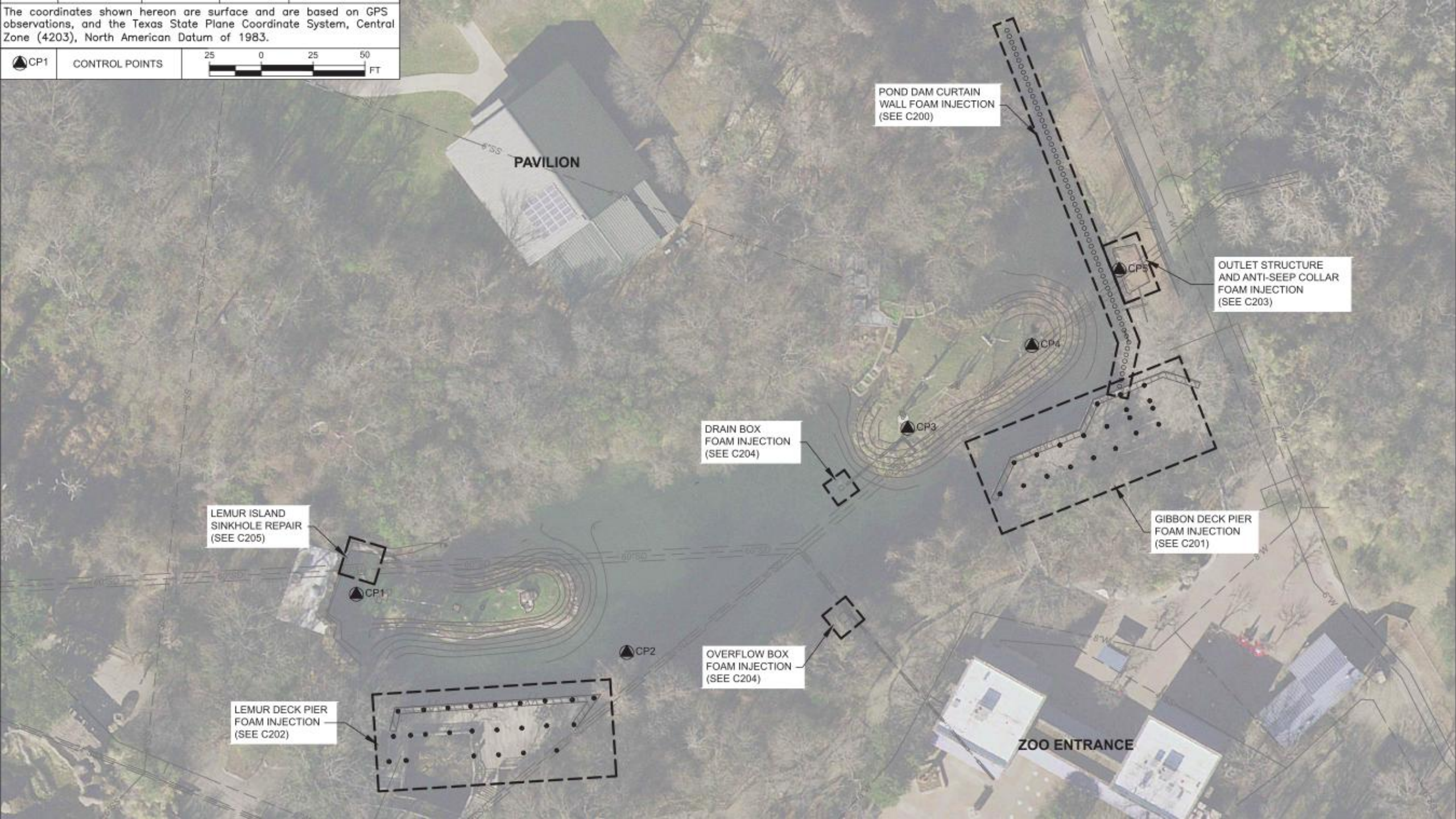
Targeted injection of hydro-insensitive polymer to densify soil

1. Pond dam curtain wall
2. Outlet structure and anti-seep collar
3. Gibbon deck piers
4. Drain box
5. Overflow box
6. Lemur deck piers
7. Lemur island sinkhole

The coordinates shown hereon are surface and are based on GPS observations, and the Texas State Plane Coordinate System, Central Zone (4203), North American Datum of 1983.

CP1 CONTROL POINTS

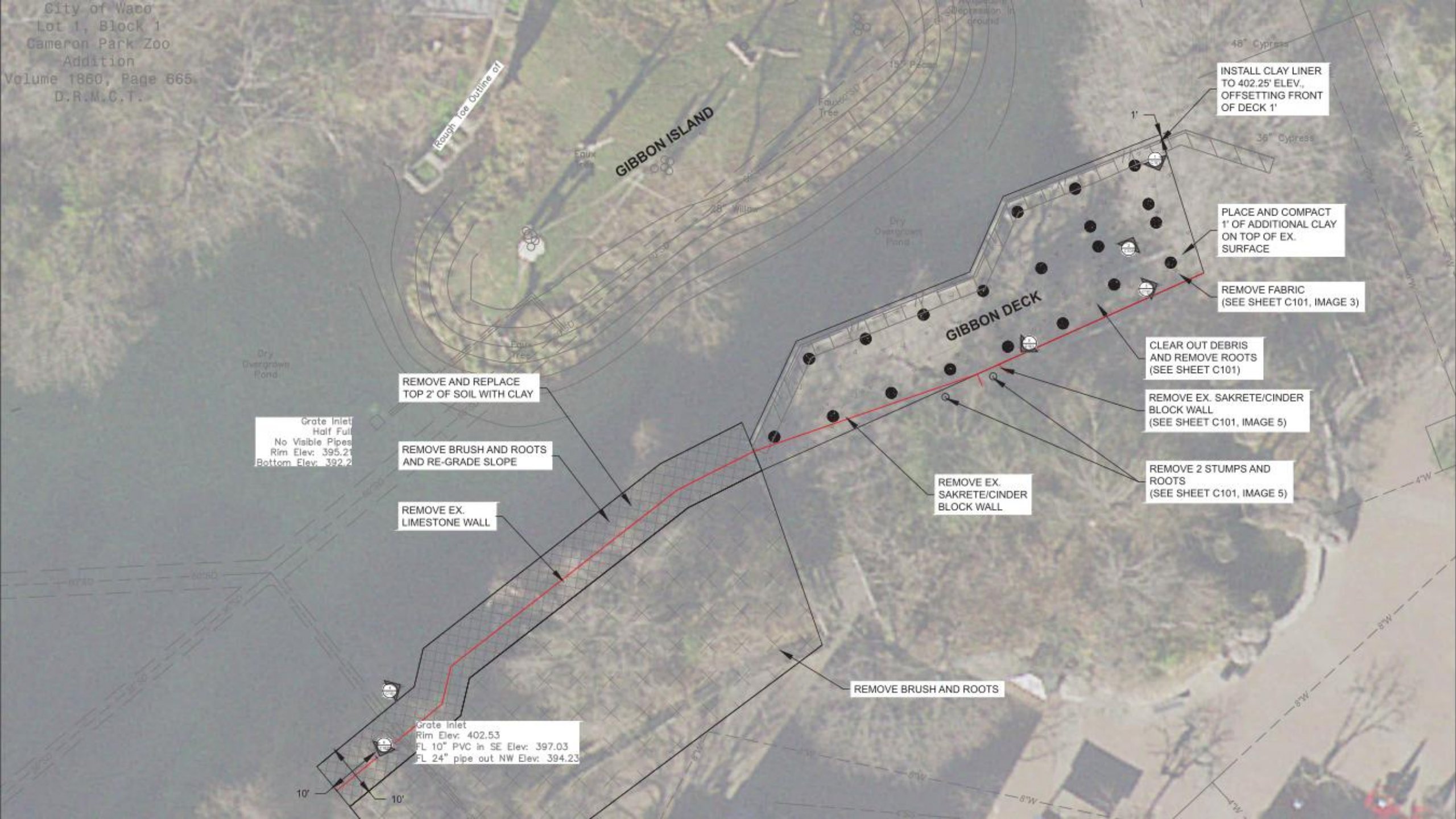
25 0 25 50 FT



Clay Liner Plug

- Clear existing vegetation

- Excavate and install clay in areas where pond was observed leaking (gibbon deck, pond bank west of gibbon deck)


City of Waco
Lot 1, Block 1
Cameron Park Zoo
Addition
Volume 1860, Page 665
D.R.M.C.T.
Rough Toe Outline of
GIBBON ISLAND
GIBBON DECK
Dry Overgrown Pond
Grate Inlet
Half Full
No Visible Pipes
Rim Elev: 395.21
Bottom Elev: 392.2
Grate Inlet
Rim Elev: 402.53
FL 10" PVC in SE Elev: 397.03
FL 24" pipe out NW Elev: 394.23
INSTALL CLAY LINER TO 402.25' ELEV., OFFSETTING FRONT OF DECK 1'
PLACE AND COMPACT 1' OF ADDITIONAL CLAY ON TOP OF EX. SURFACE
REMOVE FABRIC (SEE SHEET C101, IMAGE 3)
CLEAR OUT DEBRIS AND REMOVE ROOTS (SEE SHEET C101)
REMOVE EX. SAKRETE/CINDER BLOCK WALL (SEE SHEET C101, IMAGE 5)
REMOVE 2 STUMPS AND ROOTS (SEE SHEET C101, IMAGE 5)
REMOVE EX. SAKRETE/CINDER BLOCK WALL
REMOVE AND REPLACE TOP 2' OF SOIL WITH CLAY
REMOVE BRUSH AND ROOTS AND RE-GRADE SLOPE
REMOVE EX. LIMESTONE WALL
REMOVE BRUSH AND ROOTS
1'
10'
10'

Clay Liner Plug



04-27-2026: Items removed from pond



08-05-2026

Current Status





Next Steps


104 °F
626 mbar
544 mbar
08-13-2026
2:31:20 PM
84.70 ft
3.68 %
84.70 ft

Remaining Work

- 36” Storm Drain Joint Repair(~22 joints, 250’ section of pipe)
- Electrical upgrades to support lighting and lake aeration.
- Hardscaping and landscaping.
- Additional recirculation and water capture.
- Pathway repair.

Budget Summary

FY25 CIP Project Budget:	**$1,600,000**
Expenses:	
• Spent/Encumbered to Date	$910,636
• Storm Drain Repair	$125,000
• Remaining Updates	$240,000
Total Estimated Expense:	**$1,275,636**
Funds Eligible for Zoo Reinvestment:	**$324,364**



Thank you.

Please Contact Brendan Wiley, BrendanW@wacotx.gov, for any questions.