

ATX

FLOOD SAFETY

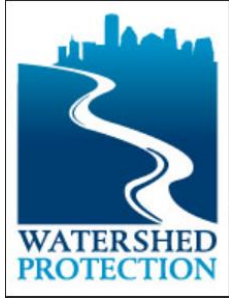
[Old Lampasas Dam]

TX07295

PARD Board
January 22, 2024



Introductions



Project Sponsor & Team:
Marie Lancaster, E.I.T.
Henry Price, P.E.



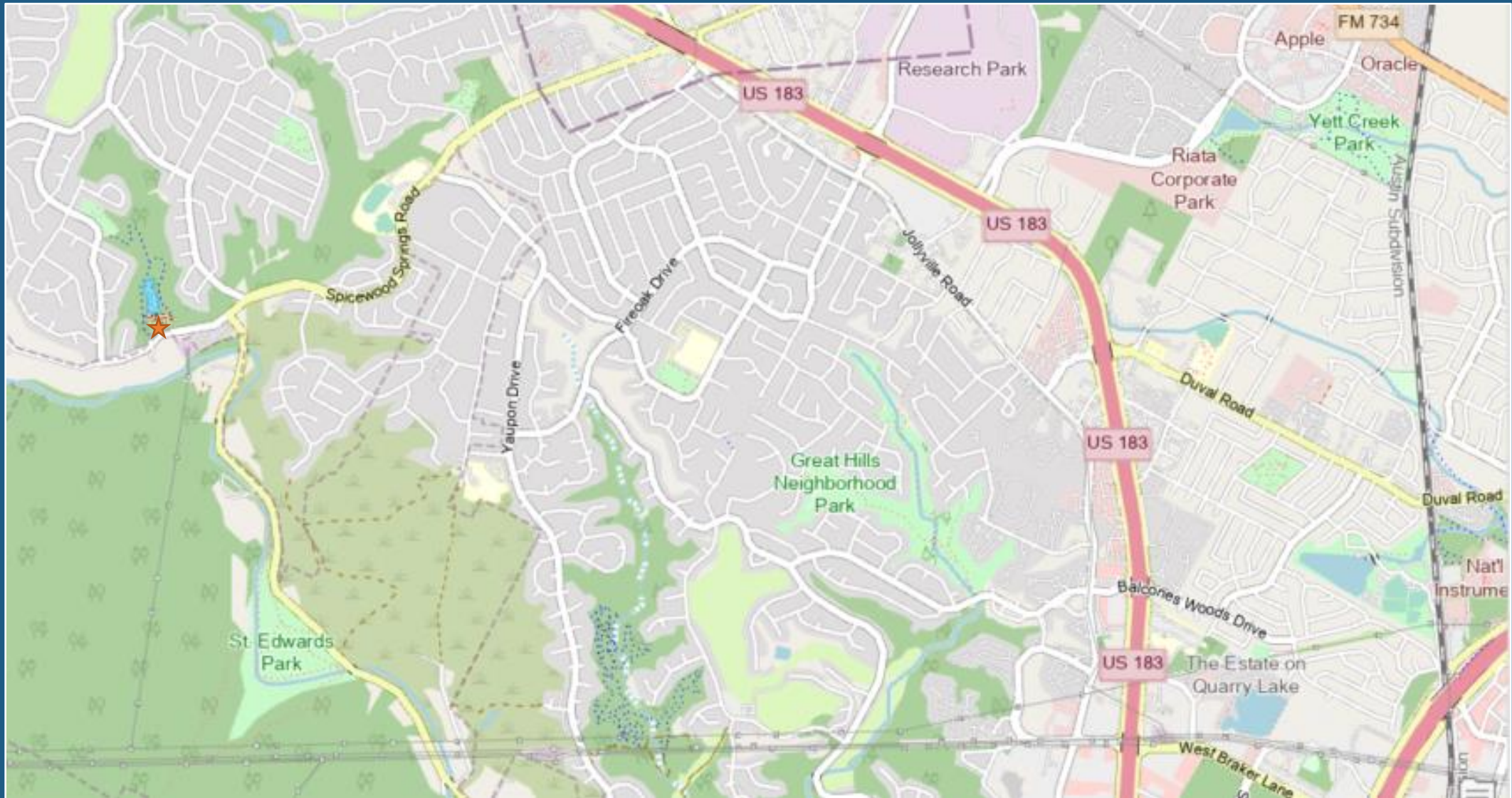
Project Manager:
Minda Sarmiento, P.E.



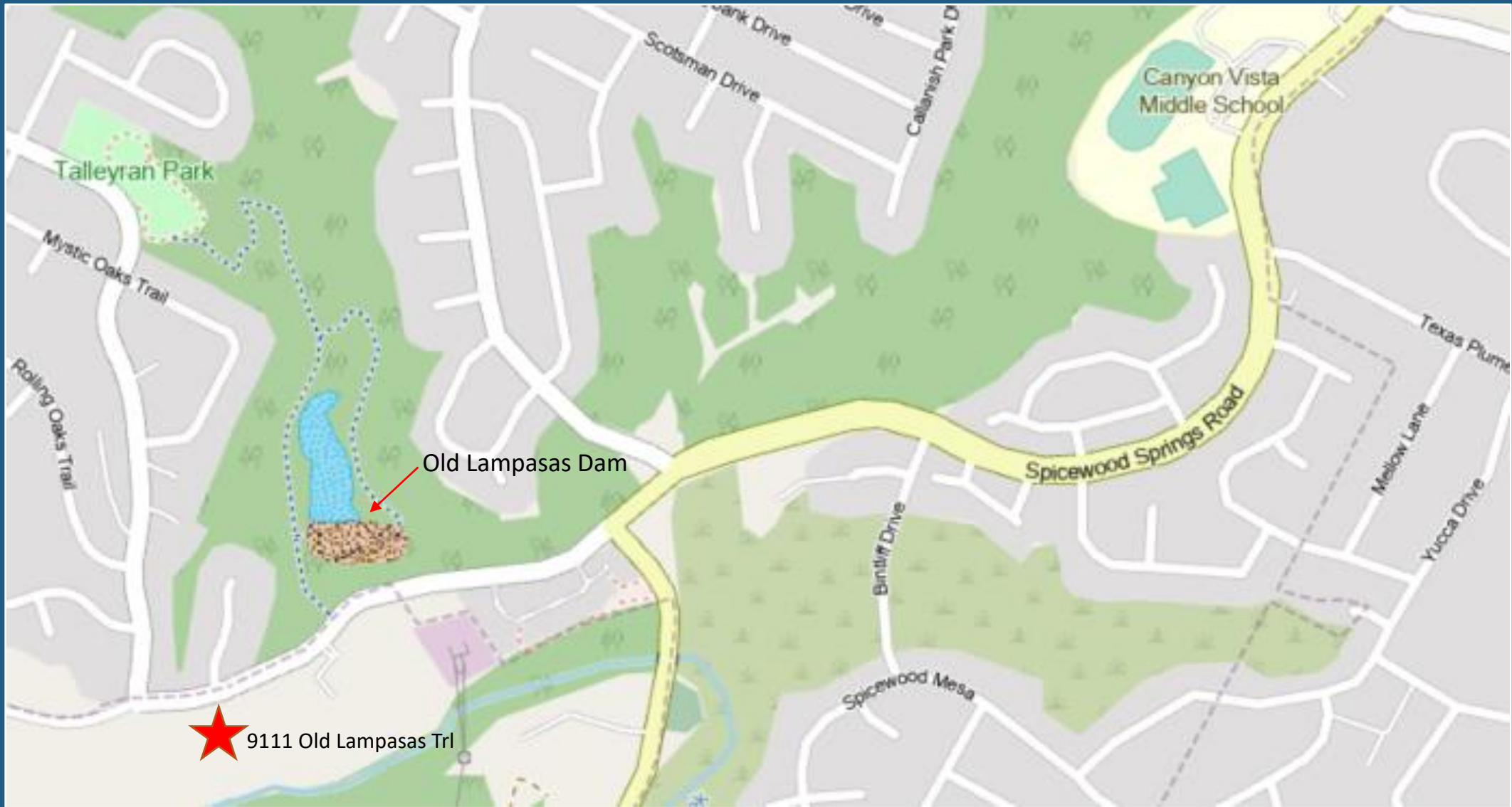
Project Consultants:
Kim Patak, P.E.
Will Huff, P.E.

“Watershed Protection protects lives, property and the environment of our community by reducing the impact of flood, erosion and water pollution.”

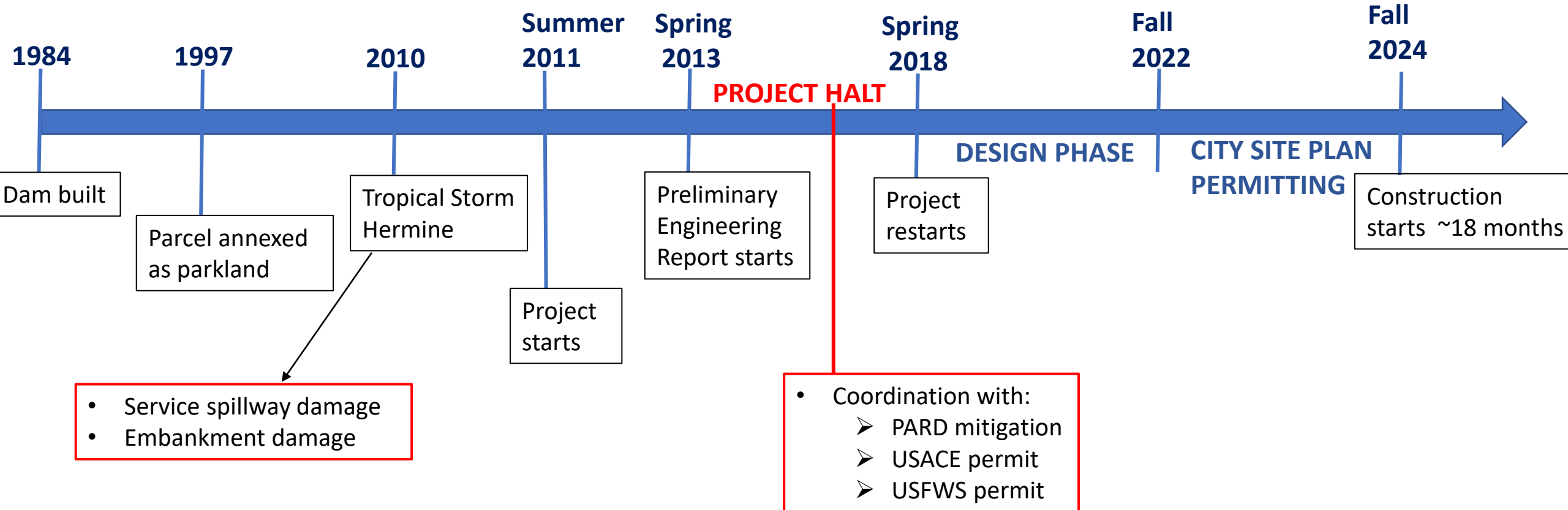
Project Location



Project Location



Project History



TCEQ Dam Safety Program

- Texas Administrative Code Title 30, Part 1, Chapter 299: Dams and Reservoirs
 - Old Lampasas is a high hazard dam
 - Recent TCEQ inspections – Poor condition
 - severe deterioration of the service spillway pipe
 - holes on the slopes and dense overgrowth of trees and brush on the embankment
 - does not safely pass 75% of the Probable Maximum Flood (PMF)



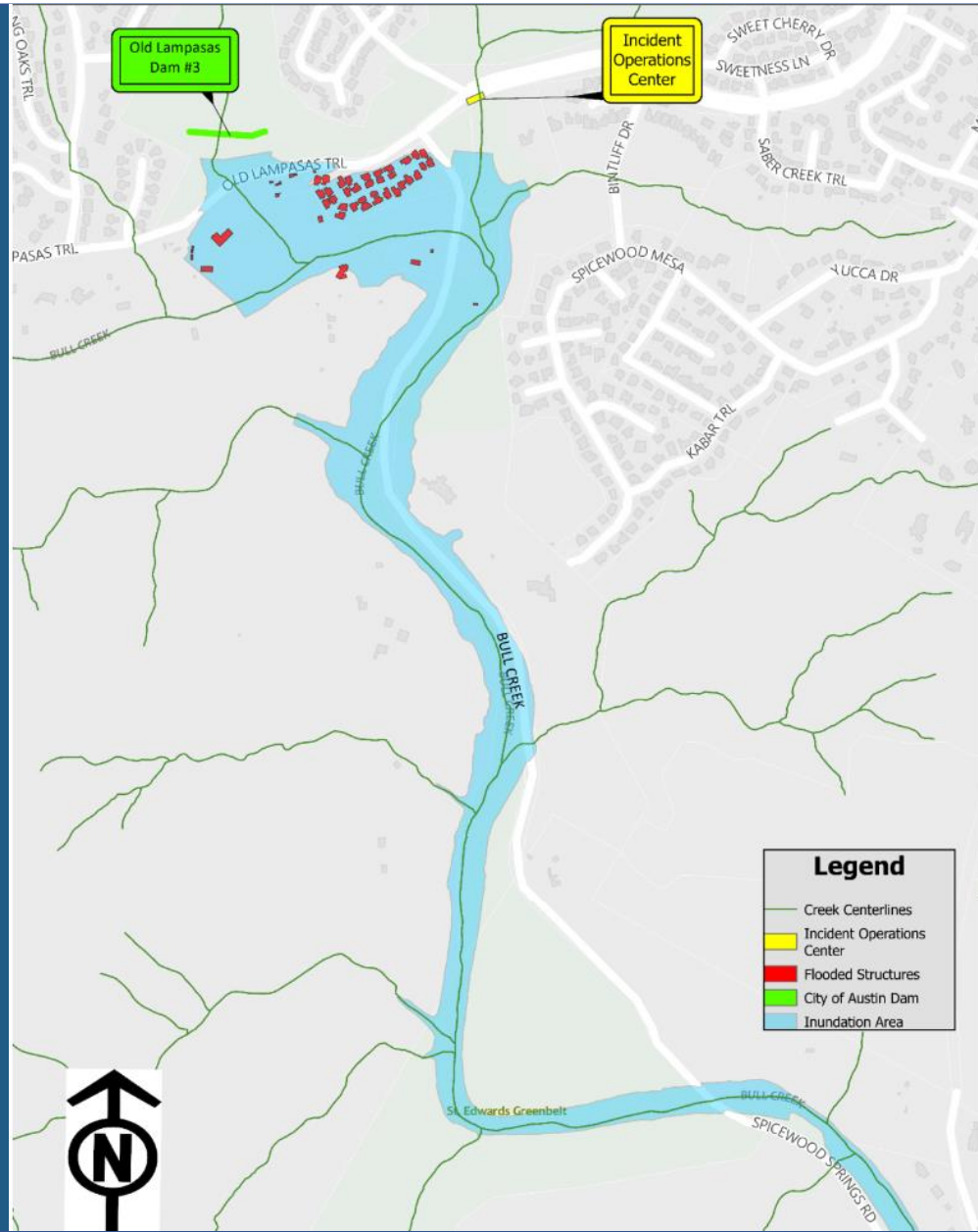




Holes on slope



Erosion on slope



Inundation Map

- Over 30 structures at risk of flooding
- 2 roads at risk of flooding
- 6 low water crossings at risk of flooding

Project Scope

- Replace damaged, existing principal spillway with new 42-inch diameter pipe
- Replacement of the existing wastewater line through the embankment of the dam
- Removal of existing trees and boulders on dam footprint
- Installation of a new Flood Early Warning System instrumentation



Project Scope

- Armoring of the existing plunge pool to reduce future erosion impacts
- Construction of a new auxiliary spillway
- New maintenance drive to give the City access to maintain the dam
- Raise and reinforce dam structure to contain the worst case scenario flood and meet City and State Dam Safety criteria

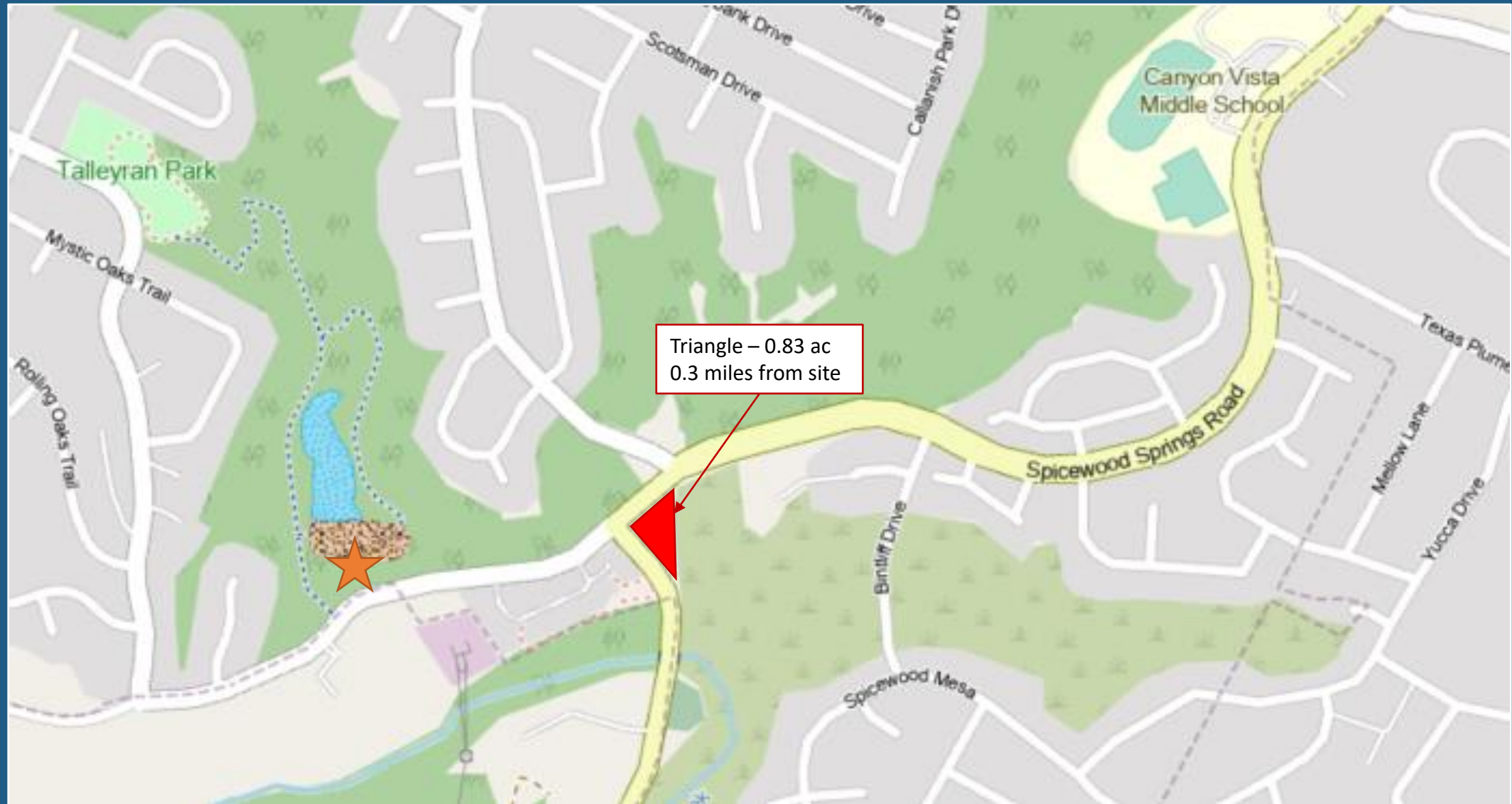


Project Scope

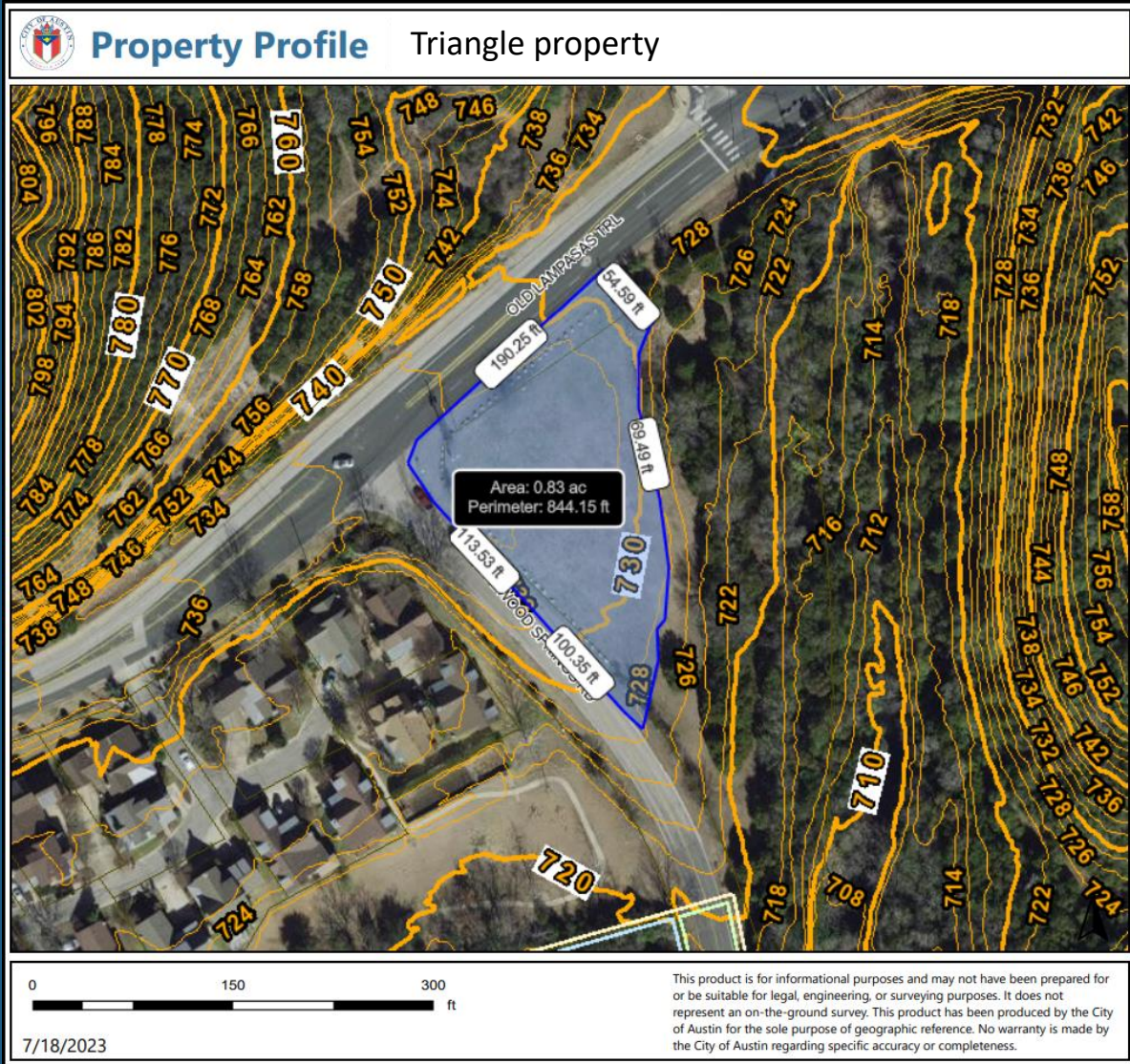
- Propose new outflow structure that provides extended detention for additional water quality benefits
- Improve habitat for Jollyville Plateau Salamander
- Estimated construction cost \$12.8M



Staging Area Location



Staging Area



- This land and the project site are PARD properties
- Closest to project site
- Will be used for ~18 months
- Will be used to store equipment and materials

Project Recap

- Fix severe deterioration of Old Lampasas Dam
- Meet City and State Dam safety criteria
- Provide additional water quality
- Enhance threatened and endangered species habitat



WPD Request

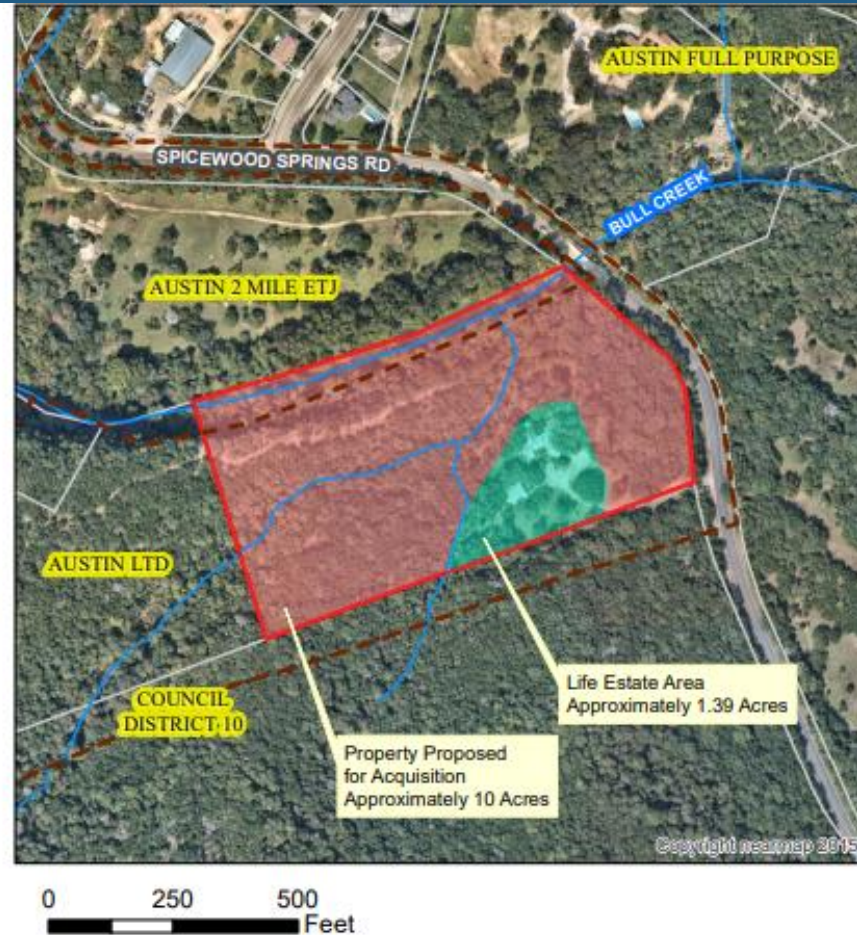
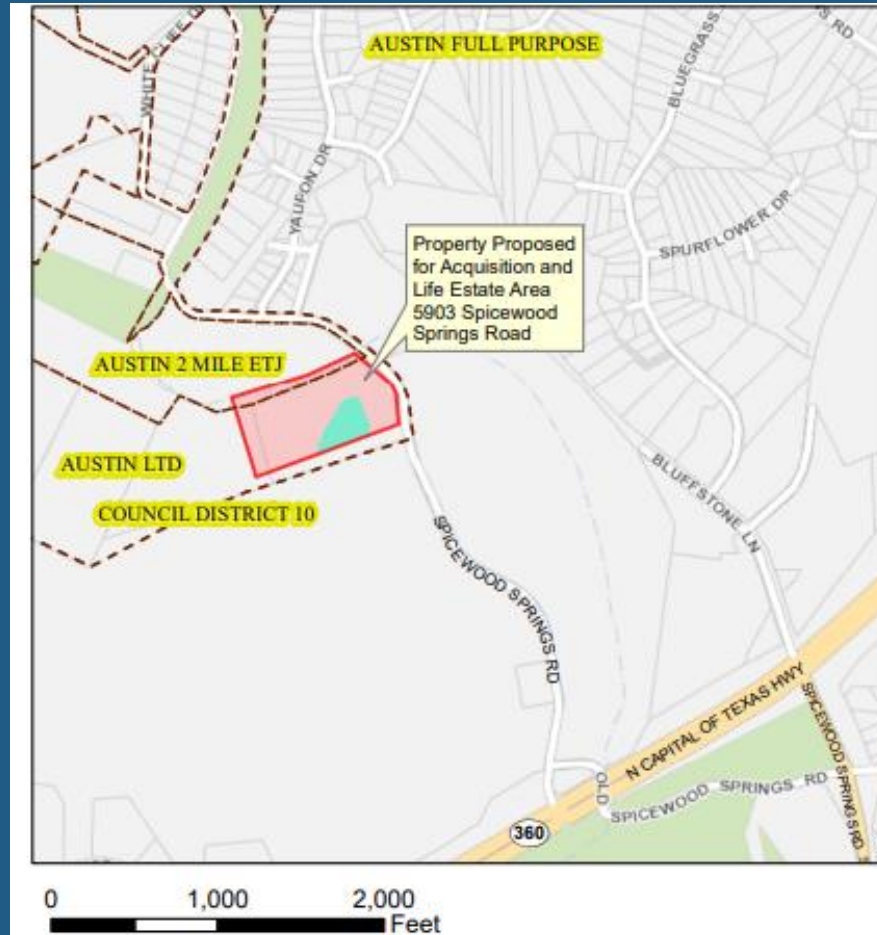
- Make a recommendation to City Council for approval of Temporary Use of parkland located at 8020 Spicewood Springs Rd – The Triangle not to exceed 540 Days.
- Total Mitigation is \$226,500 will be covered through:
 - Improvement of parkland
 - Reuse of materials (trees, boulders)

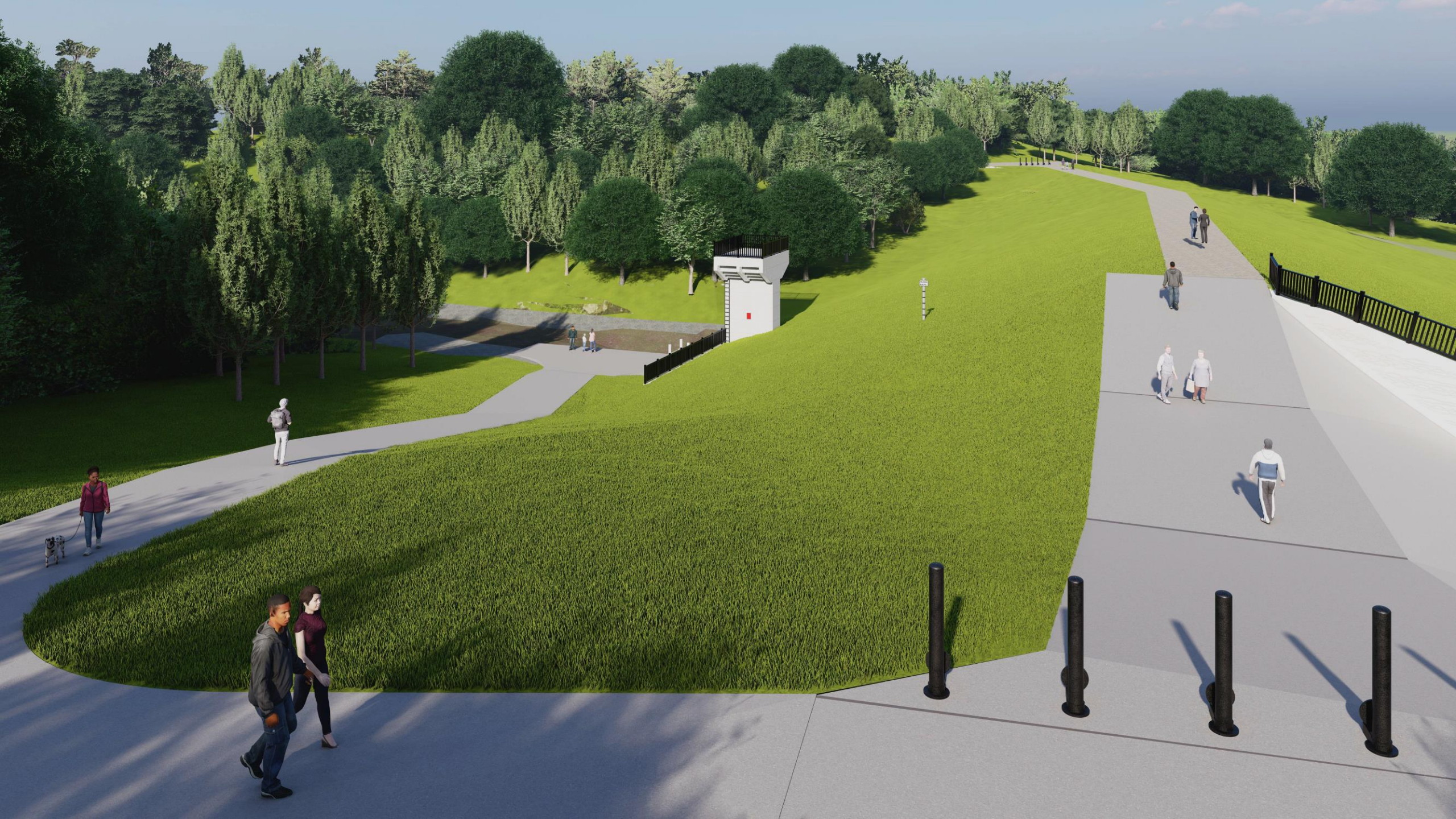


Questions?

Tree Mitigation

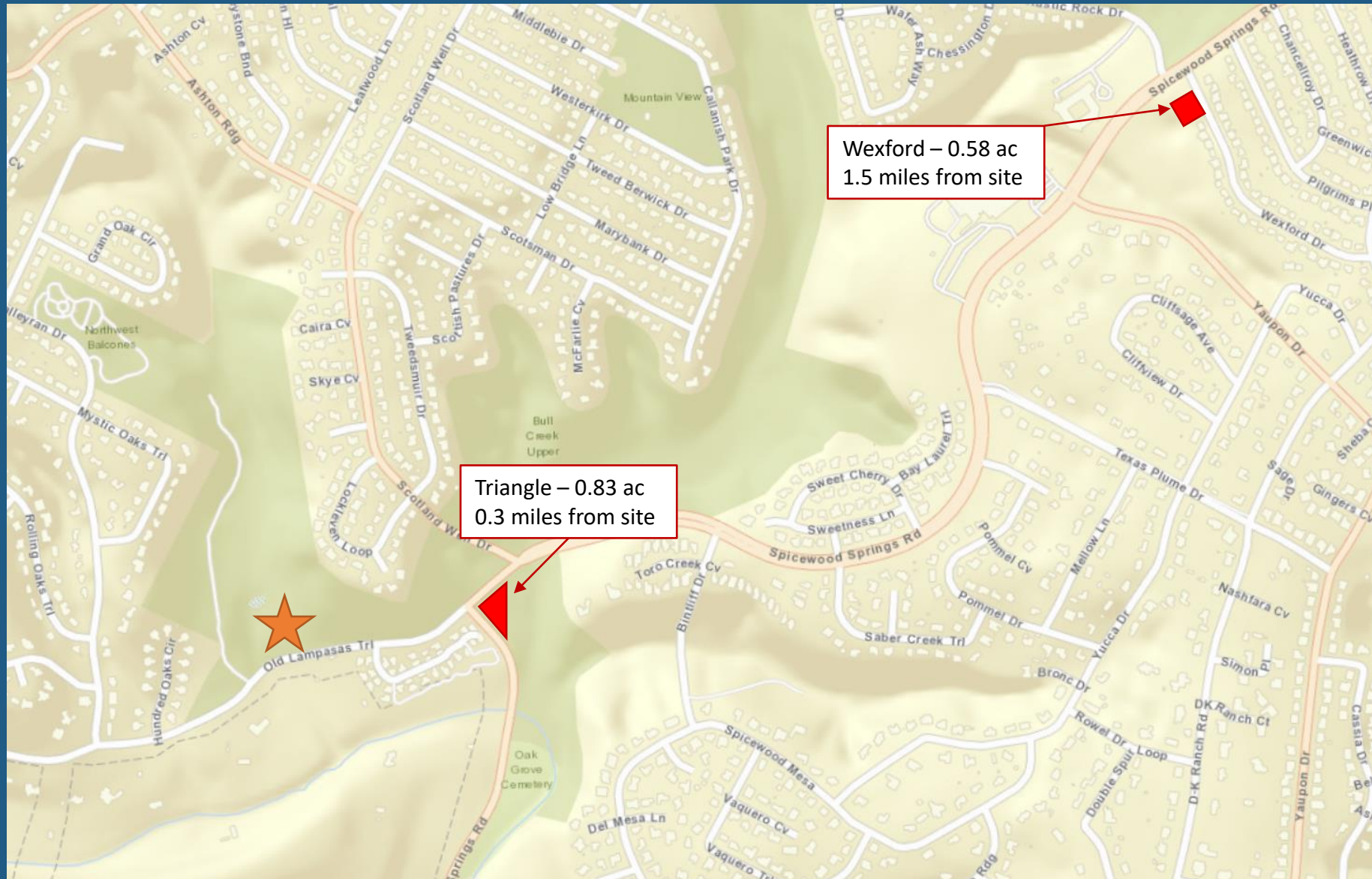
- Project partnered with PARD to acquire property located at 5903 Spicewood Springs







Other Staging Areas Location



COA LDC Variances

- LDC 25-8-261 – Development within the Critical Water Quality Zone
- LDC 25-8-301 – Construction of a roadway or driveway on slopes greater than 15%
- LDC 25-8-341 – Cut greater than 4'
- LDC 25-8-342 – Fill greater than 4'



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Possible Construction Impacts

- Trail closures (detours)
- Truck staging and traffic (no closure)
- Boulder and tree removal
- Material and equipment staging areas



Next Steps

- Obtain City Permit
- Advertise for Bid/Award
- Conduct Meet the Contractor Meeting
- Start Construction
- Construction length: ~18 months

