



# Austin Energy Duct Bank – Powering Downtown

Chapter 26 Application for AE Infrastructure within Parkland  
At Waller Beach at Town Lake Metro Park

Parks Board Meeting  
City Hall Chambers, Webex  
3/27/2024 @ 6 PM

# Topics Covered

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- Overall Project Summary
- Downtown Power Resiliency Goals/Needs
- History of Alternative Duct Bank Designs and Routes
- Determination of Final Route and Design
- Parkland Impacts due to Duct Bank design
- Community and Economic Impact

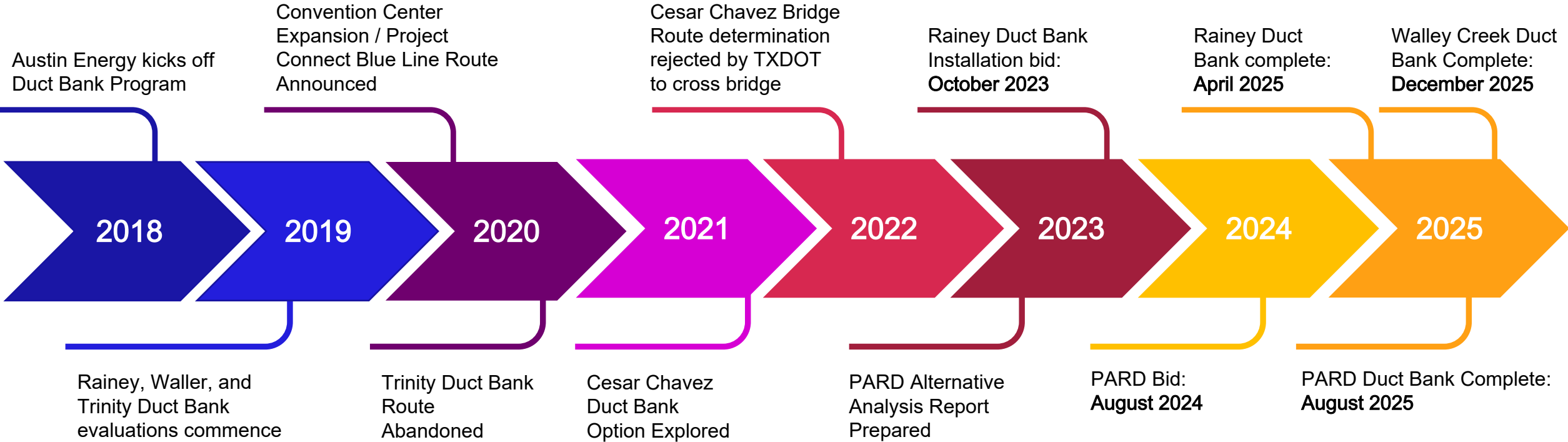
## Overall Project Summary

- The objective of this project is to provide an accessible and maintainable duct bank system that AE will use to provide distribution power to the downtown grid.
- Installation of the 9x5" electric duct bank is within the City of Austin Waller Beach at Town Lake Metro Park located south of Cesar Chavez, along the banks of Lady Bird Lake between Brazos St and Trinity St.
- Approximately 772 LF installed via micro-tunneling (through Parkland).
  - Micro-tunneling depth to be 20-40 ft below ground level
- Approximately 241 LF installed via open cut (in ROW at the Brazos St cul-de-sac and in Parkland in front of the Waller Creek boathouse).

# Austin Energy Downtown Power Grid Resiliency Goals/Needs

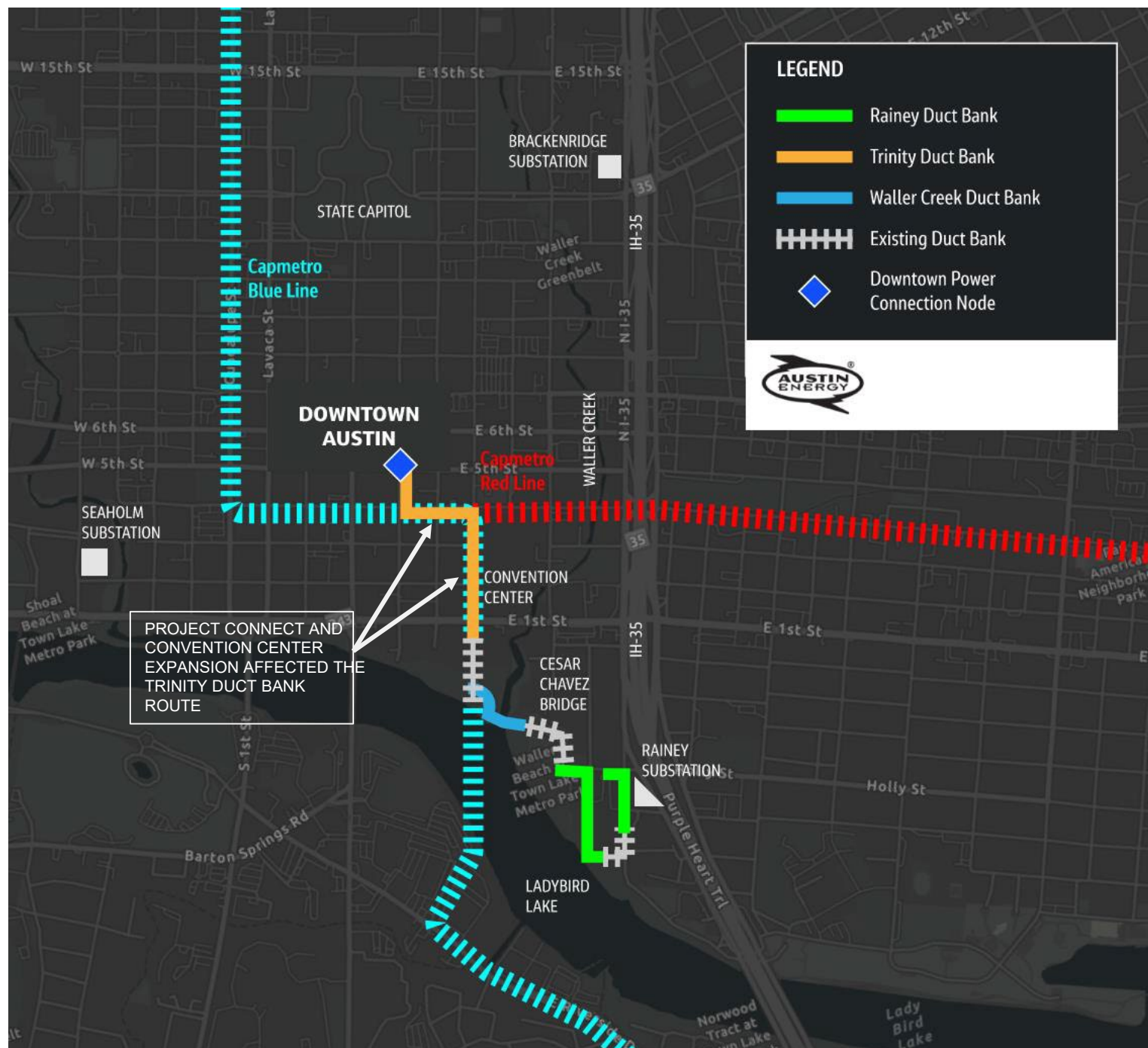
- Due to growth in the Austin Downtown Network area, Austin Energy (AE) recently completed the construction of a third Network substation in the Rainey neighborhood.
- The Rainey Street Substation at East Avenue and River Street allows AE to provide continued reliability to existing customers and support future growth.
- AE has faced significant challenges and delays with the development of the Project Connect Blue Line project and the TXDOT expansion of I-35.
- After evaluating various alternative duct bank routes, Austin Energy is requesting to utilize parkland to provide power duct banks to downtown.

# Route Evaluations Timeline



# Route Evaluations – Trinity and 4th

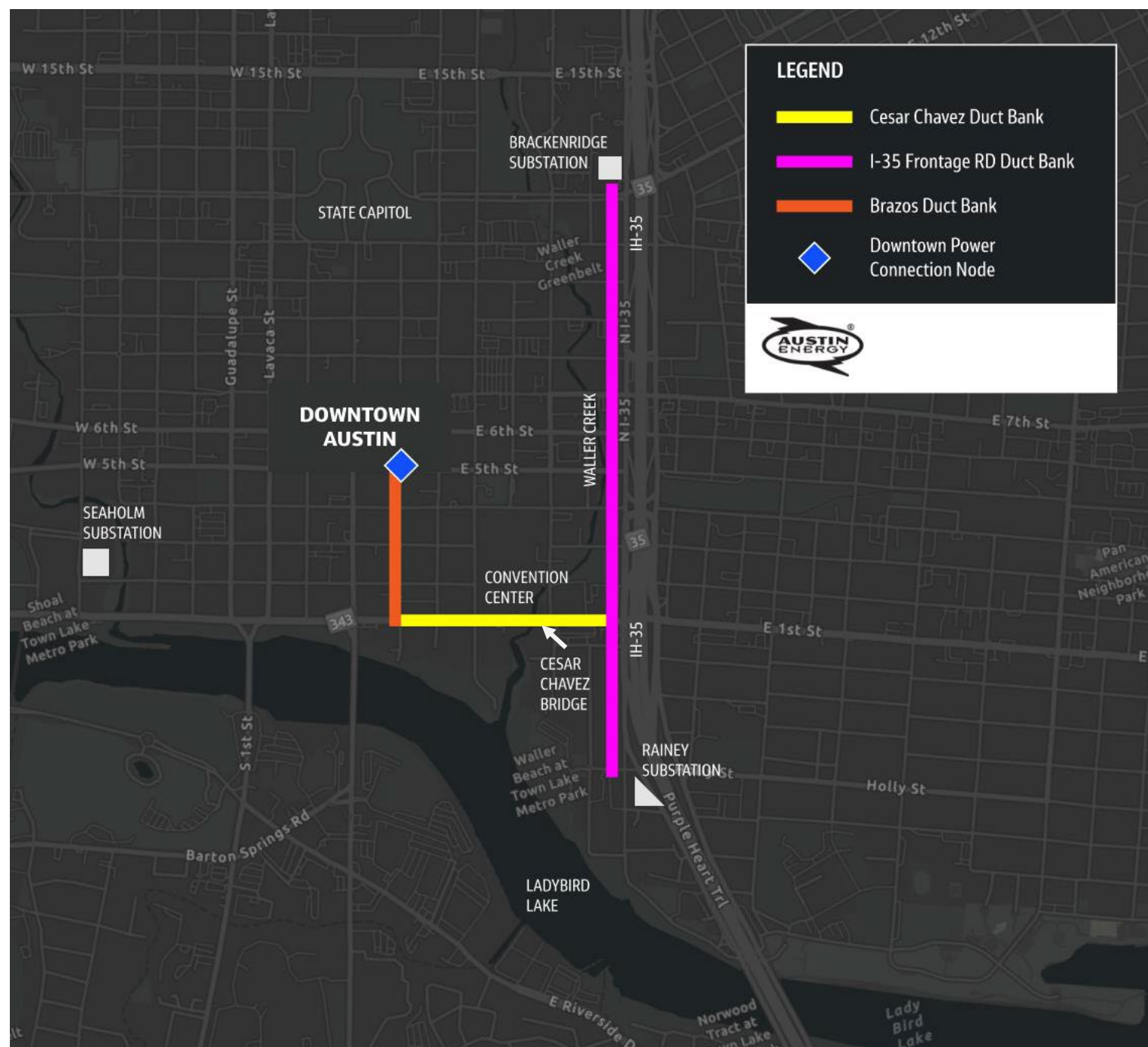
The original Trinity and 4<sup>th</sup> St Duct Bank route became an infeasible option due to Project Connect's announcement of the Blue Line route and the expansion of the Convention Center underground crossing under Trinity.



# Route Evaluations – I35 Frontage Road and Cesar Chavez Bridge

Duct bank alignment along the IH-35 Frontage Road corridor is significantly delayed due to TXDOT's IH 35 expansion.

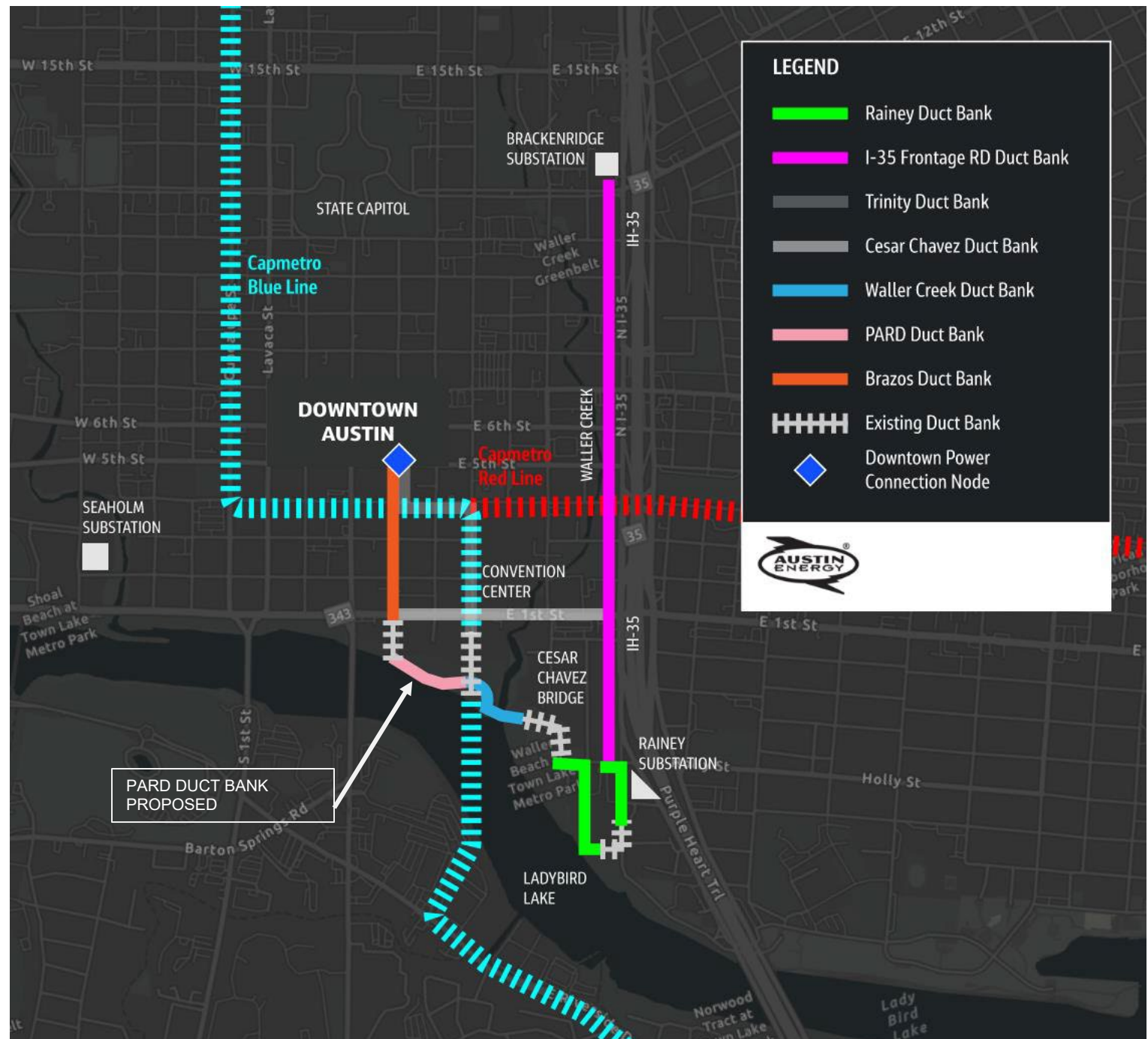
Proposal to install duct bank underneath the Cesar Chavez Bridge has been declined by TXDOT.





# Route Evaluations – Parkland Crossing

With the abandoned Trinity duct bank and TXDOT unable to approve a duct bank crossing the Cesar Chavez Bridge, the last feasible option was to bore through the Parkland.





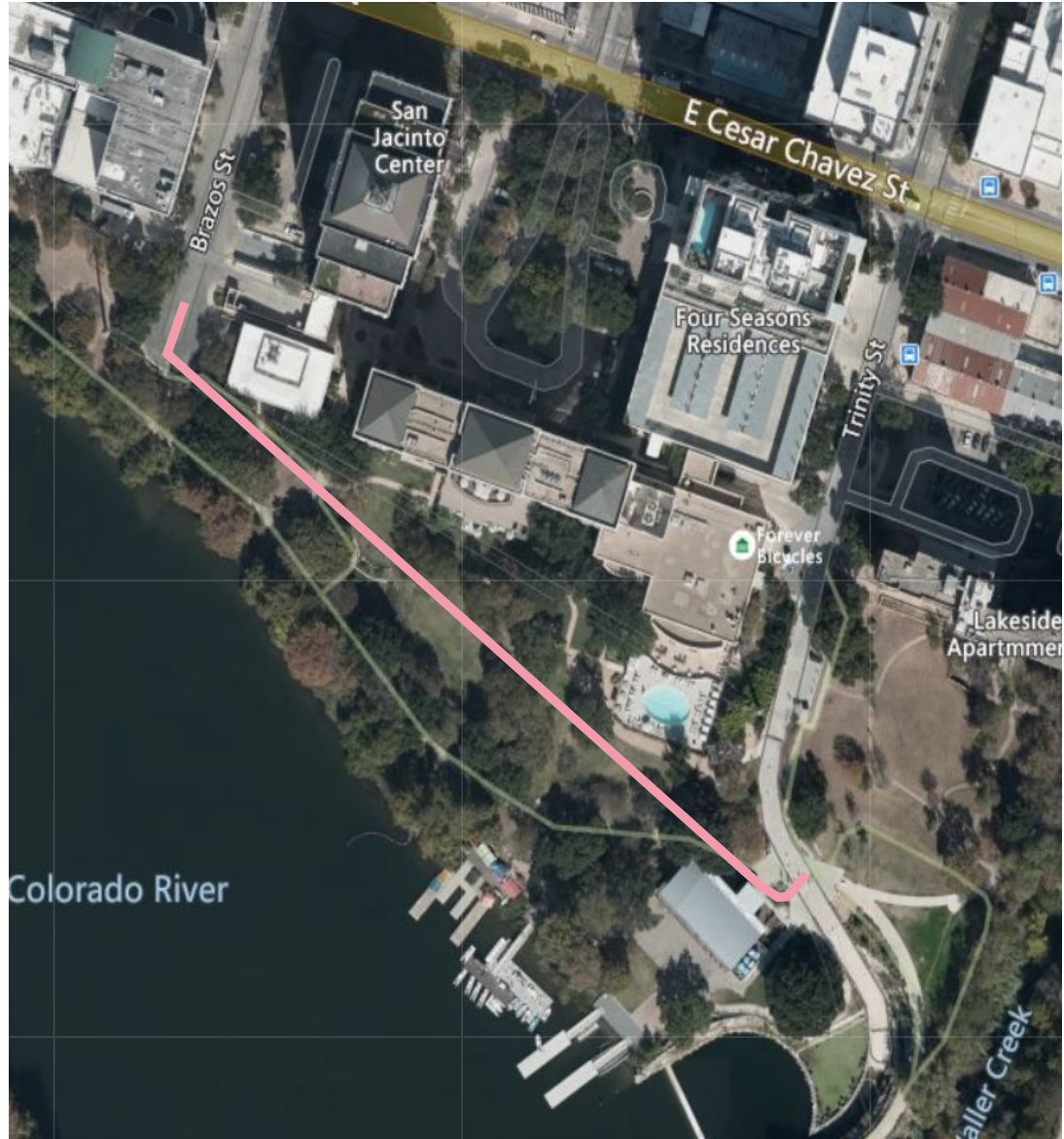
# Minimizing Impacts to the Park

- Proposed **micro-tunneling** option
  - No tree removal
  - 0 tree critical route zone's (CRZ's) affected
  - Does not impact archeologically relevant soils
    - Route would be cut into bedrock that predates human occupation of the continent
    - Nearest non-archeological (above-ground) historic property is the Lakeside Apartments
    - Proposed option does not encroach within the historic property boundary
  - Low impact to natural resources anticipated
    - Alignment is not over the Edwards Aquifer and is not within a presumed endangered species habitat
  - Potential hazardous material release risk is low
  - Unlikely to directly cause considerable noise, due to the depths it is anticipated vibrations to be minimal
  - Safer for crews at these depths (as opposed to hand mining)
- Proposed option meets all the requirements of ECM Section 5.3.0 and would minimize all impacts to the park

# Micro Tunneling Overview

- Involves sinking two shafts at either end of the tunneling route
  - Entry shaft location: at Brazos St. cul-de-sac (in ROW)
  - Exit shaft location: in front of the boathouse (in Parkland)
- Micro tunneling machine along with monitoring and additional tunneling equipment will be lowered into the entry shaft and progress underground from the entry shaft to the exit shaft.
  - Cranes will be required to insert and remove the micro tunneling machine, equipment, and materials from both shafts as part of the installation.
- Associated monitoring and tunneling equipment will be staged at the entry location work area in ROW, avoiding parkland impacts.
  - Will include the collection and processing/ transporting of spoils and slurry through a close-loop slurry system
- Estimated Construction Costs: \$4,846,000
  - Linear Feet (ft): 1,013
  - Estimated Construction Cost per Linear Foot (\$/ LF): \$4,784
  - Cost estimates are based on Engineer's Opinion of Probable Construction Costs performed by CAS Consulting Services at 30% design phase

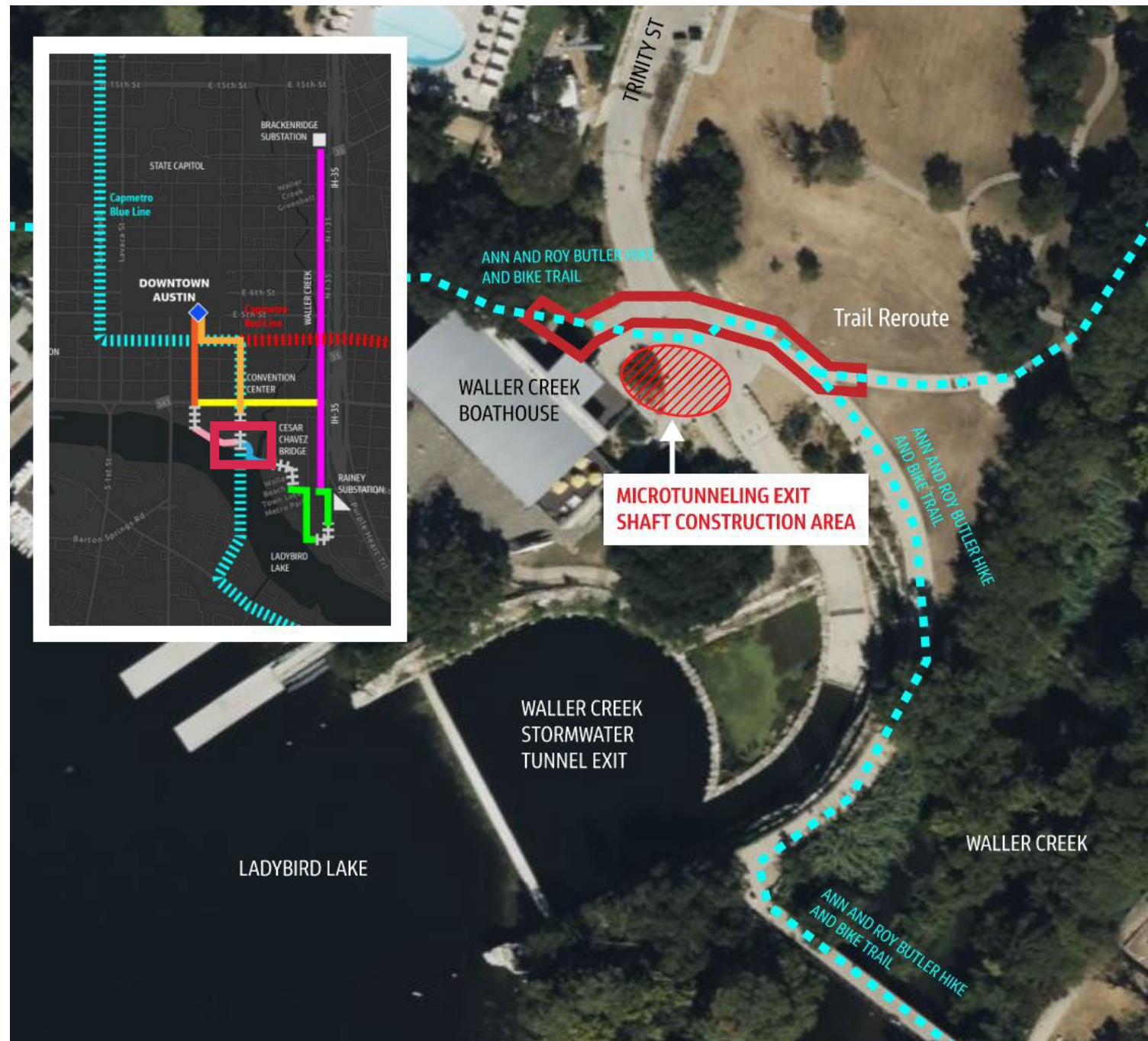
# Plan of Micro Tunnel installation





# Temporary Trail Re-Routes and Schedule

- Proposed micro-tunneling option
- Estimated 160-day construction duration
  - Minor re-route of the Ann and Roy Hike and Bike Trail at the exit shaft near the boathouse for a proposed duration of 30 days
    - Micro-tunneling option provides least impact to the public
  - No closure of Ann and Roy Hike and Bike Trail required
  - ADA compliance regarding slope and temporary material
    - Including ADA design subconsultant, Altura Solutions



# Chapter 26 of the Parks and Wildlife Code (PWC)

## Due Diligence for Utility Assignment

### Section 26.001

A department may not approve any project that requires the use of any public land designated as a park unless the department, acting through its duly authorized governing body or officer, determines that:

- 1) There is no feasible and prudent alternative to the use or taking of such land— **CONFIRMED**
- 2) The program or project includes all reasonable planning to minimize harm to the land, as a park, recreation area, scientific area, wildlife refuge, or historic site, resulting from the use or taking—

### **CONFIRMED**

- Austin Energy Department asks for a recommendation to City Council to approve 13,116 square feet for Permanent Use and 10,973 square feet for Temporary Use on Parkland not to exceed 160 Calendar Days, located at Waller Beach at Town Lake Metropolitan Park (90 East Ave). Total Mitigation is \$1,770,993.

Thank you!

