



WILLIAMSON CREEK TRIBUTARY 4 - TURTLE CREEK STABLIZATION

PUBLIC MEETING 1

9/16/21

www.AustinTexas.gov/TurtleCreek



Welcome and Agenda

Meeting Overview and Logistics

Introductions

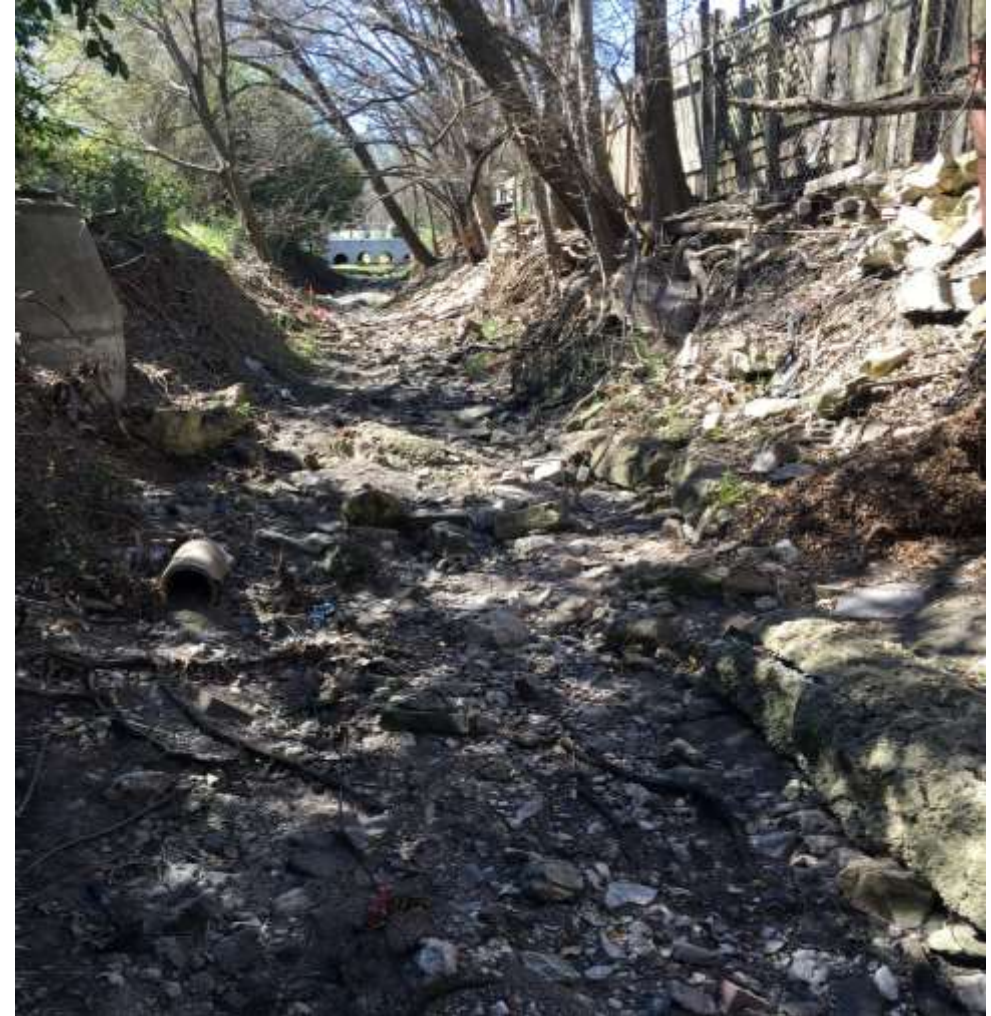
Watershed Protection Department

Project Background

Proposed Improvements

Virtual Creek Walk

Schedule and Next Steps





Introductions

Sponsoring Department:

Watershed Protection Department
Project Sponsor: Clayton West

Managing Department:

Department of Public Works
Project Manager: Javi Gonzalez

Consulting Engineer:

Freese and Nichols Inc.
Project Manager: Jay Scanlon
Project Technical Manager: George Fowler



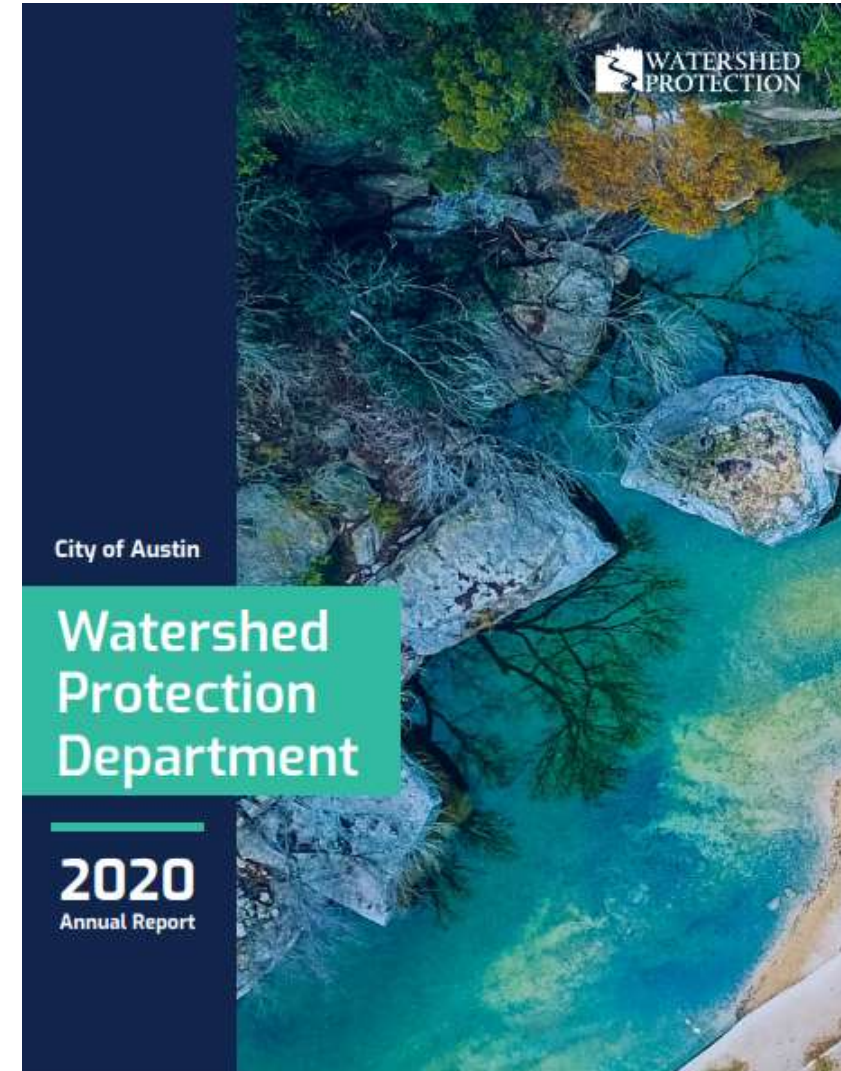
About Watershed Protection

Mission:

Protect lives, property, and the environment of our community by reducing the impact of

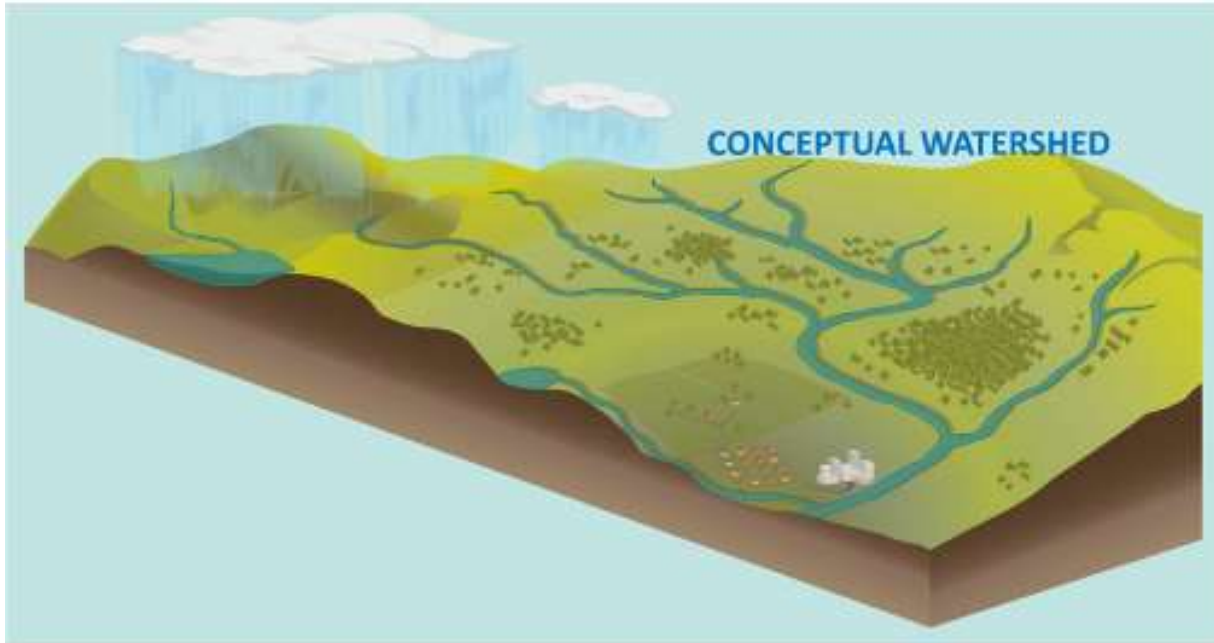
- Flooding,
- Erosion, and
- Water Quality

Reduce the damaging effects of urbanization on Austin's watersheds

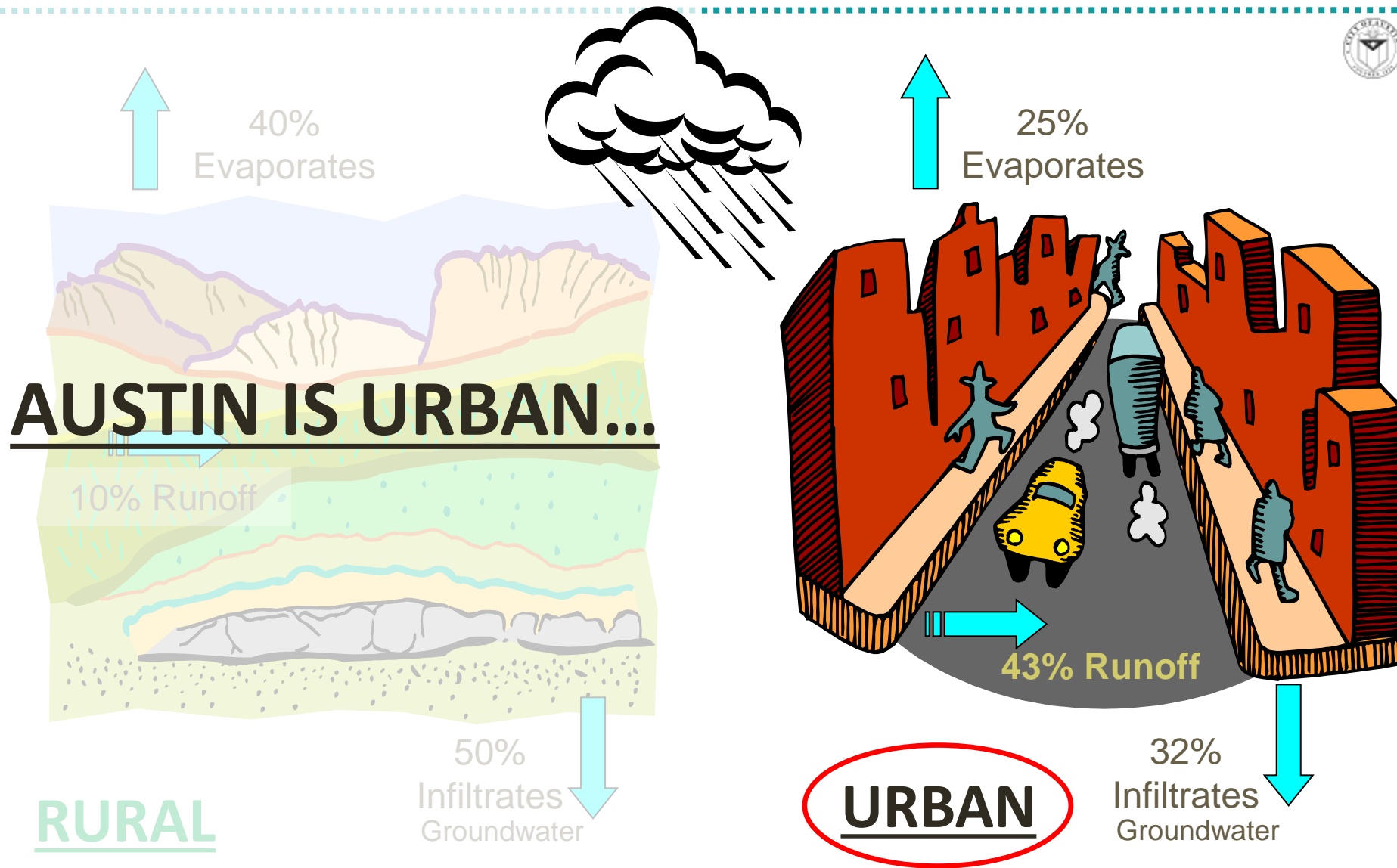




What is Urbanization?



- **Adding impervious cover (roads, parking lots, buildings...)**
- **Reduces ability of the ground to absorb rainfall runoff**
- **Increases the amount of water entering streams – dirtier waters fills more quickly and more often**





Flooding





Erosion





Water Quality





Current Issues – Project Goals

- **Creek bottom and banks eroding**
 - **Damage to public and private property**
 - **Water quality pollution**
 - **Degradation of stream**



The project will not worsen flooding

- **Stabilize and repair channel**
- **Protect property from future damage**
- **Protect trees and minimize tree removal**
- **Plant native vegetation**



Project Background



Project Area #1

- Eberhart Lane to Turtle Creek Boulevard

Project Area #2

- Stassney Lane to approximately 400 Feet Downstream

Project Area #3 (Future)

- Mockingbird Lane to South Congress Avenue
- Not currently funded



Project Background



TURTLE CREEK PRELIMINARY ENGINEERING REPORT

Prepared for:

**The City of Austin
WATERSHED PROTECTION DEPARTMENT**

DATE
8/24/2020

Prepared by:

FREESE AND NICHOLS, INC.
10430 Morado Circle Building 5, Suite 300
Austin, Texas 78759

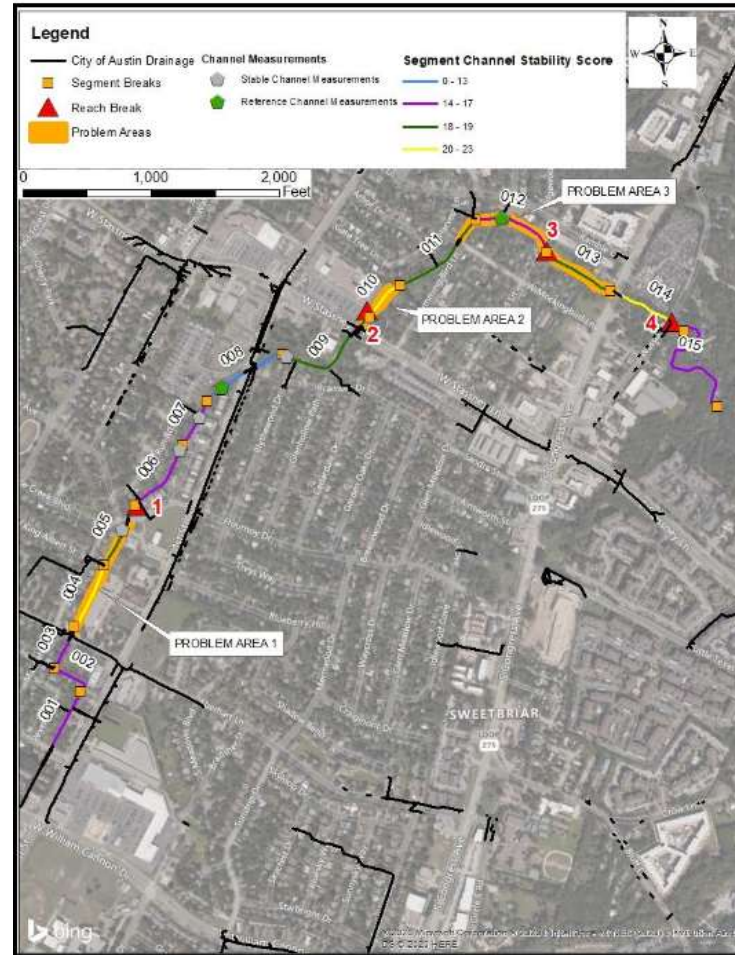
Project Number
AU320131



FREESE AND NICHOLS, INC.
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ENGINEERING FIRM
F-2144



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TEXAS REGISTERED
ENGINEERING FIRM
F-2144



- **Preliminary Engineering Report**
 - Understand past modifications
 - Characterize existing conditions
 - Predict future trends
- **Conceptual design to stabilize the creek for erosion and habitat**
- **Starting final design**



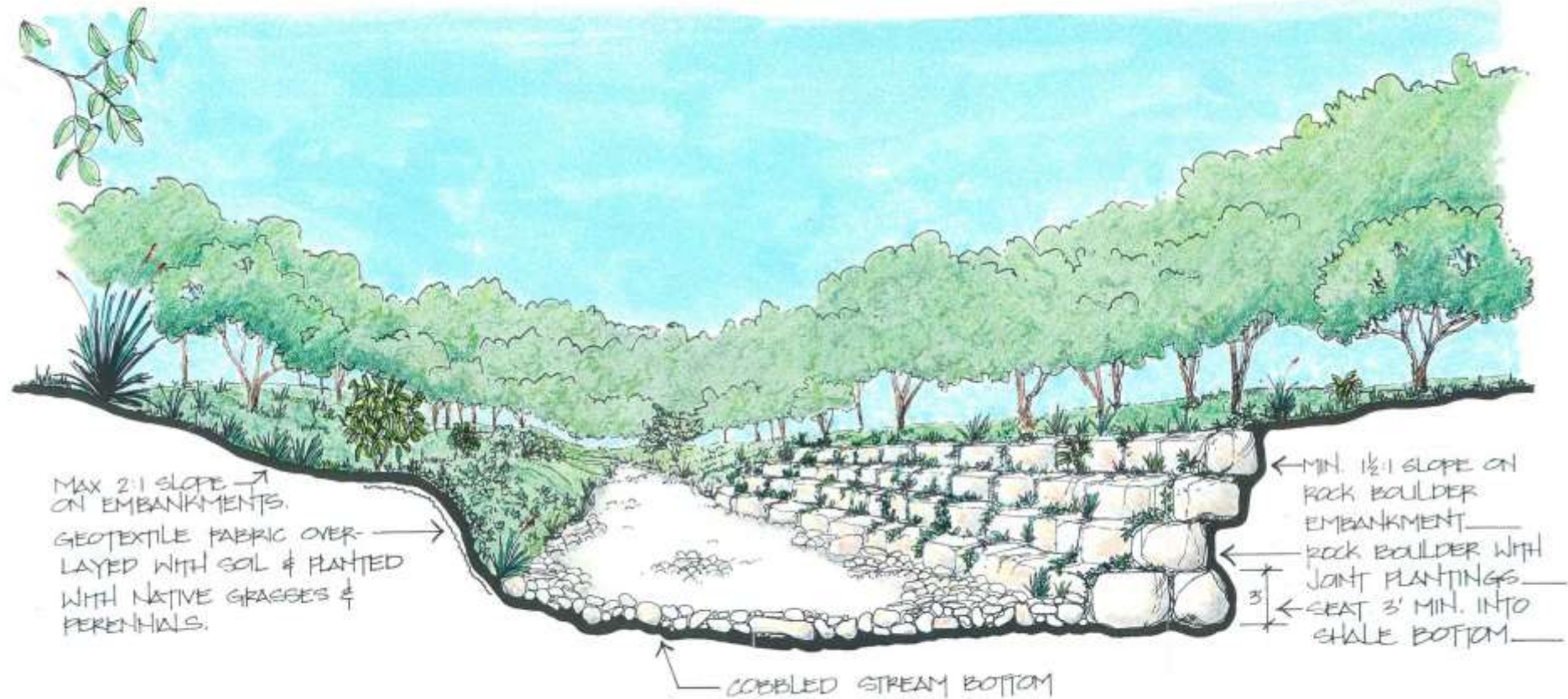
Stabilization Examples



Vegetative Treatment on Slopes



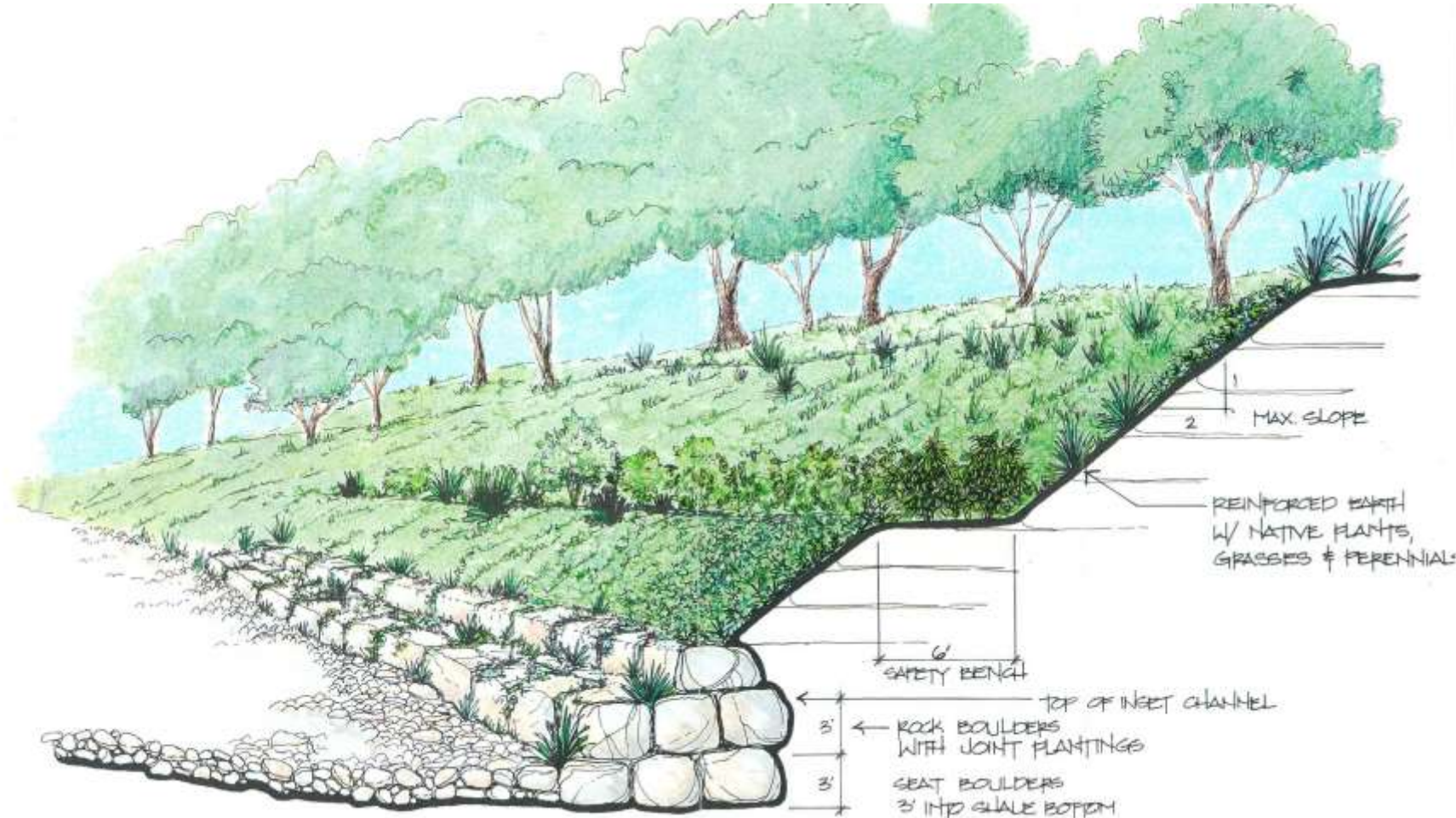
Stabilization Examples



Limestone Boulder Wall with Joint Plantings



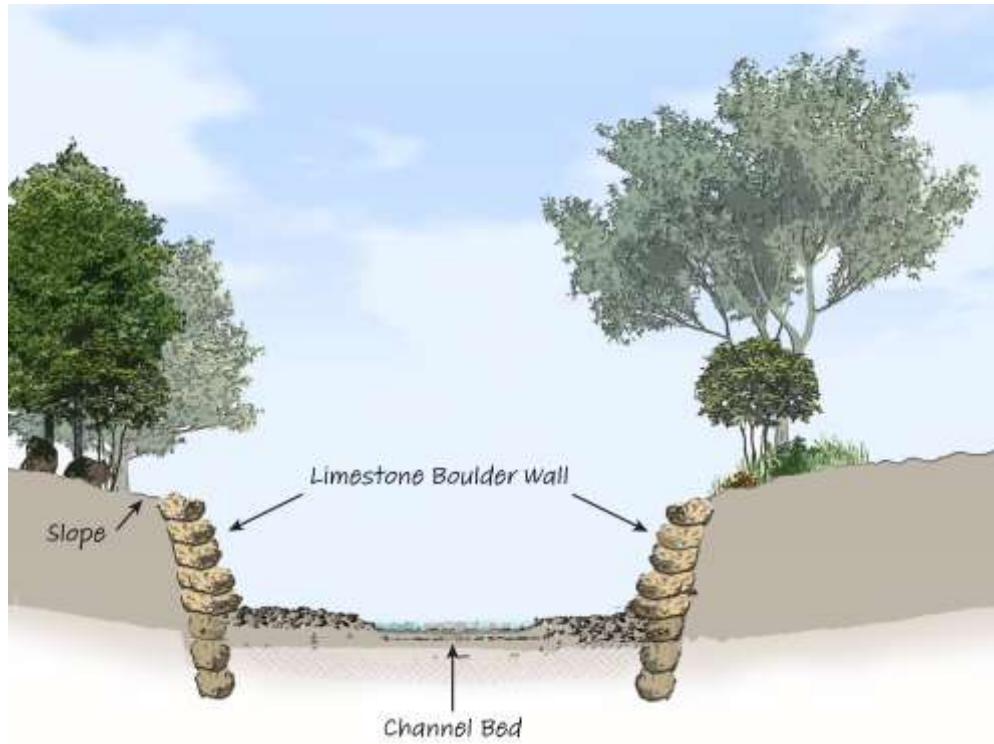
Stabilization Examples



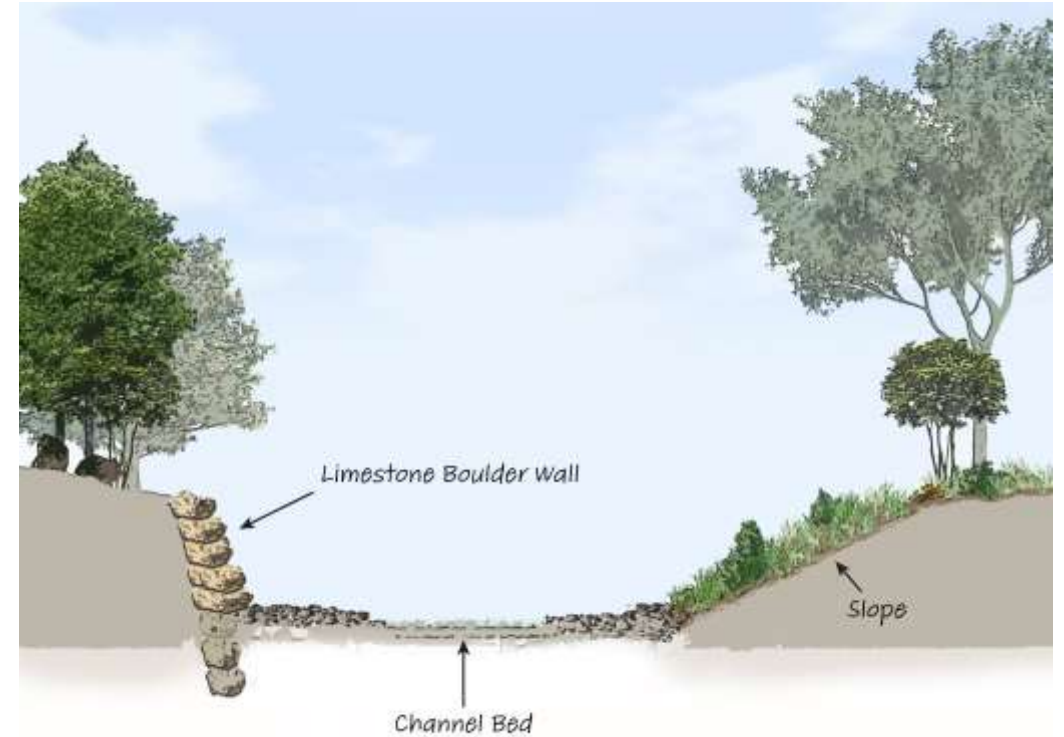
Reinforced Earth Slopes with Limestone Boulder Toe



Proposed Improvements



Typical section that uses two limestone boulder walls.



Typical section that uses one limestone boulder wall and a vegetated slope.



Virtual Creek Walk

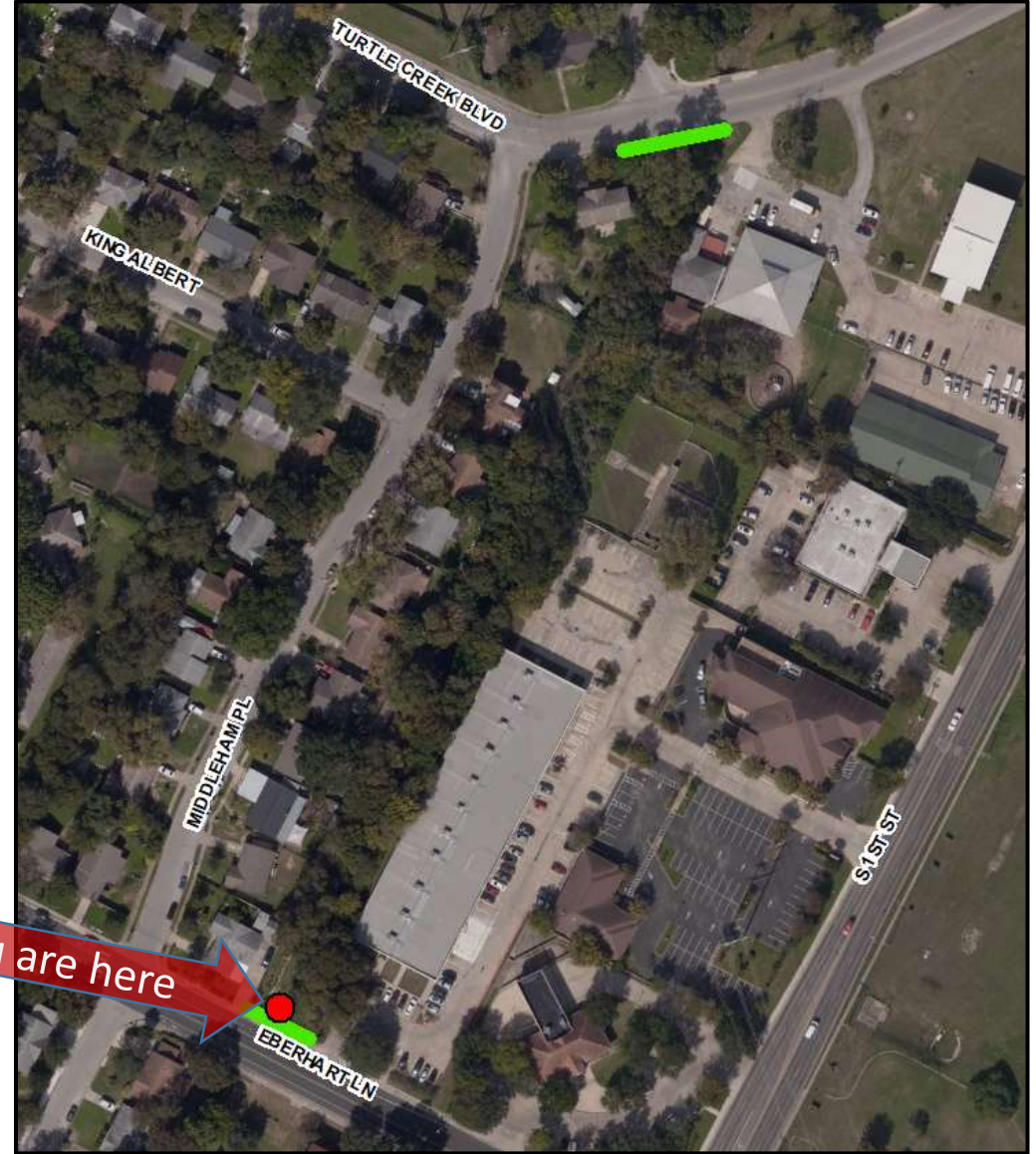
Eberhardt Reach

Eberhart Lane to Turtle
Creek Boulevard



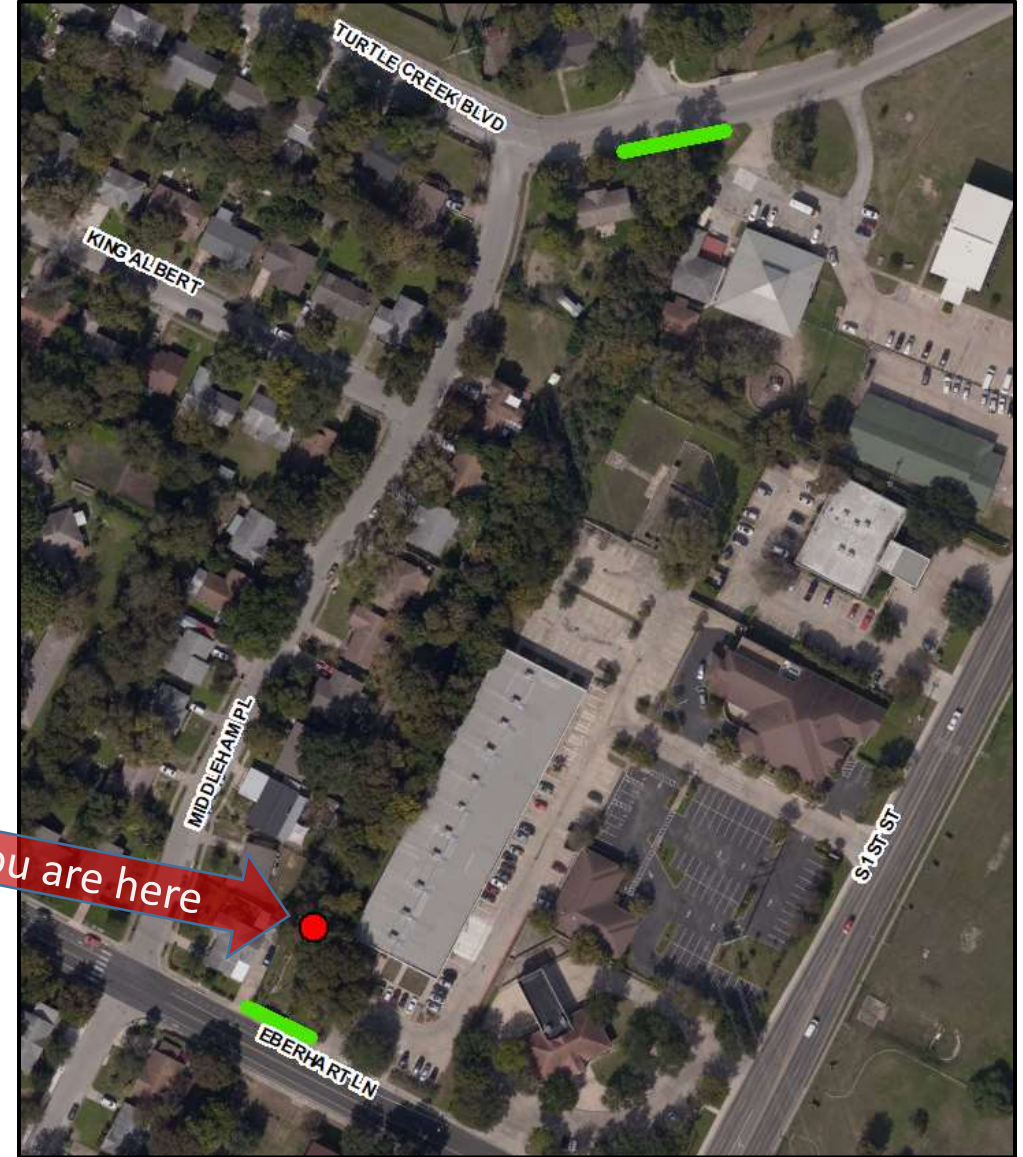


Sedimentation, wall failure, loss of private land



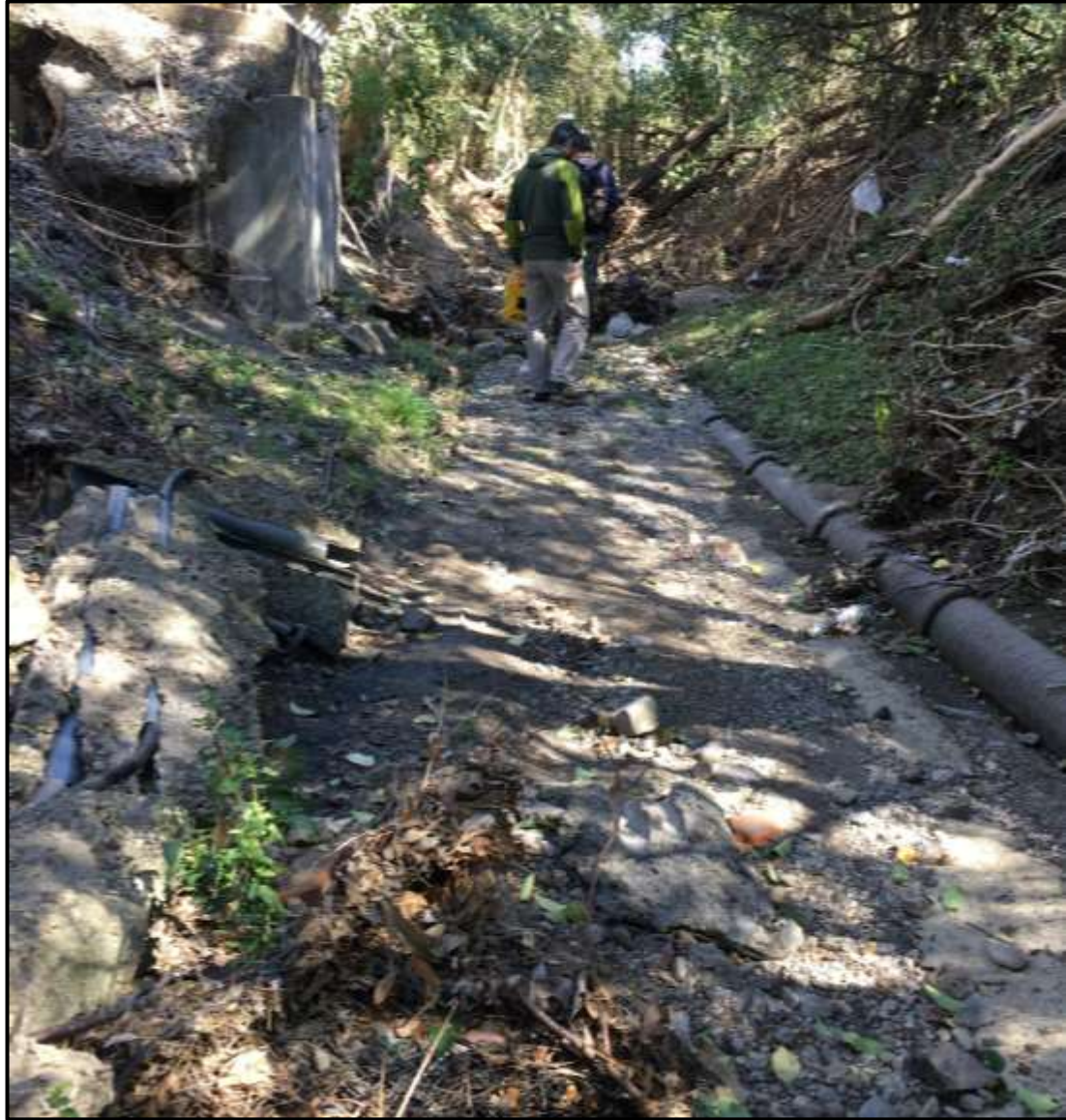


Bottom and bank erosion – tree roots exposed, trees leaning over





Bottom and bank erosion – exposed utilities and debris



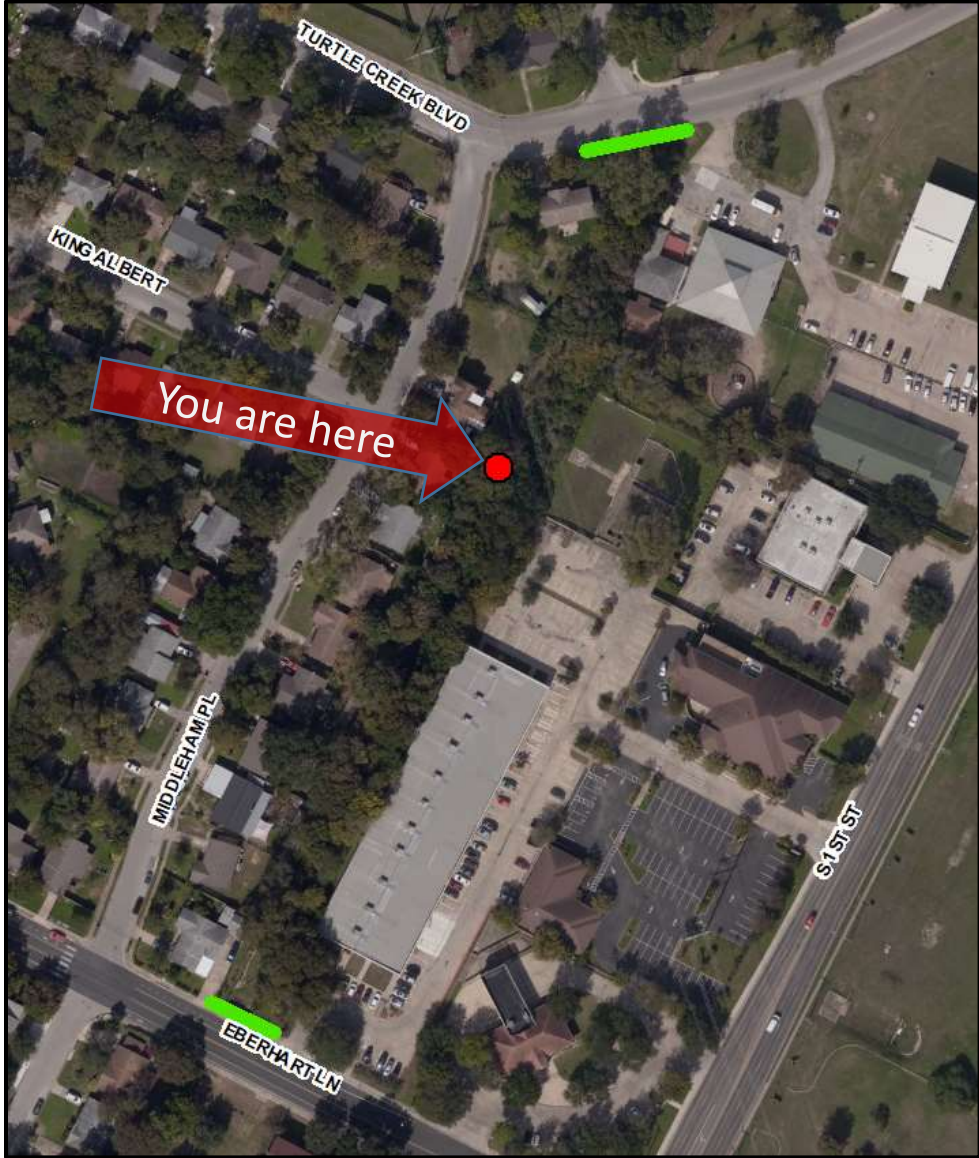


Bottom and bank erosion – fallen trees span the channel



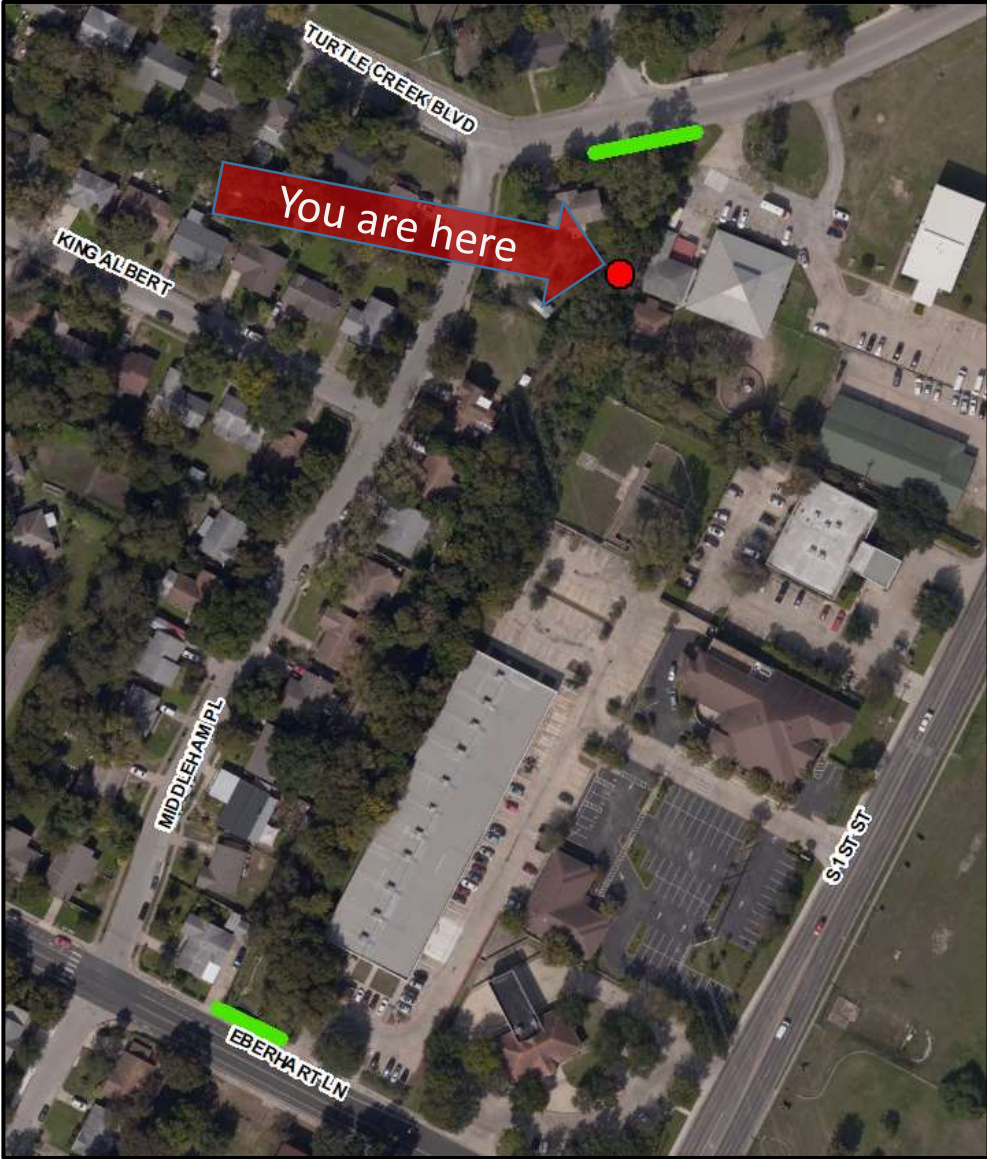


Bottom and bank erosion –undermining utility protection





Bottom and bank erosion –water quality pollution source





Virtual Creek Walk

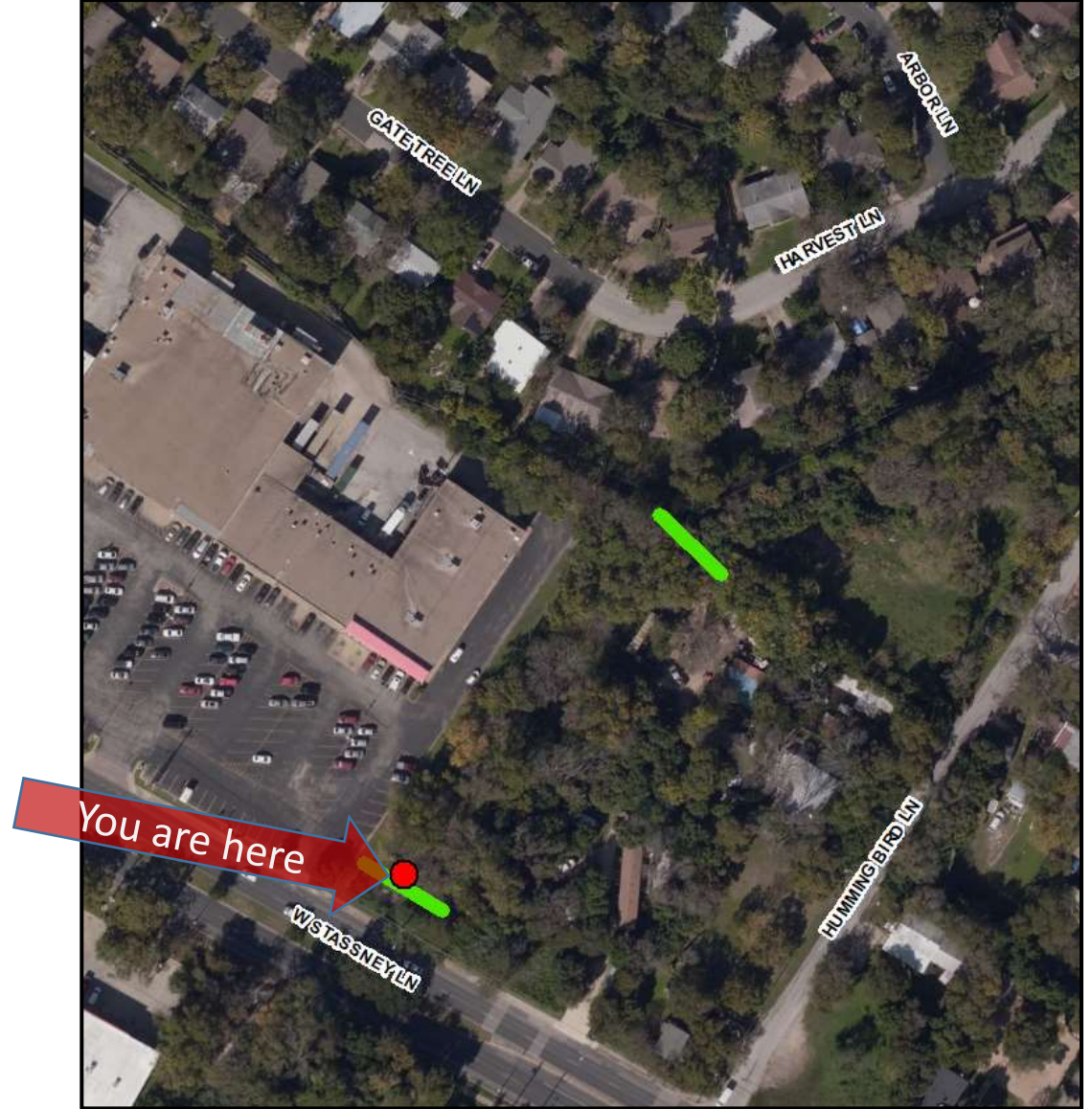
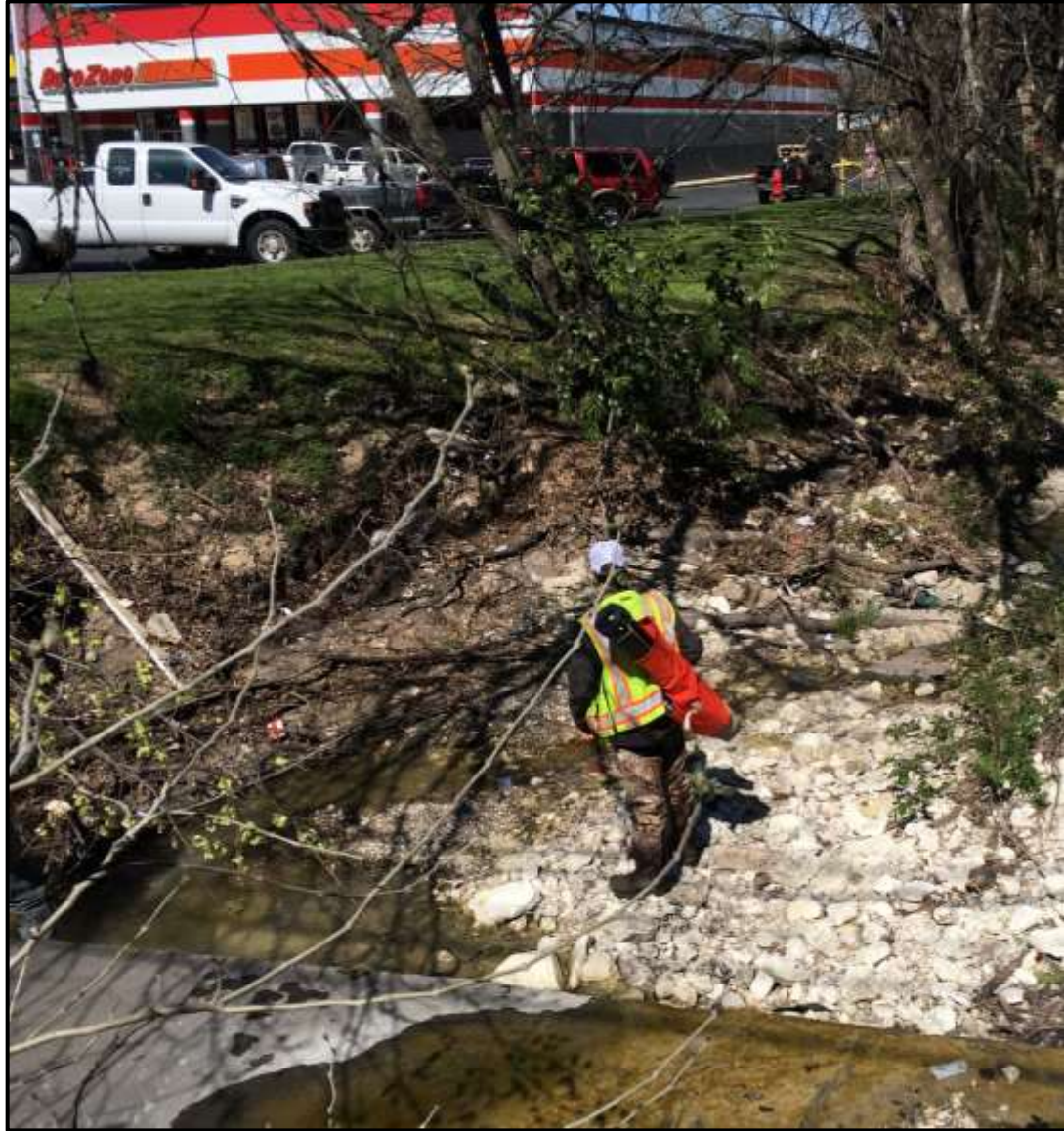


Stassney Reach

Stassney Lane to
approximately 400-ft
downstream

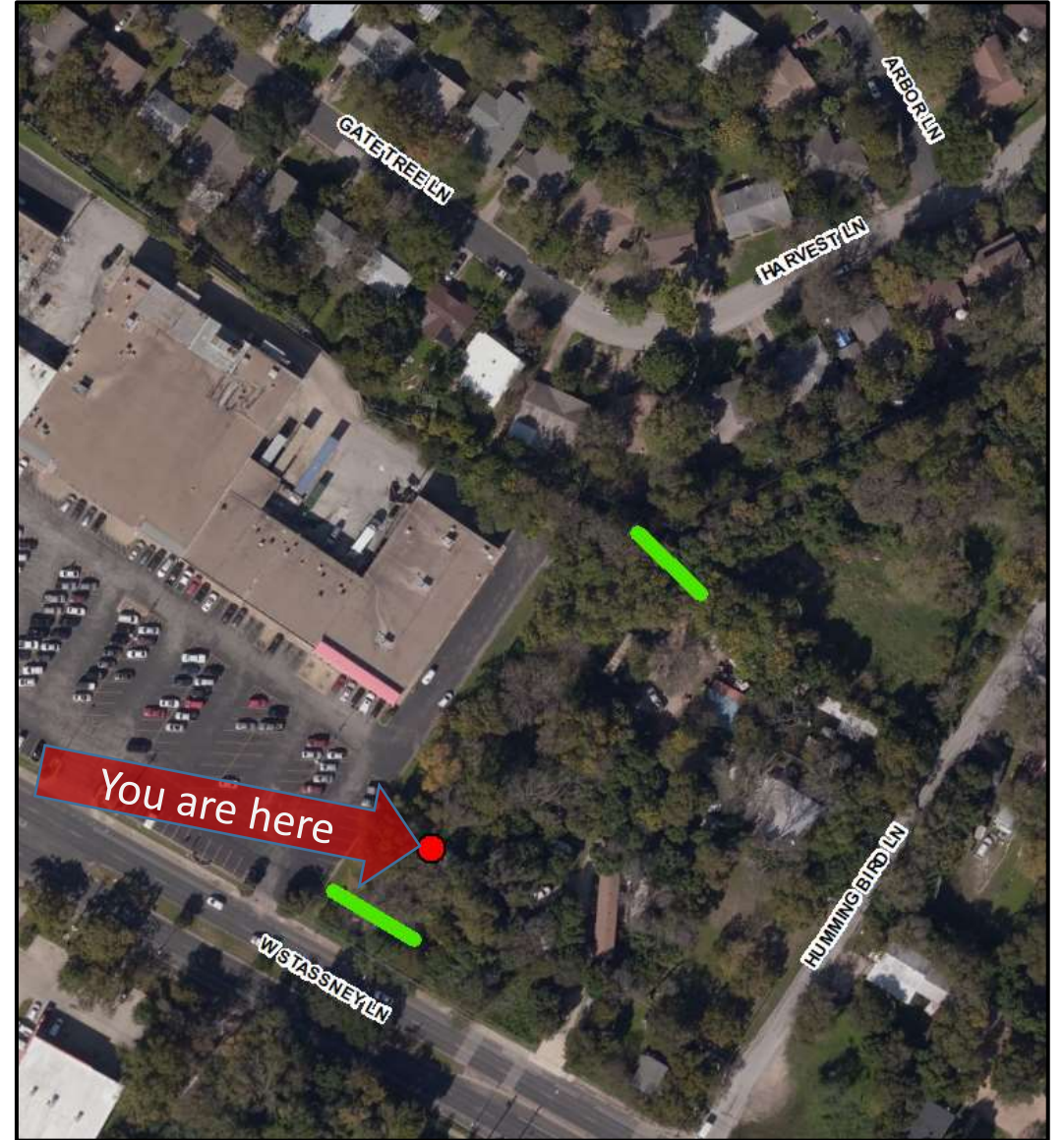


Bottom and bank erosion undermining road culvert protection structure



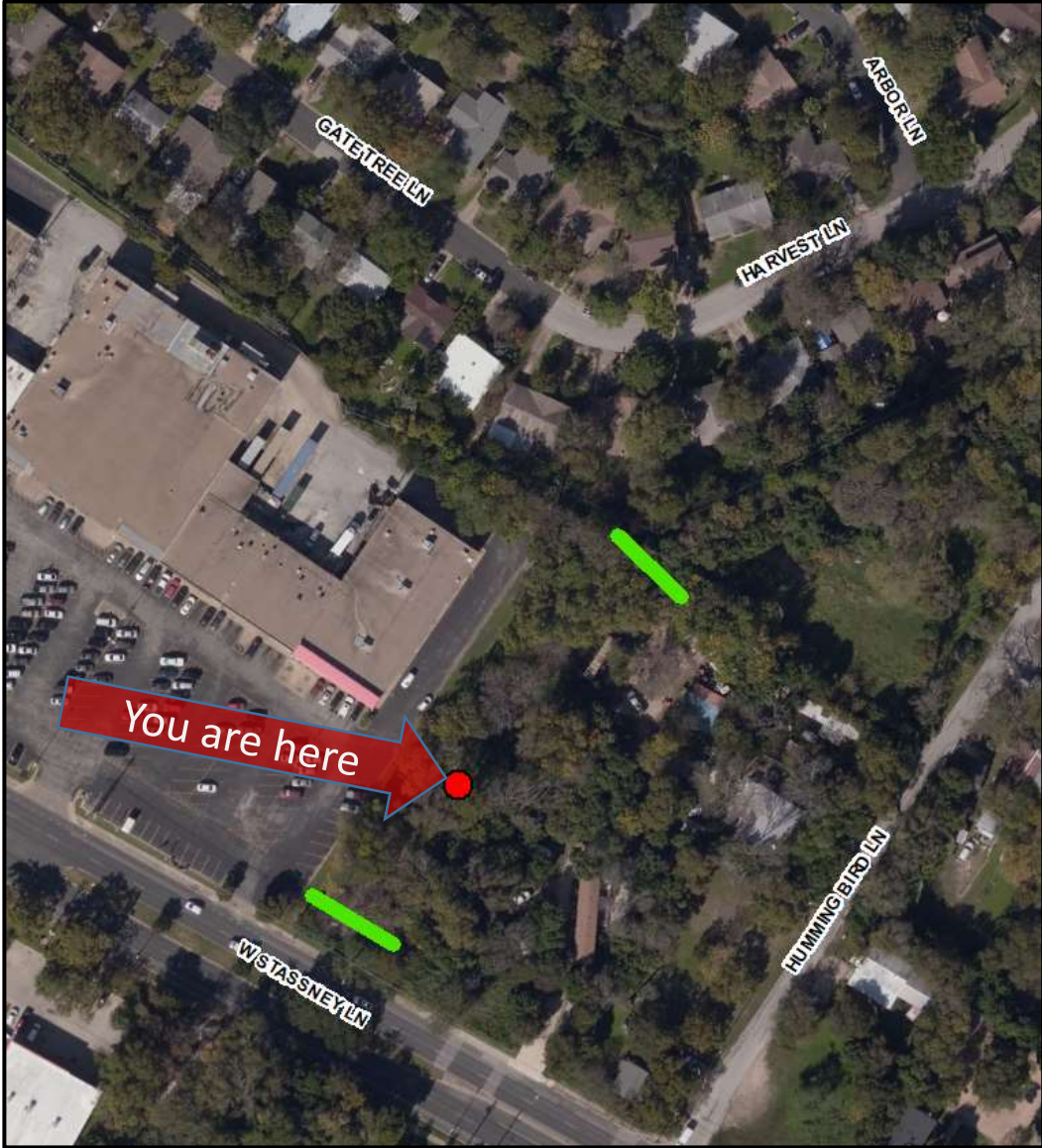


Bottom and bank erosion – undermined trees and water quality pollution source





Bottom and bank erosion – undermined trees and water quality pollution source





Bottom and bank erosion – undermined trees and water quality pollution source





Next Steps and Cost

Final Design

- Alignment and Sections
- Restoration Plan
- Permitting

Estimated Budget

- ~\$4,000,000
- Funded by the 2018 Drainage Bonds and the Drainage Charge on utility bills





Questions and Answers

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