



# Travis County Flood Mitigation Study

## Onion Creek Neighborhoods



*June 20, 2017*



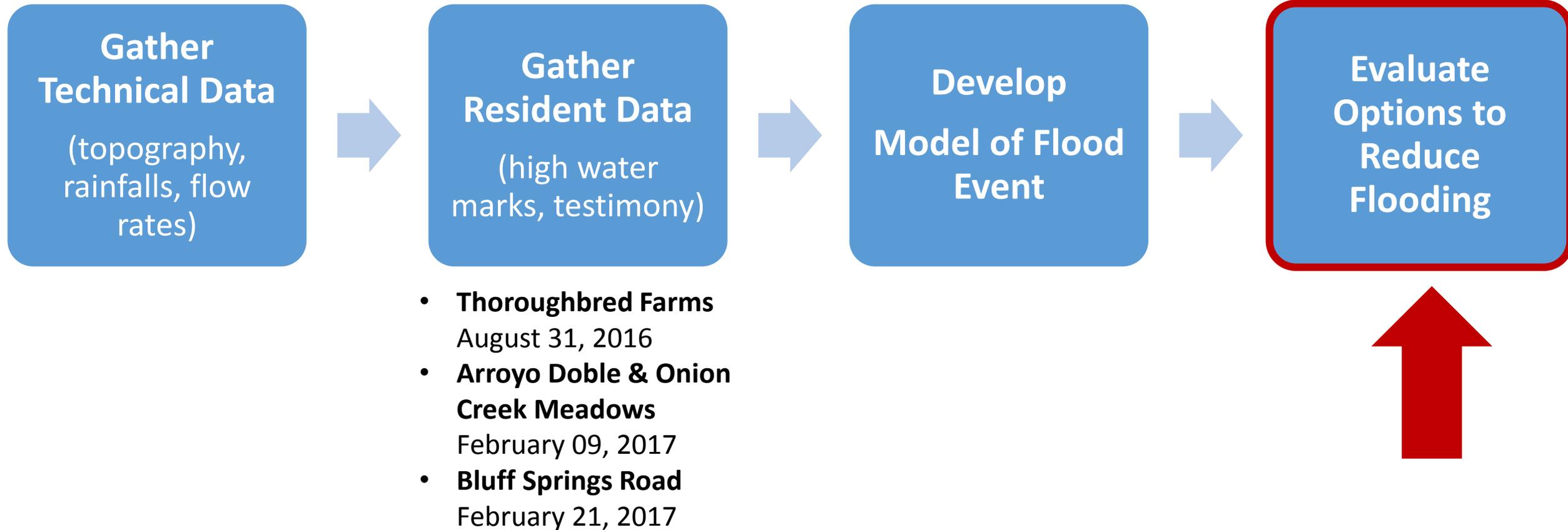
# Study Purpose

Travis County is conducting a comprehensive study of recent flood events to:

- Better understand what happened
- Plan for the future
- Explore flood mitigation options

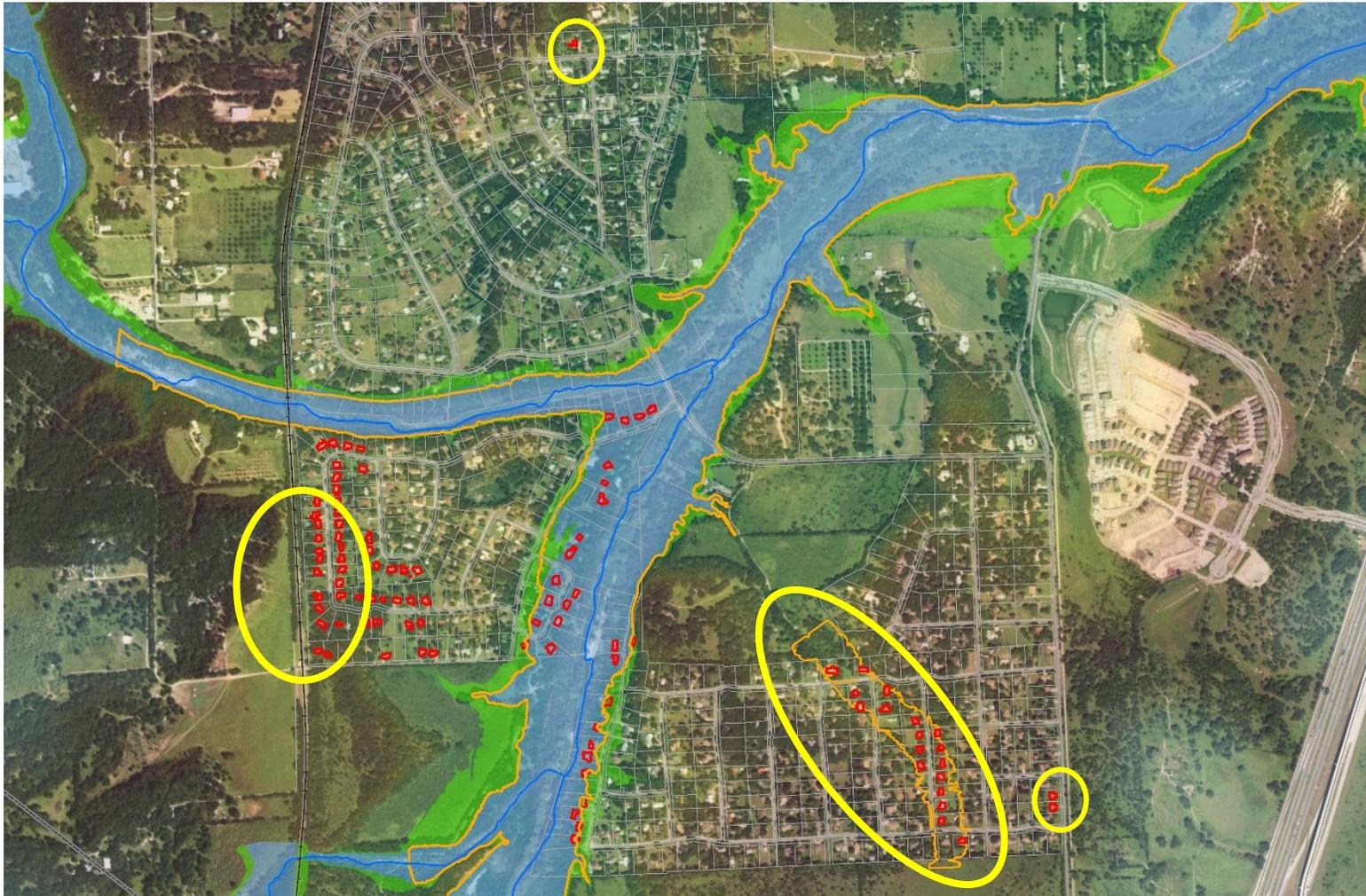


# How is the study conducted?





# Bear-Onion Creek Confluence



## Flooding Problems

- Riverine
  - ~32 homes
- Local Drainage

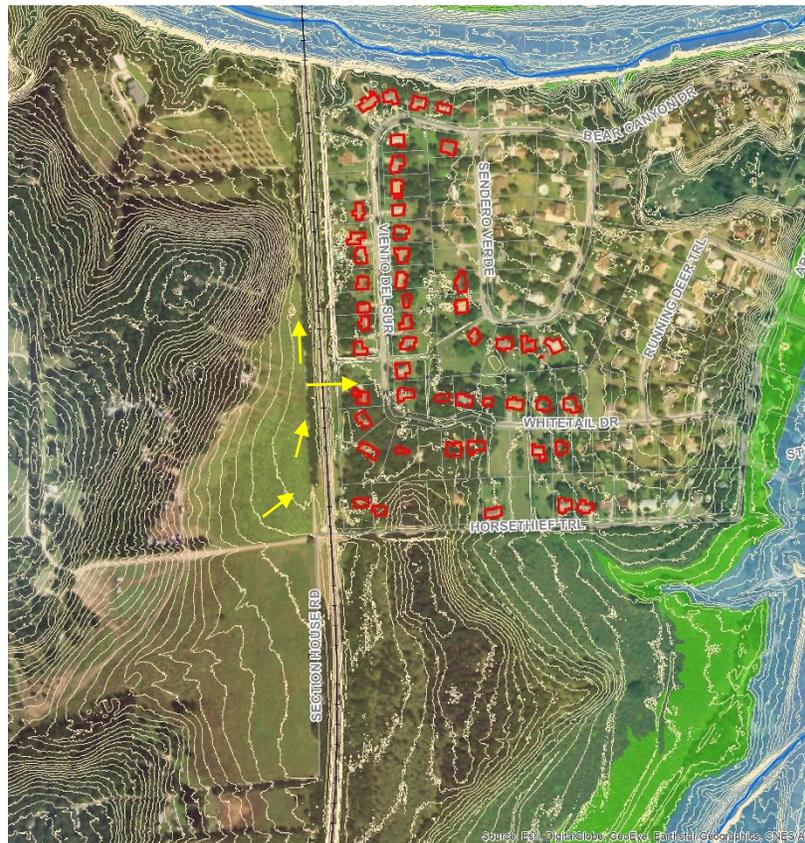


# Local Drainage Flooding Problems

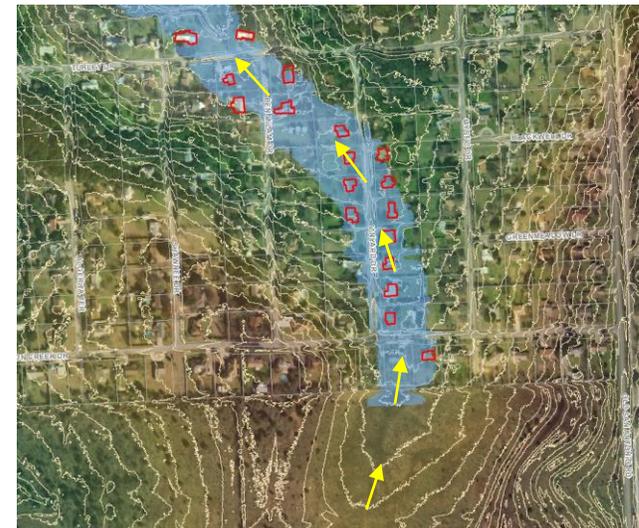
## Twin Creeks



## Arroyo Doble



## Onion Creek Meadows





# Flood Mitigation Alternatives

- Structural

- Channel Clearing
- Channel benching
- Floodwall
- Regional Detention



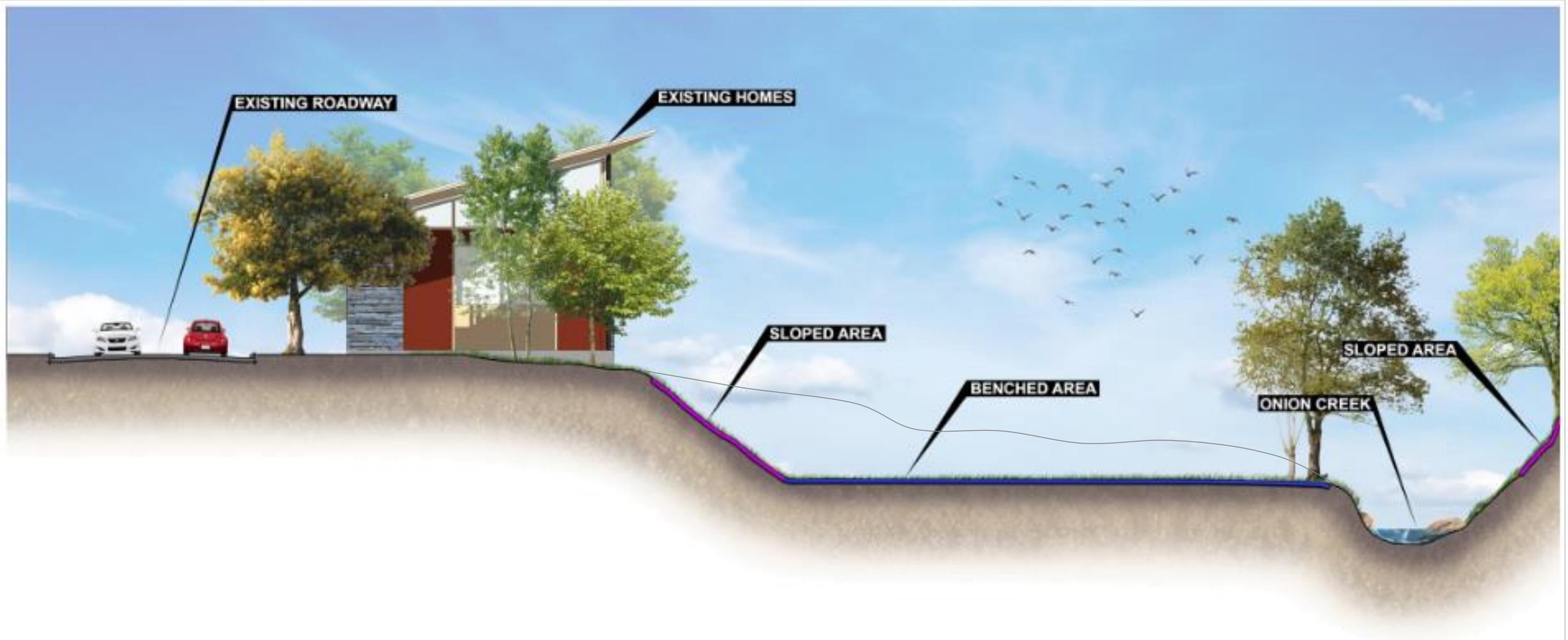
- Non-Structural

- Property Acquisition
- Regulation Changes
- Flood Awareness Outreach



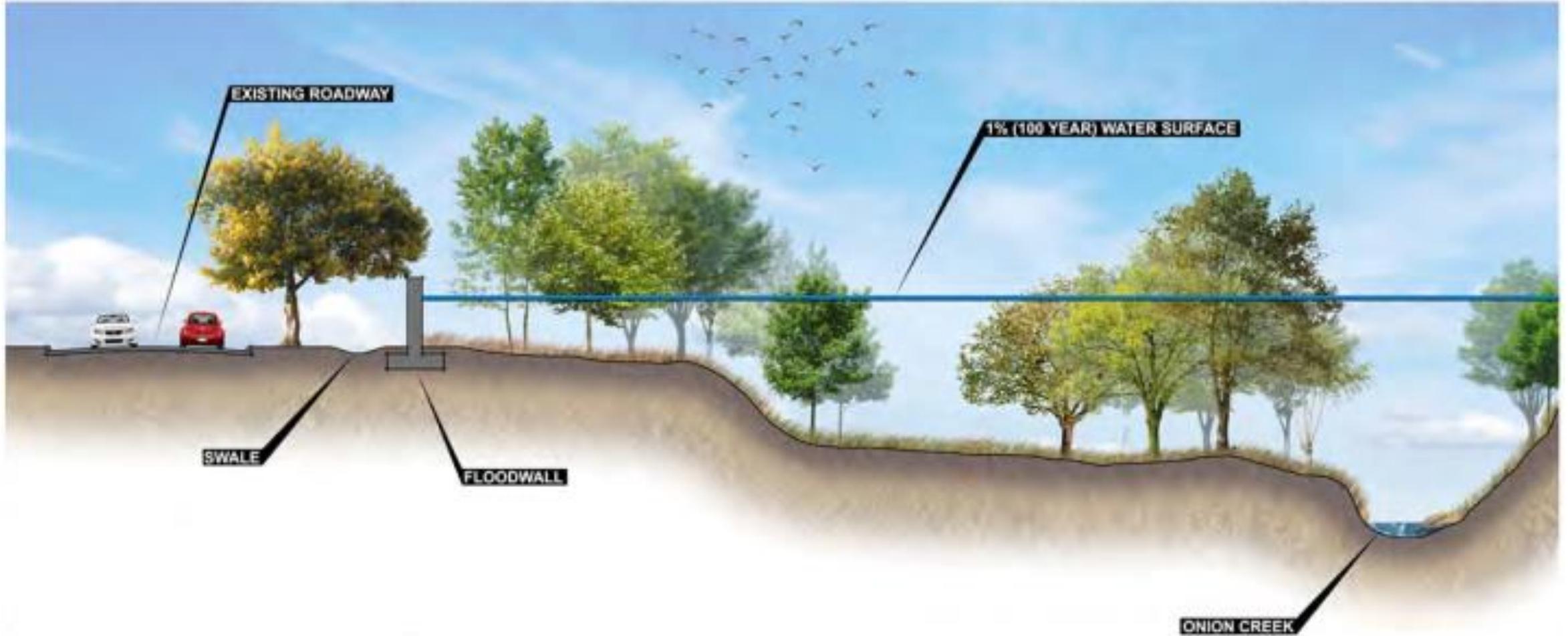


# Channel Modifications



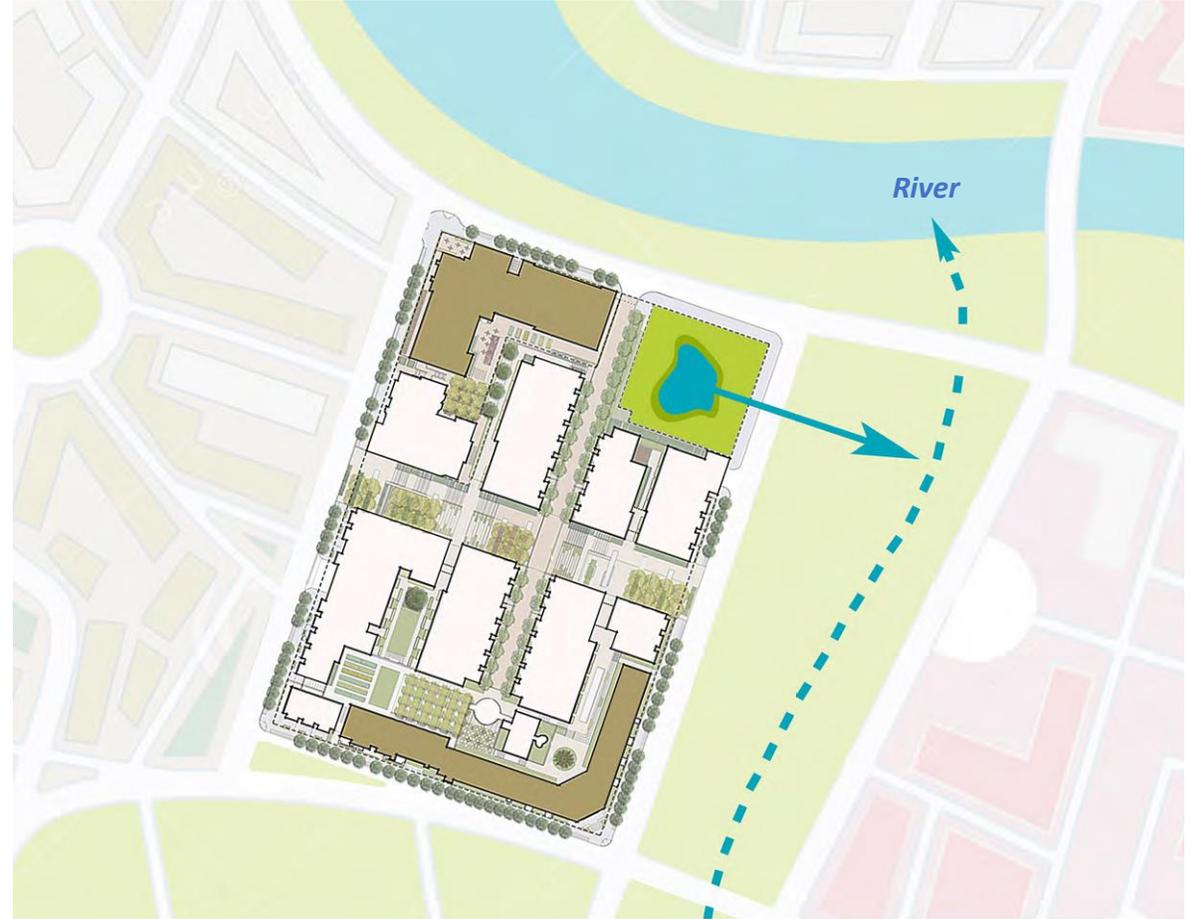
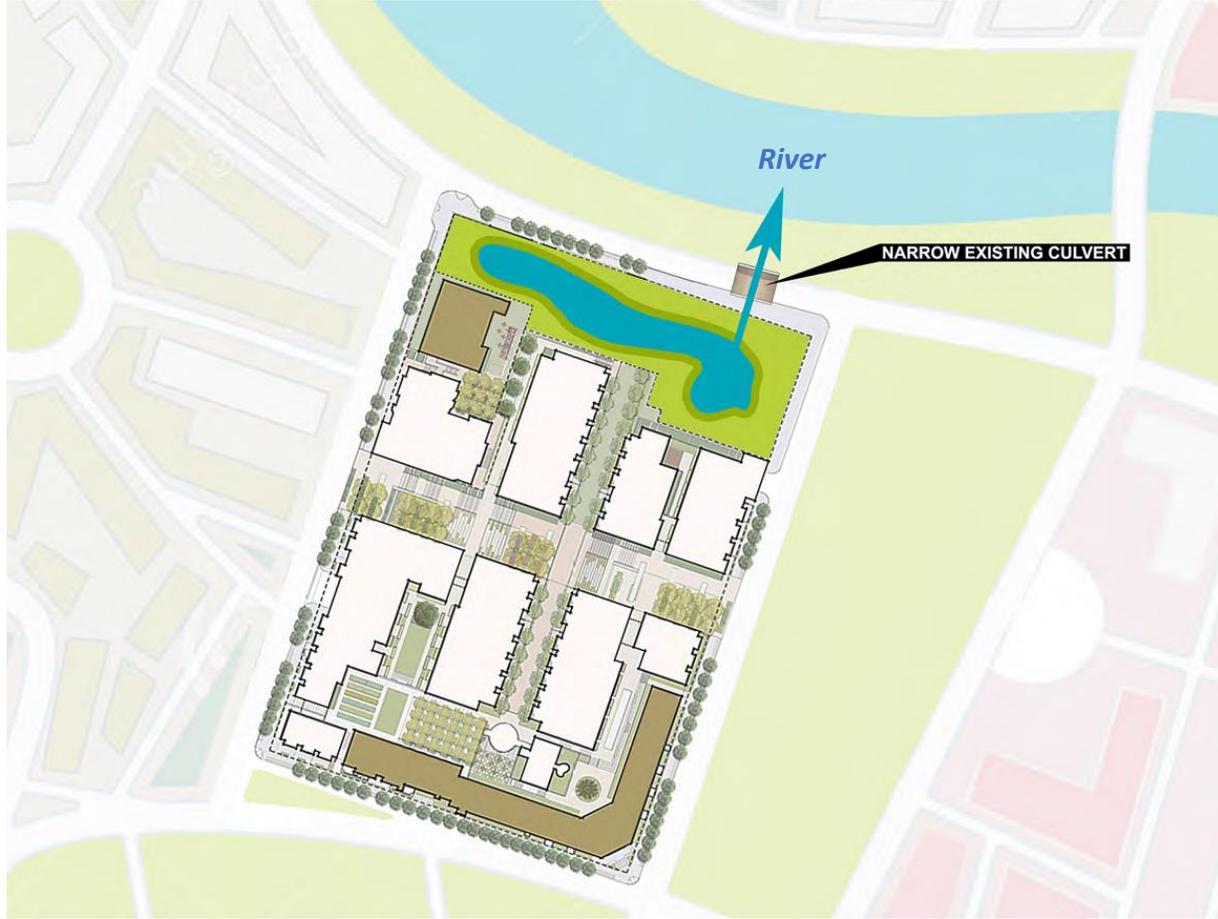


# Floodwall





# Detention

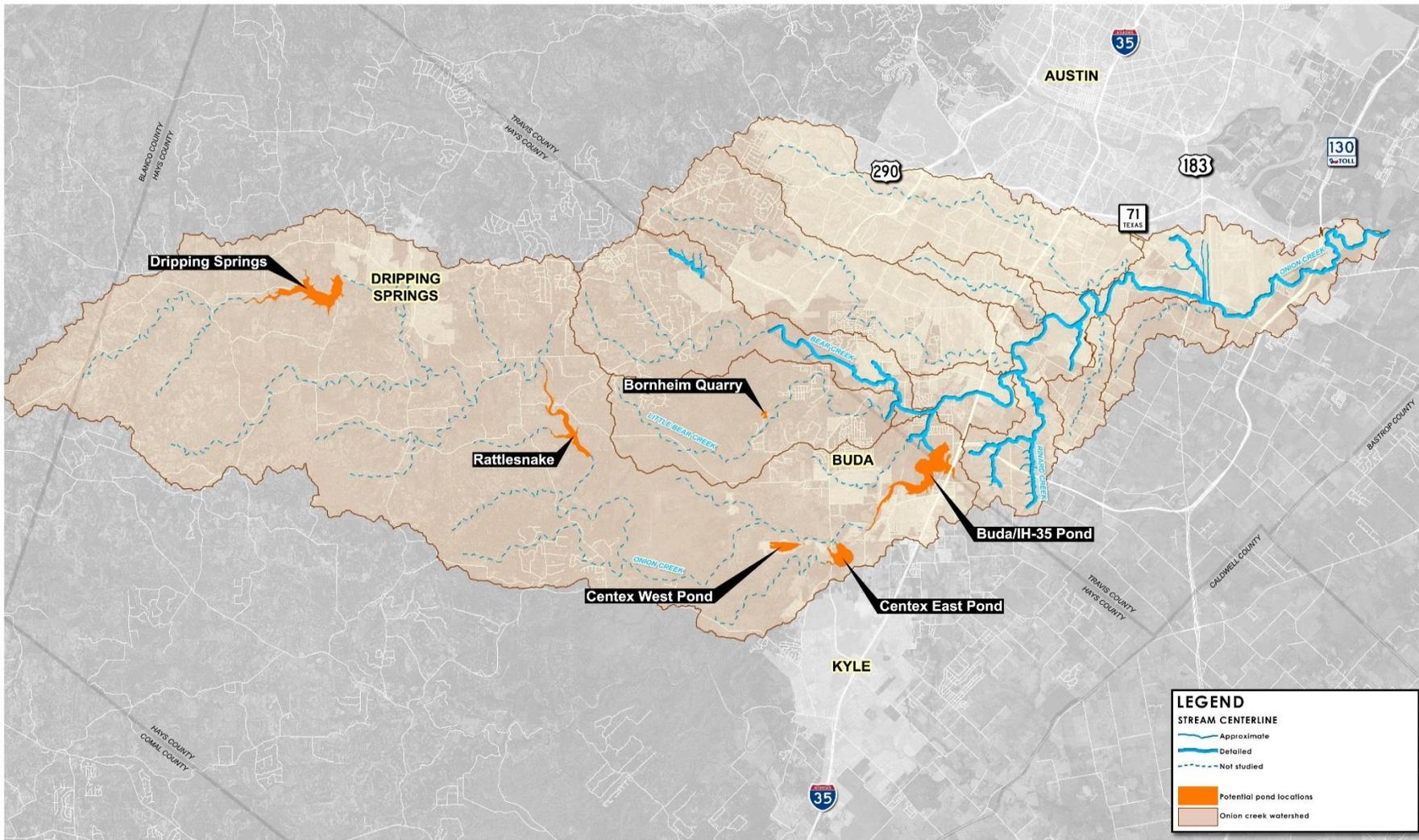




# Riverine: Regional Detention

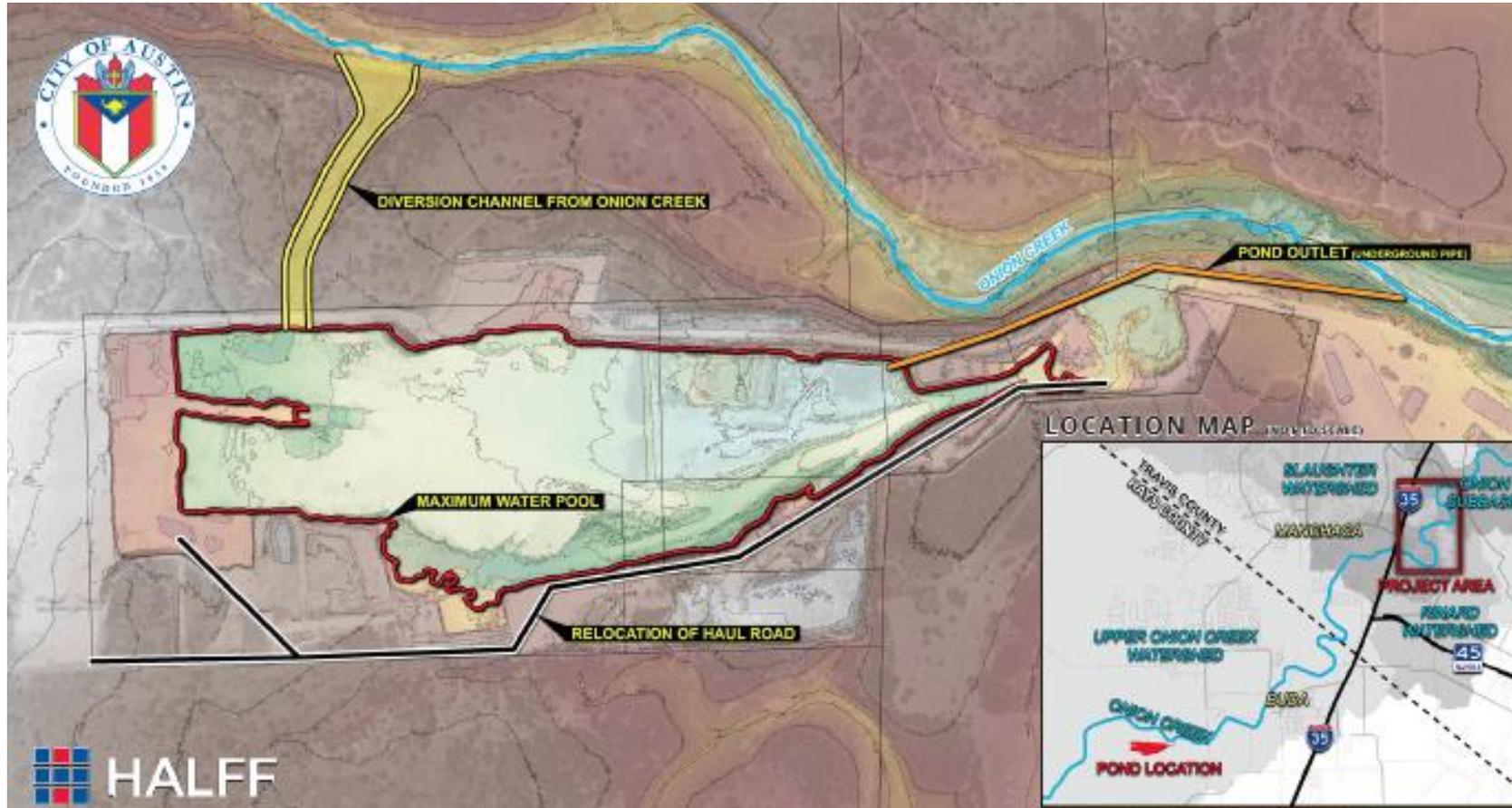
## City of Austin Project Analysis

- Dripping Springs Pond
- Rattlesnake Pond
- Centex West Regional Pond
- Centex East Regional Pond
- Buda / IH-35 Regional Pond
- Bornheim Quarry





# Riverine: Regional Detention



## City of Austin Centex West Regional Detention

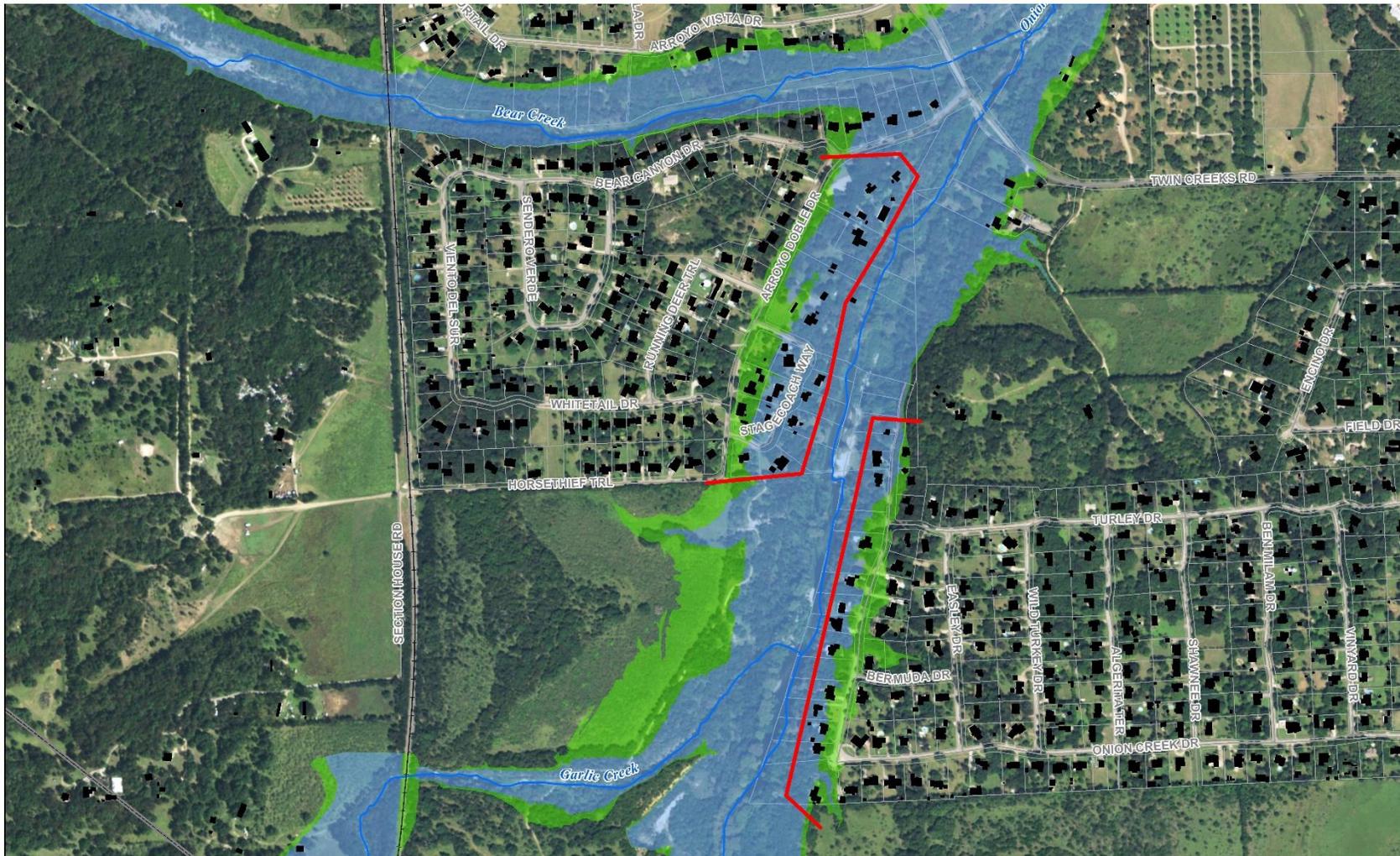
- Benefits
  - Benefits to multiple jurisdictions
  - Utilize existing quarry
  - Potential aquifer recharge opportunity
- Constraints
  - Multi-stakeholder coordination
  - Property purchase
  - Permitting
  - Environmental impacts
  - Flood mitigation benefit depends on rainfall location
  - Long timeline for implementation



# Riverine: Floodwalls

## Onion Creek Floodwalls

- Benefits
  - Less environmental impact
  - Moderate timeline for implementation
- Constraints
  - Does not protect all structures
  - Property purchase
  - Levee compliance/permitting
  - Internal drainage challenges
  - Impact to community





# Riverine: Property Acquisition

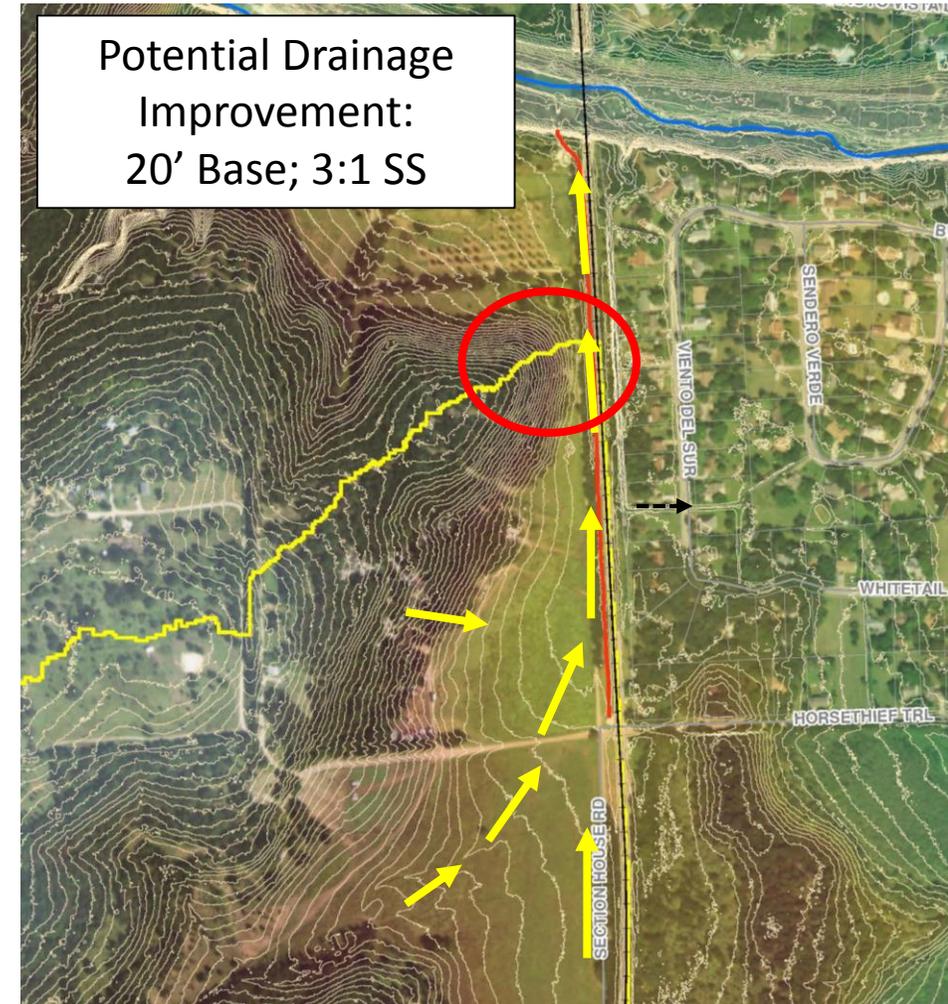
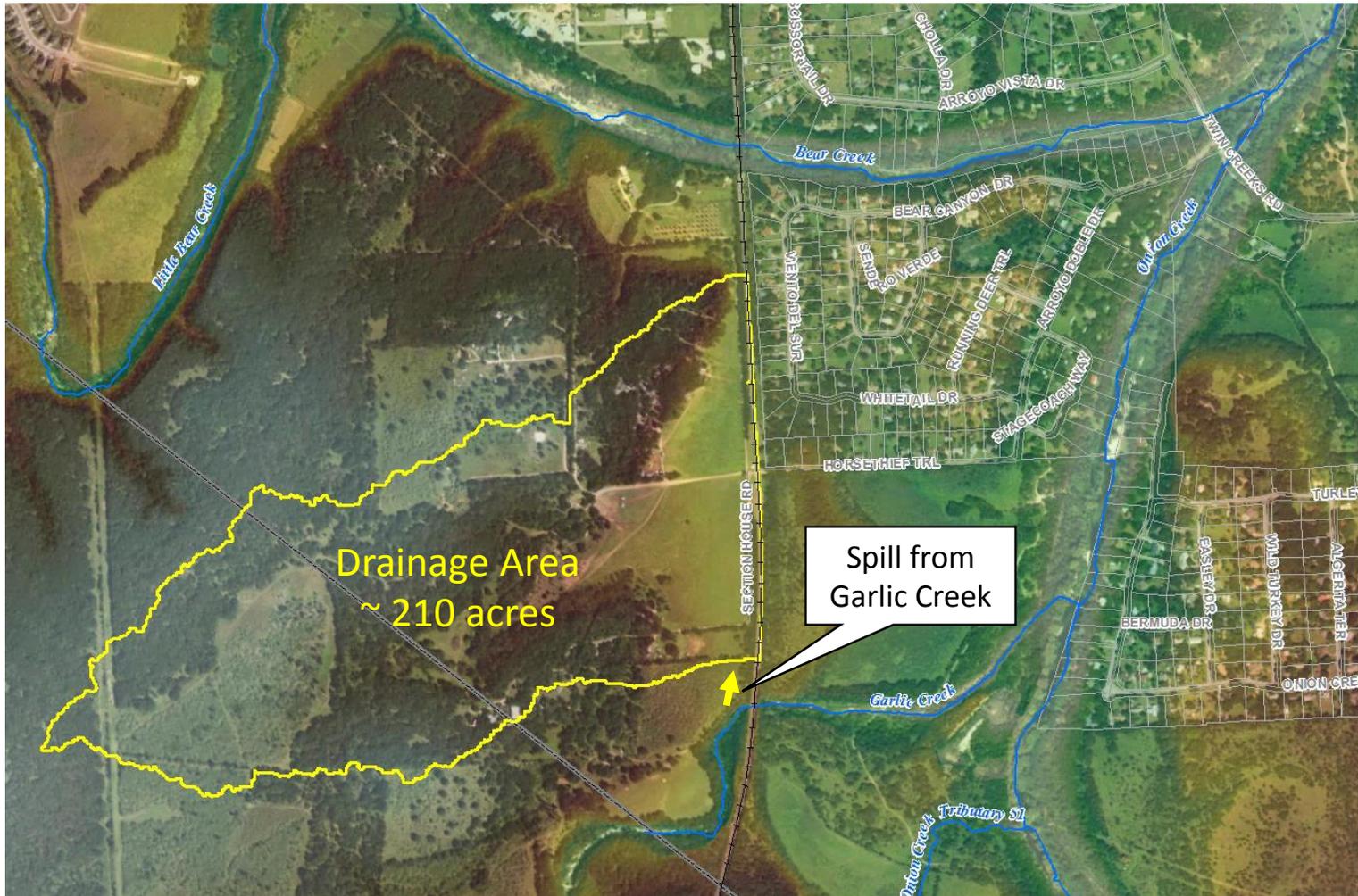


## Onion Creek Property Acquisition

- Structures
  - Approximately 32 structures in the 1% ACE Floodplain
- Benefits
  - Highest level of protection
  - Less environmental impact
  - Moderate timeline for implementation
- Constraints
  - Property purchase
  - Impact to community

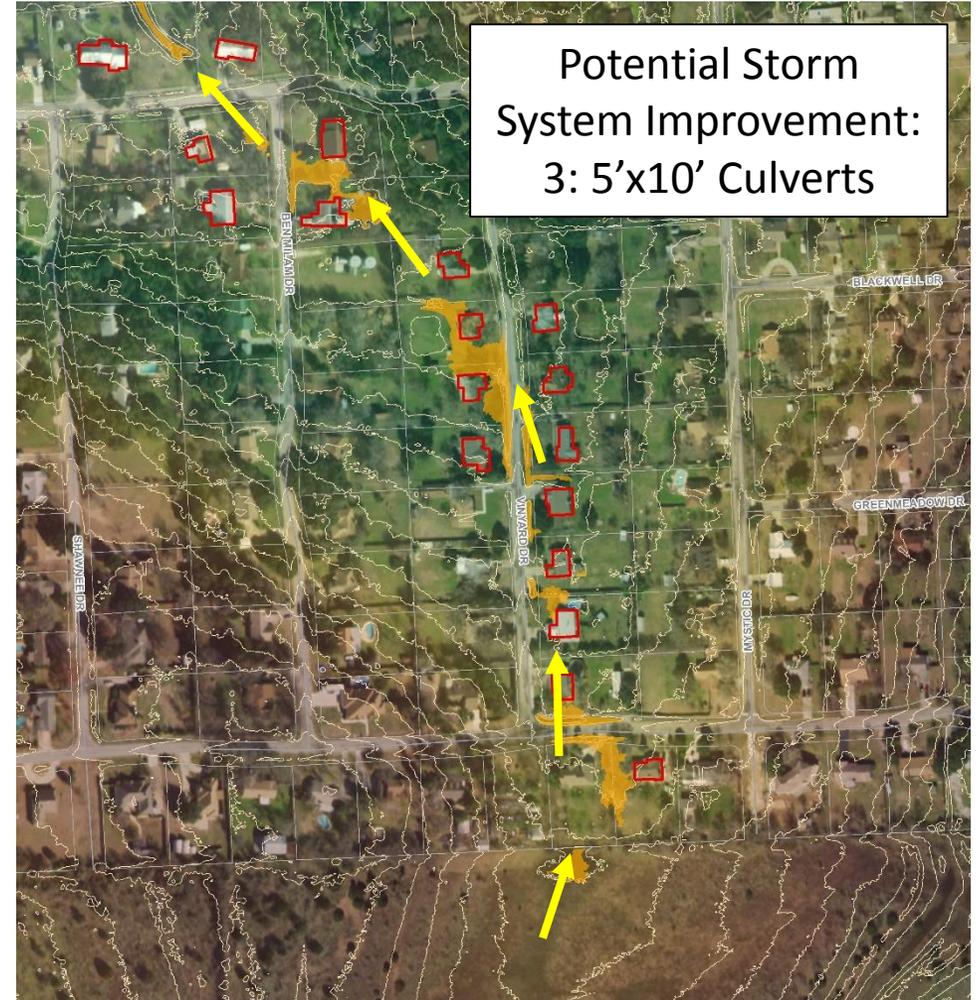
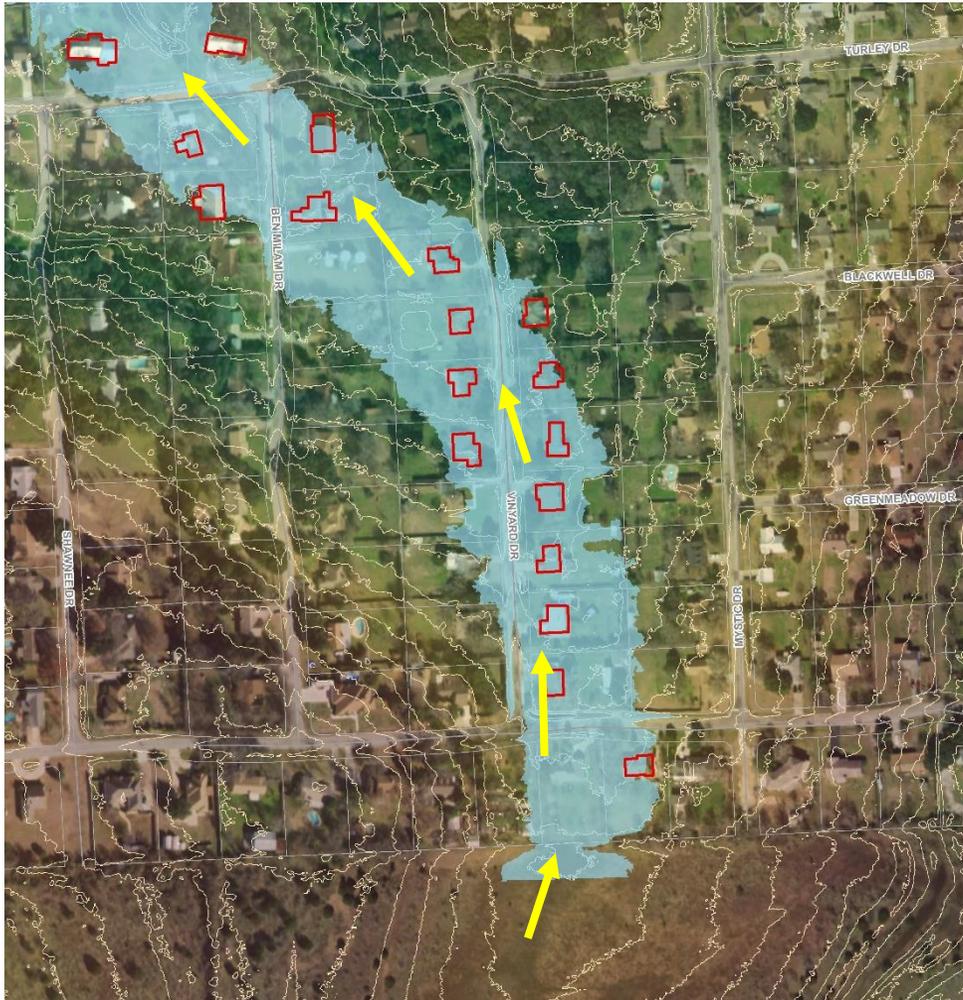


# Local Drainage: Arroyo Doble Railroad Ponding





# Local Drainage: Onion Creek Meadow



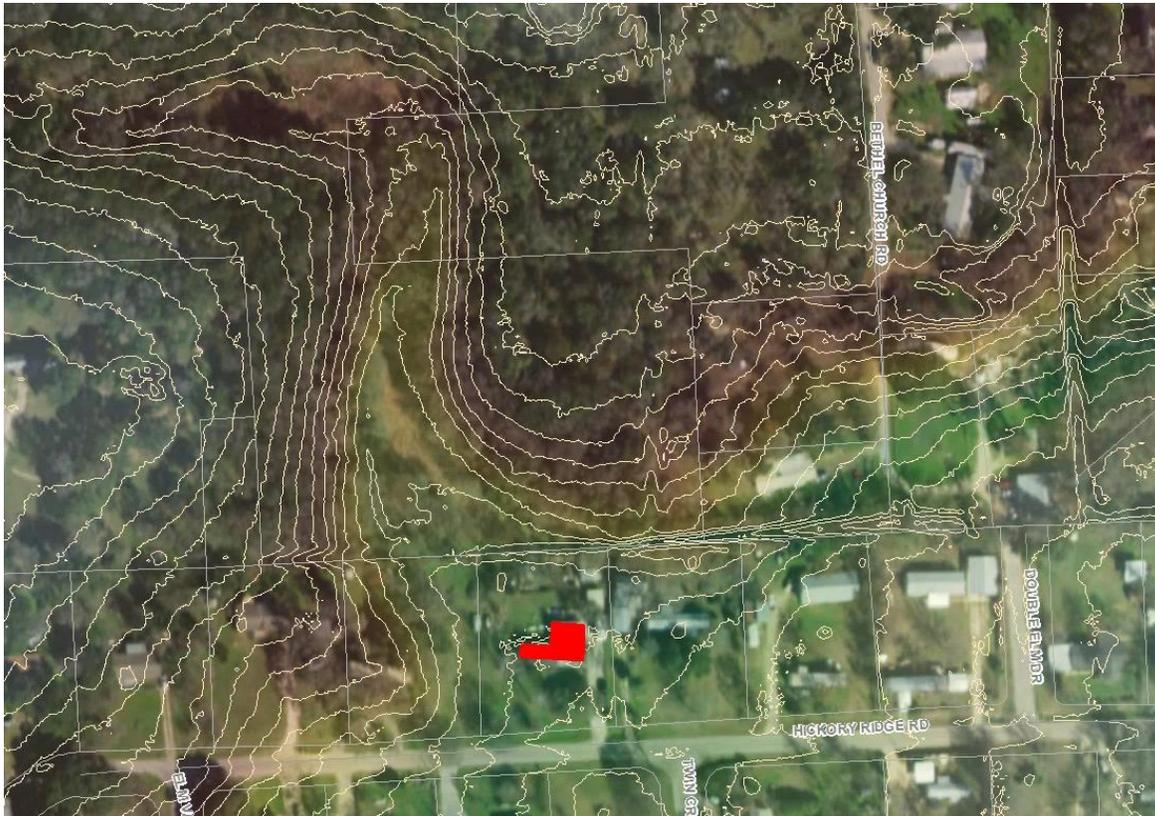
Potential Storm System Improvement:  
3: 5'x10' Culverts



# Local Drainage: Property Acquisition

## Twin Creeks

- Approximately 1 structure



## Onion Creek Meadows

- Approximately 20 structures





# Evaluation Criteria

## County-wide Approach to Evaluate Flood Mitigation

- Public Safety
- Benefits & Cost
- Environmental Impact
- Project Timing
- County Connectivity



# Flood Mitigation Alternatives Summary

## Twin Creeks

- Local Drainage
  - Property Acquisition

## Arroyo Doble

- Riverine
  - Property Acquisition
  - Floodwalls
- Local Drainage
  - Channel Improvements

## Onion Creek Meadows

- Riverine
  - Property Acquisition
  - Floodwalls
- Local Drainage
  - Storm System Improvements
  - Property Acquisition



# Next Steps

## Conceptual Analysis

- Benefits & Cost Analysis
- Evaluation Criteria
- Prioritize Mitigation Projects
- Potential Funding Sources

