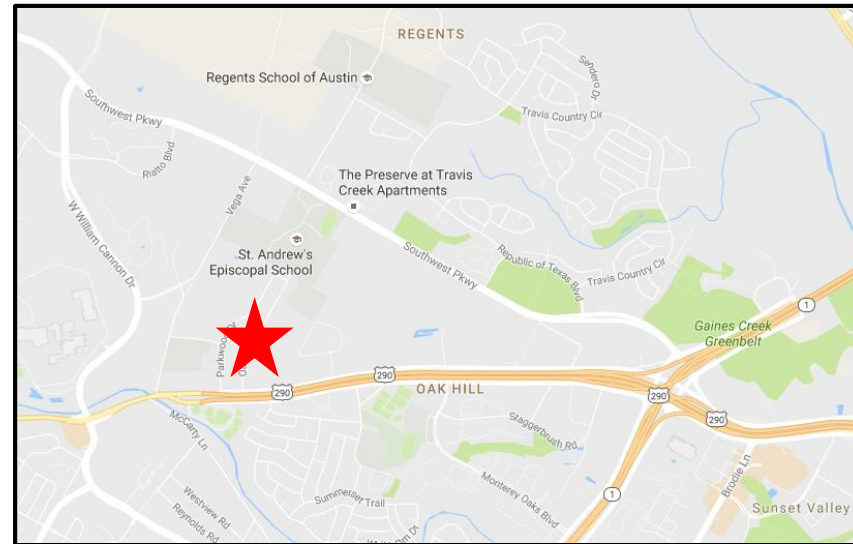# Oak Park/Oak Acres Flood Mitigation

November 3, 2016

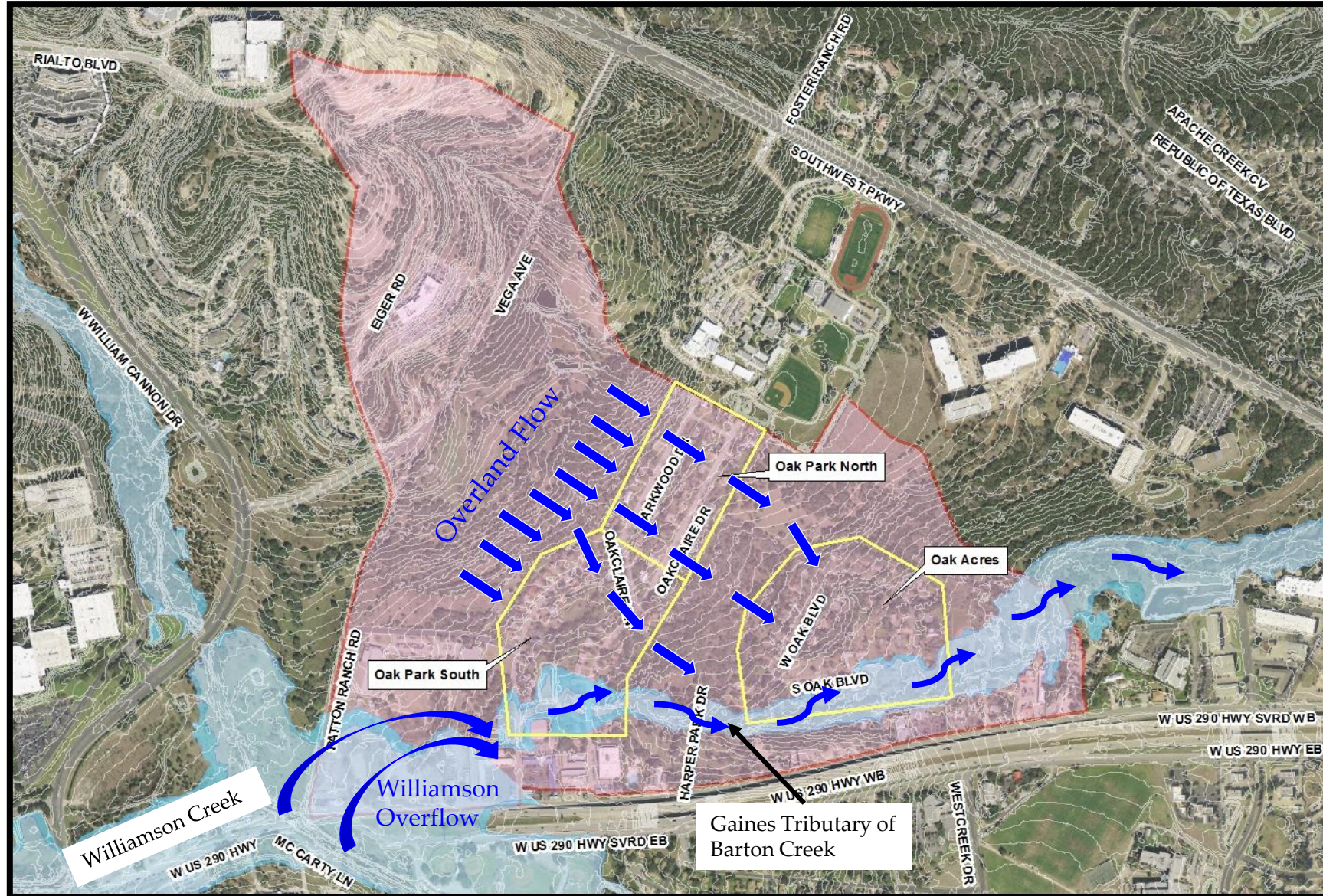John Middleton, P.E.   RPS Group   Rupali Sabnis, P.E.

City of
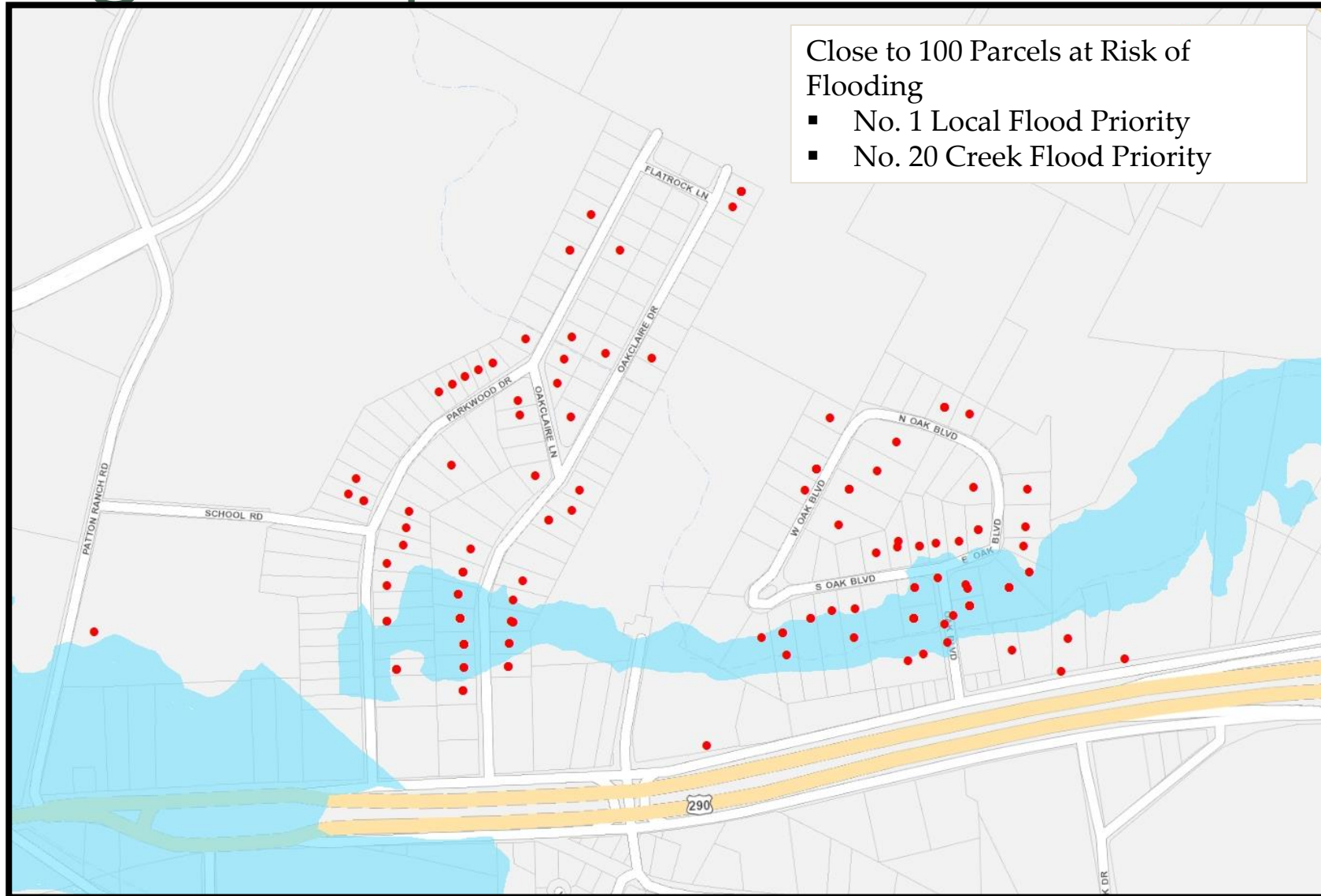Austin
WATERSHED
PROTECTION

Agenda

- Problem introduction
- Efforts to date
- Draft Preliminary Engineering Report (PER) discussion
- Moving forward
- Questions

Flooding problems

Flooding Complaints

Close to 100 Parcels at Risk of Flooding
- No. 1 Local Flood Priority
- No. 20 Creek Flood Priority

Efforts to Date

- Gaines tributary study - Williamson overflow estimate, floodplain map
- Previous neighborhood meetings – August 2012, September 2013, March 2015
- Harper Park development coordination
- St. Andrews development coordination
- Field Operations work

Preliminary Engineering Report Goals

- Mitigate flooding from local runoff and Williamson overflow
- City of Austin Drainage Criteria Manual
  - Stormdrain
    - Runoff from 25-year storm (7.6 inches in 24 hours) below ground
    - Runoff from 100-year storm (10.2 inches in 24 hours) within Right of Way
  - Roadway crossings
    - No overtopping in 25-year storm
    - Maximum 6 inches overtopping in 100-year storm
  - Minimum impact to environmentally sensitive areas (trees, recharge features)
  - No downstream adverse impact

Draft Preliminary Engineering Report

- Two design options
- Option 1 requires some property acquisition
  - Affected property owners contacted
- WPD requested another option with fewer property acquisition
- Option 2 eliminates need of any property acquisition
  - Include some easement acquisition
  - Project sponsors leaning toward Option 2
- Download draft report from project website
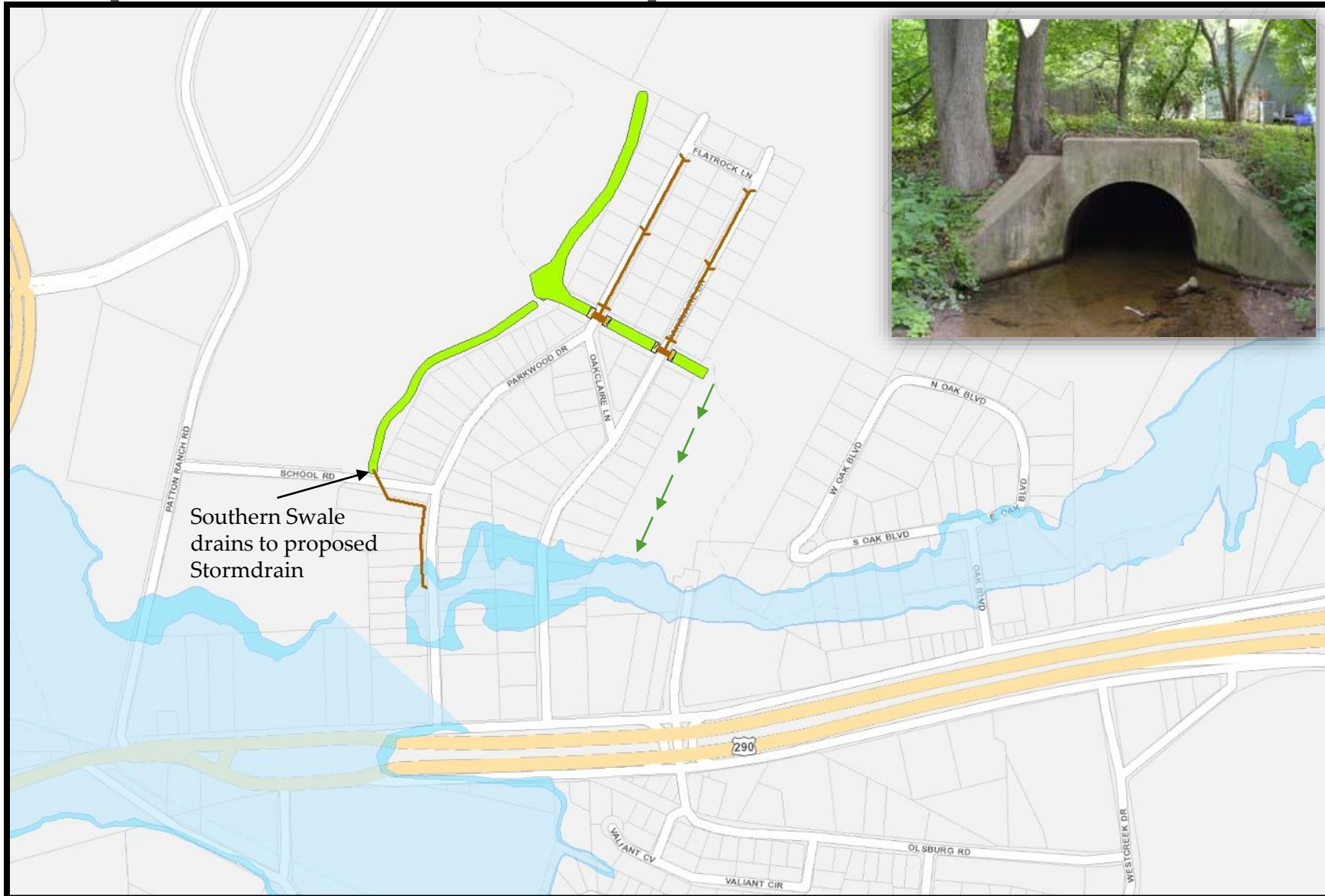
  www.austintexas.gov/oakpark

Improvement Option 1

Improvement Option 1

Channel and Culvert Improvements

Improvement Option 1

Proposed Stormdrain System

Improvement Option 1

Southern Swale drains to proposed Stormdrain
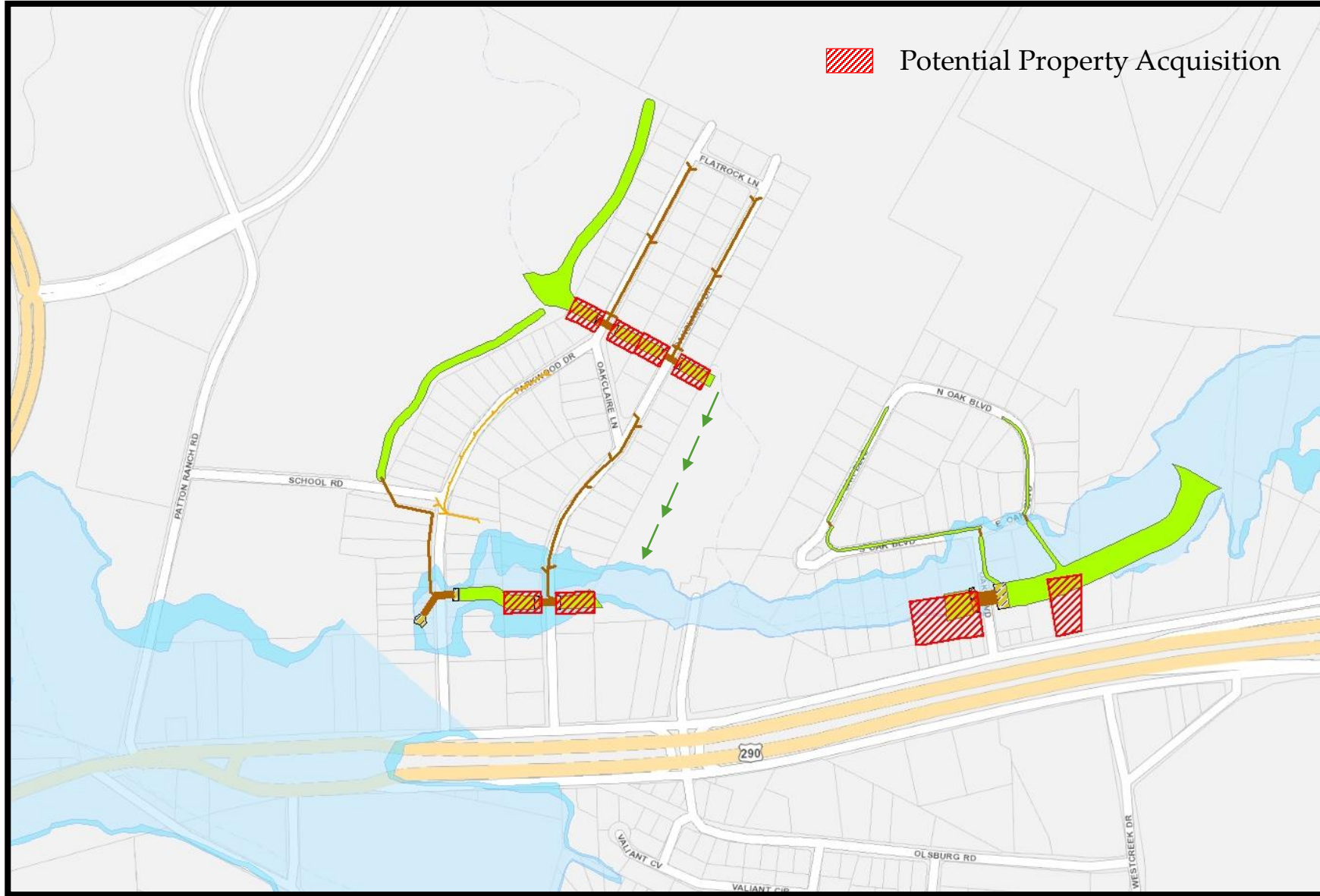
Improvement Option 1

Gaines Channel and
Culvert Improvements

Improvement Option 1

Improvement Option 1

Roadside Channel and Culvert Improvements

Improvement Option 1

Gaines Channel and
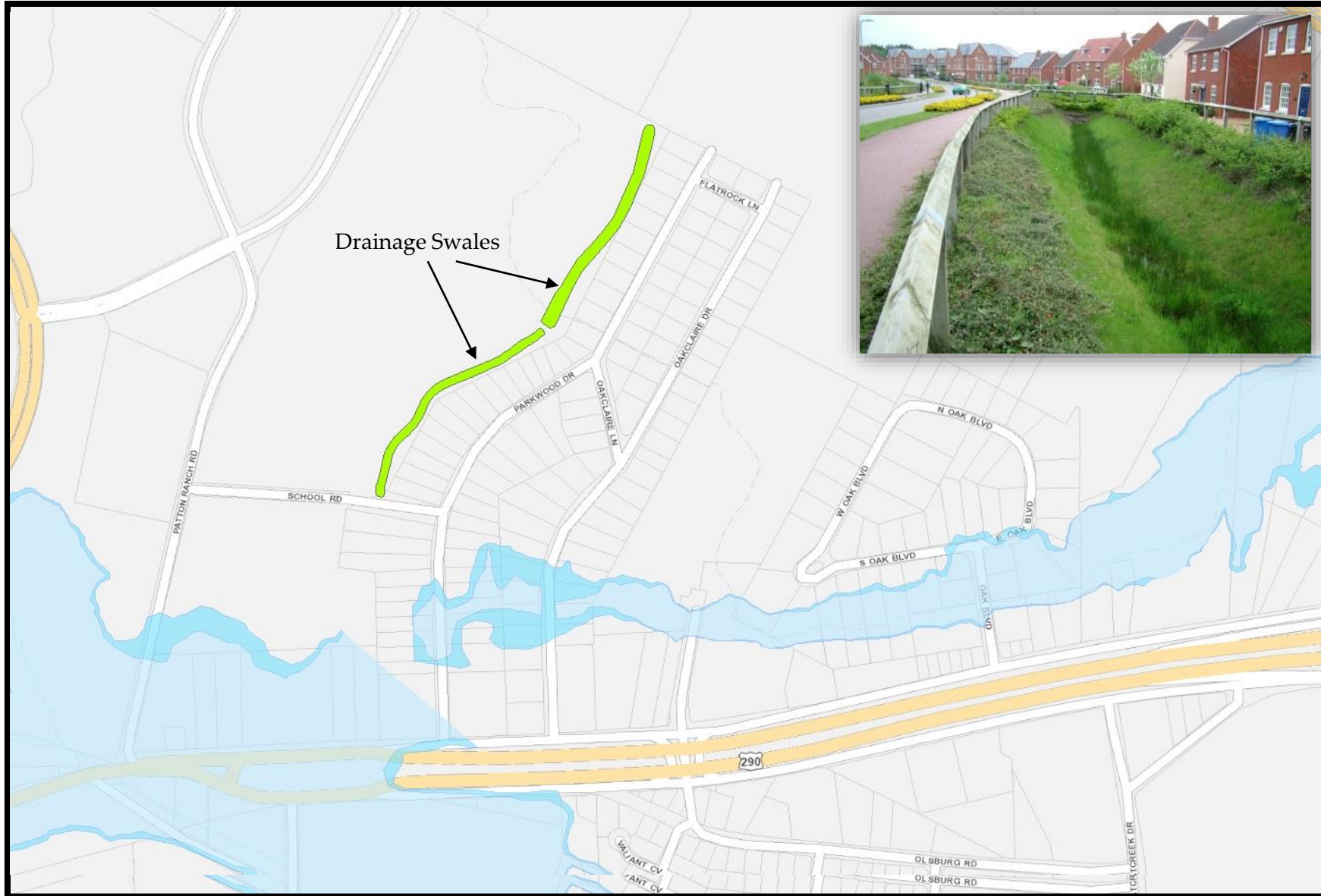Culvert Improvements

Improvement Option 1

Potential Property Acquisition
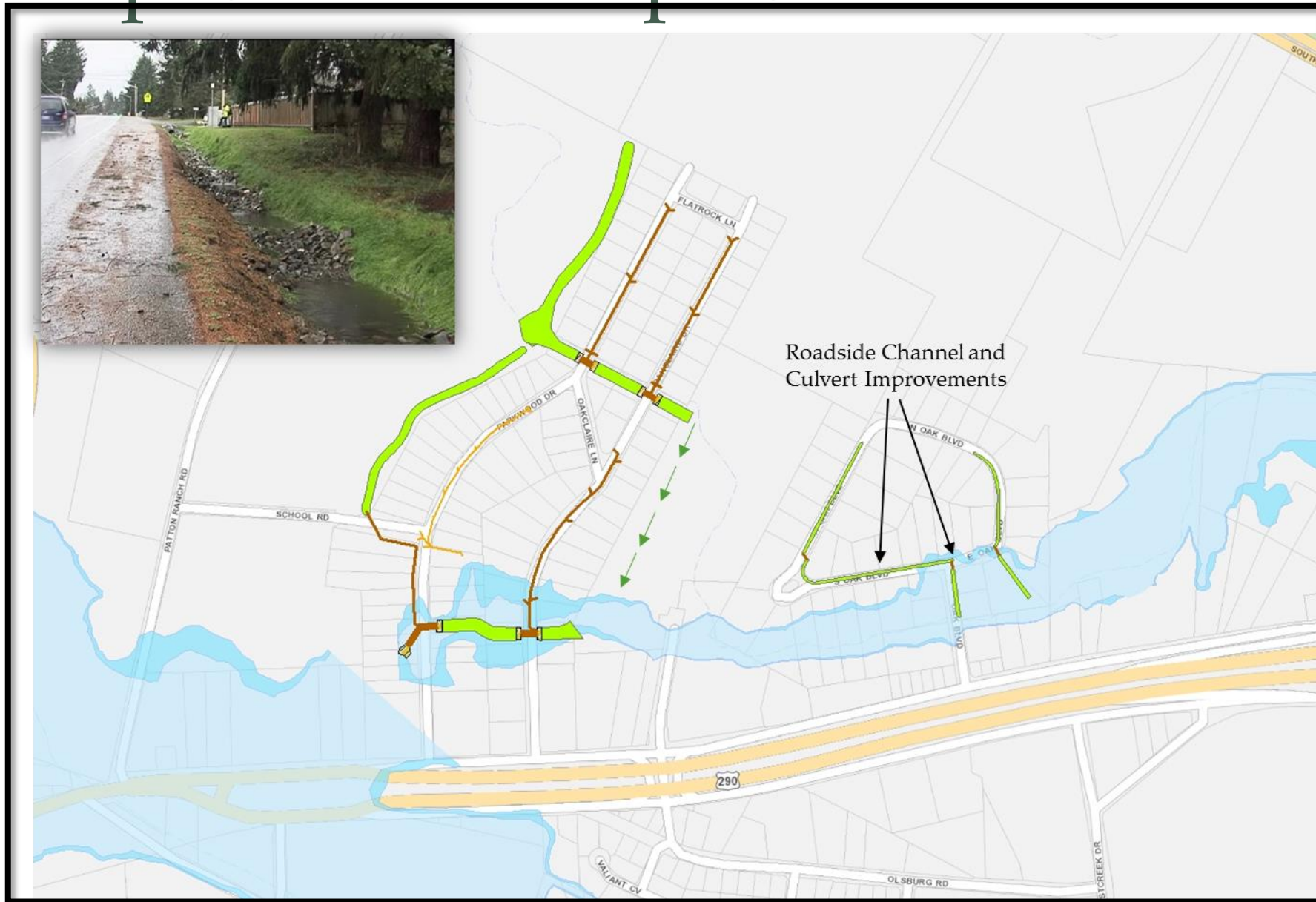
Existing Floodplain
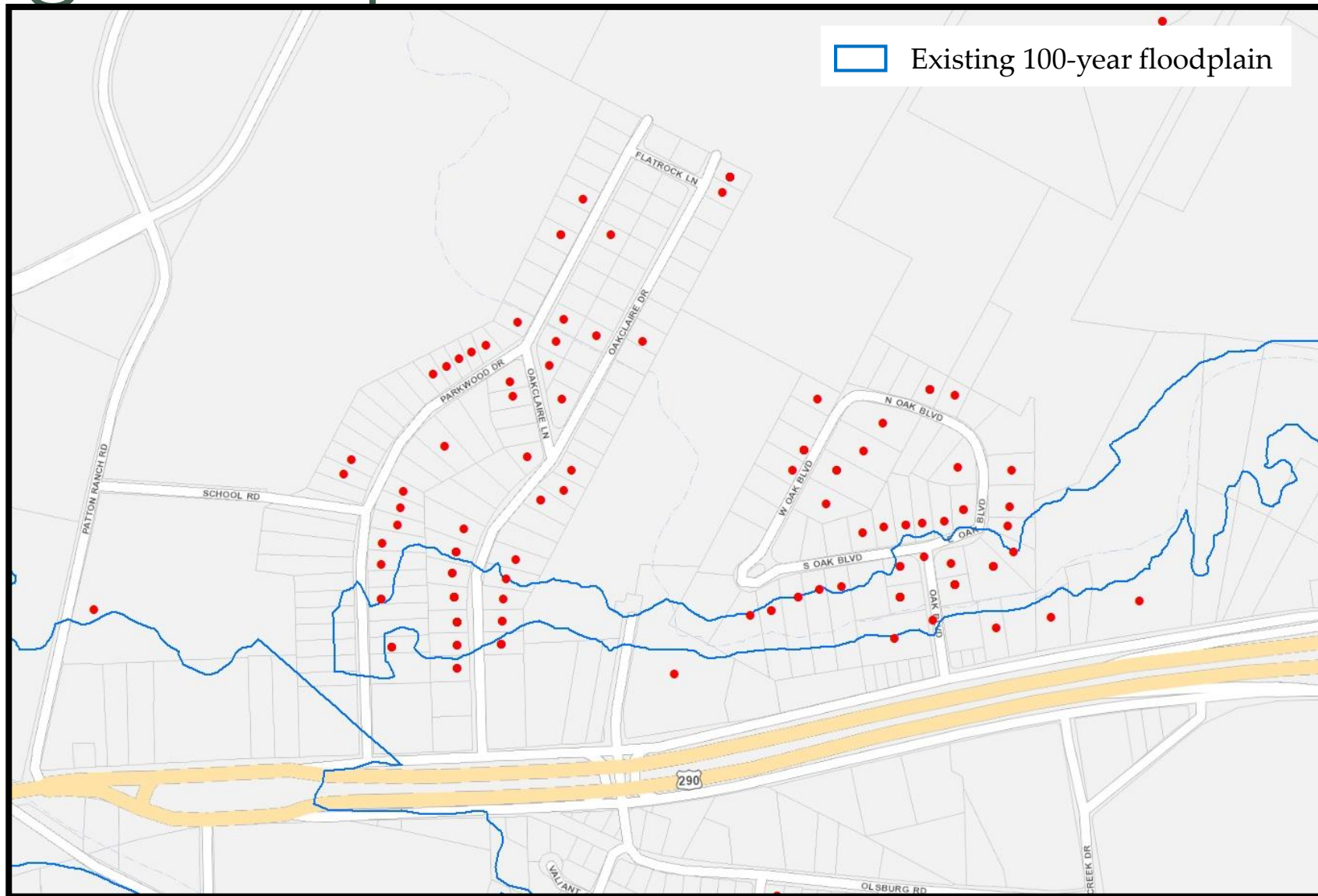
Floodplain change with Option 1

Improvement Option 2

Drainage Swales

Improvement Option 2

Proposed Inlet Structure

Proposed Box Stormdrain

Improvement Option 2

Extended and Angled Culverts

Gaines Channel and Culvert Improvements

Improvement Option 2

Southern Swale Drains to Proposed Stormdrain

Improvement Option 2

Proposed Stormdrain Systems

Existing Stormdrain Systems to remain in place

Improvement Option 2

Roadside Channel and Culvert Improvements

Improvement Option 2

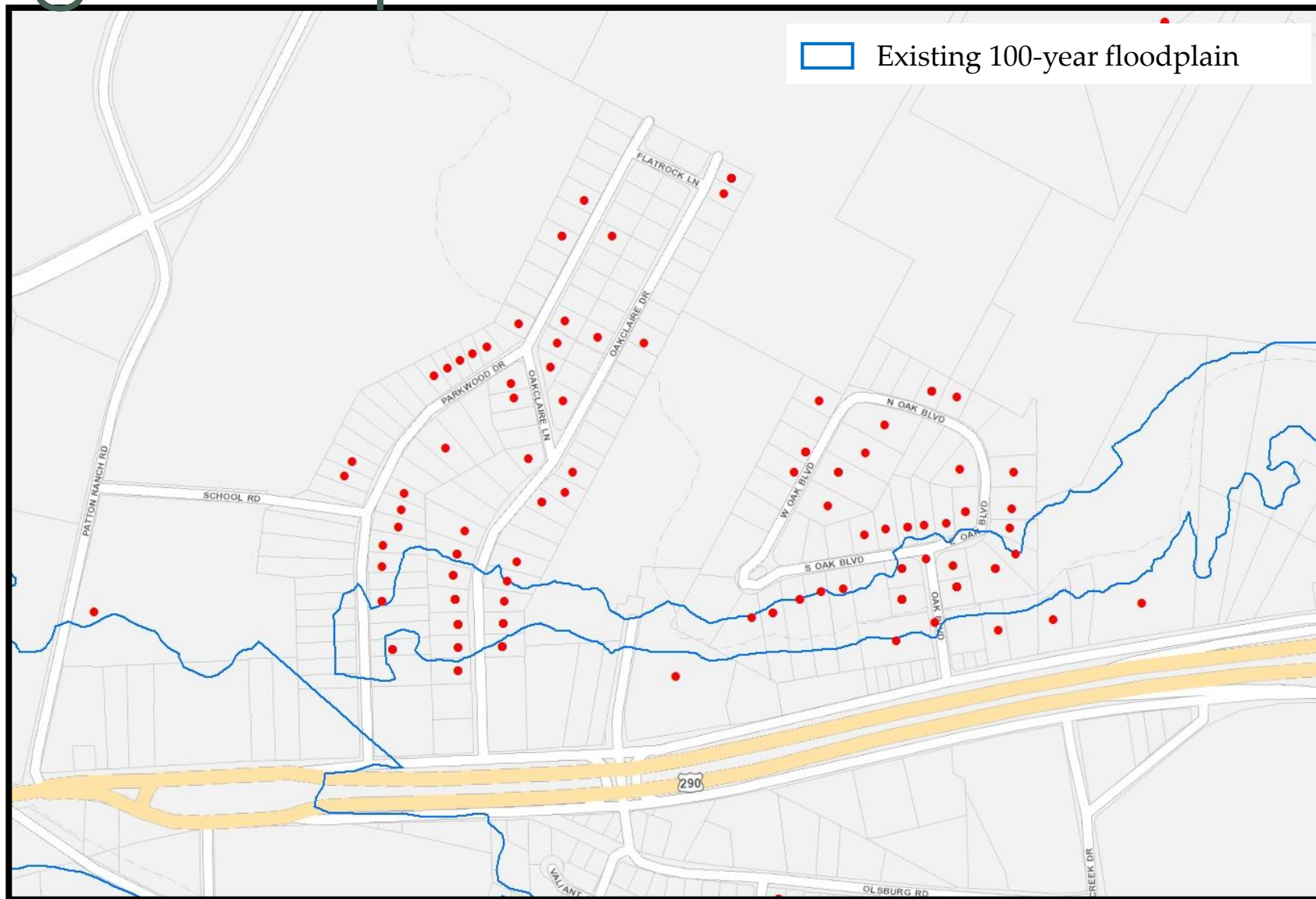Lower Channel Flowline by 2ft

Gaines Channel and Culvert Improvements

Extended Culverts
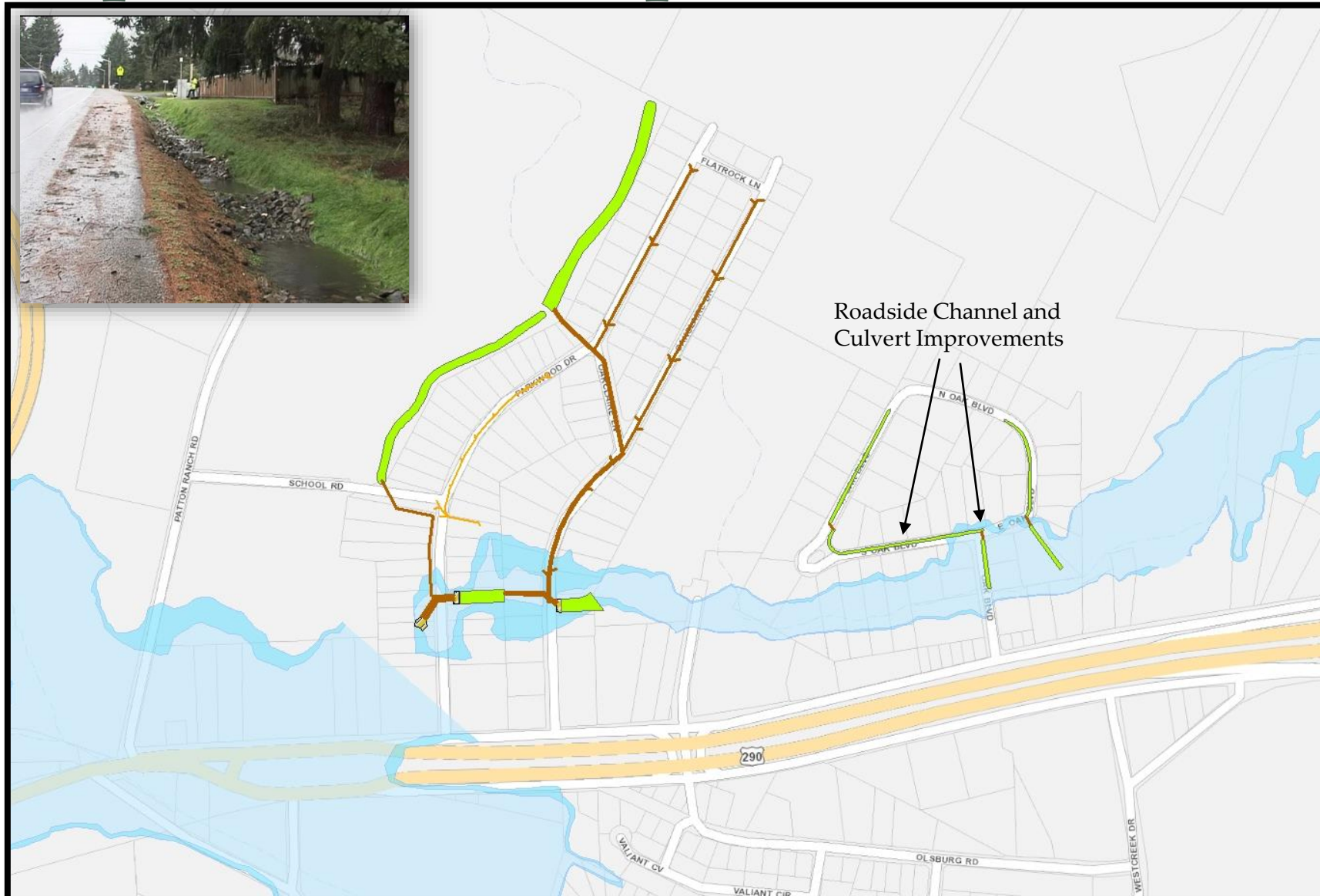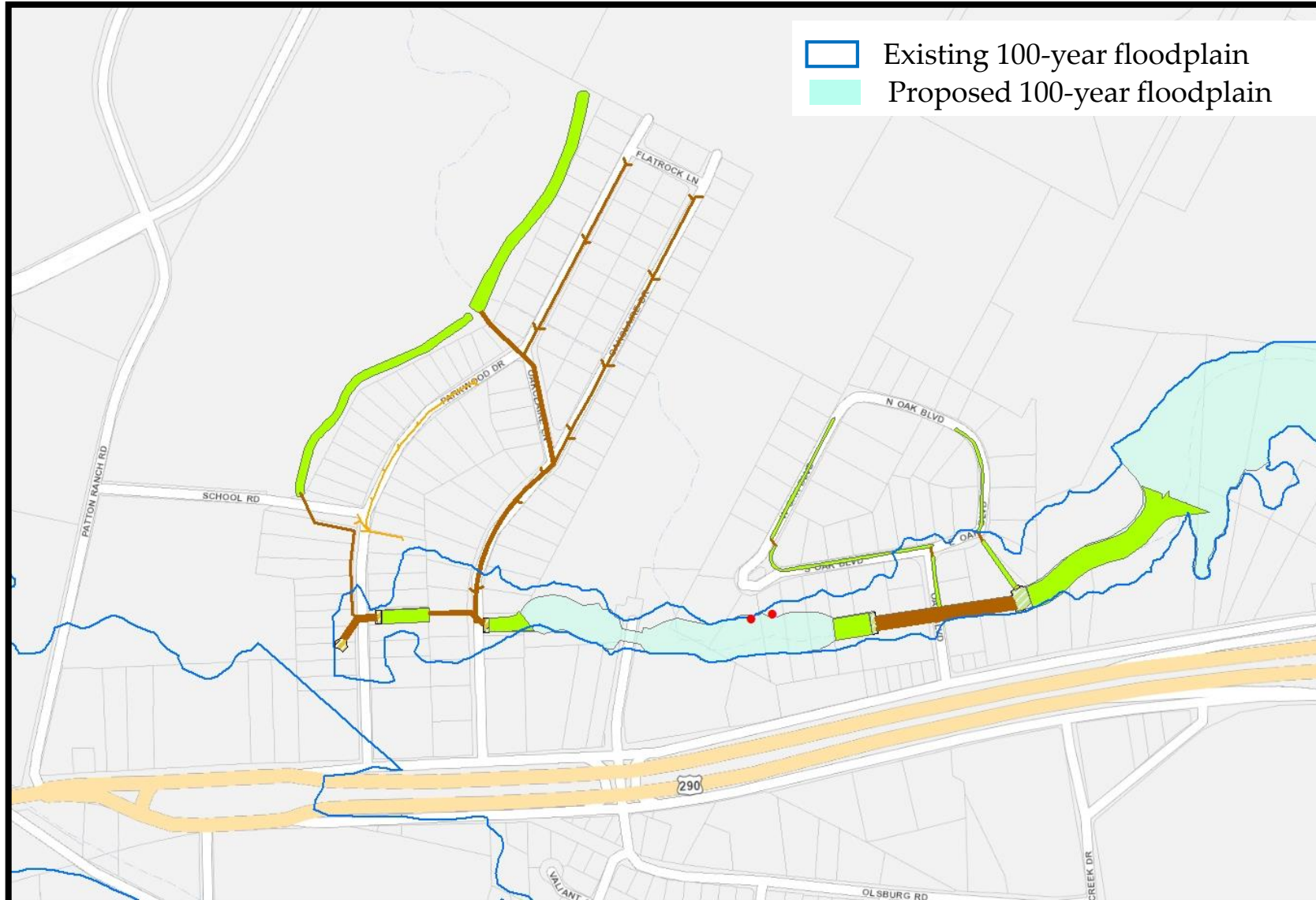
Existing Floodplain

Floodplain Change with Option 2

Moving Forward

- Selection of most feasible option
  - Project sponsors leaning toward Option 2
  - Internal Watershed Protection Department review
  - Stakeholder feedback
  - Work to minimize property and easement acquisition
- Secure funding (both options are ~$12M)
- Implementation
  - Starting from downstream
  - Phased implementation
  - Smaller projects to speed up the process
- Timeline
  - Selection of option and Preliminary Phasing Plan by Summer 2017

Thank you!!

Questions?