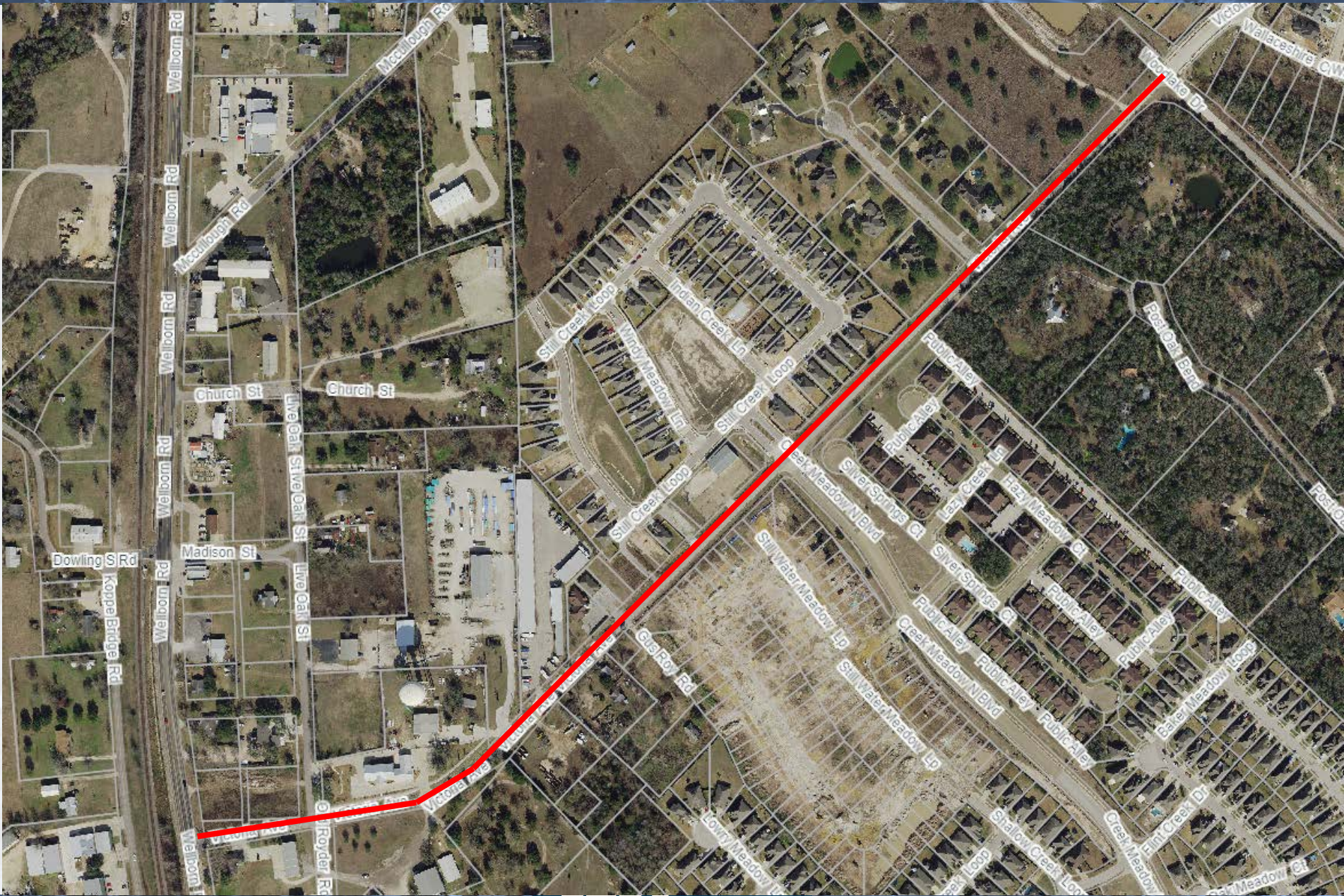


# Victoria Avenue Roundabouts

Workshop Item 9.2

December 11, 2023





# Victoria Avenue

- Added to FY 19 Capital Project budget
  - Original budget \$3,620,000
- Original Preliminary Engineering Contract approved June 13, 2019
  - \$234,500
- Original Engineering Design Contract approved January 28, 2021
  - \$458,400
- Scope revised – Change Order to close out Design Contract and New Design Contract approved May 26, 2022
  - \$182,900



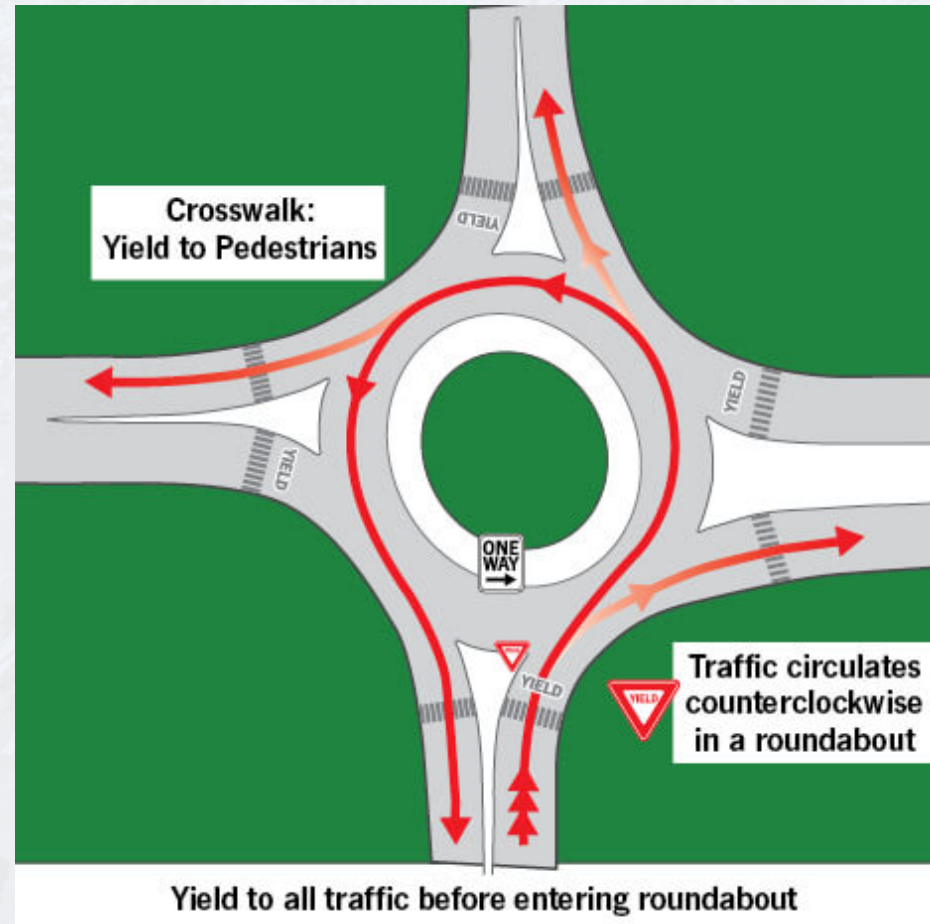
# Current Scope

- Add concrete roundabouts at the intersections of Creek Meadows Parkway and Woodlake Drive
- Feasibility of adding sidewalk on south side of road between Woodlake Drive and Creek Meadows Parkway
- Asphalt pavement will be rehabilitated with street maintenance plan



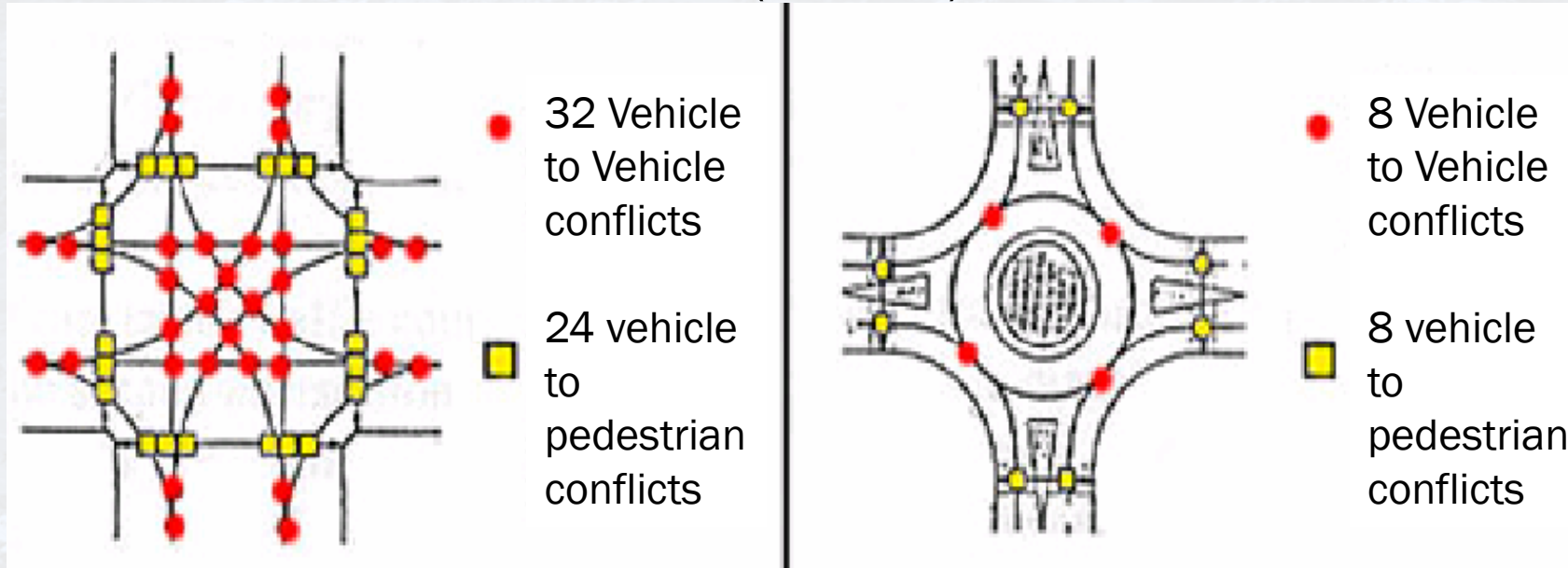
# What is a modern Roundabout?

- Generally circular in shape
- Counter-clockwise traffic flow (One way)
- Yield at entry
- Slow speed environment
- Cars yield to Pedestrians



# What Makes Roundabouts so Safe?

- Reduced number of conflict points, and are less severe:
  - Vehicle to Vehicle Conflicts (32 to 8)
  - Vehicle to Pedestrian Conflicts (24 to 8)



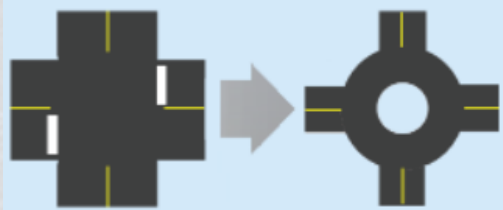
Traditional 4-way Intersection

Single Lane Roundabout



# So How Safe Are They?

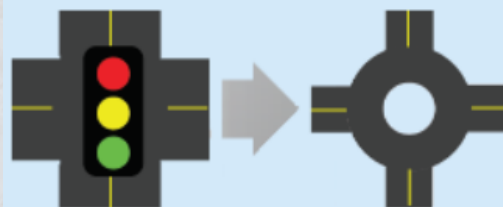
## Two-Way Stop-Controlled Intersection to a Roundabout



**82%**

Reduction in fatal and injury crashes<sup>1</sup>

## Signalized Intersection to a Roundabout



**78%**

Reduction in fatal and injury crashes<sup>1</sup>

- Two-way stop controlled converted to a roundabout:
  - 62% reduction in ALL crashes
  - 85% reduction in injury crashes
  - 82% reduction in fatal and injury crashes combined
- Signalized intersection converted to a roundabout:
  - 62% reduction in ALL crashes
  - 85% reduction in injury crashes
  - 78% reduction in fatal and injury crashes combined

Source: <https://www.iihs.org/topics/roundabouts#safety-benefits>



# Traffic Flow Benefits

## Efficiency

- Reduces traffic delays as much as 65%
- Vehicle stops reduced as much 52%

## Environment

- With less stops, vehicle emissions reduced (15%-40%) and fuel consumption is lowered (24%) at the intersection

## Positive Effects

- Public Opinion of Roundabout increases over time with use
- Safer for drivers (failure to yield is less severe)

Source: <https://www.iihs.org/topics/roundabouts#safety-benefits>





# Gaining Popularity

- Vehicular roundabouts began in the 1950s
- Modern Roundabouts are gaining in popularity since 1990 (Nevada, USA)
- “Roundabout First Policy” has been adopted by NY DOT and Virginia DOT
- College Station Roundabout Policy & Guidelines
  - Adopted and Signed 2019
  - Roundabouts are the preferred facility at controlled intersections of one (1) or more collector or local roads

Source: <https://www.iihs.org/topics/roundabouts#safety-benefits>



# Updated Scope

- Public meeting held September 19, 2023
  - 30+ meeting attendees
  - Received positive and negative feedback concerning project
- Remove roundabout at Woodlake Drive
- Add sidewalk between Creek Meadows Parkway and Woodlake Drive



# Questions?

