



FPID: 436187-1



FPID: 435627-1

Concept Development & Evaluation

Public Meeting

September 20, 2018



Florida Department of Transportation



Title VI



This meeting, and the subject studies, are being conducted without regard to race, color, national origin, age, sex, religion, disability, or family status. Persons wishing to express their concerns relative to FDOT compliance with Title VI may do so by contacting:

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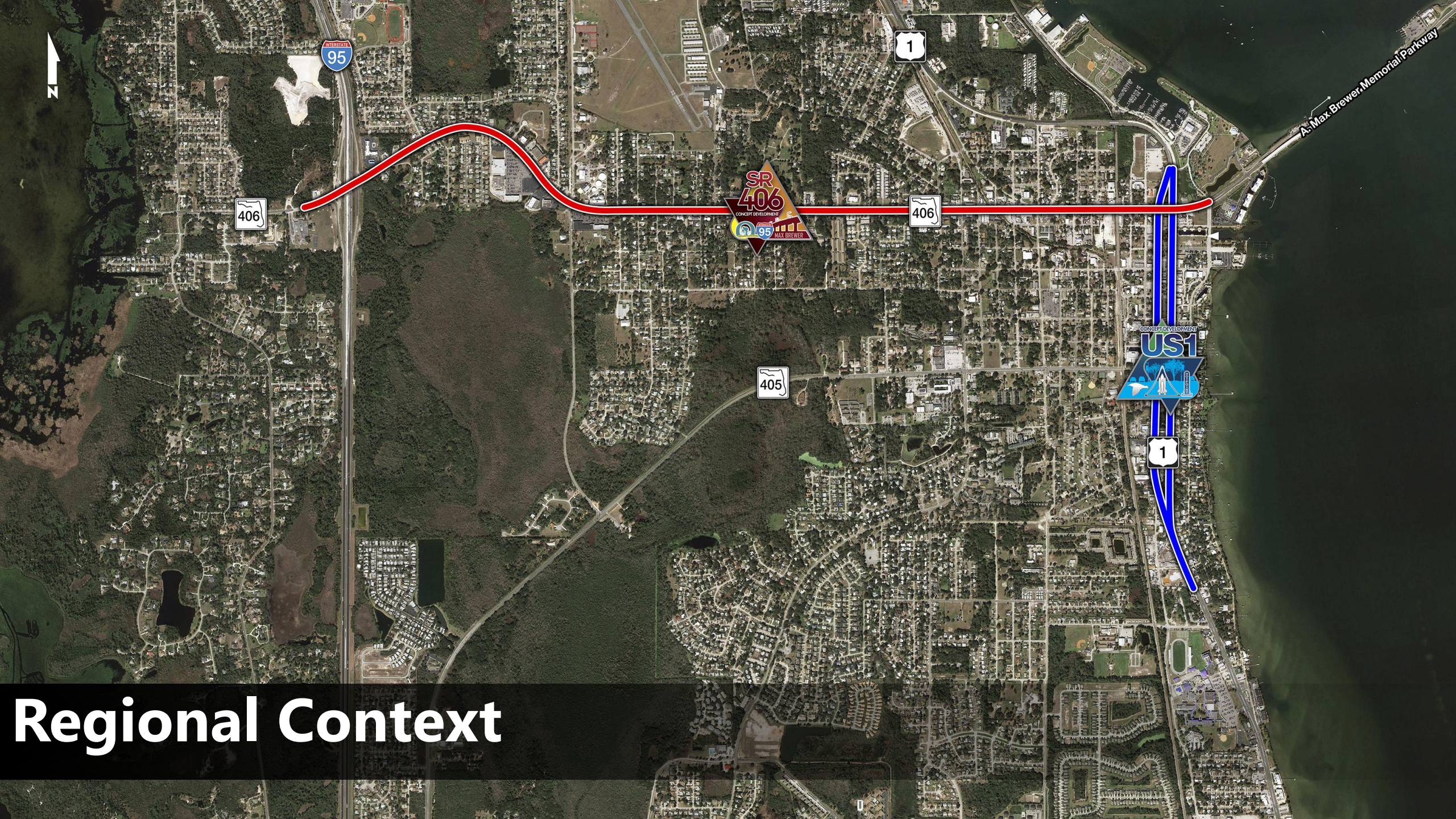
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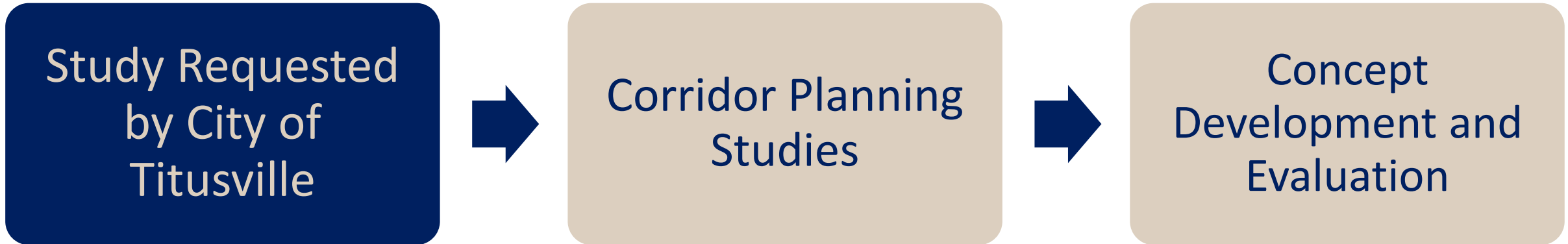
Regional Context



Project Background



YR 2014



Study Requested by City of Titusville

Purpose: Provide improved multimodal mobility, with consistent roadway design that will enhance safety and connectivity while supporting economic and community development goals.



Project Background



YR 2014

YR 2015 to 2016

Study Requested by
City of Titusville



Corridor Planning
Studies



Concept
Development and
Evaluation Studies

Corridor Planning Studies

- Study began in January 2015
- Public Meeting in February 2016 presented the original alternatives
- Completed in September 2016 producing the original alternatives to be advanced into the next phase



Project Background



YR 2014

Study Requested by
City of Titusville



YR 2015 to 2016

Corridor Planning
Studies



YR 2017 to Current

Concept
Development and
Evaluation Studies

Concept Development and Evaluation Studies

- Began in June 2017
- Refining original alternatives from planning studies into proposed alternatives

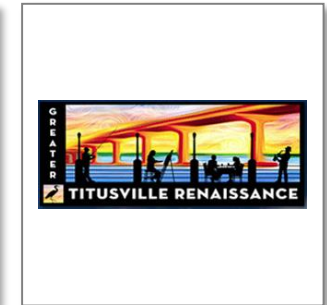


Project Visioning Team (PVT)



The Project Visioning Team, PVT, is an advisory group made up regional stakeholder organizations that provides jurisdictional, policy, technical, and administrative guidance

- Pulse on community preferences
- Shapes the recommended improvements
- PVT meetings held on November 8, 2017 & June 27, 2018





Project Process



1. Examine | June 2017 – March 2018

- Existing Traffic Conditions
- 2040 No Build Traffic Conditions
- 2040 Proposed Build Conditions



2. Identify and Develop Alternatives | February 2018 – May 2018

- Based on feedback received during Planning Study

3. Select and Refine Proposed Alternatives | May 2018 – November 2018

- Based on analysis and feedback received from Project Visioning Team



Future Conditions: No Build

Roadway Operations & Safety Needs



Roadway Capacity

- Corridor expected to operate at an **acceptable** level in 2040 without any changes, including:
 - Corridor and intersection delay
 - Morning and evening peak traffic delay

Safety

- Reduce number of median openings
- Reduce number of intersection crashes



Original Planning Study Alternatives



S.R. 406

- **Median Improvements** throughout the S.R. 406 corridor
- Addition of **bike lanes** throughout the S.R. 406 corridor
- **Road Diet** along S.R. 406, from Dixie Avenue to Indian River Avenue
- **Roundabout** at Singleton Avenue & S.R. 406

U.S. 1

- **Roundabout** at U.S. 1 & S.R. 406
- **Roundabout** at U.S. 1 & Grace Street



Previous Planning Study Recommendation: U.S. 1 & Grace Street Roundabout



Will **not** move forward due to:

- Low side-street volume
- Low benefit-cost ratio
- Potential of significant business relocation costs

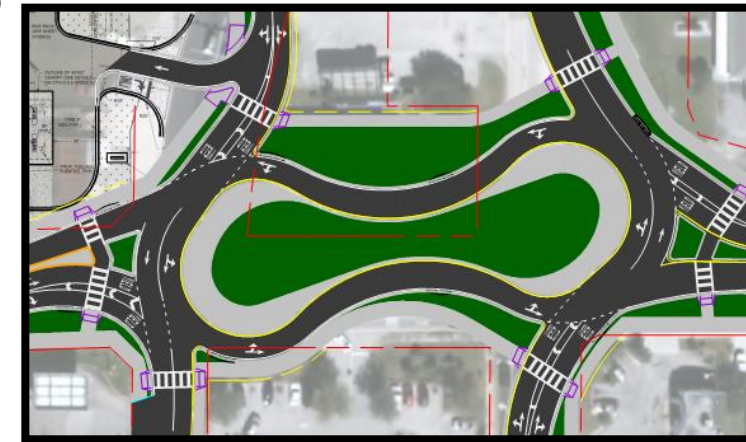




Proposed Alternatives Moving Forward



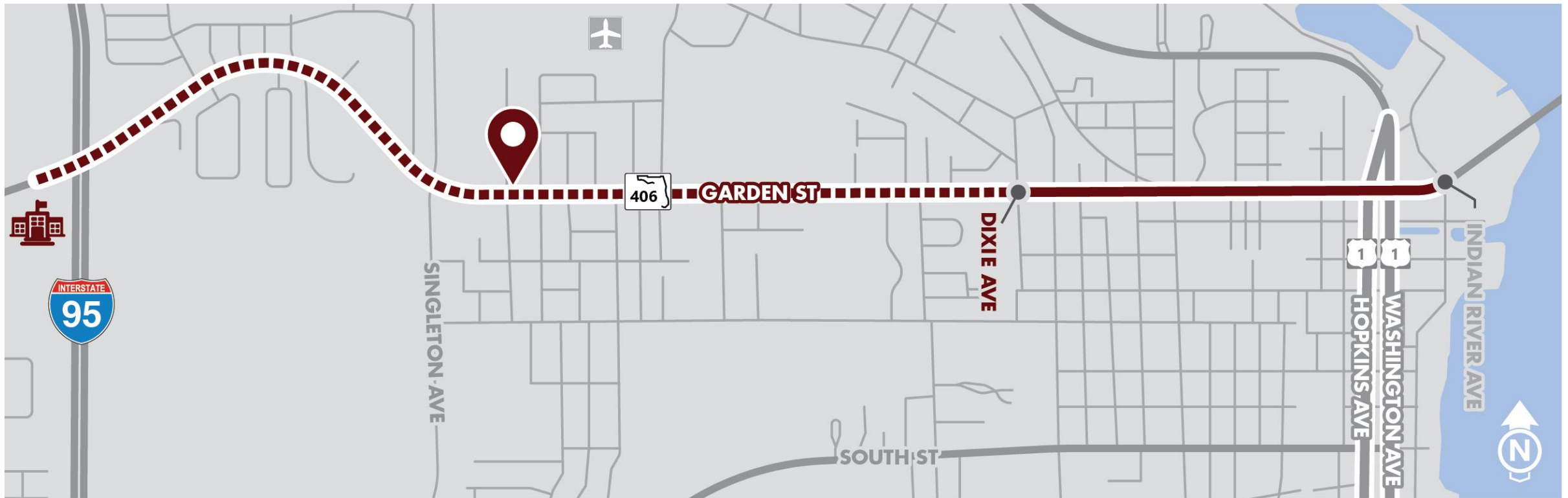
- **Median Improvements** throughout the S.R. 406 corridor
 - Reducing number of median openings from 33 to 16
- Addition of **bike lanes** throughout the S.R. 406 corridor
- **Road Diet** along S.R. 406 from Dixie Avenue to Indian River Avenue
- **Roundabout** at Singleton Avenue and S.R. 406
- **Roundabout** at S.R. 406 and U.S. 1





Median Improvements and Addition of Bike Lanes

S.R. 406 from South Lake Elementary School to Dixie Avenue





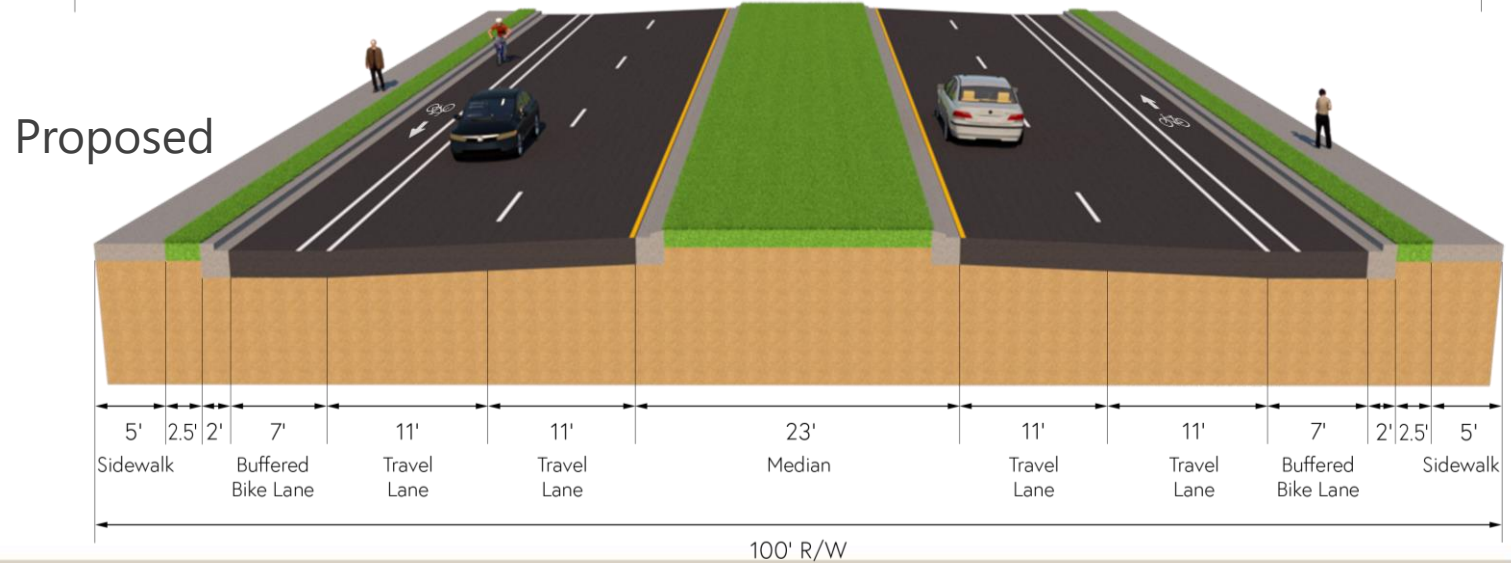
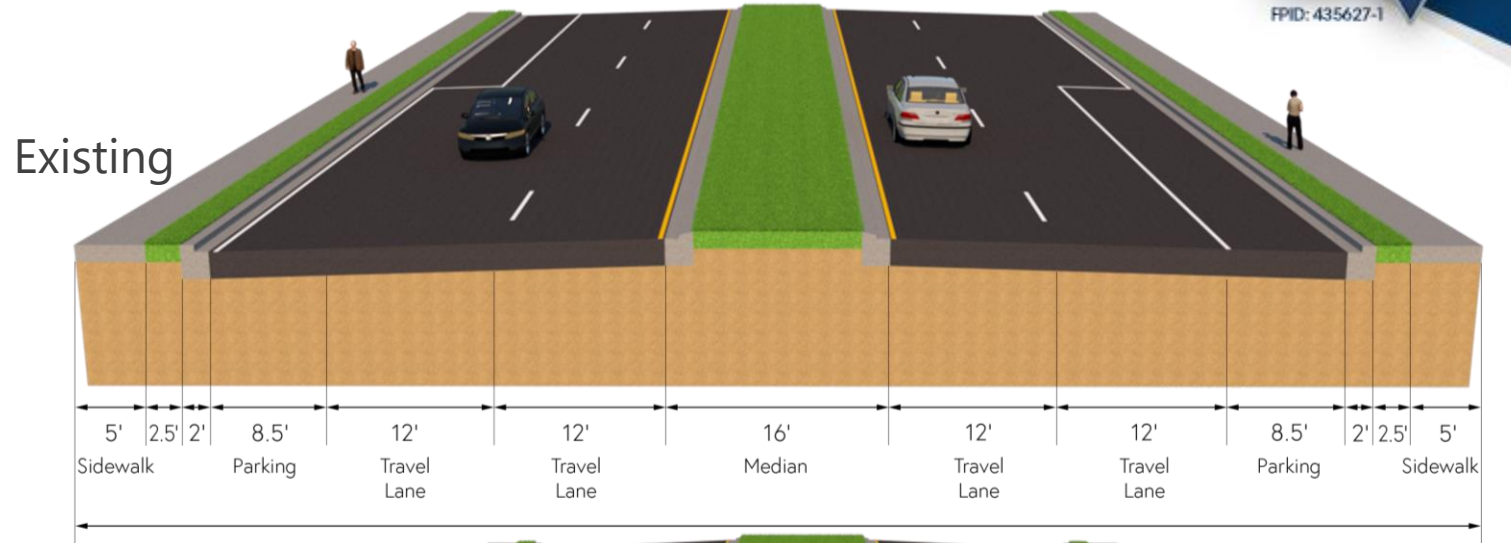
Median Improvements and Addition of Bike Lanes

S.R. 406 from South Lake Elementary School to Dixie Avenue



Proposed Changes

- Removal of street parking
- Reduction of travel lane width
- Addition of buffered bicycle lanes
- Widened raised median
- Reduce the number of openings to improve safety
- Maintain existing sidewalks, curb line and right-of-way





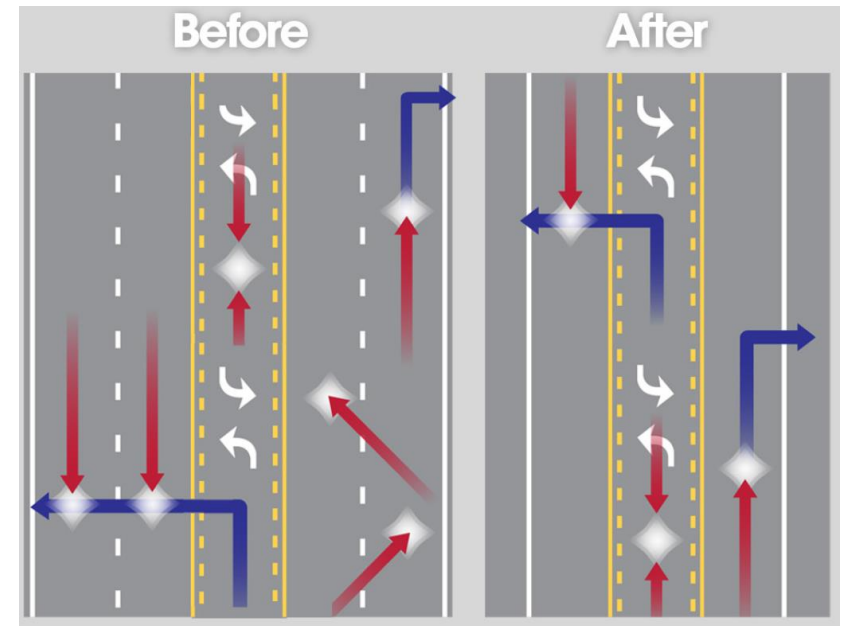
Road Diet



Benefits

Road Diet plans have the potential to solve a number of traffic operations and safety issues. Benefits often include:

- **Reduction in crashes** and crash severity through traffic calming and reduced speed differential
- **Increased pedestrian safety** with fewer lanes to cross
- Opportunity to repurpose roadway segments to create **bike lanes** and other amenities
- Cost effective for implementation
- Increased property values





Road Diet

S.R. 406 from Dixie Avenue to Indian River Avenue





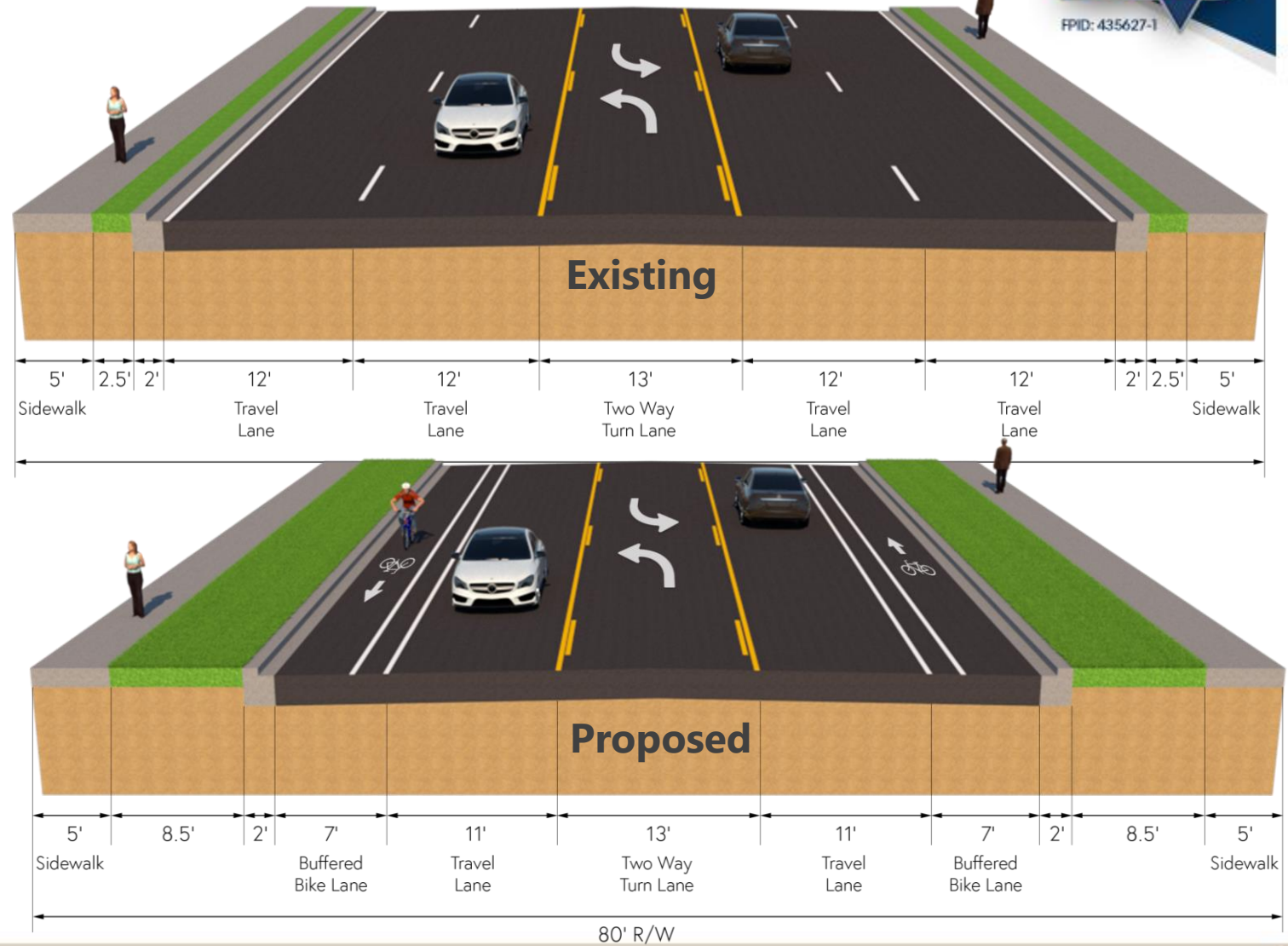
Road Diet

S.R. 406 from Dixie Avenue to Indian River Avenue



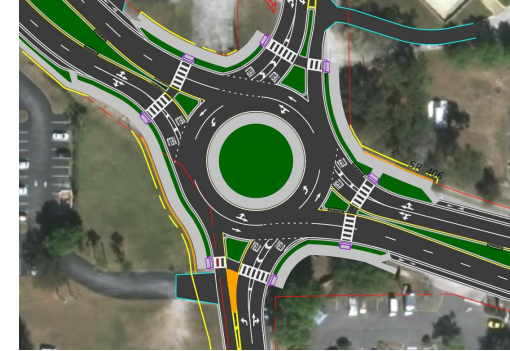
Proposed Changes

- **Reduce** from 5-lane to 3-lane typical section: 2 travel lanes and 1 center turn lane
- **Reduction** of travel lane width
- **Addition** of buffered bicycle lanes
- **Move in** existing curbs, but retain existing drainage system
- Provides **wider** utility strip
- **Maintain** existing sidewalks
- Operates **acceptably** YR 2040



Roundabout Benefits

Roundabouts are designed to improve safety for all users. Benefits of a well-designed roundabout may include:

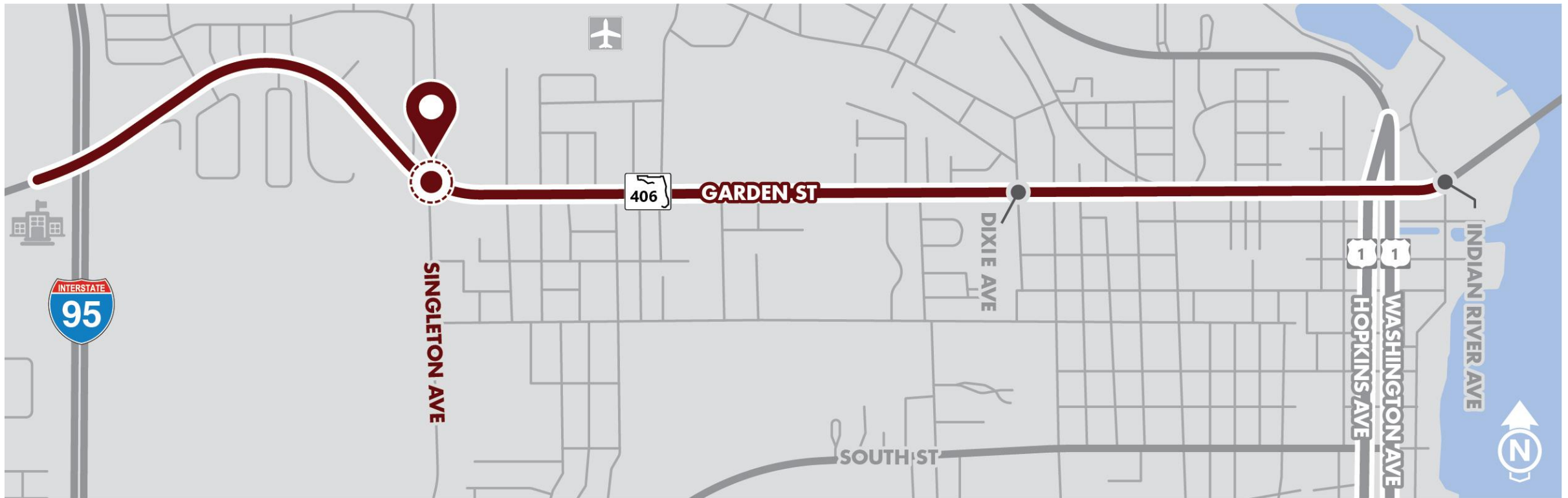


- Traffic calming by reducing vehicle speeds
- Aesthetically appealing
- No annual operating costs
- Reduces fatal crashes up to 90%
- Reduces injury crashes up to 76%
- Reduces pedestrian crashes up to 40%

Source: FHWA



Roundabout: S.R. 406 at Singleton Avenue



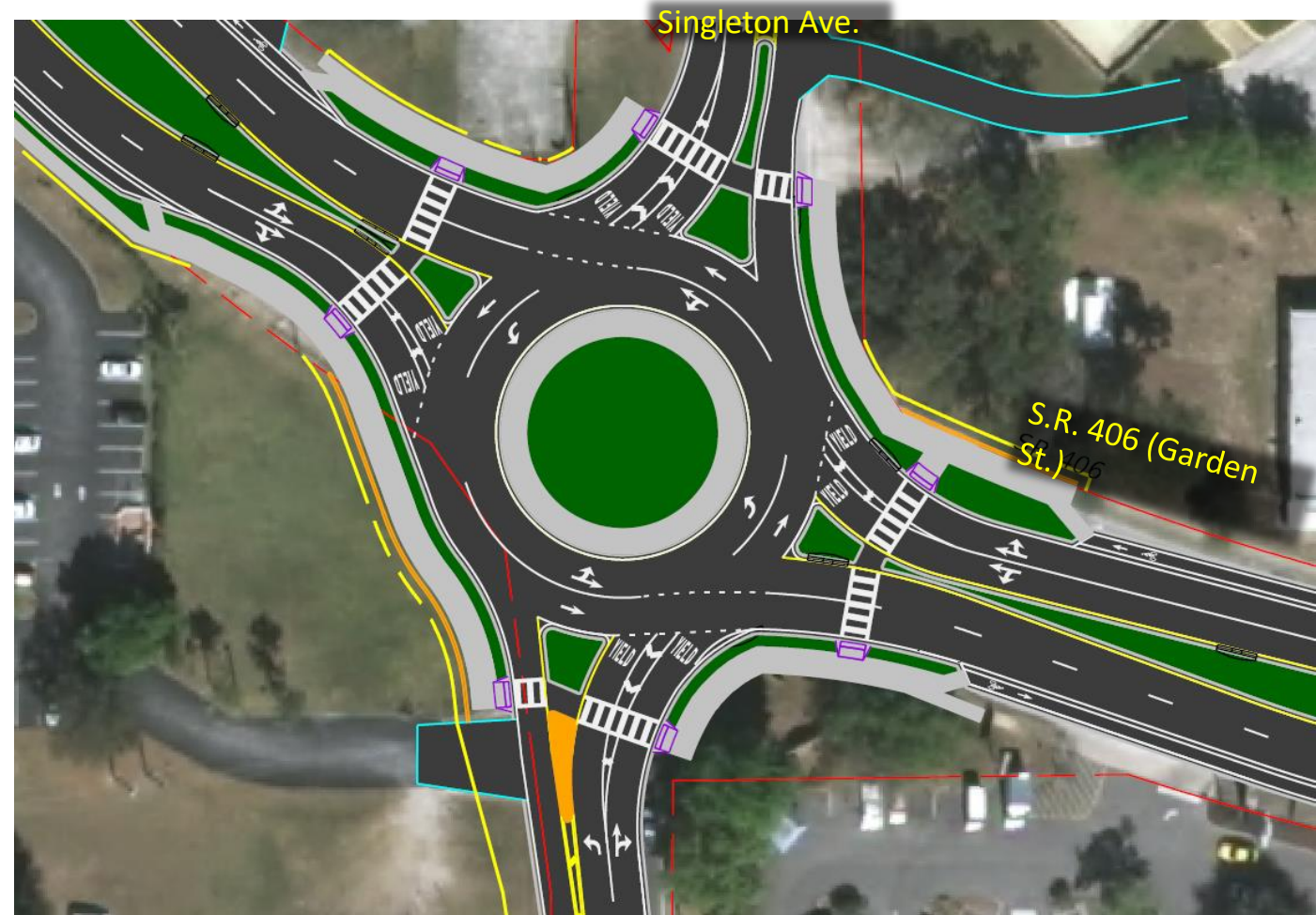


Roundabout: S.R. 406 at Singleton Avenue



Seeks to:

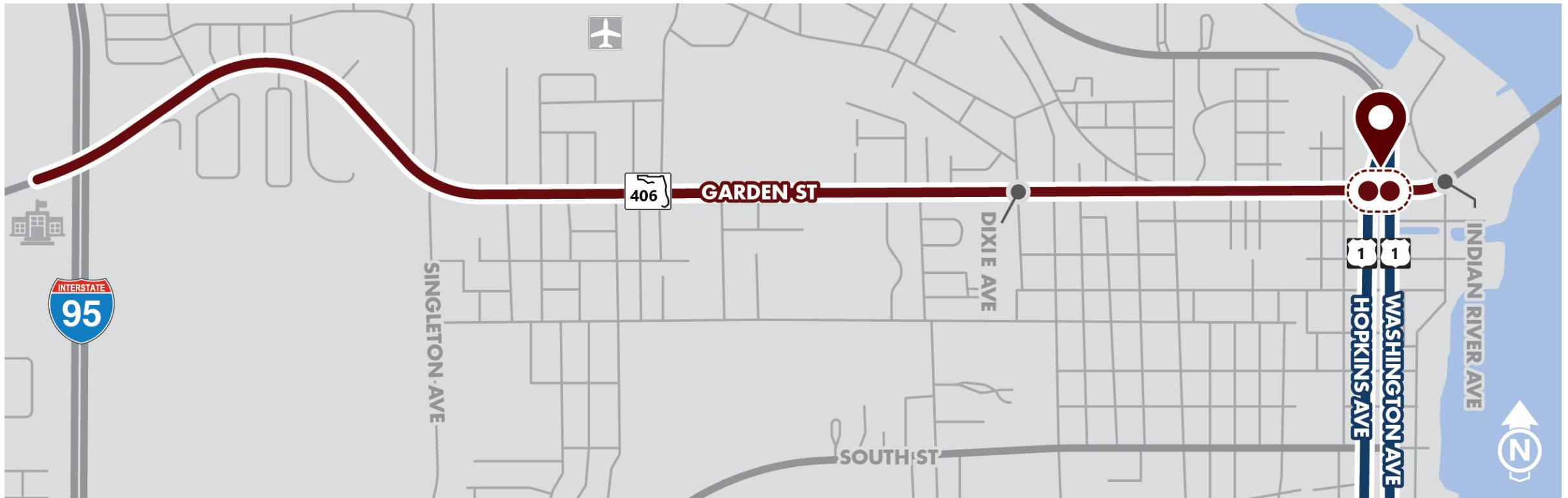
- Reduce number of crashes at intersection
- Slow traffic speeds moving into downtown
- Serve as gateway feature into downtown
- Improve traffic operations
- Estimated Savings over the life of the project:
 - \$6.2 million in crash cost reduction
 - \$1.1 million in delay reduction savings





Roundabout: S.R. 406 at U.S. 1

Both intersections (Hopkins Avenue and Washington Avenue)





Roundabout: S.R. 406 at U.S. 1

Both intersections (Hopkins Avenue and Washington Avenue)



Seeks to:

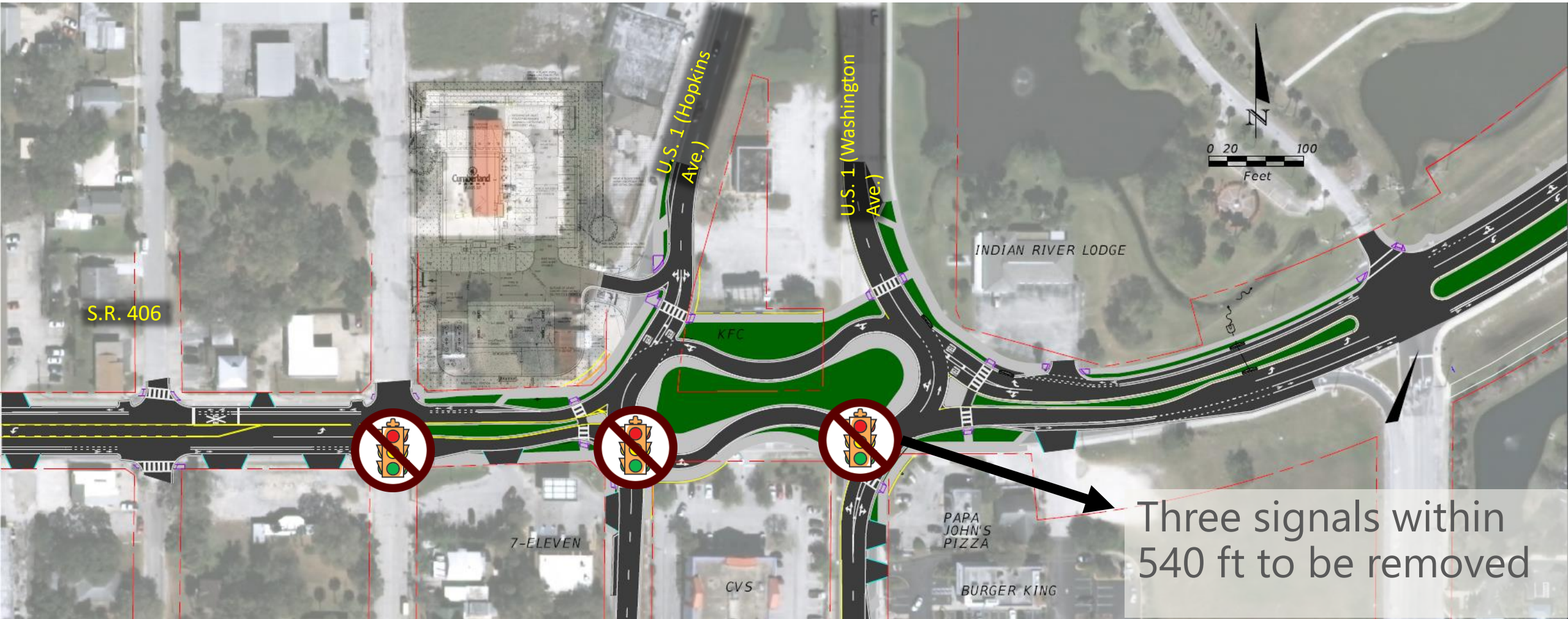
- Reduce number of crashes at intersection
- Slow traffic speeds and serve as gateway moving into downtown
- Improve traffic operations
- Estimated Savings over the life of the project:
 - \$18.7 Million in crash cost reduction
 - \$2.1 Million in delay reduction savings





Roundabout: S.R. 406 at U.S. 1

Context





Benefit & Needs



Proposed improvements address goals of study including:

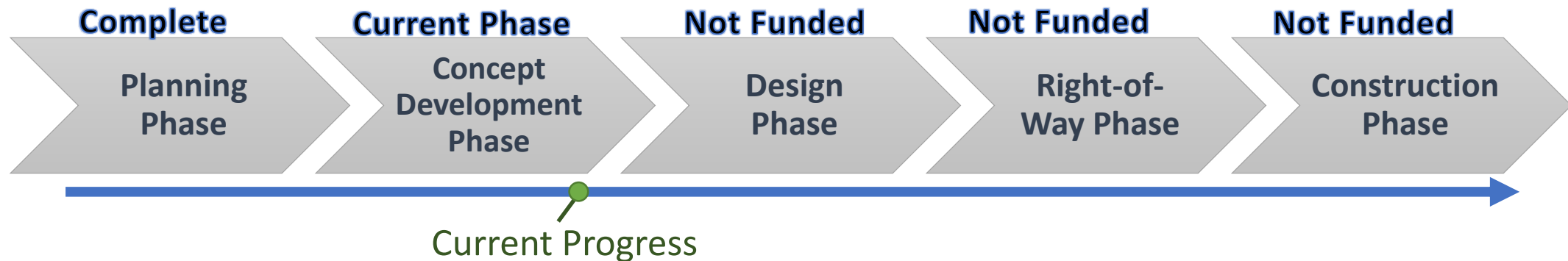
- ✓ **Improved** multimodal mobility
 - With added bike lanes and improved sidewalk connectivity
- ✓ **Enhancing** safety and connectivity
 - Addressing significant crash rates study intersections
 - Improved access management
- ✓ **Supporting** economy and community development goals
 - Road diet seeks to prioritize downtown Titusville as a great place for people and business.
 - Provides safer modal opportunities for users of the corridor.



Next Steps



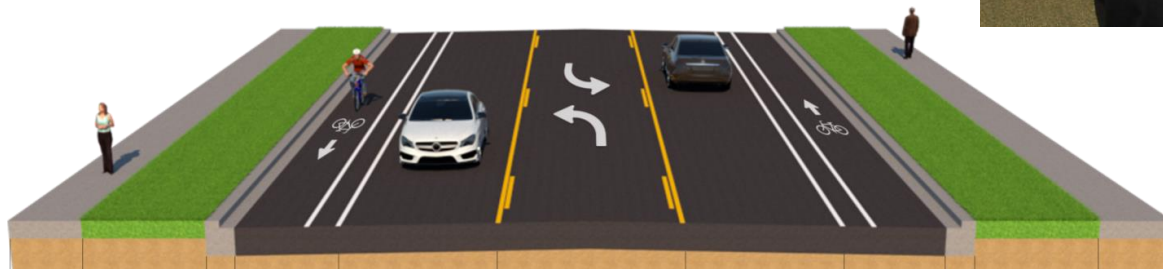
After this study:



Public Meeting Stations

See staff at workshop stations to discuss full results including:

- Existing and Future Traffic Analysis
- Full Proposed Concepts
- Understanding Roundabouts and Road Diets





Questions or Comments?



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Be sure to participate in the workshop stations and fill out a comment form at the end of your time!

Project information will be posted at:

S.R. 406: <http://www.cflroads.com/project/436187-1/>

U.S. 1: <http://www.cflroads.com/project/435627-1/>