

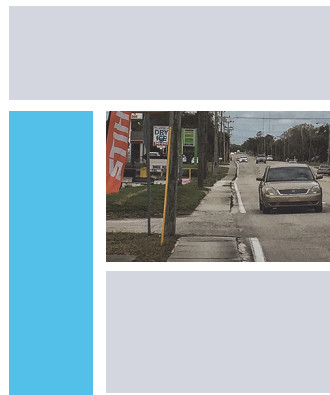
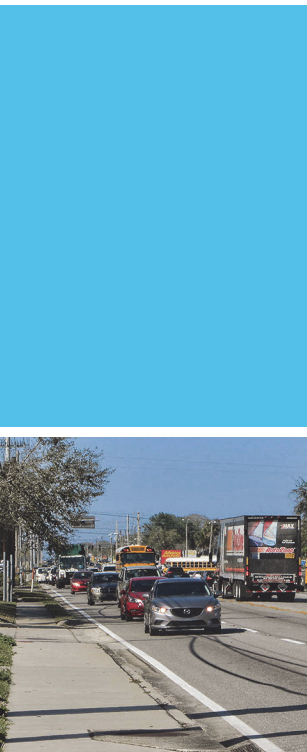
2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

Final Report

Eau Gallie Boulevard to Lake Washington Road



Prepared for:
Space Coast Transportation Planning Organization
2725 Judge Fran Jamieson Way
Melbourne, FL 32940
spacecoasttpo.com

Prepared by:
Kittelson & Associates, Inc.
225 E. Robinson Street, Suite 450
Orlando, FL 32801
kittelson.com



Appendix D Wickham Road Public Involvement Comments and Coordination Summary

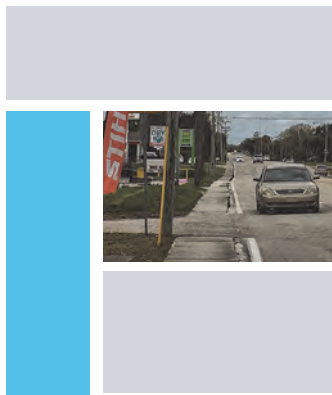
2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

Comments and Coordination Summary

Eau Gallie Boulevard to Lake Washington Road



Prepared for:
Space Coast Transportation Planning Organization
2725 Judge Fran Jamieson Way
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LIST OF APPENDICES

- Appendix A – PAT Meeting #1 Materials
- Appendix B – Existing Conditions Public Meeting Materials
- Appendix C – PVT Meeting #2 Materials
- Appendix D – PVT Meeting #3 Materials
- Appendix E – Future Alternatives Public Meeting Materials
- Appendix F – Stakeholder Meeting Notes
- Appendix G – SCTPO Board/Committees Presentation
- Appendix H – Online Comments Received

APPENDIX A – PAT MEETING #1 MATERIALS

Project Advisory Team Existing Conditions Meeting Agenda



April 25, 2017

Viera Governmental Center, Atlantic Room, Building C, 3rd Floor

10:00 AM – 12:00 PM

Wickham Road Operational Analysis

1. Project Background/Overview
2. Existing Conditions Analysis
 - a. Existing Facilities (Pedestrian/Transit/Drainage and Utilities)
 - b. Existing Traffic Characteristics
 - c. Operational Evaluation
 - d. Crash History (Corridor/Pedestrian/Bicycle)
3. Issues/Opportunities Discussion
 - a. Multi-Modal (Pedestrian/Bicycle/Transit)
 - b. Vehicular
 - c. Drainage and Utilities
4. Next Steps
 - a. Major Task Items
 - i. Existing Conditions Draft Report Work
 - ii. Begin Future Conditions Assessment
 - b. Project Advisory Team Meetings
 - i. Early August 2017 – Future Ops Analysis, Roadway Alternatives and Typical Sections, Drainage and Impacted Utilities Assessment
 - ii. Early October 2017 – Preliminary Construction and ROW Cost Estimates, Operational MOEs and B/C Matrix
 - c. Public Workshops
 - i. May 9, 2017
 - ii. Late October 2017

Aurora Road Corridor Study

1. Project Background/Overview
2. Existing Conditions Analysis
 - a. Existing Land Use and Zoning
 - b. Community Features
 - c. ROW and Typical Sections
 - d. Existing Facilities (Pedestrian and Transit)
 - e. Existing Volumes and Traffic Characteristics
 - f. Operational Evaluation
 - g. Crash History (Corridor/Pedestrian/Bicycle)
 - h. Character Districts
3. Issues/Opportunities Discussion
 - a. Multi-Modal (Pedestrian/Bicycle/Transit)
 - b. Vehicular and Drainage
4. Next Steps
 - a. Major Task Items
 - i. Existing Conditions Draft Report Work
 - ii. Begin Future Conditions Assessment
 - b. Project Advisory Team Meetings
 - i. Late September 2017 – Future Ops and Road Diet Feasibility Analyses, Initial Roadway Alternatives, Drainage and Impacted Utilities Assessment
 - ii. Mid December 2017 – Alternatives Analysis
 - iii. Early March 2018 – Preferred Alternative and Concept, Preliminary Construction Cost Estimates
 - c. Public Workshops
 - i. May 16, 2017
 - ii. Early November 2017
 - iii. Late March 2018

2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

EXISTING CONDITIONS REVIEW | APRIL 25, 2017



AGENDA



Project Background / Overview



Existing Conditions Analysis



Issues / Opportunities Discussion



Next Steps



2017

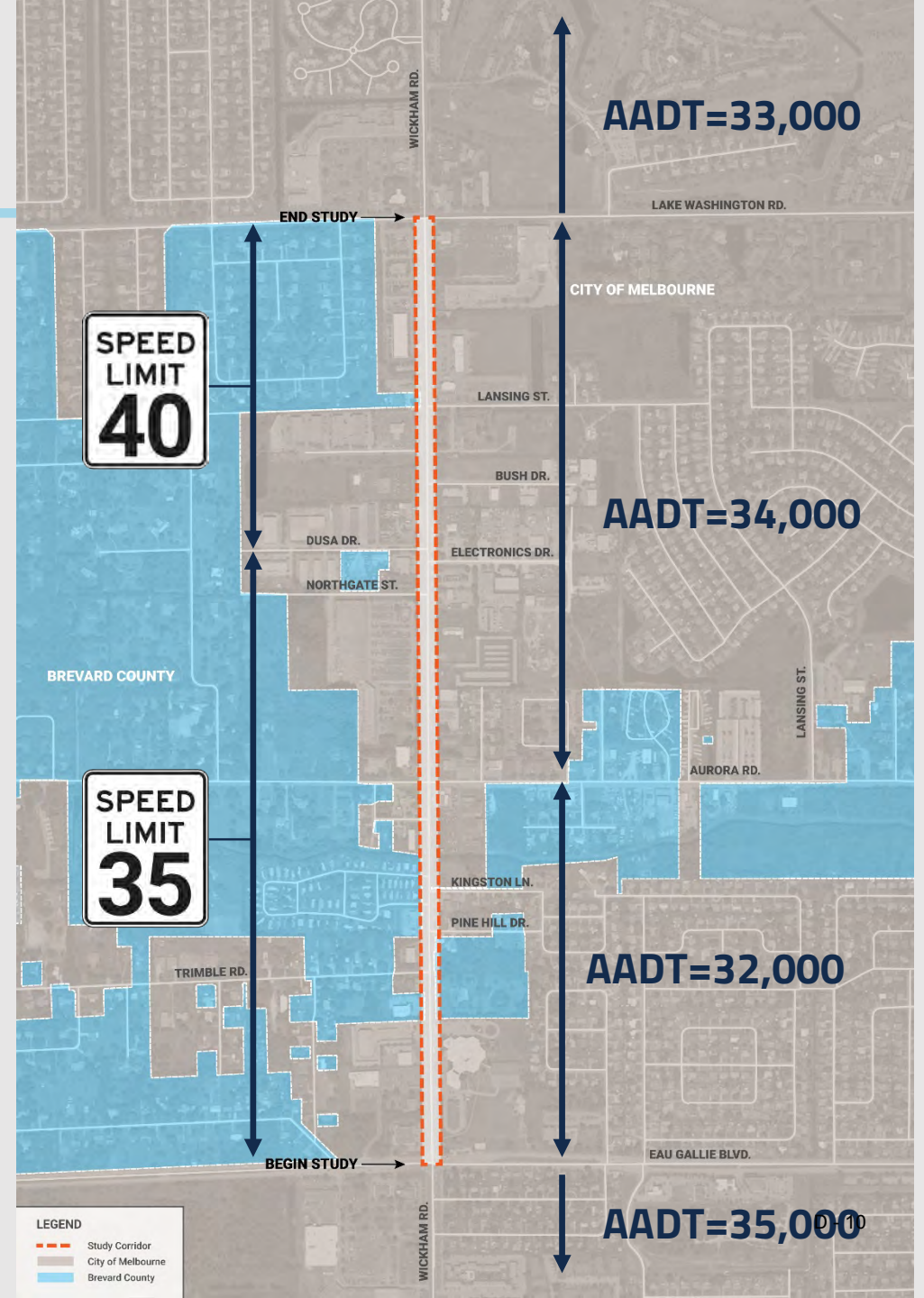
WICKHAM ROAD

OPERATIONAL ANALYSIS



PROJECT BACKGROUND / OVERVIEW

STUDY CORRIDOR





2017

WICKHAM ROAD

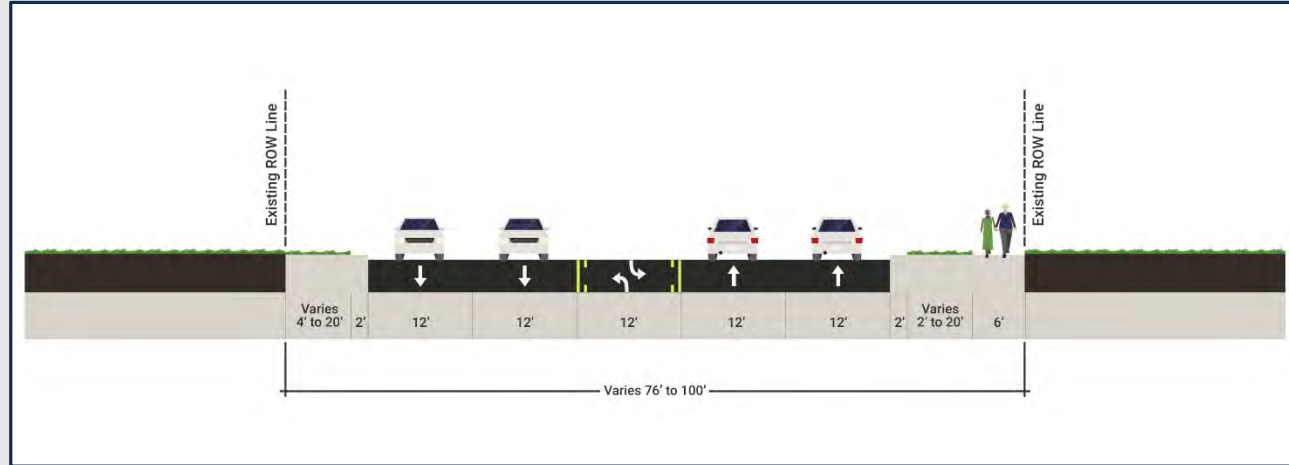
OPERATIONAL ANALYSIS



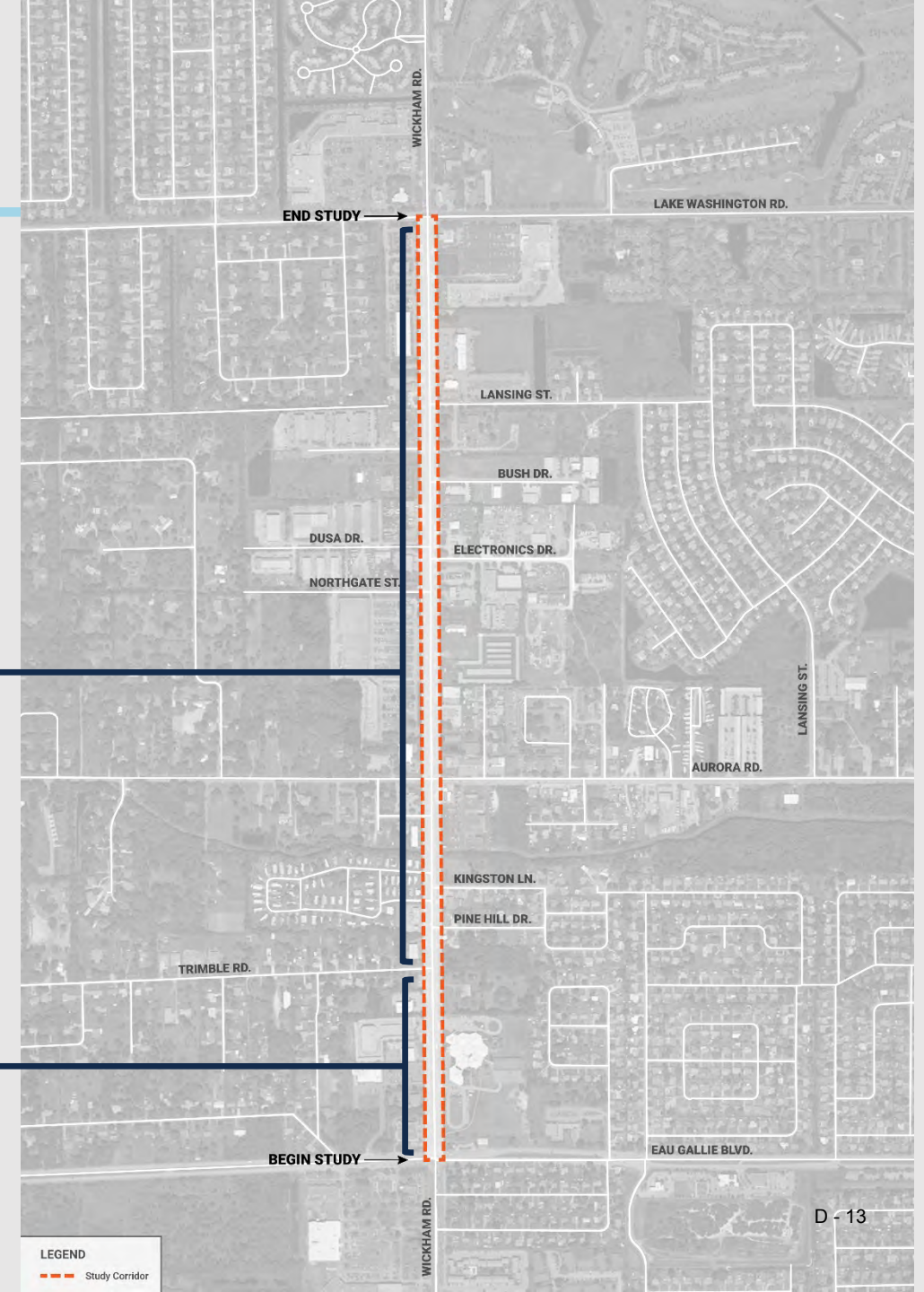
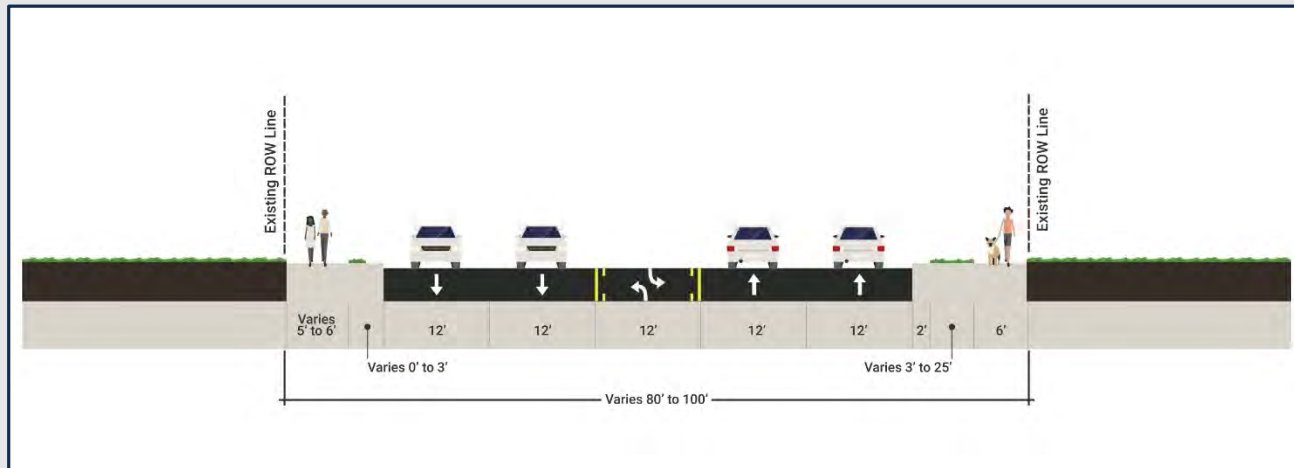
EXISTING CONDITIONS ANALYSIS

ROW AND TYPICAL SECTIONS

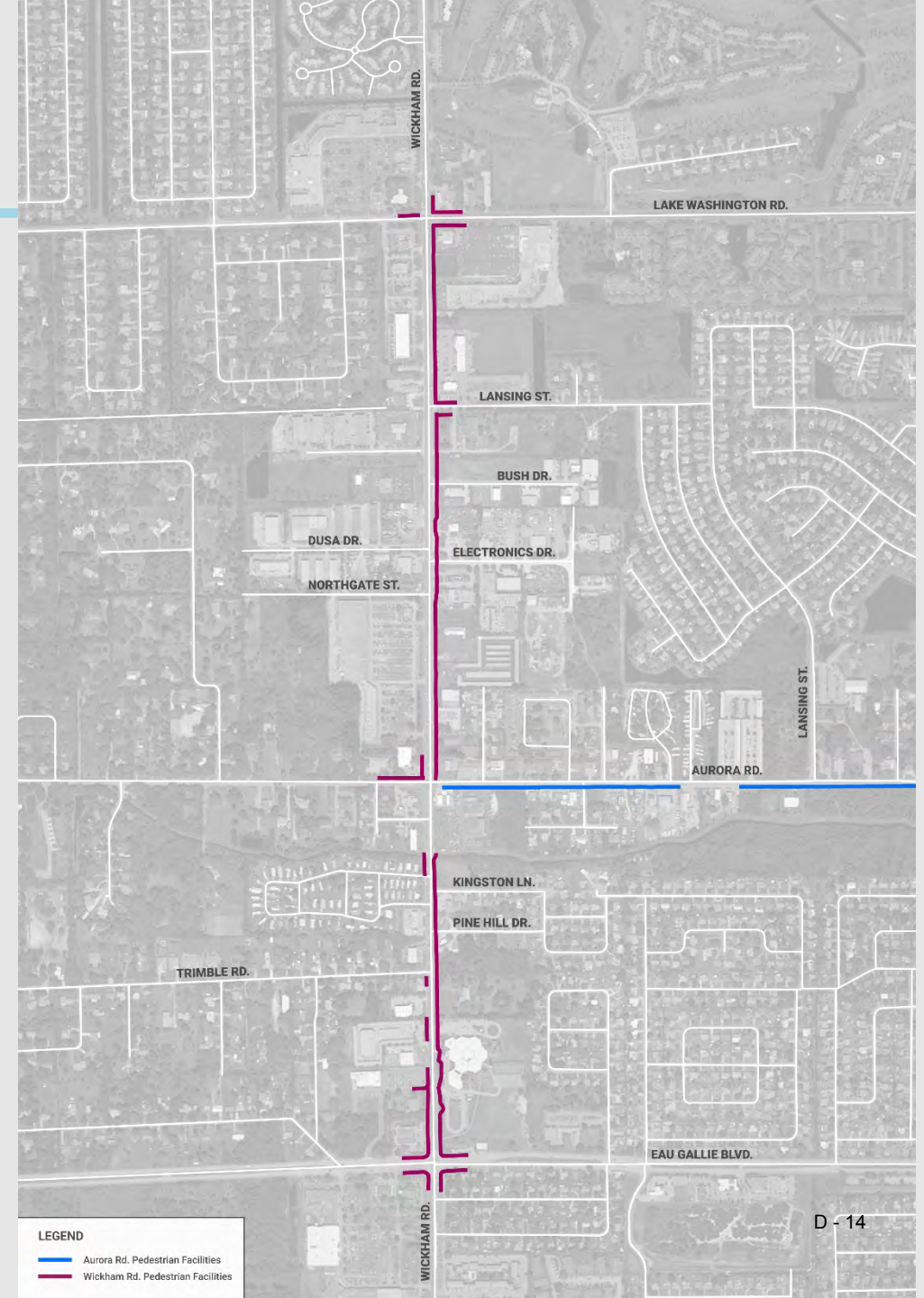
TYPICAL SECTION NORTH OF TRIMBLE ROAD



TYPICAL SECTION SOUTH OF TRIMBLE ROAD



EXISTING PEDESTRIAN FACILITIES



LEGEND

- Aurora Rd. Pedestrian Facilities
- Wickham Rd. Pedestrian Facilities

EXISTING TRANSIT NETWORK



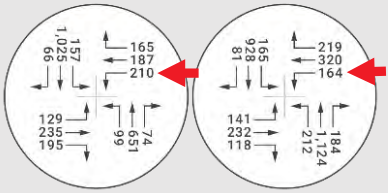
EXISTING DRAINAGE AND UTILITIES



EXISTING TRAFFIC CHARACTERISTICS

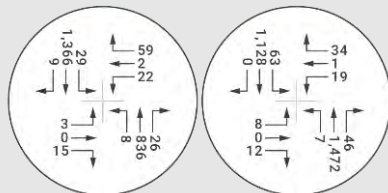
LAKE WASHINGTON ROAD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



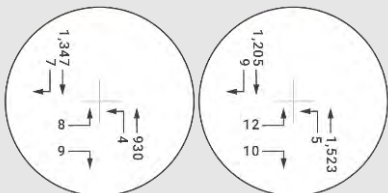
LANSING STREET

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



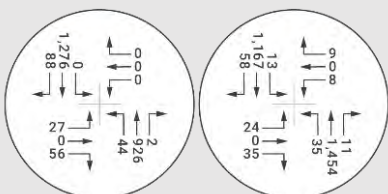
NORTHGATE STREET

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



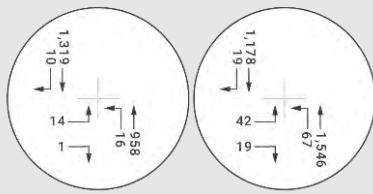
MCDONALD'S DRIVEWAY

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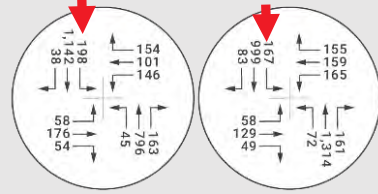
NORTHGATE PLAZA

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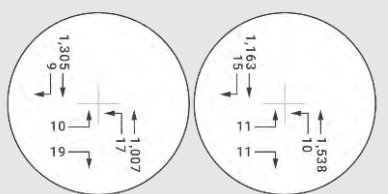
AURORA ROAD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



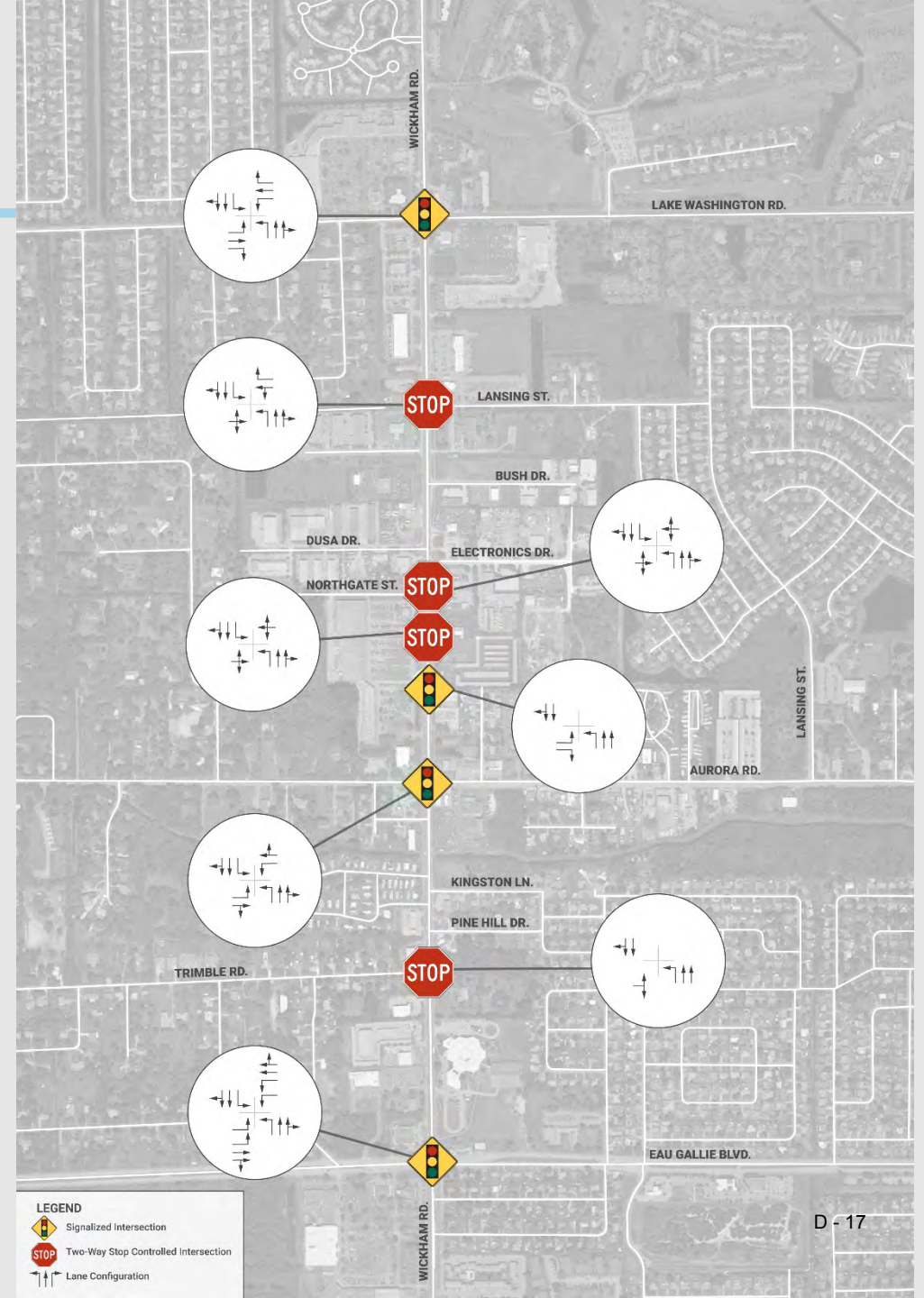
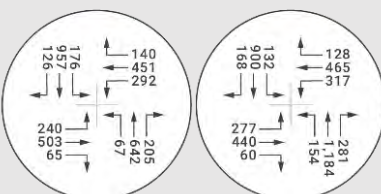
TRIMBLE ROAD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



EAU GALLIE BOULEVARD

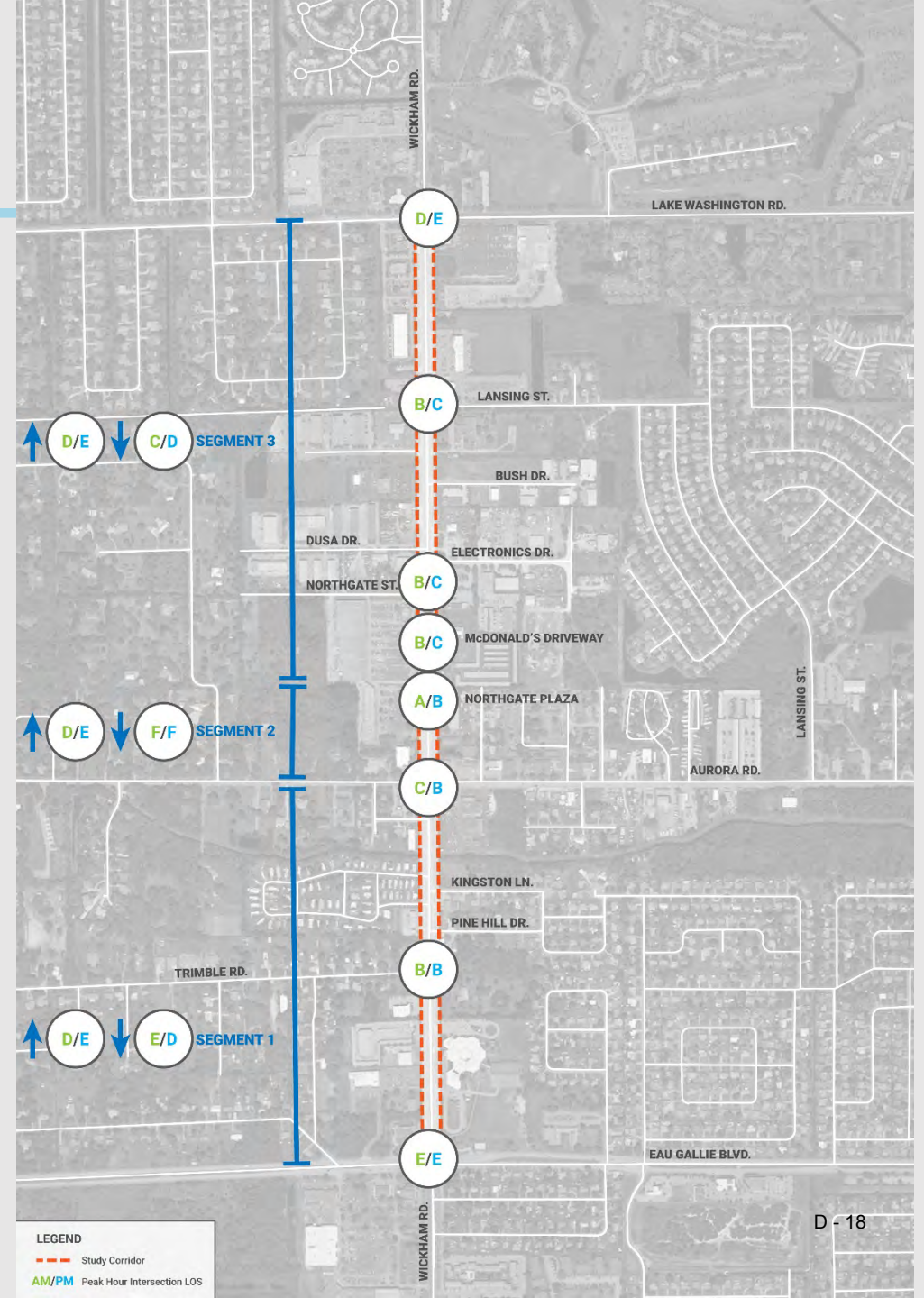
AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



LEGEND

- Signalized intersection
- Two-Way Stop Controlled Intersection
- Lane Configuration

OPERATIONAL EVALUATION



CRASH HISTORY (2011-2015)

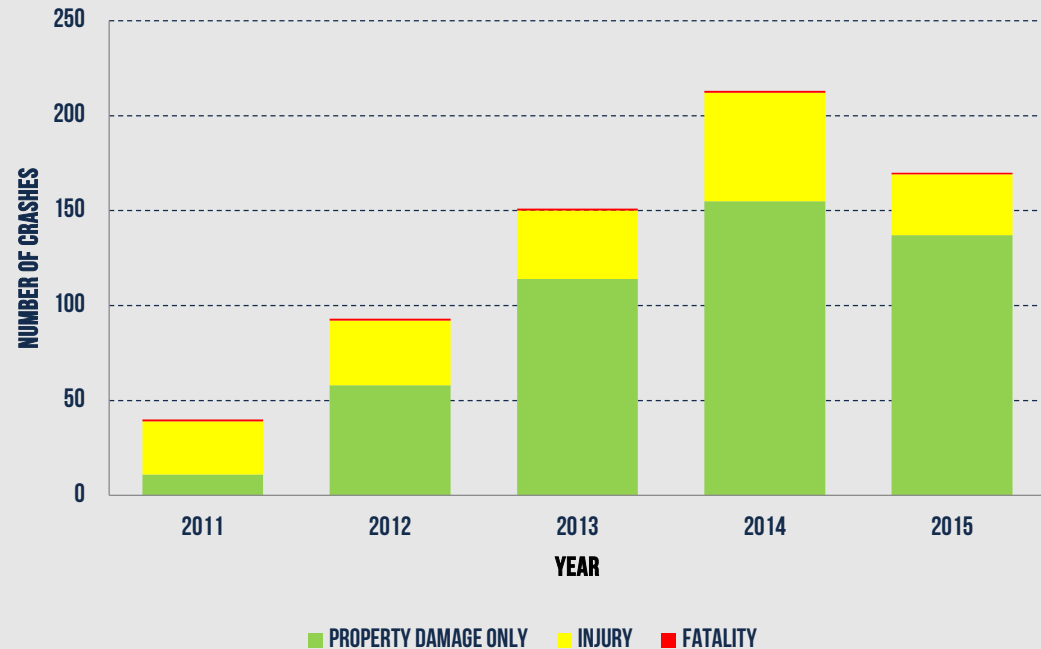
667 crashes from 2011 to 2015

- 5 fatal (1 percent) and 187 injury crashes (28 percent)
- 80 percent of the crashes occurred on a weekday (Monday through Friday)
- 33 percent of the crashes occurred between 3 PM and 6 PM

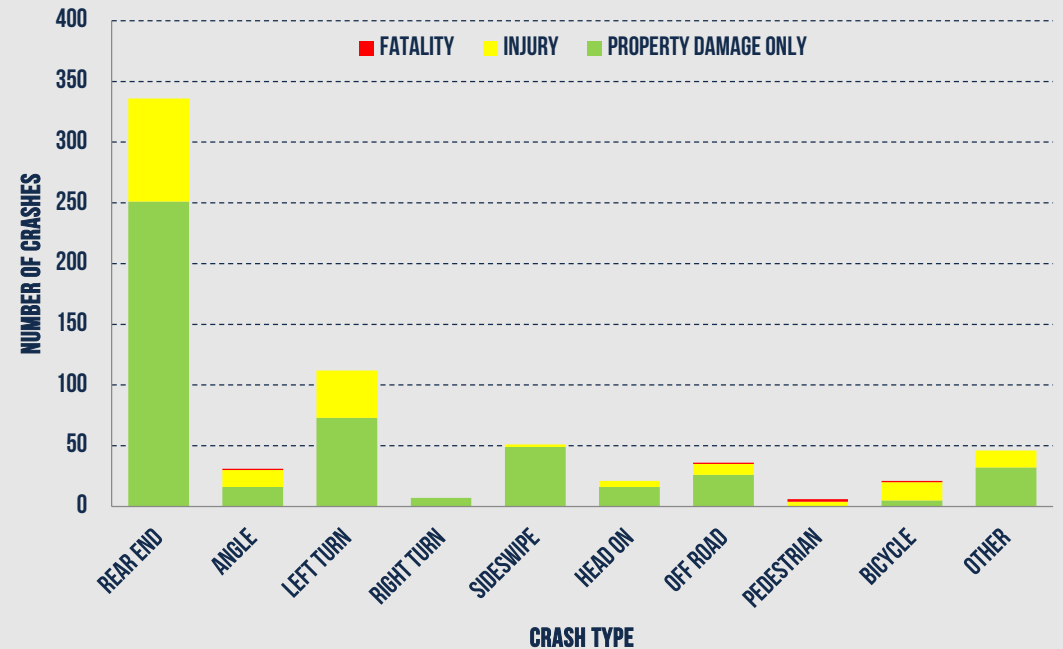
21 bicycle crashes

6 pedestrian crashes

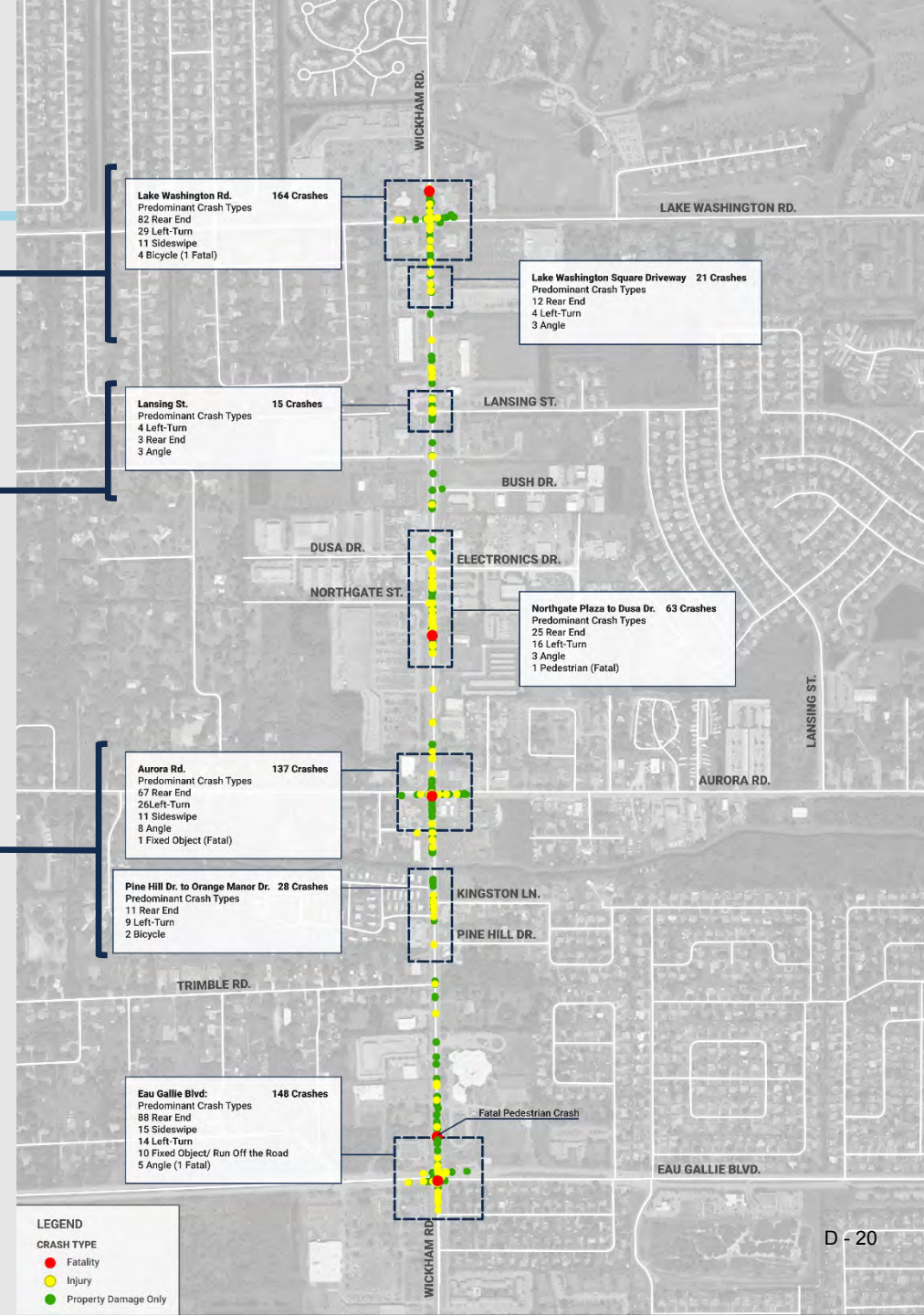
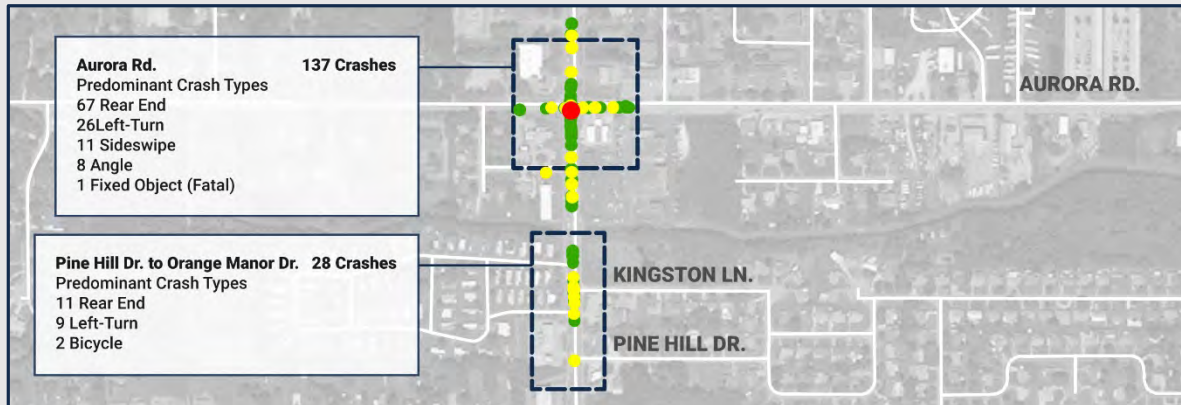
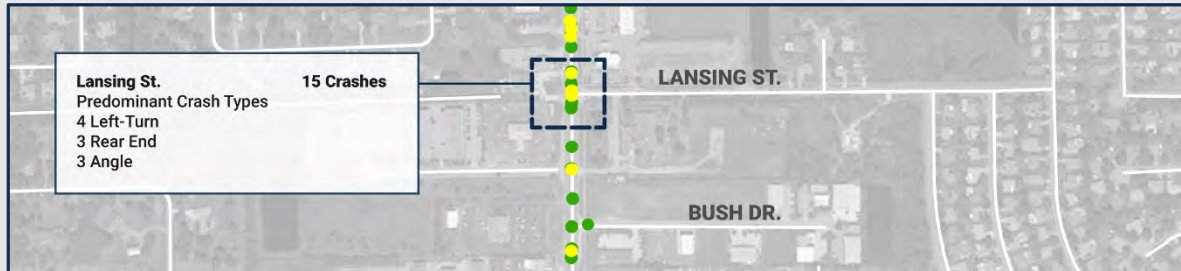
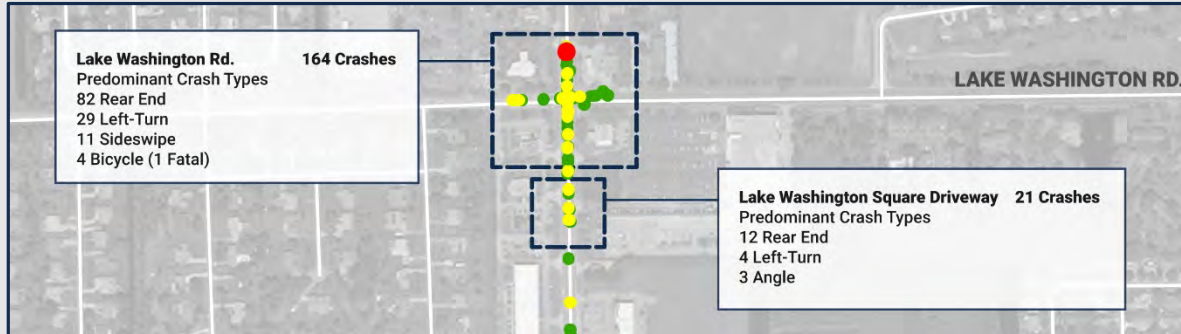
CRASHES BY YEAR AND SEVERITY



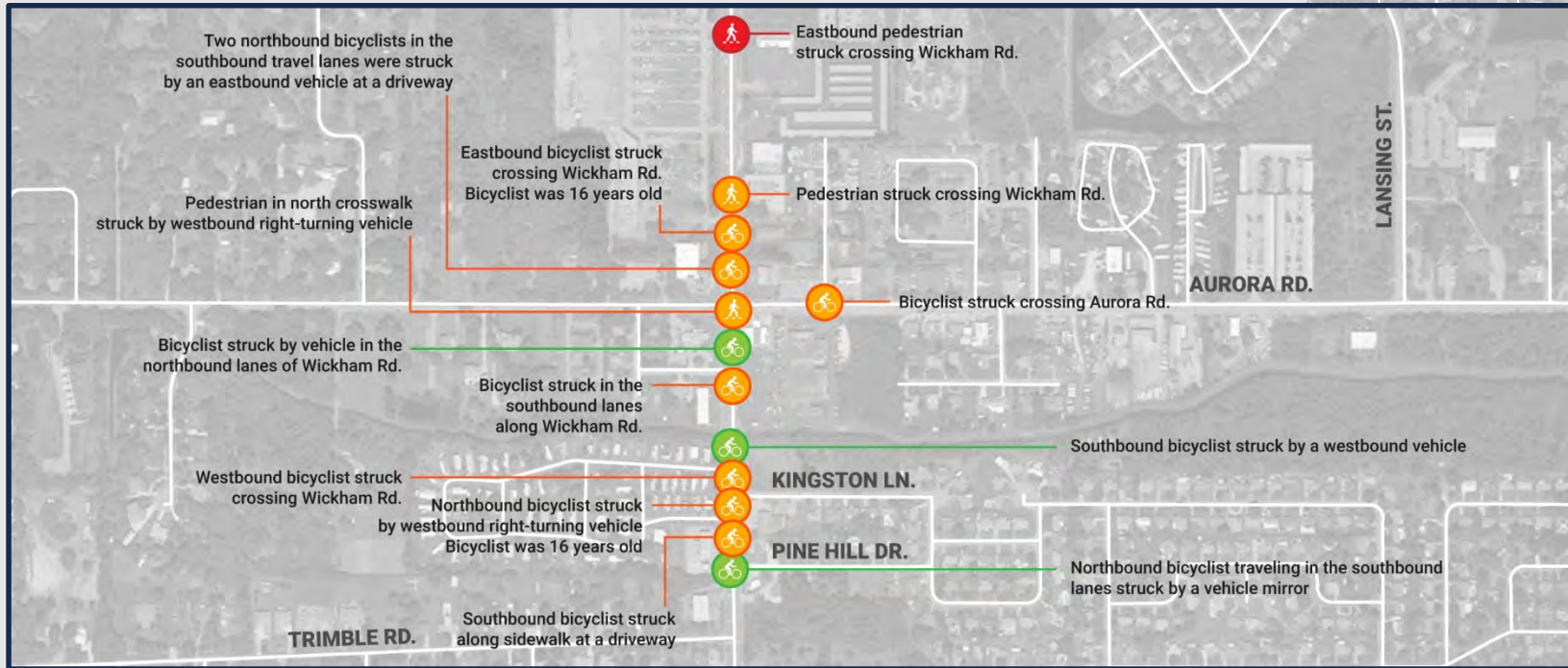
CRASHES BY TYPE AND SEVERITY



CRASH HISTORY (2011-2015)

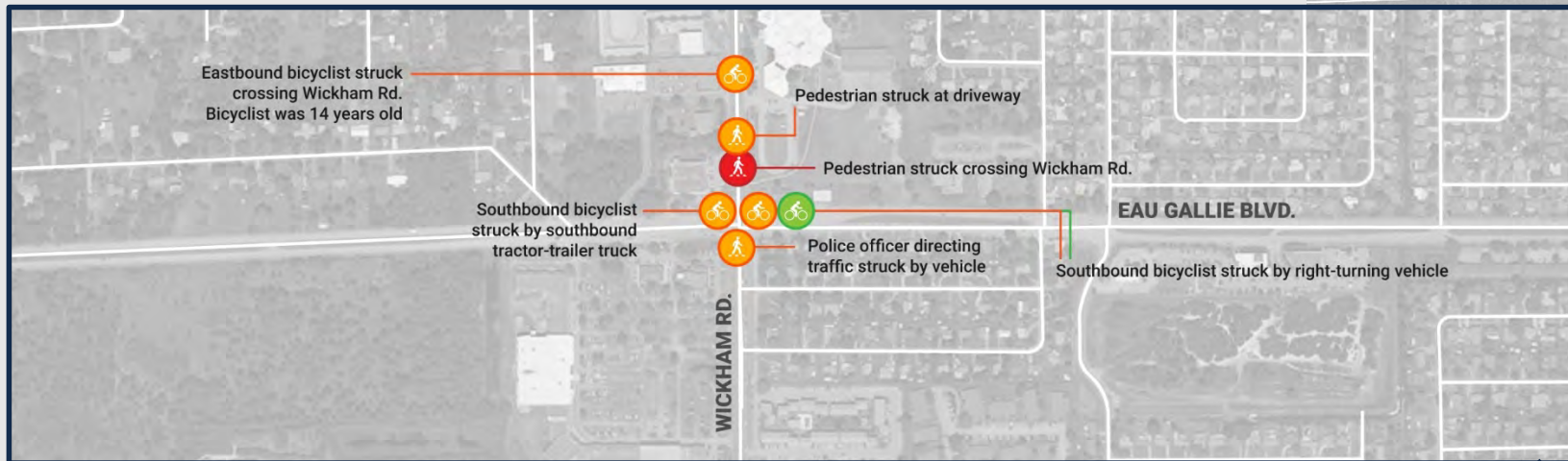


PEDESTRIAN AND BICYCLE CRASH HISTORY (2011-2015)



● **Fatality**
● **Injury**
● **Property Damage Only**

PEDESTRIAN AND BICYCLE CRASH HISTORY (2011-2015)



● Fatality ● Injury ● Property Damage Only





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



ISSUES / OPPORTUNITIES DISCUSSION

MULTI-MODAL ISSUES AND OPPORTUNITIES



VEHICULAR, UTILITY, AND DRAINAGE ISSUES AND OPPORTUNITIES



LEGEND

- Left-Turn Crash Emphasis Intersection
- Left-Turn/Angle Crash Emphasis Area
- Peak Hour Queuing
- Utilities Adjacent to Roadway
- Drainage Facilities Adjacent to Roadway



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



NEXT STEPS

QUESTIONS / CONTACT INFORMATION

SCTPO Project Manager

Laura Carter

2725 Judge Fran Jamieson Way

Building B, Room 105

Melbourne, FL 32940

Phone: 321-690-6890

Laura.carter@brevardfl.gov

Consultant Project Manager

Travis Hills, PE

225 East Robinson Street

Suite 450

Orlando, FL 32801

Phone: 407-540-0555

thills@kittelso.com





Project Advisory Team (PAT) Existing Conditions Evaluation Meeting

SUBJECT:	Wickham Operational Analysis and Aurora Road Corridor Study Existing Conditions Review Meeting
MEETING DATE:	Tuesday, April 25, 2017
MEETING TIME:	10:00 AM - 12:00 PM
VENUE:	Viera Governmental Center, Building C - 2725 Judge Fran Jamieson Way, Melbourne, FL 32940, Atlantic Room

Introduction and Attendees

A meeting was held with the PAT to discuss the Existing Conditions Evaluation for both the Wickham Road Operational Analysis and the Aurora Road Corridor Study. Below are the attendees of this PAT Meeting:

- Laura Carter - SCTPO
- Georganna Gillette - SCTPO
- Steven Bostel - SCTPO
- Corrina Gumm - Brevard County
- Ashley Stanford - Brevard County
- Erin Sterk - Brevard County
- Rachel Gerena - Brevard County
- Jenni Lamb - City of Melbourne
- Todd Corwin - City of Melbourne
- Judy Pizzo - FDOT D5
- Lance Parker - Space Coast Area Transit
- JP Weesner - KAI
- Michael Eagle - KAI
- Like Liu - KAI

A sign-in sheet for the meeting is attached at the end of these notes.

Wickham Road Operational Analysis

Project Background and Overview

Mr. Eagle gave a brief update on the project schedule, reviewed the corridor existing conditions characteristics (study limits, AADT, speed limits, etc.), issues and opportunities within the corridor, and facilitated a discussion about the project websites. The following summarizes the related comments and discussion from the PAT:

- **Operational Evaluation**
 - Brevard County is conducting a study to review ITS improvements on Wickham Road. The results of this study should be included in either the existing or future conditions report.
- **Crash History**
 - KAI was requested to check the time of crashes along the segment between Eau Gallie Boulevard and Aurora Road in order to understand whether crash patterns were influenced by school traffic. This will be included in the existing conditions report.
 - It was noted that some crashes may be caused by drivers during the hours of pick-up and drop-off at Sabal Elementary School.
- **Pedestrian/Bicycle Crash History**
 - KAI was requested to review these crashes by the time of day to determine if street lighting is an issue. This will be included in the existing conditions report.
 - KAI was requested to add a description or chart to show the contributing factors for each crash. Specifically the percentage of crashes that involved mid-block crossings along Wickham Road in order to understand the necessity for safer crossing alternatives. This will be included in the existing conditions report.
- **Multi-Modal Issues and Opportunities**
 - Based on a previous study done by Tindale Oliver & Associates, over 90% of the bus stops in Brevard County are not ADA compliant.
 - Mr. Parker noted that continued coordination with Space Coast Area Transit is required so that planned ADA improvements will be incorporated into the Wickham Road and Aurora Road alternative evaluations.
 - Mr. Parker acknowledged at least three pedestrian crashes involving riders crossing Wickham Road to catch the bus in the past year. When comparing the transit facilities map and pedestrian/bicycle crash map, it was noted that some of the crash locations are in the vicinity of transit stops.
 - Mr. Parker noted a transit bus has capacity for three bicycles on its rack at a time. The Wickham Road transit routes have a high number of bicycle

users and it is up to the discretion of the bus driver whether or not to allow bicycles on the bus.

- Mr. Parker noted that the bus stops at Lake Washington Road and Aurora Road feature a route transfer. The pedestrian facilities at these locations are not conducive to pedestrians making transfer connections, thus leading to mid-block crossings trying to catch the transfer bus. KAI was requested to study these intersections to propose alternatives for improved pedestrian facilities.
- Mr. Parker noted there is an ongoing discussion within Space Coast Area Transit to shift bus stops where there is no right-turn only lane from far-side intersection bus stops to near-side bus stops.
- There is a possibility for a mid-block crossing improvement at the Wickham Road and Lansing Street intersection. Pedestrian facilities will be included if a signal is constructed at this intersection.

- **Vehicular and Drainage Issues and Opportunities**

- There are drainage issues at the southwest and southeast corners of the Aurora Road and Lake Washington intersections. Drainage icons should be added to the figure at these locations.

- **Project Websites**

- Mr. Eagle demonstrated how to use the project websites to solicit feedback. The project websites are at the following locations:
 - Wickham Road Operational Analysis: <http://maps.kittelso.com/wickhamroad>
 - Aurora Road Corridor Study: <http://maps.kittelso.com/auroraroad>

Aurora Road Corridor Study

Project Background and Overview

Mr. Weesner gave a brief update on the project schedule, reviewed the corridor existing conditions characteristics (study limits, AADT, speed limits, etc.), and issues and opportunities within the corridor. The following summarizes the related comments and discussion from the PAT:

- **Multi-Modal Issues and Opportunities**
 - It was suggested there were possible walking routes to Sabal Elementary School from Aurora Road to Wickham Road. The project team will study the school zone maps and may update the walk routes on the Aurora Road issues and opportunities map accordingly.
 - Ms. Sterk noted that for both corridors the general beautification and increase in walkability/bikeability is desired. Mr. Weesner noted these ideas will be incorporated into the proposed section alternatives in a future phase of the project in addition to weighing options for medians, moving curb, ROW acquisition, and near and long term potentials.
 - It was noted that with the sidewalk upgrades along Aurora Road, the ped/bike volumes will increase. Therefore, the need for improvements of the pedestrian/bicycle facilities at the intersection of Wickham Road and Aurora Road will be required to accommodate future demand.
- **Vehicular and Drainage Issues and Opportunities**
 - The PAT members were concerned about where stormwater is collected, specific water quality standards, and whether or not filtration is needed.
 - It was indicated by City of Melbourne that the queuing along Commodore Boulevard may have been caused by the re-opening of Apollo Boulevard.
 - Mr. Parker noted it was difficult for his bus drivers to make turns at the Commodore Boulevard intersection, because of the number of students crossing, lack of exclusive left-turn lanes, and permitted only left-turn phasing.
 - None of the PAT members knew whether there was an agreement with the auto dealerships regarding the occupied ROW. The auto dealerships should be informed and met with during the future condition assessment.

Next Steps

- **Public Workshop Notification**
 - Ms. Carter explained the Public Workshop notification process and how the mailers were sent out to the residents within the postal codes of the Study Area as well as emails that were sent to the elected and appointed officials.
 - Ms. Carter offered to check with the Community Center to see if project flyers could be posted on their community board.

-
- The SCTPO will work with the City of Melbourne to get the public workshop information on their website.
 - Space Coast Area Transit will also post the public workshop information on their website and blog.
 - **Public Workshop Dates**
 - Wickham Road Operational Analysis Public Workshop - **May 9, 2017**
 - Aurora Road Corridor Study Public Workshop - **May 16, 2017**

These meeting minutes are Like Liu's interpretation of the comments, requests, and discussion during the meeting. Questions, additions, and/or clarifications should be directed to her at 407-540-0555 or lliu@kittelso.com.

Project Advisory Team Existing Conditions Meeting

April 25, 2017

Name	Agency/Firm	Attended
JP Weesner	KAI	✓
Michael Eagle	"	✓
Like Liu	"	✓
Judy Pizzo	FDOT	✓
Laure Carter	SCTPO	-
Lance Parker	SCAT	✓
ERIN STERK	Brevard Co.	✓
Corrina Gumm	" "	✓
Anthony Stamford	" "	✓
Jenni Lamb	City of Melbourne	✓
Georganna Gillette	SCTPO	✓
Todd Corwin	Melbourne	✓
Steven Bospi	SCTP	✓

APPENDIX B – EXISTING CONDITIONS PUBLIC MEETING MATERIALS

MEETING NOTICES



OPEN HOUSE
TUESDAY, MAY 9, 2017

5:30 PM to 7:30 PM
Presentation at 6:00 PM
Wickham Park Community Center | Room 3
2815 Leisure Way | Melbourne, FL 32935

SHARE YOUR VOICE!

You are invited to attend a public meeting for a study being conducted on Wickham Road by the Space Coast Transportation Planning Organization in coordination with Brevard County and the City of Melbourne.

Study Limits: Wickham Road from Eau Gallie Boulevard to Lake Washington Road

Study Purpose: To evaluate alternatives that improve congestion and safety and also address pedestrian, bicycle, and transit needs.

Meeting Purpose: Study team will present initial findings related to existing conditions and are seeking your input.



Space Coast Transportation Planning Organization
2725 Judge Fran Jamieson Way, Building B
Viera, FL 32940
Phone: 321-690-6890
www.spacecoasttpo.com

PRSR STD
ECRWSS
U.S. POSTAGE
PAID
EDDM RETAIL

Can't make the meeting? Please visit project website for more information and to leave your comments.

Project Website: spacecoasttpo.com/plan/wickham-road-operational-analysis

SCTPO Project Manager:

Laura Carter, Operations Manager
laura.carter@brevardfl.gov
321-690-6890

Consultant Project Manager:

Travis Hills, P.E., Kittelson & Associates, Inc.
thills@kittelson.com
407-540-0555

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to compliance with Title VI may do so by contacting Laura Carter, SCTPO Operations Manager, at 321-690-6890 or laura.carter@brevardfl.gov. Persons with disabilities who require special accommodations under the Americans with Disabilities Act or persons who require translation services, free of charges, should contact Travis Hills at 407-540-0555 or thills@kittelson.com, at least seven (7) days prior to the meeting. If you are hearing or speech impaired, please contact us by using the Florida Relay Service, 1-800-955-8771 (TDD), or 1-800-955-8770 (Voice).

*****ECRWSS*****

Local
Postal Customer



April 14, 2017

Subject: Wickham Road Operational Analysis
From Eau Gallie Boulevard to Lake Washington Road
Brevard County

Dear Elected Leader,

On behalf of the Space Coast Transportation Planning Organization (SCTPO), Brevard County, and the City of Melbourne, you are invited to attend the first public meeting for the Wickham Road Operational Analysis.

The Wickham Road Operational Analysis will evaluate alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle, and transit movement along the corridor. The analysis will focus on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road in the City of Melbourne.

This is the first of two public meetings being held throughout the 14 month planning study. The purpose of the meeting is to present initial findings related to existing conditions and receive input from interested stakeholders.

The Public Meeting is being held on **Tuesday, May 9, 2017** from **5:30 PM** to **7:30 PM** at the **Wickham Park Community Center, Room 3** located at **2815 Leisure Way, Melbourne, Florida 32935**. The meeting will begin as an open house at **5:30 PM** with a presentation at approximately **6:00 PM**.

A project website has been established that provides information and documents related to the project. The website also contains a link to an interactive map of the project and one can post comments and feedback. <http://spacecoasttpo.com/plan/wickham-road-operational-analysis/>

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to SCTPO compliance with Title VI may do so by contacting Laura Carter, SCTPO Operations Manager by phone at 321-690-6890, or email laura.carter@brevardfl.gov.

Persons with disabilities who require special accommodations under the Americans with Disabilities Act or persons who require translation services, free of charge, should contact: Travis Hills at 407-540-0555 or by e-mail to thills@kittelsohn.com, at least seven (7) days prior to the meeting. If you are hearing or speech impaired, please contact us by using the Florida Relay Service, 1-800-955-8771 (TDD), or 1-800-955-8770 (Voice).

If you have any questions about the study or the meeting, please contact Laura Carter or Travis Hills at the contact information noted above.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bob Kamm", written over a white background.

Bob Kamm
Space Coast Transportation Planning Organization, Executive Director



April 14, 2017

Subject: Wickham Road Operational Analysis
From Eau Gallie Boulevard to Lake Washington Road
Brevard County

Dear Government Partner,

On behalf of the Space Coast Transportation Planning Organization (SCTPO), Brevard County, and the City of Melbourne, **you are invited to attend the first public meeting for the Wickham Road Operational Analysis.**

The **Wickham Road Operational Analysis** will evaluate alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle, and transit movements along the corridor. The analysis will focus on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road.

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If you have any questions about the study or the meeting, please contact Laura Carter or Travis Hills at the contact information noted above.

Sincerely,

Laura Carter
Space Coast Transportation Planning Organization, Operations Manager



Space Coast Transportation Planning Organization
2725 Judge Fran Jamieson Way Bldg. B
Viera, Fl. 32940
spacecoasttpo.com

Contact: Laura Carter
Phone 321-690-6890
Fax 321-690-6827

Press Release

For Immediate Release:
June 3, 2017

Residents Encouraged to Attend Wickham Rd. Open House

The Space Coast Transportation Planning Organization (SCTPO) is conducting an Operational Analysis on Wickham Road and is inviting residents to provide feedback on current issues and conditions. The study area includes Wickham Road from Lake Washington Road to Eau Gallie Boulevard and is focused on evaluating potential improvements to reduce congestion and improve safety. Strong emphasis is being placed on improvements for bicyclists, pedestrians and transit riders.

Initial findings of the study will be presented at an Open House on May 9, 2017, Wickham Park Community Center, Room 3, 2815 Leisure Way, Melbourne. The meeting will run 5:30- 7:30 PM with a presentation beginning at 6:00 pm. After the presentation attendees will have an opportunity to provide feedback and ask questions. A project website has been established, spacecoasttpo.com/plan/wickham-road-operational-analysis, so those that cannot attend can review the findings and make comments. For additional information contact Laura Carter, SCTPO Project Manager laura.carter@brevardfl.gov or 321-690-6890.

###

MEETING BOARDS/PRESENTATION

Title VI Compliance

The Space Coast Transportation Planning Organization (SCTPO) complies with various nondiscrimination laws and regulations, including Title VI of the Civil Rights Act of 1964 and the Americans with Disabilities Act (ADA).

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to SCTPO compliance with Title VI may do so by contacting:

LAURA CARTER
Operations Manager

2725 Judge Fran Jamieson Way
Building B, Room 105
Melbourne, FL 32940
Phone: 321-690-6890
laura.carter@brevardfl.gov

Why You Are Here:

- To participate in the Operational Analysis process
- To review the existing conditions issues and opportunities along Wickham Road
- To provide your thoughts, concerns, and comments regarding the project

Stay Informed by:

Visiting our website
spacecoasttpo.com/plan/wickham-road-operational-analysis

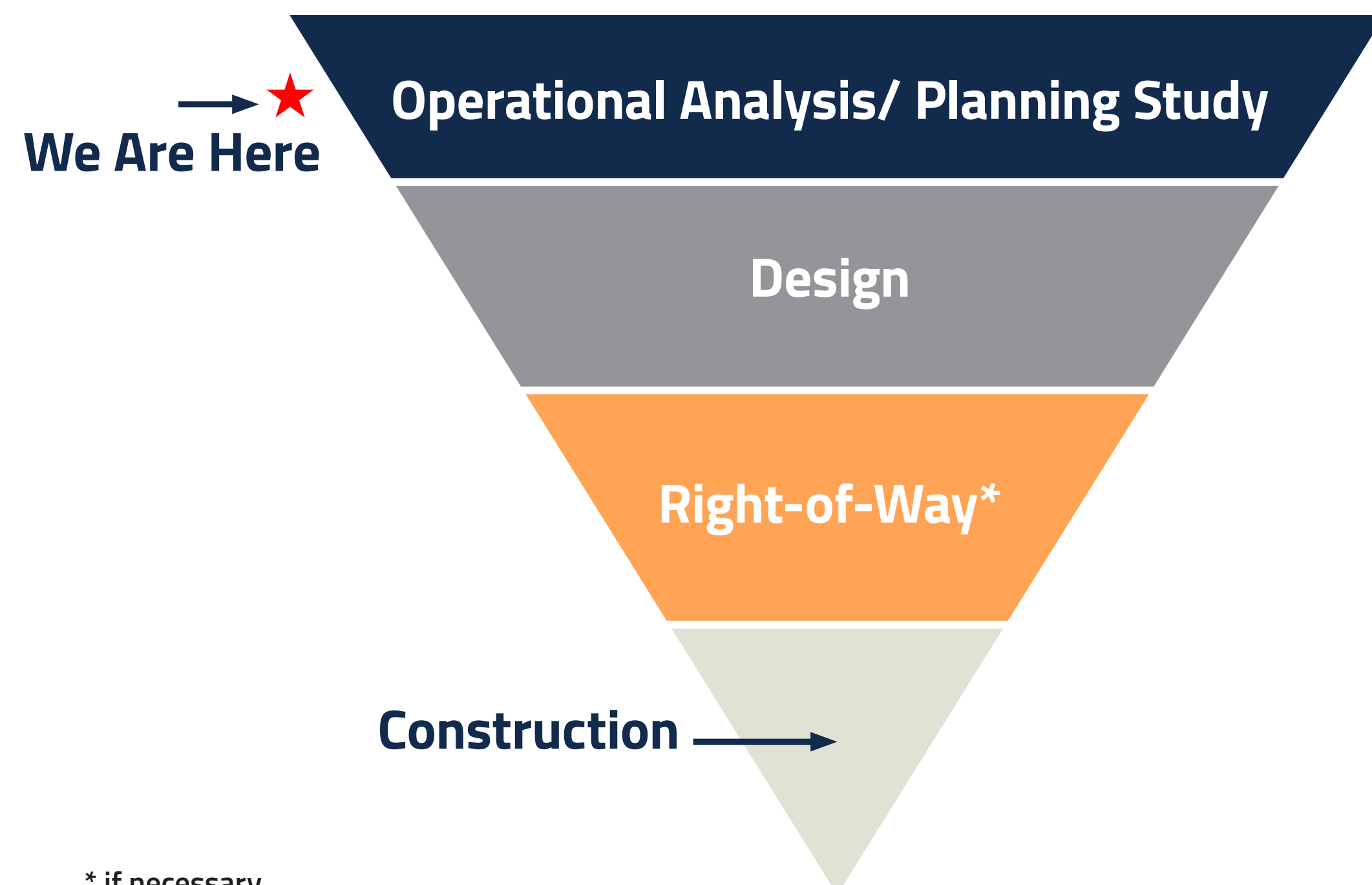
Contacting Laura Carter
 Operations Manager

2725 Judge Fran Jamieson Way
 Building B, Room 105
 Melbourne, FL. 32940
 321-690-6890
laura.carter@brevardfl.gov

How Can You Get Involved?

- Participate in open discussion with the project team
- Ask questions about specific aspects of the project
- Fill out a comment form with your input
- Request a small group / neighborhood meeting
- Visit our comment website at: maps.kittelson.com/wickhamroad

Where We Are:



* if necessary

Project Schedule

2017

2018

TASK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
Begin Study	★												
Existing Conditions Analysis													
Project Advisory Team Kick-Off Meeting		★											
Project Advisory Team Meeting #1				★									
Future Conditions Analysis													
Existing Conditions Public Meeting													
Alternatives Development													
Project Advisory Team Meeting #2								★					
Project Advisory Team Meeting #3									★				
Alternatives Development Public Meeting										★			
SCTPO TAC/CAC Presentation													★
SCTPO Board Meeting Presentation													★
Project Wrap Up													

★ We Are Here

TONIGHT'S AGENDA

5:30 PM to 6:00 PM
OPEN HOUSE

6:00 PM to 6:30 PM
PRESENTATION

6:30 PM to 7:30 PM
OPEN HOUSE

CONTACT US

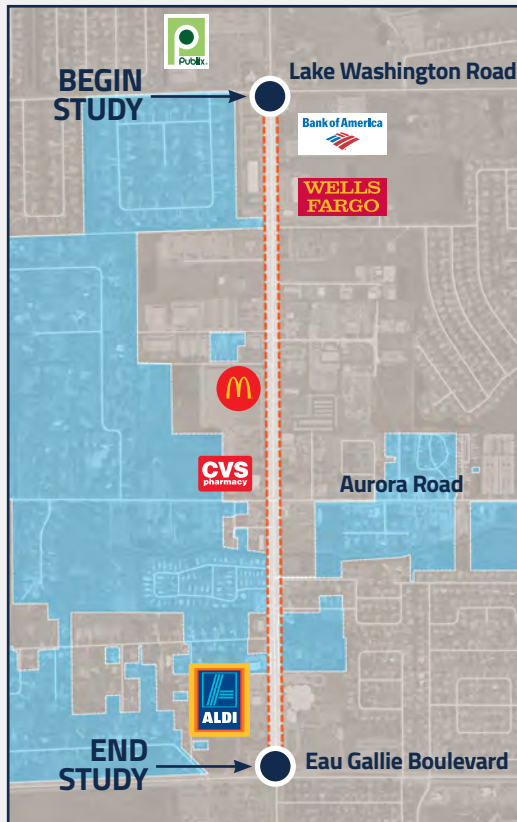
**SCTPO
 PROJECT MANAGER:**

Laura Carter
 2725 Judge Fran Jamieson Way
 Building B, Room 105
 Melbourne, FL 32940
laura.carter@brevardfl.gov
 321.690.6890

**CONSULTANT
 PROJECT MANAGER:**

Travis Hills, PE
 Kittelson & Associates, Inc.

225 E Robinson St.
 Suite 450
 Orlando, FL 32801
thills@kittelson.com
 407.540.0555



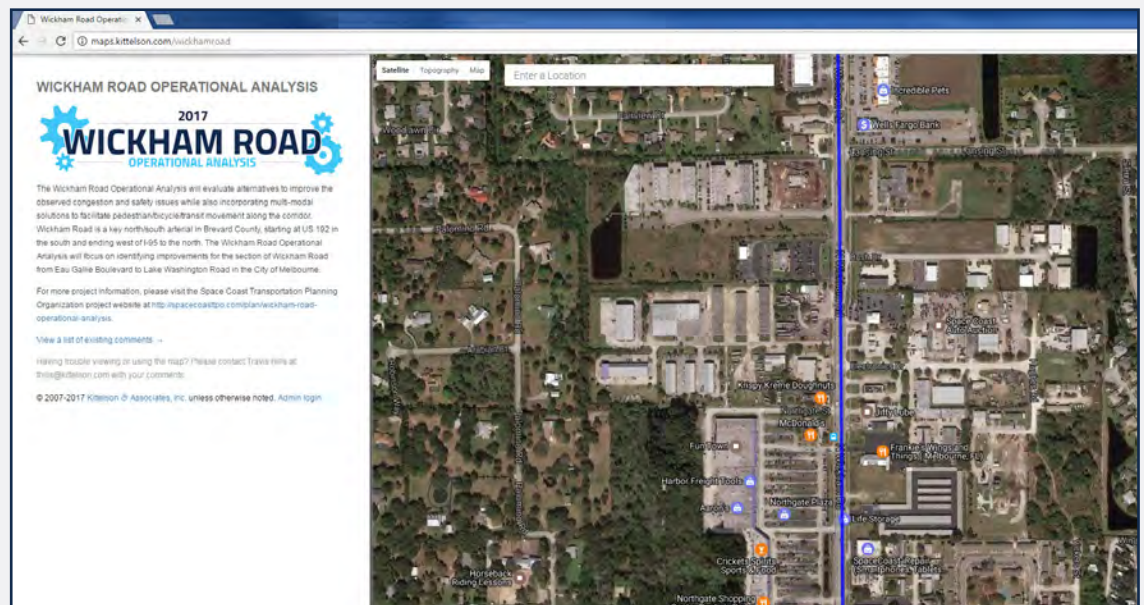
Welcome!

Welcome to the **Wickham Road Operational Analysis Existing Conditions Public Meeting**. The Wickham Road Operational Analysis will evaluate alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle and transit movement along the corridor. The analysis will focus on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road in the City of Melbourne.

This is the first of two public meetings being held throughout the 14 month planning study. The purpose of the meeting is to present initial findings related to existing conditions and receive input from interested stakeholders.

Your Input is Valuable!

Anyone wishing to submit comments or concerns may do so at this meeting, or by visiting our Interactive Map at maps.kittelson.com/wickhamroad. The public comment period will remain open until close of business May 23, 2017.



Next Steps

The next steps in the Operational Analysis will be to develop a variety of potential roadway concepts that meet the future needs of the corridor. These options will be presented at the Second Public Meeting anticipated to take place in the fall of 2017.

Project Schedule

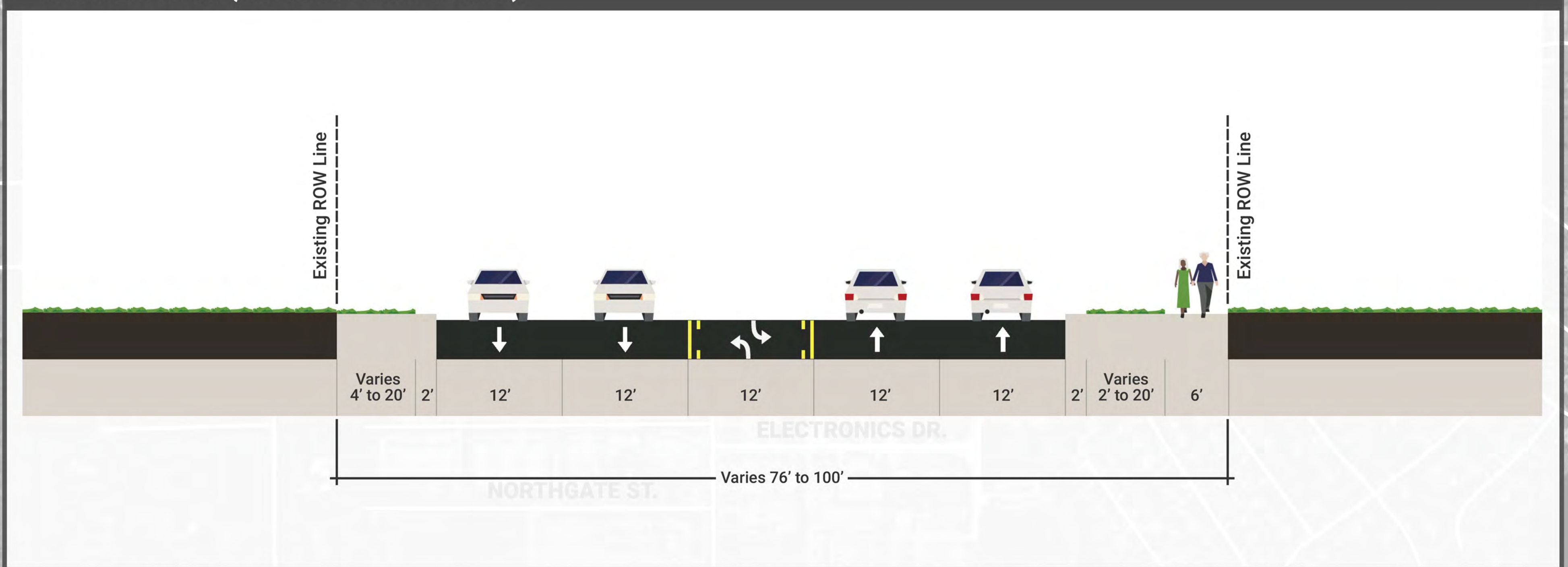
2017

2018

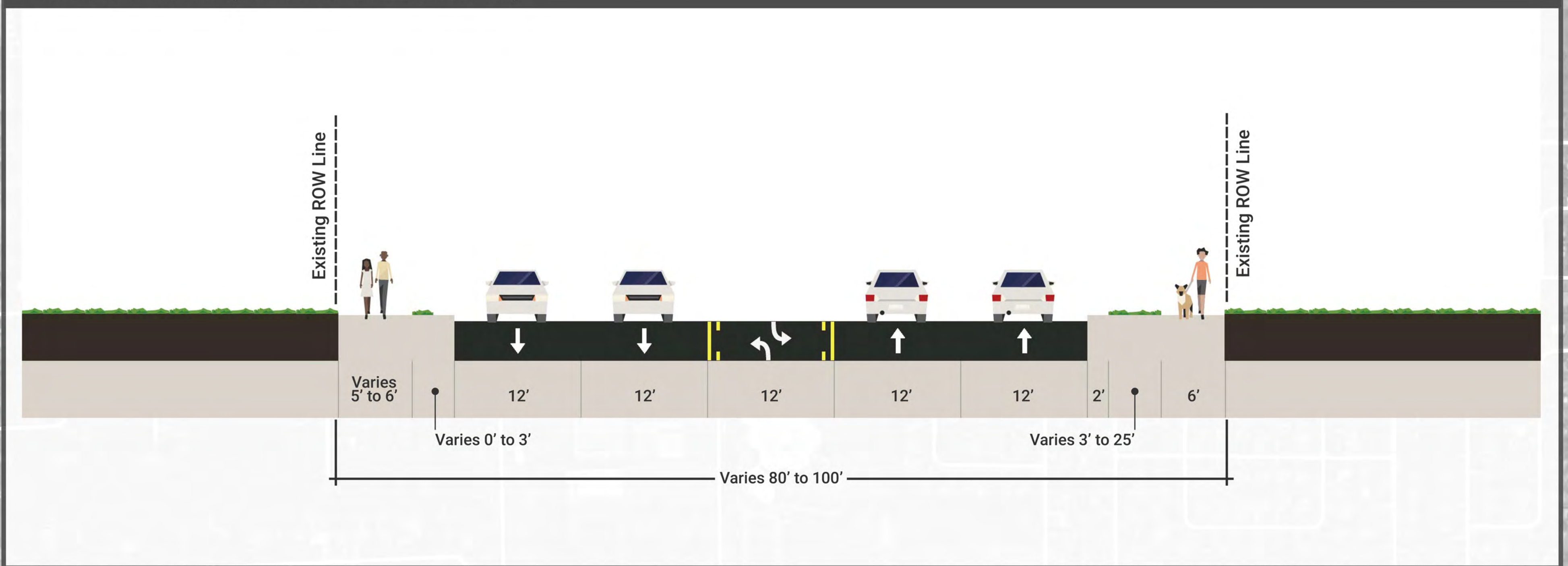
TASK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
Begin Study	★												
Existing Conditions Analysis													
Project Advisory Team Kick-Off Meeting		★											
Project Advisory Team Meeting #1				★									
Future Conditions Analysis													
Existing Conditions Public Meeting					★ We Are Here								
Alternatives Development													
Project Advisory Team Meeting #2								★					
Project Advisory Team Meeting #3									★				
Alternatives Development Public Meeting										★			
SCTPO TAC/CAC Presentation													★
SCTPO Board Meeting Presentation													★
Project Wrap Up													



Wickham Road (North of Trimble Road)



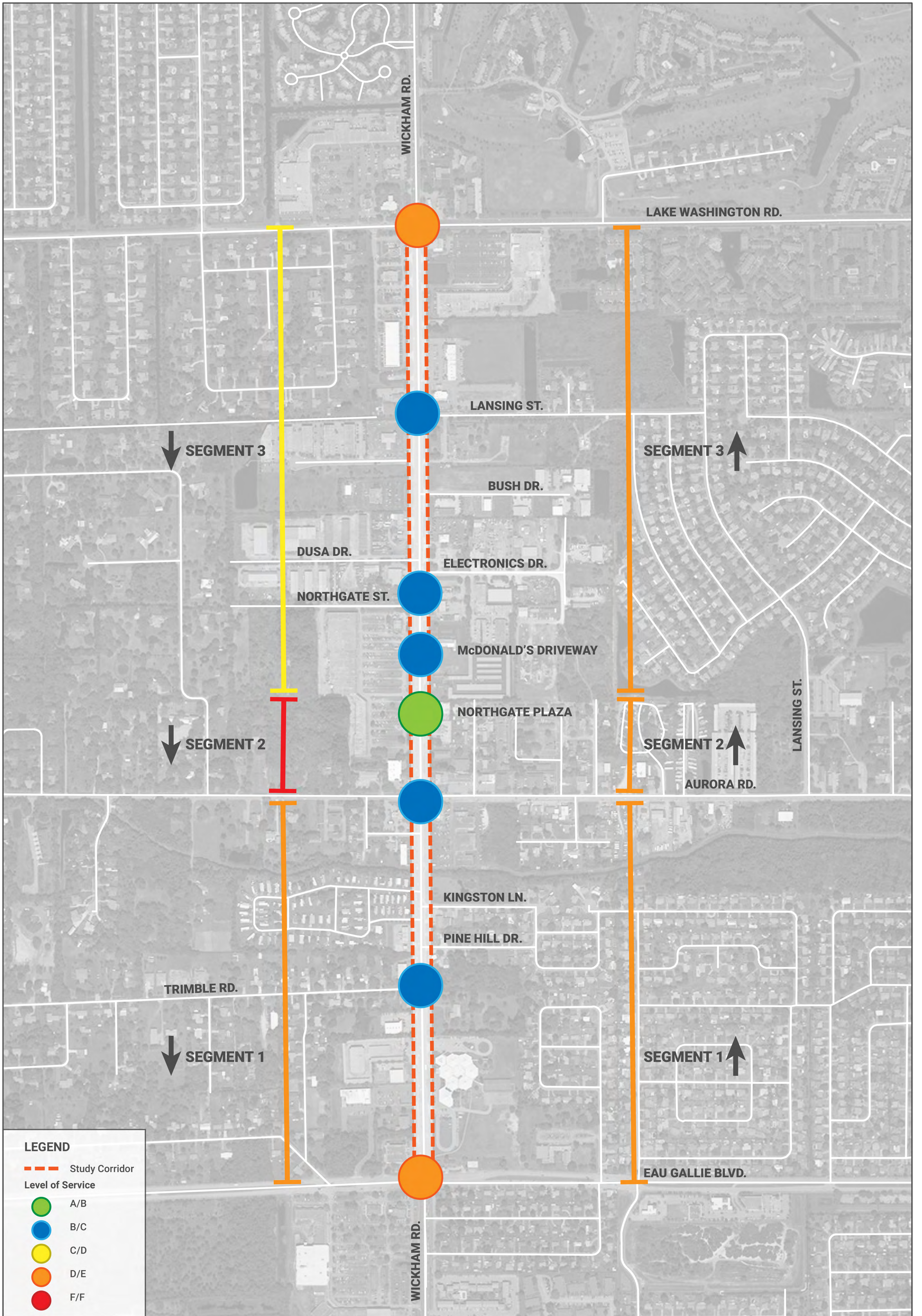
Wickham Road (South of Trimble Road)





LEGEND

- Aurora Rd. Pedestrian Facilities
- Wickham Rd. Pedestrian Facilities



LEGEND

--- Study Corridor

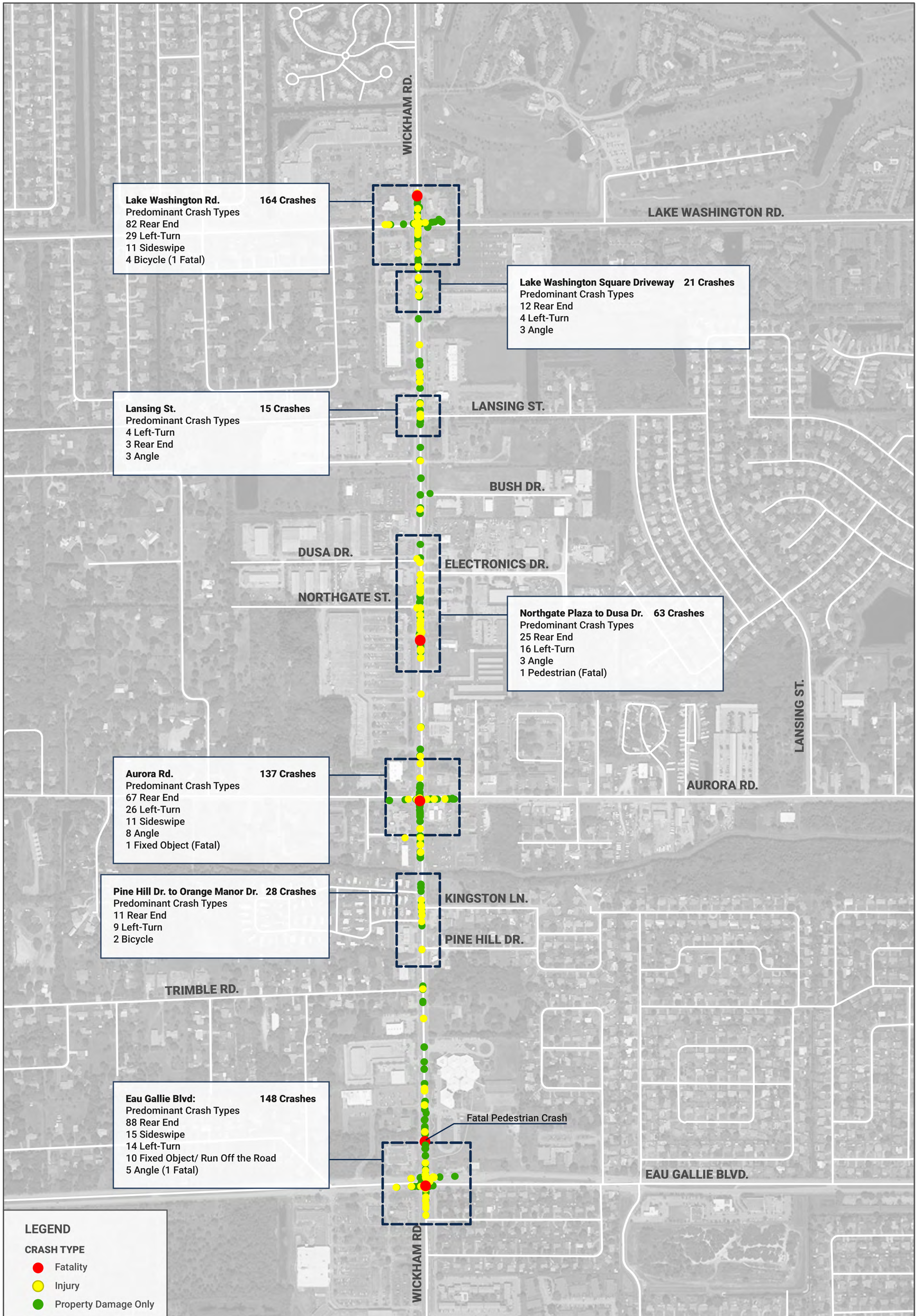
Level of Service

- A/B
- B/C
- C/D
- D/E
- F/F

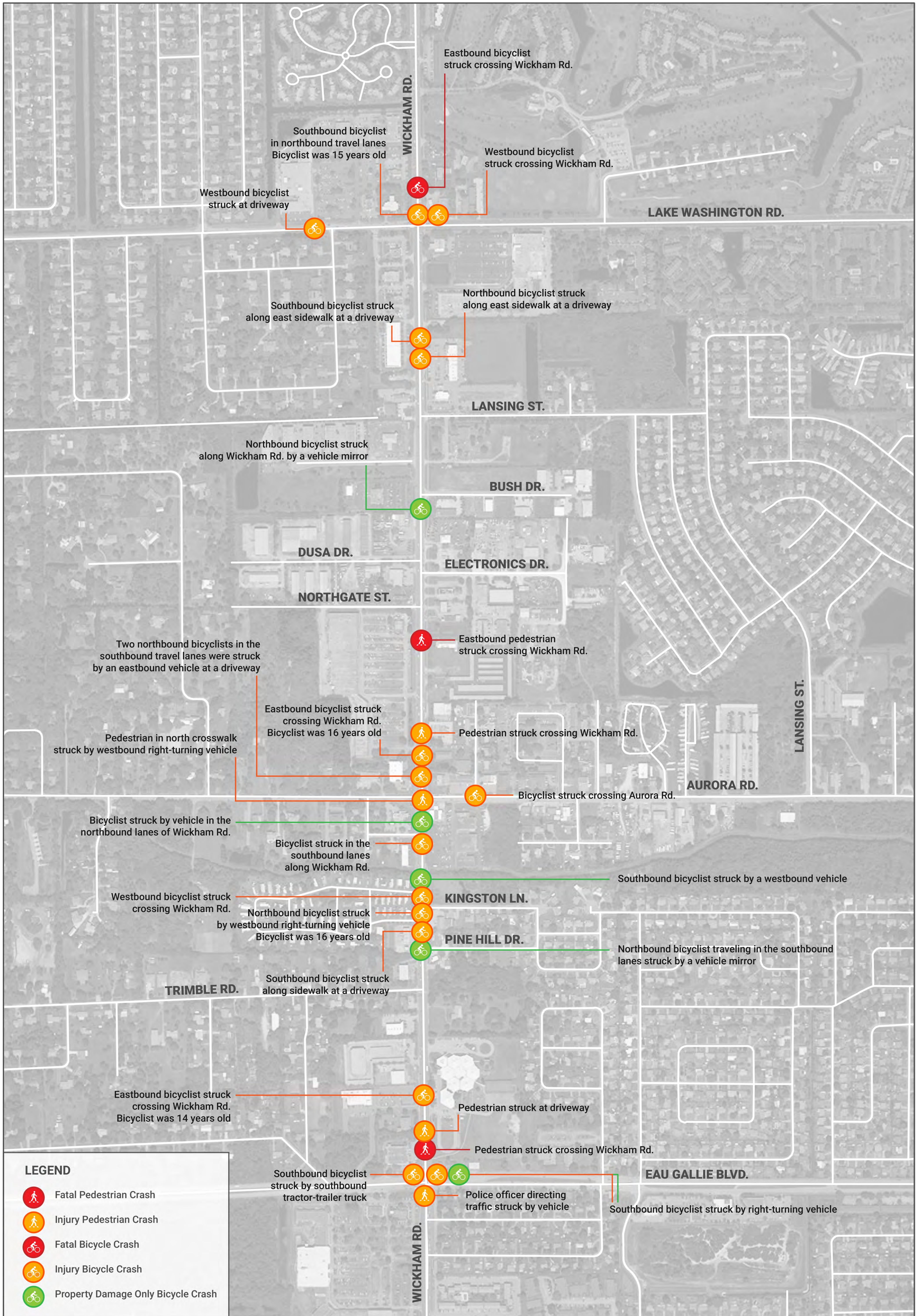
Scale in Feet



North







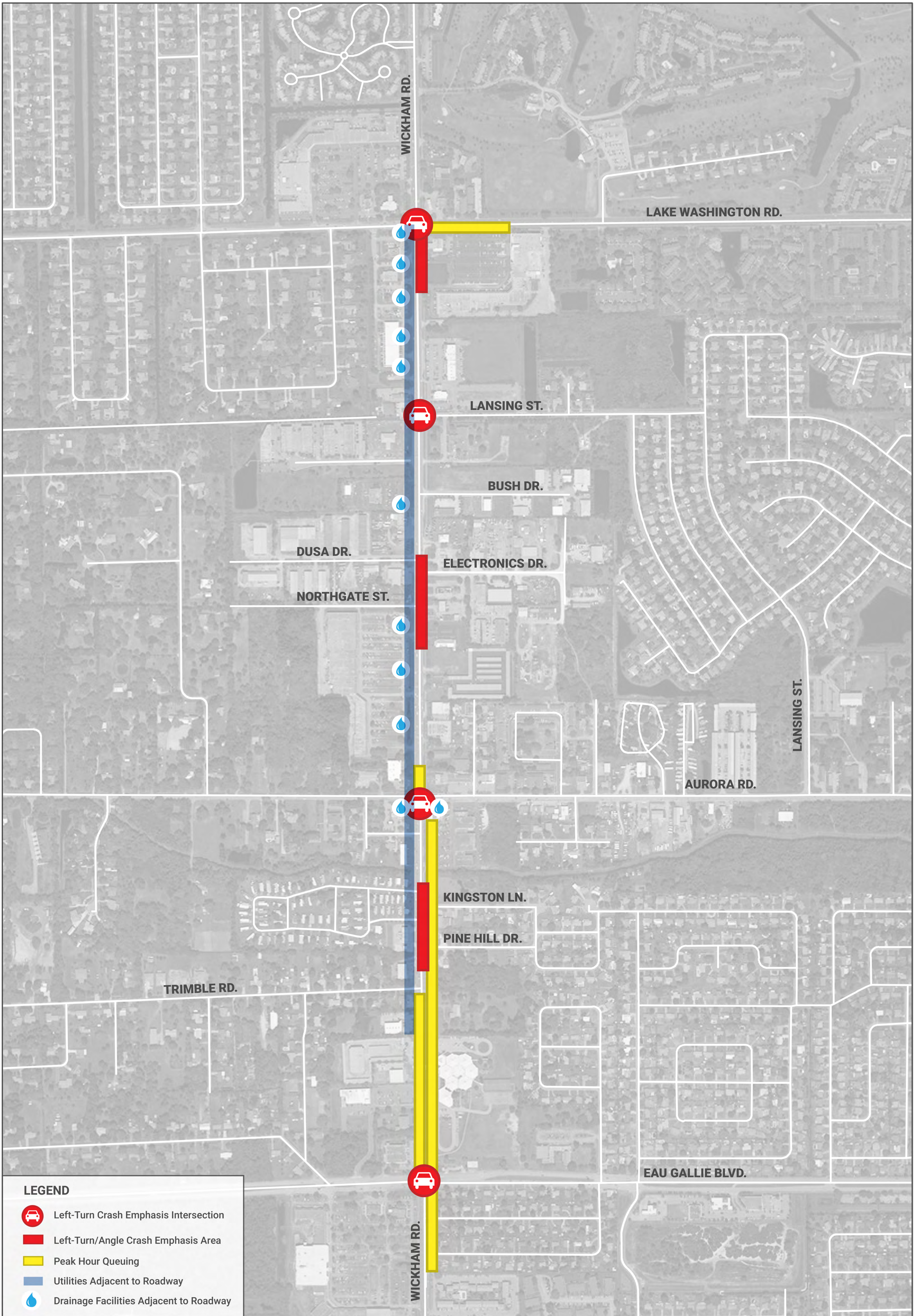
BICYCLE AND PEDESTRIAN CRASHES





LEGEND

-  Pedestrian Mobility Emphasis Intersection
-  Transit Stop Enhancements
-  Pedestrian Facility Gaps
-  Bicycle Facility Enhancements



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

EXISTING CONDITIONS PUBLIC MEETING | MAY 9, 2017



AGENDA



Project Background / Overview



Existing Conditions Analysis



Issues / Opportunities Discussion



Next Steps



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

The graphic features the year '2017' in a light blue font above the main title. The title 'WICKHAM ROAD' is in a large, bold, white-outlined font. Below it, 'OPERATIONAL ANALYSIS' is in a smaller, light blue font. The text is flanked by several light blue gear icons of varying sizes, and horizontal lines are positioned above and below the main title.

PROJECT BACKGROUND / OVERVIEW

STUDY CORRIDOR

LEGEND

- Study Corridor
- City of Melbourne
- Brevard County





2017

WICKHAM ROAD

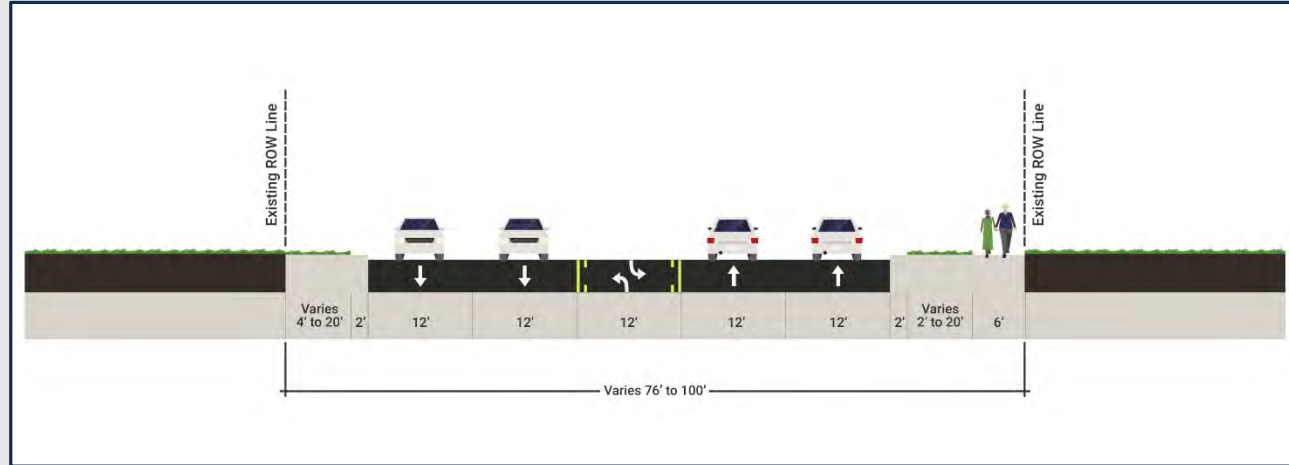
OPERATIONAL ANALYSIS



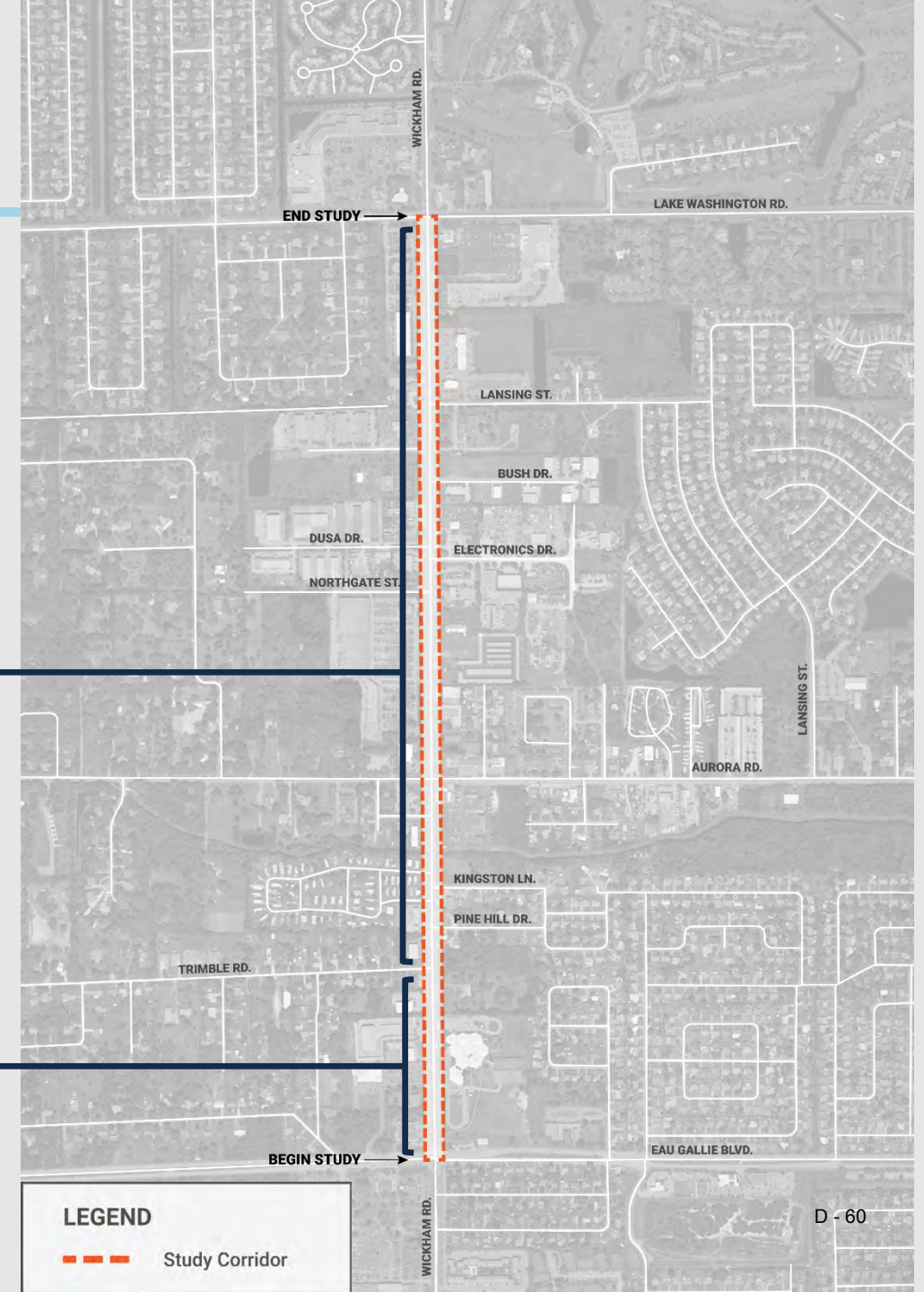
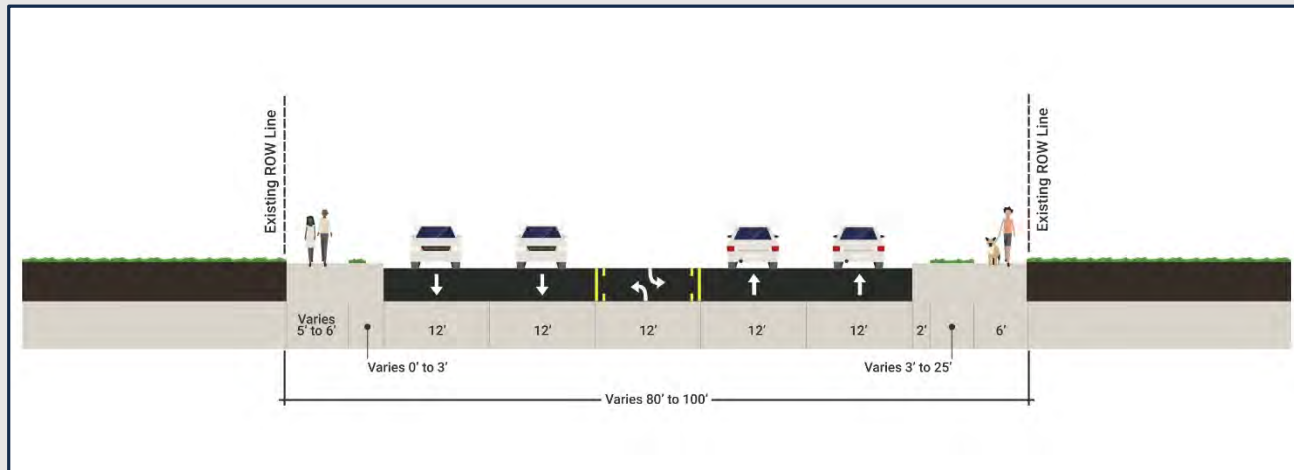
EXISTING CONDITIONS ANALYSIS

ROW AND TYPICAL SECTIONS

TYPICAL SECTION NORTH OF TRIMBLE ROAD



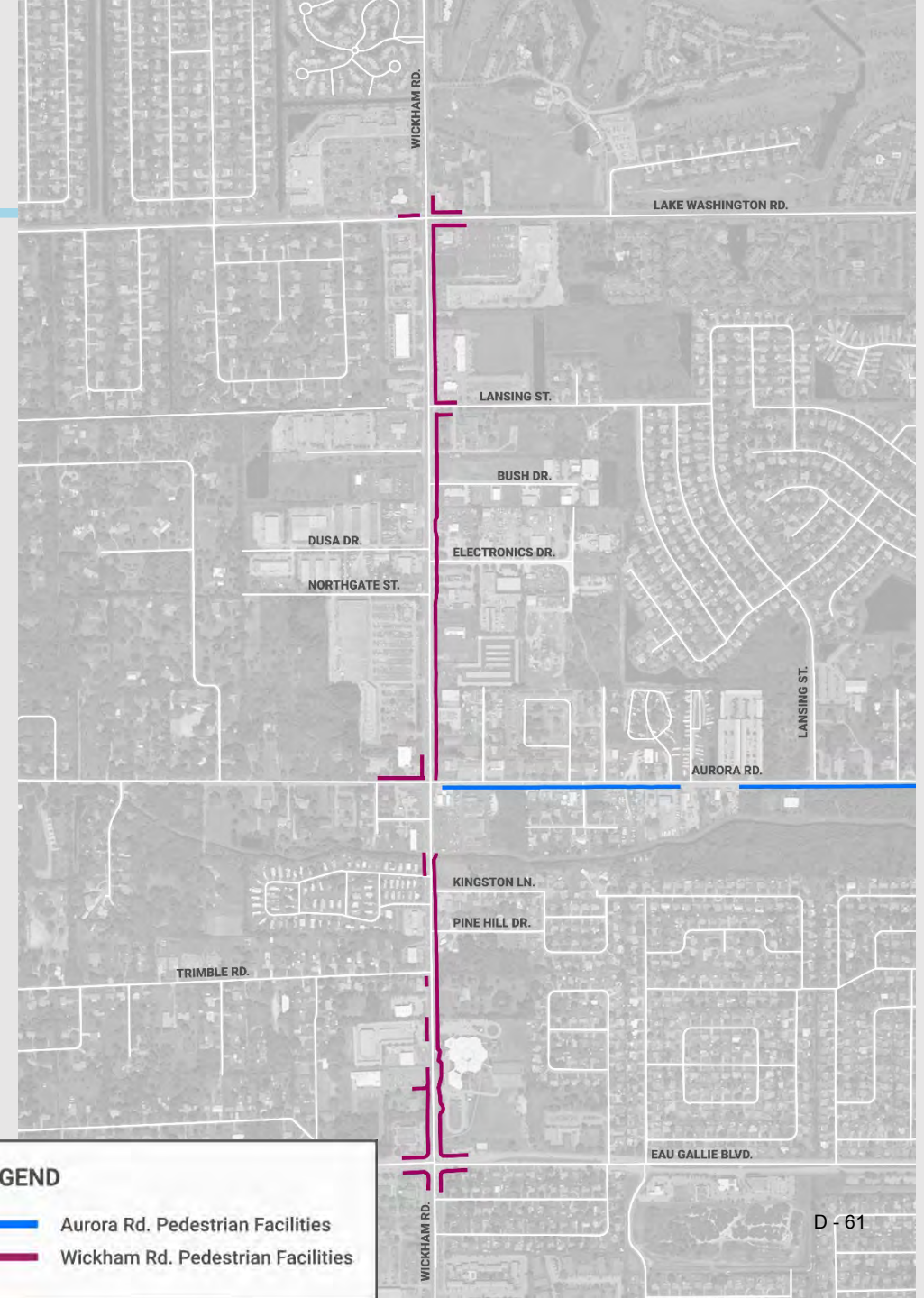
TYPICAL SECTION SOUTH OF TRIMBLE ROAD



LEGEND

--- Study Corridor

EXISTING PEDESTRIAN FACILITIES



LEGEND

- Aurora Rd. Pedestrian Facilities
- Wickham Rd. Pedestrian Facilities

EXISTING TRANSIT NETWORK



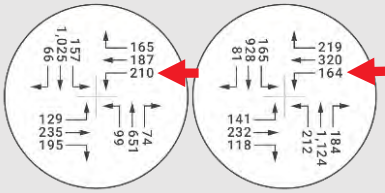
EXISTING DRAINAGE AND UTILITIES



EXISTING TRAFFIC CHARACTERISTICS

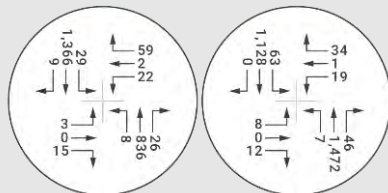
LAKE WASHINGTON ROAD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



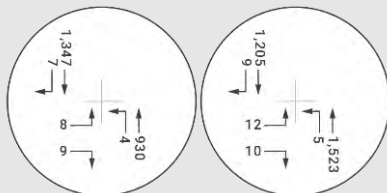
LANSING STREET

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



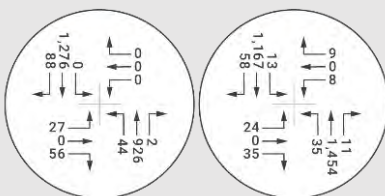
NORTHGATE STREET

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



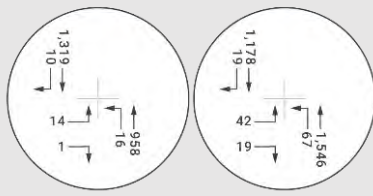
MCDONALD'S DRIVEWAY

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



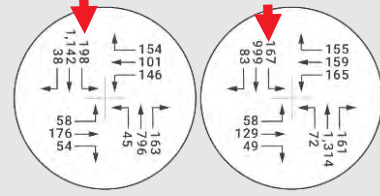
NORTHGATE PLAZA

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



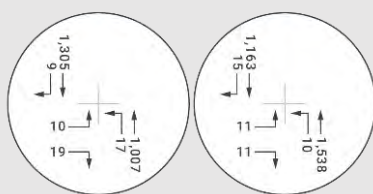
AURORA ROAD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



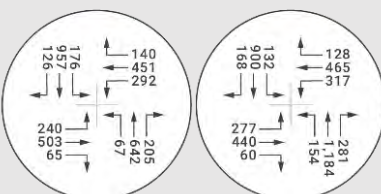
TRIMBLE ROAD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES



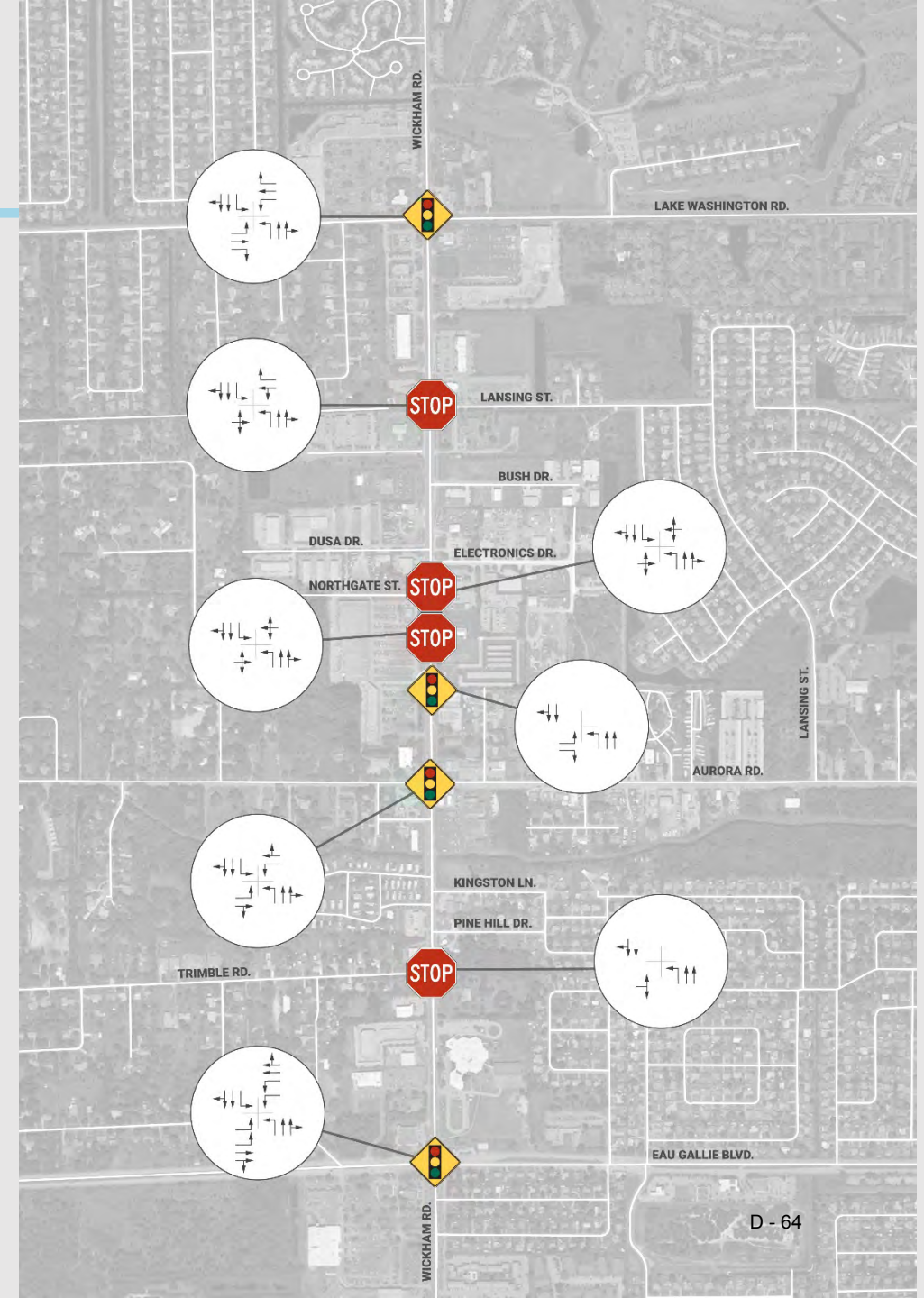
EAU GALLIE BOULEVARD

AM PEAK HOUR VOLUMES PM PEAK HOUR VOLUMES

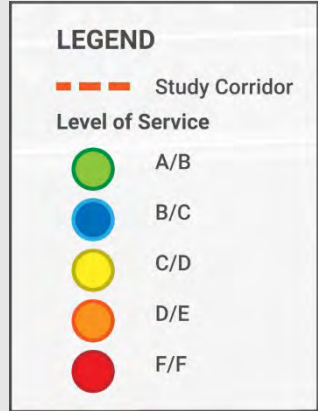


LEGEND

- Signalized Intersection
- Two-Way Stop Controlled Intersection
- Lane Configuration



OPERATIONAL EVALUATION



CRASH HISTORY (2011-2015)

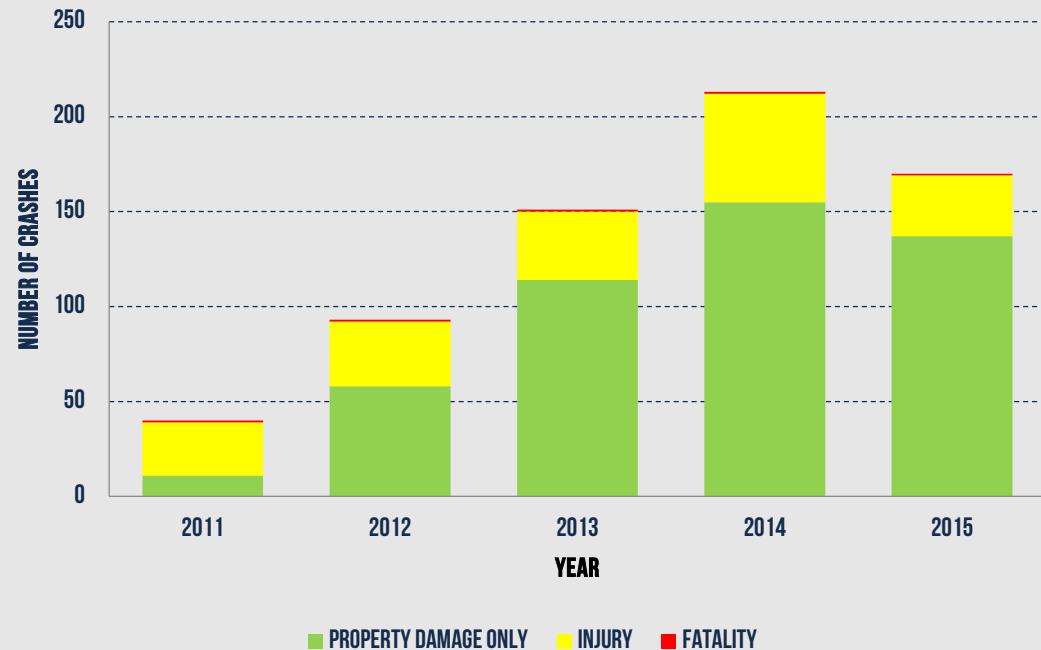
667 crashes from 2011 to 2015

- 5 fatal (1 percent) and 187 injury crashes (28 percent)
- 80 percent of the crashes occurred on a weekday (Monday through Friday)
- 33 percent of the crashes occurred between 3 PM and 6 PM

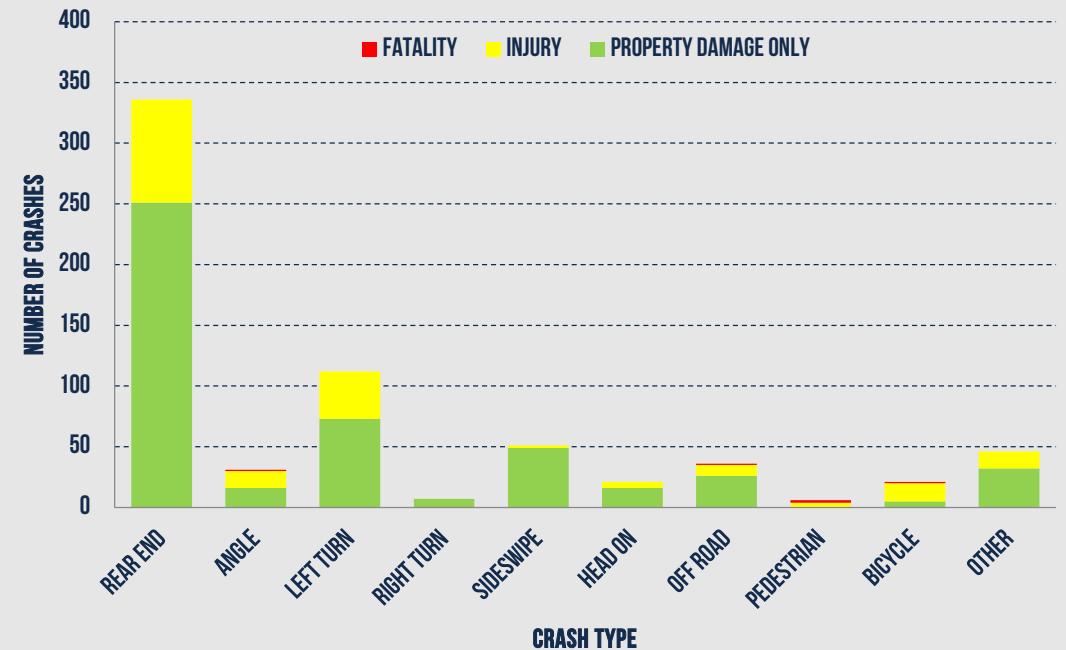
21 bicycle crashes

6 pedestrian crashes

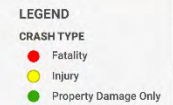
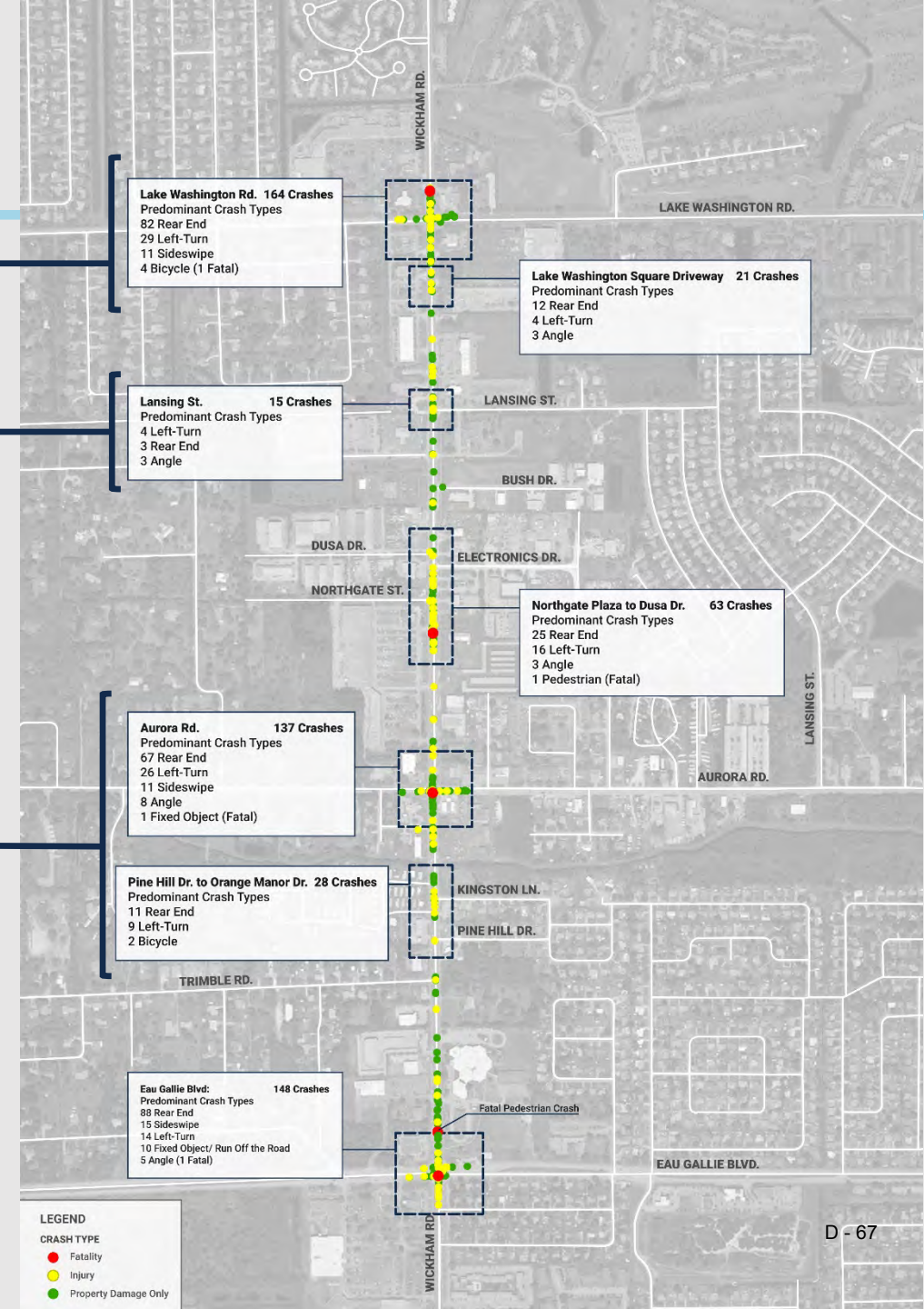
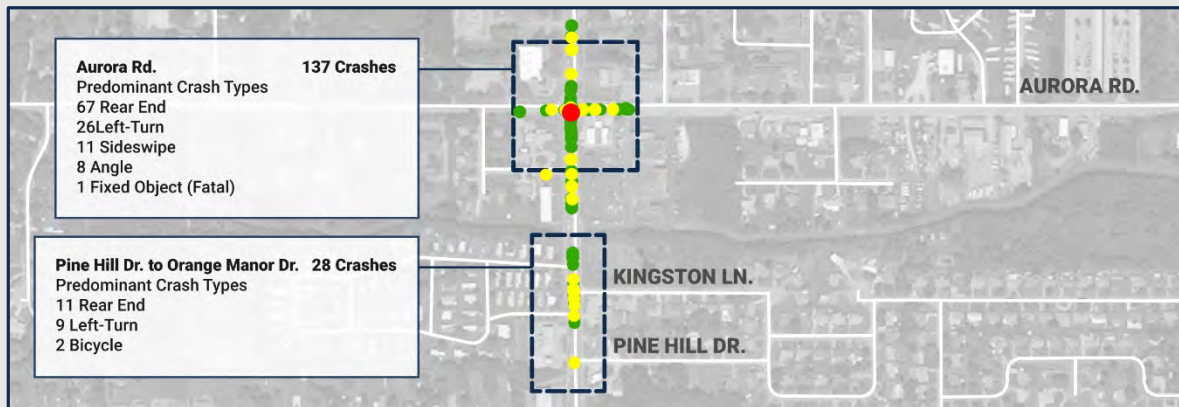
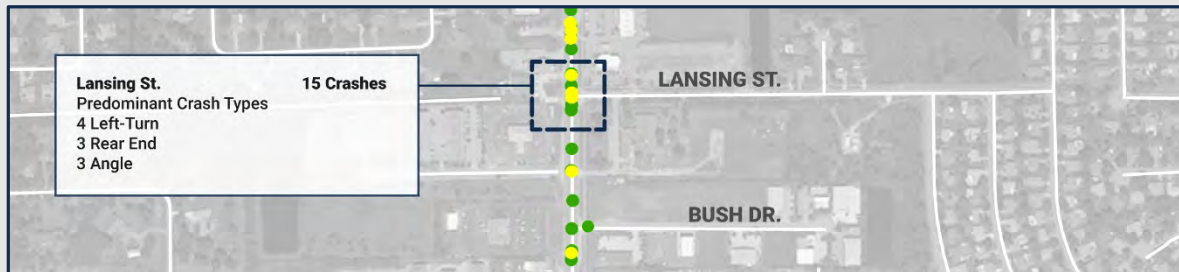
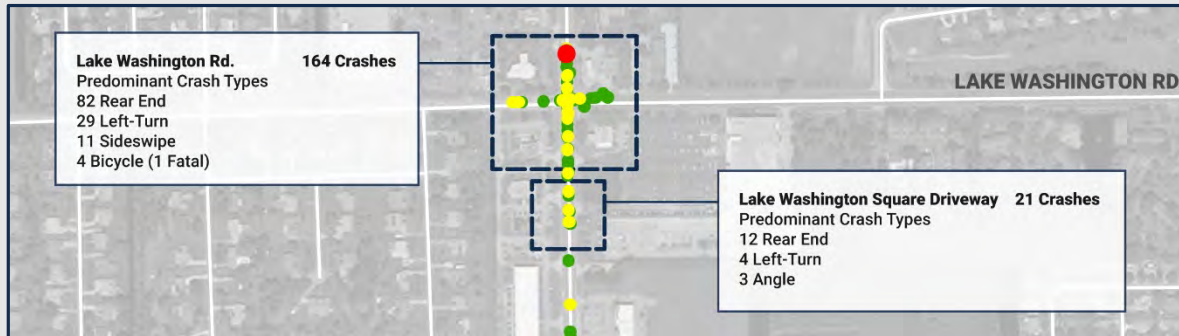
CRASHES BY YEAR AND SEVERITY



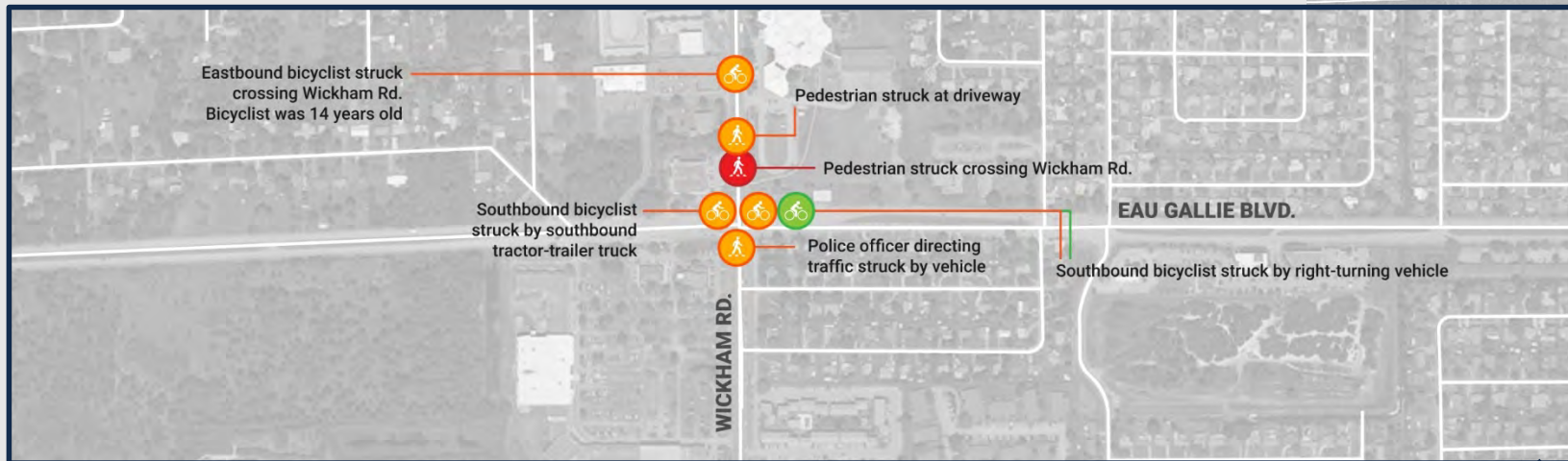
CRASHES BY TYPE AND SEVERITY



CRASH HISTORY (2011-2015)



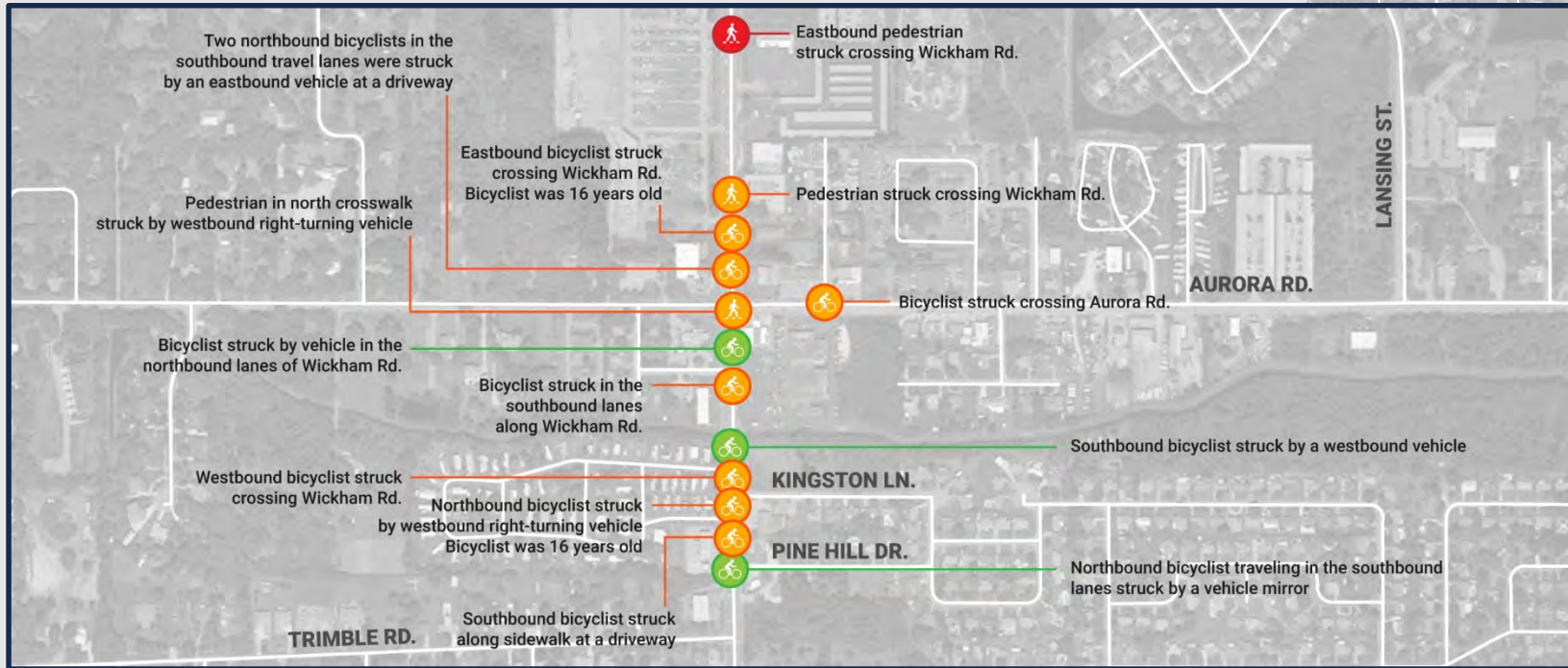
PEDESTRIAN AND BICYCLE CRASH HISTORY (2011-2015)



● Fatality **● Injury** **● Property Damage Only**



PEDESTRIAN AND BICYCLE CRASH HISTORY (2011-2015)



● **Fatality**
● **Injury**
● **Property Damage Only**



2017

WICKHAM ROAD




OPERATIONAL ANALYSIS



ISSUES / OPPORTUNITIES DISCUSSION

MULTI-MODAL ISSUES AND OPPORTUNITIES






LEGEND

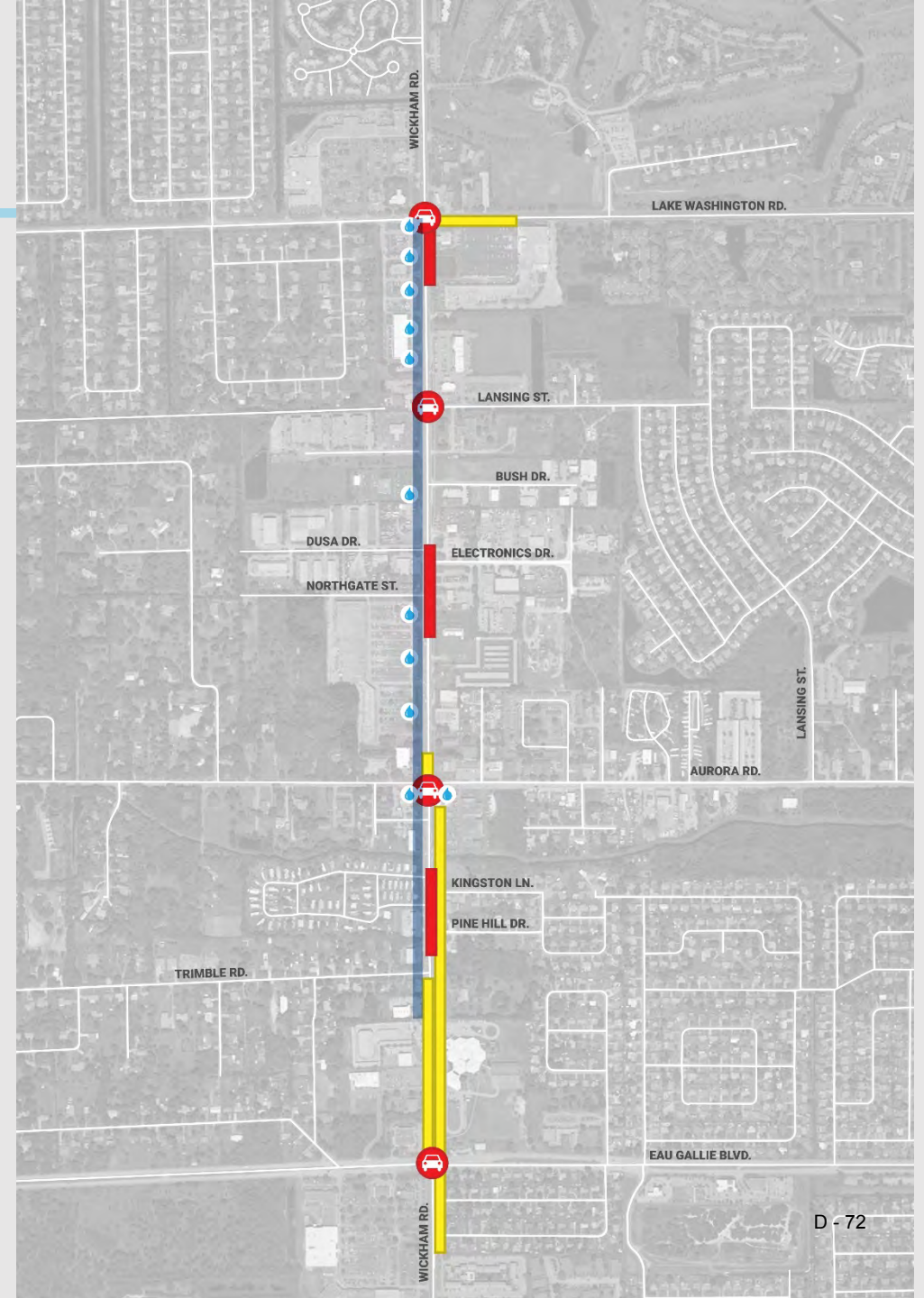
-  Pedestrian Mobility Emphasis Intersection
-  Transit Stop Enhancements
-  Pedestrian Facility Gaps
-  Bicycle Facility Enhancements



VEHICULAR, UTILITY, AND DRAINAGE ISSUES AND OPPORTUNITIES

LEGEND

-  Left-Turn Crash Emphasis Intersection
-  Left-Turn/Angle Crash Emphasis Area
-  Peak Hour Queuing
-  Utilities Adjacent to Roadway
-  Drainage Facilities Adjacent to Roadway





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



NEXT STEPS

QUESTIONS / CONTACT INFORMATION

SCTPO Project Manager

Laura Carter

2725 Judge Fran Jamieson Way

Building B, Room 105

Melbourne, FL 32940

Phone: 321-690-6890

Laura.carter@brevardfl.gov

Consultant Project Manager

Travis Hills, PE

225 East Robinson Street

Suite 450

Orlando, FL 32801

Phone: 407-540-0555

thills@kittelso.com



MEETING SUMMARY



Existing Conditions Public Meeting

SUBJECT: Wickham Road Operational Analysis

MEETING DATE: Tuesday May 9th, 2016

MEETING TIME: 5:30 PM – 7:30 PM

VENUE: Wickham Park Community Center, Room 1, 2815 Leisure Way,
Melbourne FL 32935

Introduction and Attendees

The Wickham Road Operational Analysis will evaluate alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle, and transit movements along the corridor. The analysis will focus on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road. This is the first of two public meetings being held throughout the 14 month planning study. The purpose of the meeting is to present initial findings related to existing conditions and receive input from interested stakeholders. Thirty-two members of the public participated in the public meeting with 14 additional local government, Space Coast Transportation Planning Organization (SCTPO), and consultant staff. No Elected Officials attended the Public Meeting. The sign-in sheets for the meeting are attached.

Meeting Outreach Tools and Meeting Statistics

The SCTPO uses a multi-faceted social media campaign to reach out to the general public regarding public meetings. **Table 1** below displays the social media outreach activities and comments related to those activities.

Table 1: Social Media Outreach Activities

ITEM/TOOL	COMMENTS
Meeting Flyer/Postcard Property Owners Mail List (Every Door Direct Mail)	Utilized UPSP; direct mail out of Postcards to local zip codes # Postcards Mailed = 8,896 Delivered to post office 4/14/17
Elected Officials Emailed	25-30 Days Prior to Public Meeting Transmitted April 17, 2017
Appointed Officials Emailed	25-30 Days Prior to Public Meeting Transmitted April 17, 2017
Website	SCTPO popup on home page; calendar and project page
Social Media (Facebook/Twitter)	Posted one week prior, in early afternoon by SCTPO
Social Media (Facebook/Twitter)	Posted one week prior, in early afternoon by SCTPO
Press Release	SCTPO transmitted
Meeting Documents & Maps	Posted on website
Meeting PowerPoint Presentation	Posted on website
City of Melbourne Public Involvement Officer	Coordinated with PIO; posted on City website
Meeting Notice Post at Community Center	Flyer posted at facility
Meeting Notices in SCTPO Agenda Packages	SCTPO TAC/CAC/TPO May agenda packages
Announcement Flyers Provided to BOCC D4 and D5 Commissioners	Flyers provided to commissioner offices

As noted in the introduction, 32 members of the public participated in the meeting along with 14 local government, SCTPO, and consultant staff. The tables below provide additional meeting statistics:

Attendees Overview

Public: 32 attendees
Staff/consultants/local govt. agencies: 14
Total: 46

Gender Overview

Female: 22
Male: 24

Disabilities/Impairments

Visually Impaired: 2

Ethnicity

Caucasian	12
Hispanic	0
Black or African American	0
Pacific Islander	0
Other	0
No answer	2

How did you Hear About Meeting?

E-Mail	1
Direct Mail Flyer	20
Website	1
Social Media	1
Word of Mouth	5
Other*	10

*6 responses were from staff/consultants

Age Range

Under 30	0
30-45	1
45-60	4
over 60	9

Meeting Summary

The Public Meeting was an open house type format, with 30 minutes reserved at the beginning for the public to review the concept boards/handouts and ask questions of the study team staff. Once the initial question and answer time finished, Laura Carter, the SCTPO project manager, and Travis Hills, the consultant project manager, gave a presentation outlining the following topics about the project:

- Project Background/Overview
- Existing Conditions Analysis Results
- Issues/Opportunities along Corridor
- Schedule and Next Steps

After the presentation was completed, the public was encouraged to review the concept boards and ask any additional questions of the study team staff. The Public Meeting adjourned at 7:30 PM. The presentation given at the Public Meeting is attached.

Summary of Public Comment

The public that attended the meeting were encouraged to provide comments on the project. Fourteen comment forms were received by the study team from the public. Below is a summary of the comments received from the public:

Project Feedback

The following question was posed to the respondent: How do you feel about the transportation options along Wickham Road, with 1 being No Improvements Needed and 5 being Needs Major Improvements? The following provides a count of the 1 through 5 responses to this question (for those that answered):

Project Feedback	1	2	3	4	5	Did Not Answer
How do YOU feel about the transportation options along Wickham Road, with 1 being NO IMPROVEMENTS NEEDED and 5 being NEEDS MAJOR IMPROVEMENTS?	1	0	2	2	7	2

Likes

- I cycle Wickham. I would like to see short-term quick fixes while the study goes on. I appreciate the sidewalk we have, but it isn't even level. Poor people in wheelchairs. Excellent presentation.
- It seems something is being done. That's good.
- Smooth roadway.

Dislikes

- I think this corridor should invite people to cycle and walk for the sake of health and reduce pollution.
- Lack of roadway lighting.
- Poor drainage and pedestrian space.
- Aurora intersection.
- No bike lanes.

Improvements Desired

- Stop light at the intersection of Venture Lane and Wickham Road with Lansing Street diverted behind and south of the South Alternative Learning Center. This would make a true cross street intersection at this location. This location has the benefit of not impacting the power lines on the west side of the roadway.
- Replace diagonal ramping with two ramps per corner. Reconfigure white light time so that pedestrians understand it and seniors have time to cross.
- Continuous walk and bike lanes on both sides; crossing should be possible for pedestrians on all four possible ways on Aurora/Wickham and Lake Washington/Wickham.
- Sidewalks on Aurora Road. An exit on Lake Washington from I-95.
- Add light poles.
- Addition of "No Left Turn" sign onto Wickham Road at road from parking lot, south of Bank of America. Cars turning left from their road must cross two northbound lanes on Wickham and move into the "Left Turn Lane" on Wickham onto Lake Washington.
- Sharrow on travel lane for bicycle.

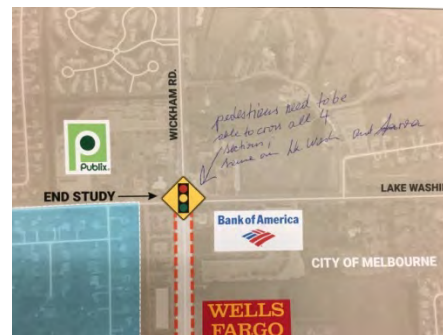
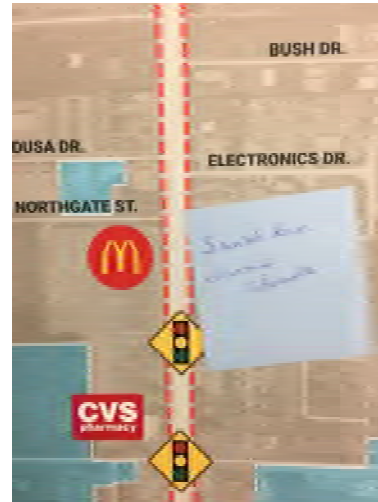
- Widen available turning radius when leaving Wickham and turning west on to Lake Washington. Larger vehicle cannot do so safely.
- Timing of signals coordinated to improve flow of traffic.
- Improving sidewalks and bike access; improve ADA compliance.
- Rebuild Aurora intersection open throat. Finish sidewalks.

Other Questions or Comments

- LA Fitness, neighboring produce store, and Walgreens are the only business with easy access for bikes and bike racks. Why not encourage business to support access of bikes to them for the benefit of their business? Financial support? Let's have a real bus system that inspires people to leave their cars at home. Seniors need it, besides workers.
- Is it not possible to drive Wickham Road and put a continuous green light? I know that is tough to accomplish.
- Pre-written comments were received from Kay Hildebrandt and Susan Arnold. These comments have been attached for reference.

The picture below displays Post-It note comments on the roll plot aerial on display during the meeting.

- Broken/incomplete sidewalk on Wickham between Aurora and Kingston.
- Smooth down elevated sidewalks near Northgate Street.
- Possible signal at Lansing Street?
- Pedestrians need to be able to cross all 4 sections at Lake Washington and Aurora.



Next Steps

The following are next steps for the project:

- Prepare future conditions no-build analysis - May/June 2017
- Alternatives analysis - Summer 2017
- Alternatives Analysis Public Meeting - Fall 2017

This summary is Travis Hills' interpretation of the meeting. Questions should be directed to him at 407-540-0555.

Attachments

- General Public Sign-In Sheets
- Public Meeting Mailer
- Public Meeting Mailer Coverage Area

- Elected and Appointed Officials Letters
- Press Release
- Public Meeting Title VI Compliance Board
- Public Meeting “Why Are We Here” Board
- Public Meeting Handout and Comment Forms
- Public Meeting Existing Conditions Boards
- Public Meeting Presentation
- Pre-Written Comments from Public

ELECTED OFFICIAL? (Y/N)	GOV'T AGENCY STAFF? (Y/N)	NAME	E-MAIL ADDRESS	HOW DID YOU FIND OUT ABOUT THIS MEETING?					
				EMAIL	MAILER	WEBSITE	SOCIAL MEDIA	WORD OF MOUTH	OTHER
✓	Y	Steven Bestel	steven.bestel@brevard.fl.gov						
N	Y	Abby Rex	abby.rex@brevardfl.gov						
N	N	Rupert Hector	rhector@cfl.rr.com		✓			✓	
N	N	BARBARA (Bonnie) JIA	hilkida@yahoo.com		✓				
N	N	Jack Hasch	jhasch@launchfeu.com						✓
N	Y	Bob Famm						✓	✓
N	N	Kay Hildebrandt	khilde99@gmail.com		✓				
N	N	Carolynn Howell	chowell5@cfl.rr.com		✓				
N	N	Tom Hull	Tomh@joyal-homes.com					X	
N	N	House Price	hprice2@cfl.rr.com		✓				
N	N	Bill DeBusk	rel_eng@yahoo.com					✓	
N	N	Allene Austin	allene.austin@bellsouth.net		✓				
	Y	Todd Corwin	todd.corwin@mlsfl.org						✓
		Landbank SCAT							
		Maura Rigobosi			✓				
		Camille Tate			✓				
N	N	Debbie Rich	debrarich@earthlink.net		✓				

ELECTED OFFICIAL? (Y/N)	GOV'T AGENCY STAFF? (Y/N)	NAME	E-MAIL ADDRESS	HOW DID YOU FIND OUT ABOUT THIS MEETING?					
				EMAIL	MAILER	WEBSITE	SOCIAL MEDIA	WORD OF MOUTH	OTHER
N	N	David Bennett	dbennett@go-iei.com						X
N	Y	Laura Carter							X
N	N	Karl Pissetti	kpissetti@cityof.com						X
N	Y	Sarah Kraum							X
N	N	DAN SPRADLING	dlspe1964@gmail.com		X				X
N	N	Brooklyn Bettsch			X				
N	N	Joy DeBUSK	joyusot@yahoo.com				X		
N	N	GINGER Tuleb	Ginger@Revolutionary.com	X					
N	N	Phil Moore				X			
N	N	Wynn Arnold	wone		X				
N	N	Susan Arnold			X				
N	N	Vicki Orndorf	vickiorndorf@yahoo.com		X				X
N	N	Art & Tori Pappas	appapapas2@cfl.rr.com		X				
N	N	Peggy Powell	ppowell28@cfl.rr.com		X				
N	N	Ch. Sattler	chsattler@wellknowh.com						
N	N	Paul M. Jay	paul@joyal-homes.com		X				
N	N	Susette Stewart	susettestewart@yahoo.com						X

ELECTED OFFICIAL? (Y/N)	GOV'T AGENCY STAFF? (Y/N)	NAME	E-MAIL ADDRESS	HOW DID YOU FIND OUT ABOUT THIS MEETING?					
				EMAIL	MAILER	WEBSITE	SOCIAL MEDIA	WORD OF MOUTH	OTHER
		Scott Ellis	SELLIS@SPACEV.NET		✓				
		Palmer Stiles							
		Rose Stiles							
		L. (Mrs) MacArthur	lmac@jpl.com		✓				
	Y	DEVIN SWANSON	devin.swanson@brevard.gov		✓				
	Y	Ashley Stanford	ashley.stanford@brevardfl.gov					✓	
		L Johnston							

MEETING FEEDBACK



Existing Conditions Public Meeting – May 9, 2017

1. Please indicate the degree to which you agree with the following statements as a result of attending the Wickham Road Existing Conditions Public Meeting (CIRCLE ONE)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have increased my understanding of the purpose of the Wickham Road Study	1	2	3	4	5
I have increased my understanding of the project process	1	2	3	4	5
I was able to have my transportation question(s) answered	1	2	3	4	5
The presentation was helpful and informative	1	2	3	4	5
The visual aids were beneficial (handouts, display boards)	1	2	3	4	5
Staff were friendly and professional	1	2	3	4	5
The location of the Open House was appropriate	1	2	3	4	5
The time of the Open House was appropriate	1	2	3	4	5

2. How can we improve the Open House? _____

3. [OPTIONAL]

Zip Code _____

4. Age range and Ethnicity

_____ under 30

_____ 30-45

_____ 45-60

_____ over 60

_____ Caucasian

_____ Hispanic

_____ Black or African American

_____ Pacific Islander

_____ Other

Thank you for your time and participation!
Please place completed form in "Feedback" box



**PROJECT
FEEDBACK**



How do *YOU* feel about the transportation options along Wickham Road, with 1 being NO IMPROVEMENTS NEEDED and 5 being NEEDS MAJOR IMPROVEMENTS? (Please circle one)

1 2 3 4 5

Likes:

Dislikes:

Improvements Desired:

Other Questions or Comments:

**Thank you for your time and participation!
Please place completed form in "Feedback" box**



WICKHAM SPEECH

My name is Susan Arnold and I live on Palomino Rd., which runs between Aurora Rd. and Turtle Mound Rd.

I really don't think there is a solution to the Wickham Rd. traffic problem. It has been a long time in the making and it is too late now to do anything about it. It has already been built beyond what infrastructure can handle.

Both the County Commissioners and the Melbourne City Council have allowed uncontrolled building all up and down Wickham.

At the present time there is a sign out in front of the Northgate Shopping Center announcing that out parcels are available and there is a proposed 50 home development behind the shopping center with an exit proposed on Northgate, which will funnel traffic between the donut shop and McDonalds and there is no traffic light there.

You can walk between the drug stores, the convenience stores and gas stations. We don't need that many choices. It is time to stop the rezoning that allows more on less.

Thank you for your time and allowing me to express my opinion

Date: May 9, 2017

To: **2017 Wickham Road Operation Analysis**
Wickham Park Community Center, Room 3
2815 Leisure Way, Melbourne FL 32935

From: Kay Hildebrandt
1627 Newland Court
Melbourne, FL 32934-9060



RE: **Public Meeting Open House Presentation from 5:30 p.m. to 7:30 p.m.**
Presentation at 6:00 p.m. on May 9, 2017

Sharing My Voice Through this Memo:

- To Improve Safety and not add additional costs for street light operation, pedestrians and bike riders need additional street lamps, (that run off solar energy) ideally from Eastern Florida State College to Wuesthoff Hospital, here in Melbourne. In the early morning and late evening in both getting on the bus and leaving the bus, it is difficult to navigate the sidewalks, as they are often dark, as the street lighting is inadequate.
- Adding continuous sidewalks from the front of Orange Manor Mobile Home Park, (located off Wickham, between Aurora and Eau Gallie Road), on the west side of Wickham Road (where Aldi and the tire store is located) would mean better access for the elderly (who reside in this 55 plus park). Presently, there is a lot of mud and dirt, mixed with sand, intermixed with off and on sidewalks. Navigating on bike results in broken eggs and sometimes falling down, as sand and mud are hard to walk and ride through. These sidewalks need to run continuous from Lake Washington to Wuesthoff Hospital-Melbourne. This is a hardship for both the businesses and the person trying to get to shopping and medical care, as it prevents access to these businesses for the disabled and elderly.

Page 2

Memo – from Kay Hildebrandt



To- 2017 Wickham road Operational Analysis-May 9, 2017

- Operating the bus route on Wickham in a direct up and back route, so a person without a car is able to go to and from any business along Wickham Road. Sometimes with the loop that is presently done for transporting along Wickham Road, a bus rider can become stranded at a business, as pick up is not available on the returning side of the road.
- Getting the walk signals in operation on the intersection of Murrell and Wickham. This is an extremely busy intersection, (where the Zoo is located) and not having the walk signals working for a number of months has meant loss of business across the street, as well as being unable to obtain food or drink from the closest business 7/11 on this intersection. Standing in the hot sun, for a number of months, waiting for bus 7, and not daring to risk my life crossing without walk signals at this intersection is a problem. Someone may not be as cautious as I am and get themselves killed trying to cross this intersection.

APPENDIX C – PVT MEETING #2 MATERIALS

PAT Meeting #2 – Future Alternatives Meeting Agenda



August 18, 2017

Viera Gov't Center, Atlantic Room, Building C, 3rd Floor

9:00 AM – 11:00 AM

Future Build Alternatives Discussion

1. Schedule Update
2. Issues/Opportunities Review
 - a. Ped mobility intersection improvements – Intersection Concepts
 - b. Transit stop enhancements – Preferred Alternative Concept Development
 - c. Ped/bike facility enhancements – Preferred Alternative Concept Development
 - d. Left-turn crash emphasis intersection – Intersection Concepts
 - e. Left-turn/angle crash emphasis area – Preferred Alternative Concept Development
 - f. Peak hour queueing – Intersection Concepts
 - g. Utilities and drainage facilities adjacent to roadway – Typical Section and Preferred Alternative Concept Development
3. Future No-Build Analysis
4. Future Build Alternatives
 - a. Short Term Improvements
 - b. Intersection Turn Lane Improvements
 - c. Northgate Plaza Access Alternatives
 - d. Venture Lane/Lansing Street Alternatives
 - e. Typical Section Alternatives
5. Measures of Effectiveness
 - a. MOE matrix for typical section alternatives
 - b. Benefit/cost matrix for intersections based on operational analysis results

6. Next Steps and Schedule

a. Major Task Items

- i. Continue preliminary concept work for typical sections and intersections
- ii. Begin drainage, utility, and ROW assessments for various typical section alternatives
- iii. Begin matrix evaluations for typical sections and intersections

2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

FUTURE CONDITIONS ALTERNATIVES REVIEW | AUGUST 18, 2017
PROJECT ADVISORY TEAM MEETING #2

 **KITTELSON**
& ASSOCIATES


INFRASTRUCTURE
ENGINEERS, INC.


SPACE COAST
TPO

AGENDA

- Schedule Update
- Issues/Opportunities Review
- Future No-Build Analysis
- Future Build Alternatives
- Measures of Effectiveness
- Next Steps and Schedule



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



ISSUES / OPPORTUNITIES REVIEW

MULTI-MODAL ISSUES AND OPPORTUNITIES

LEGEND






-  Pedestrian Mobility Emphasis Intersection
-  Transit Stop Enhancements
-  Pedestrian Facility Gaps
-  Bicycle Facility Enhancements

- **Pedestrian Mobility Emphasis Intersections**
Intersection Concepts
- **Transit Stop Enhancements**
Preferred Alternative Concept Development
- **Pedestrian Facility Gaps and Bicycle Facility Enhancements**
Preferred Alternative Concept Development

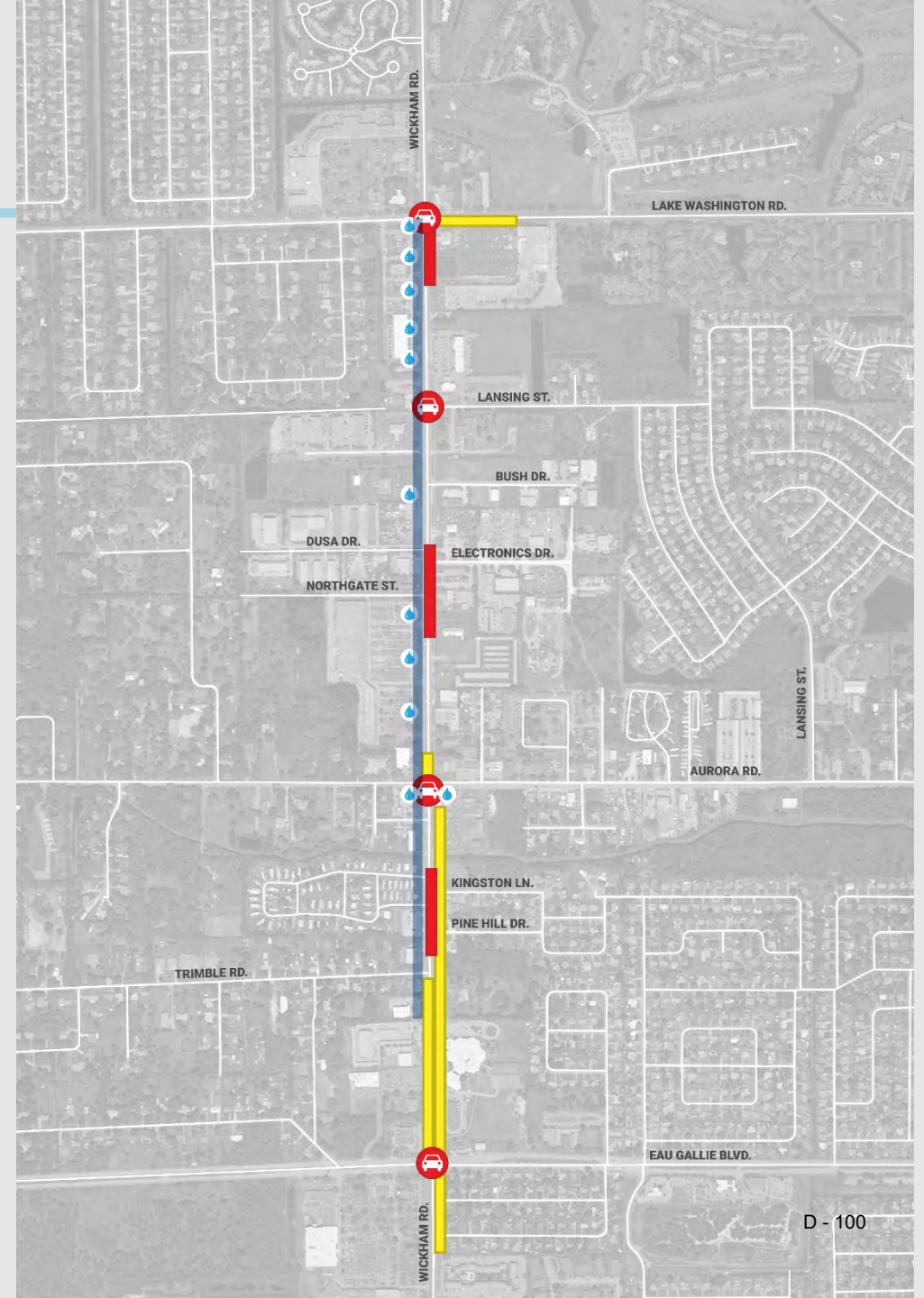


VEHICULAR, UTILITY, AND DRAINAGE ISSUES AND OPPORTUNITIES

LEGEND

-  Left-Turn Crash Emphasis Intersection
-  Left-Turn/Angle Crash Emphasis Area
-  Peak Hour Queuing
-  Utilities Adjacent to Roadway
-  Drainage Facilities Adjacent to Roadway

- **Left-Turn Crash Intersections**
Intersection Concepts
- **Left-Turn/Angle Crash Areas**
Preferred Alternative Concept Development
- **Peak Hour Queuing**
Intersection Concepts
- **Utilities and Drainage**
Typical Section and Preferred Alternative Concept Development





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



FUTURE NO-BUILD ANALYSIS

FUTURE NO-BUILD ANALYSIS

- Performed sensitivity analysis using growth rates of 0.5 to 2 percent
- Coordinated with SCTPO and Brevard County on results of sensitivity analysis
- Selected and applied 1% growth rate to forecast
segment and intersection volumes out to 2040

NO-BUILD HCM LOS EVALUATION RESULTS – 2040 AM PEAK HOUR

Segment	Free Flow Speed (MPH)	Average Travel Speed (MPH)	% of Free Flow Speed	LOS	Segment LOS Below LOS Standard?
Northbound Direction					
Eau Gallie Boulevard to Aurora Road	41.1	17.0	41%	D	No
Aurora Road to Northgate Plaza	40.6	17.8	44%	D	No
Northgate Plaza to Lake Washington Road	43.1	18.0	42%	D	No
Southbound Direction					
Lake Washington Road to Northgate Plaza	43.1	21.6	50%	C	No
Northgate Plaza to Aurora Road	41.5	9.1	22%	F*	Yes
Aurora Road to Eau Gallie Boulevard	40.7	17.7	43%	D	No

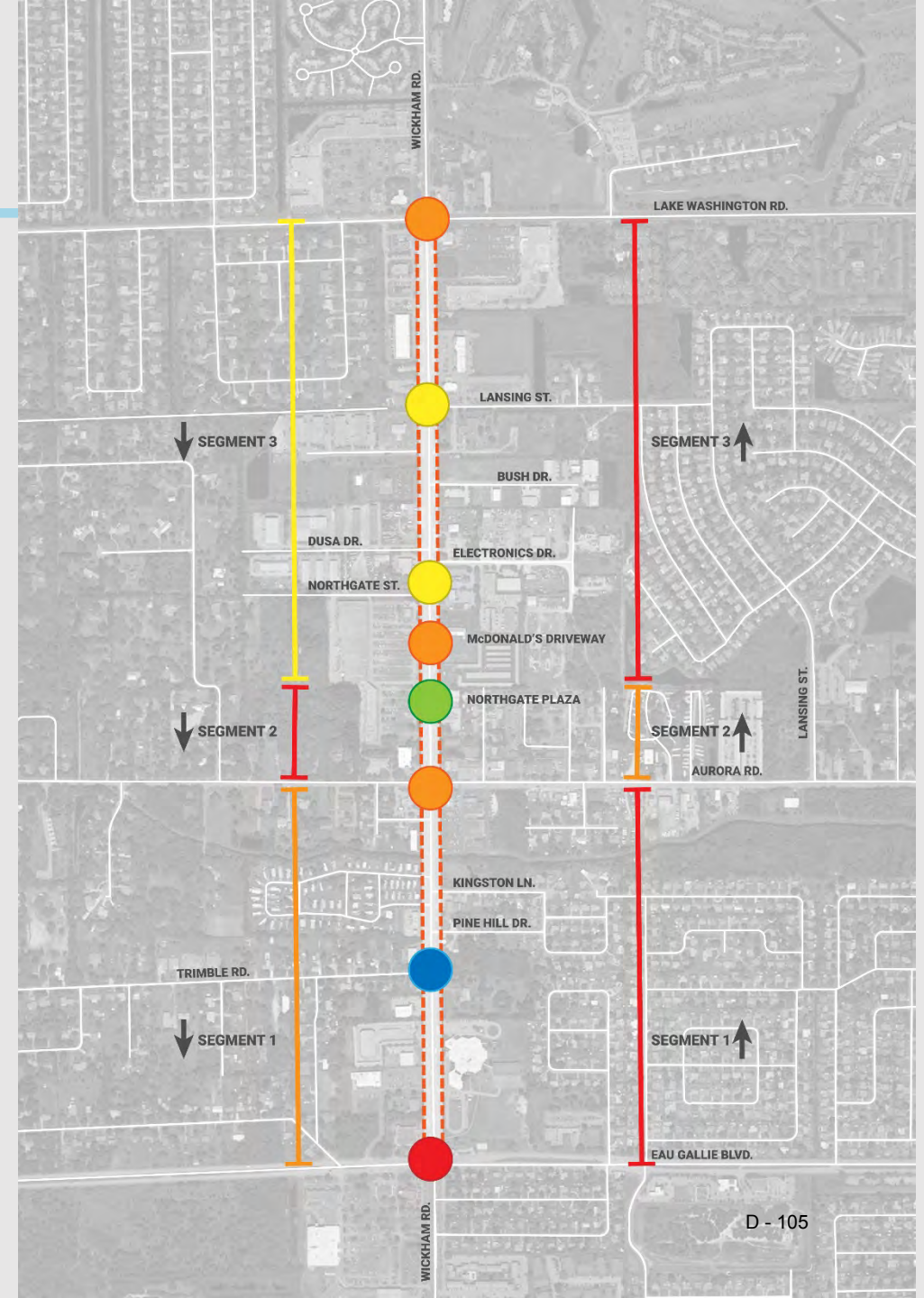
***Note:** Segment was below LOS standard under 2016 volumes

NO-BUILD HCM LOS EVALUATION RESULTS – 2040 PM PEAK HOUR

Segment	Free Flow Speed (MPH)	Average Travel Speed (MPH)	% of Free Flow Speed	LOS	Segment LOS Below LOS Standard?
Northbound Direction					
Eau Gallie Boulevard to Aurora Road	41.1	12.9	31%	F	Yes
Aurora Road to Northgate Plaza	40.6	15.9	39%	E	No
Northgate Plaza to Lake Washington Road	43.1	12.6	29%	F	Yes
Southbound Direction					
Lake Washington Road to Northgate Plaza	43.1	21.4	50%	D	No
Northgate Plaza to Aurora Road	41.5	9.7	23%	F*	Yes
Aurora Road to Eau Gallie Boulevard	40.7	15.1	37%	E	No

***Note:** Segment was below LOS standard under 2016 volumes

OPERATIONAL EVALUATION





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



FUTURE BUILD ALTERNATIVES

FUTURE BUILD ALTERNATIVES OVERVIEW

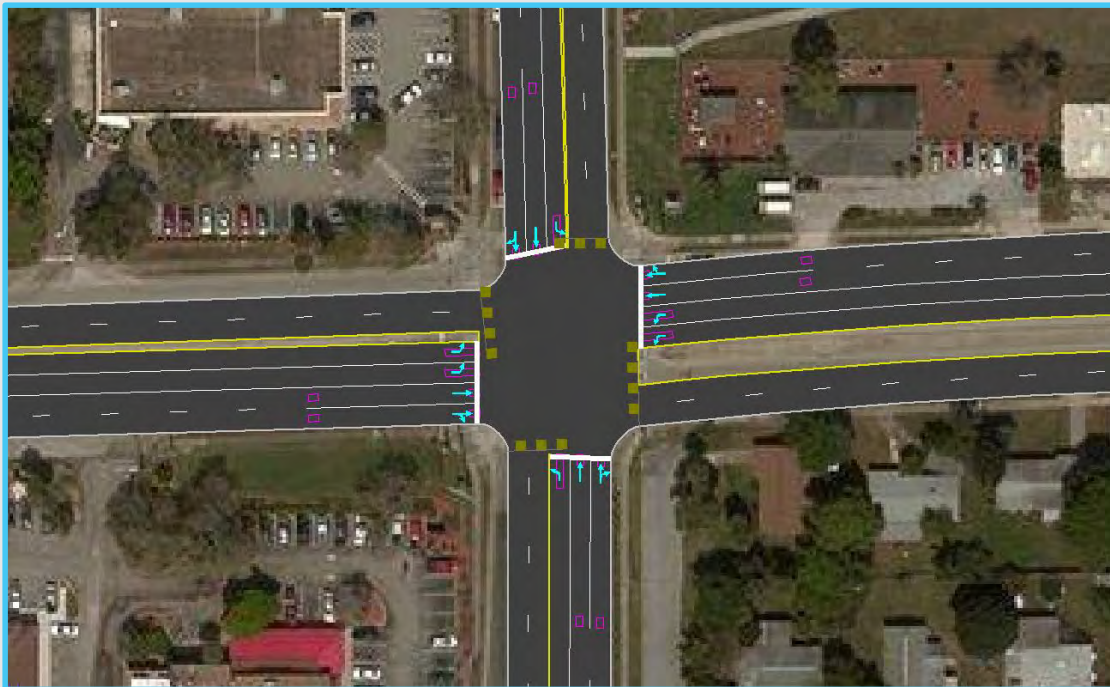
- Short Term Improvements
- Wickham Road Intersection Improvements
- Wickham Road Typical Section Alternatives

SHORT TERM IMPROVEMENTS

- Pedestrian facility improvements at intersections
- Maintenance/near-term safety suggestions from RSA report
- Adaptive signal control/ITS related improvements aimed at reducing peak hour and non-reoccurring congestion - ongoing Brevard County projects
- Incorporate spot medians/directional median openings at specific locations
- LED corridor lighting
- PEDSAFE

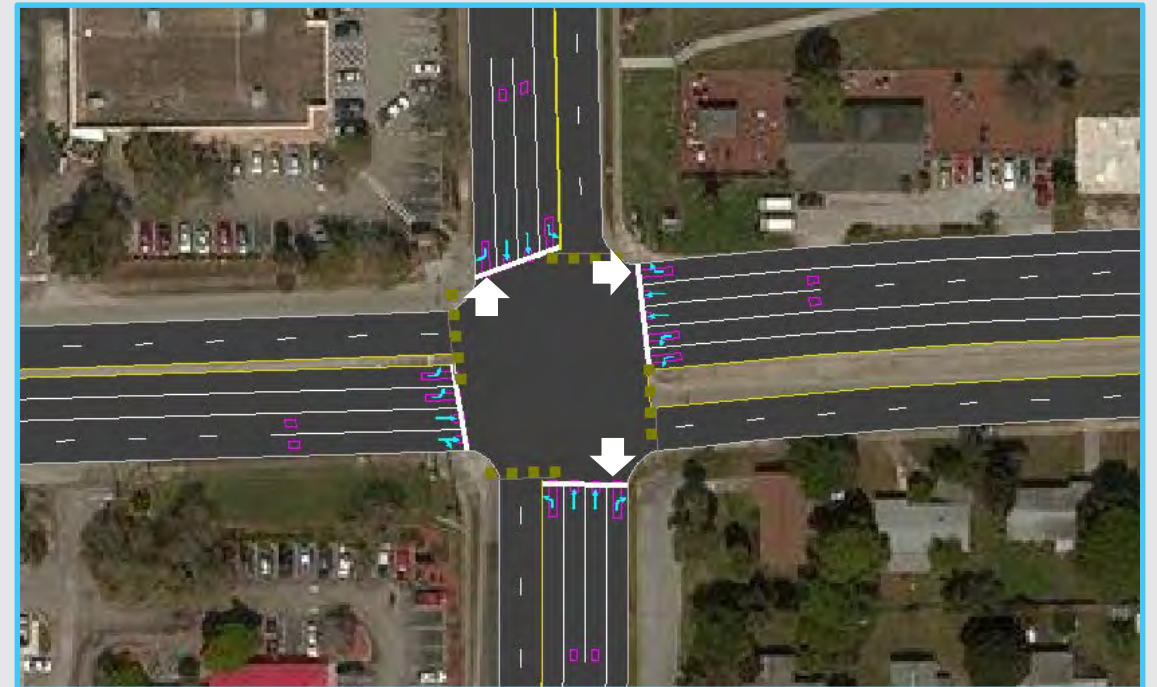
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS F in PM peak, 9 over-capacity movements



No-Build

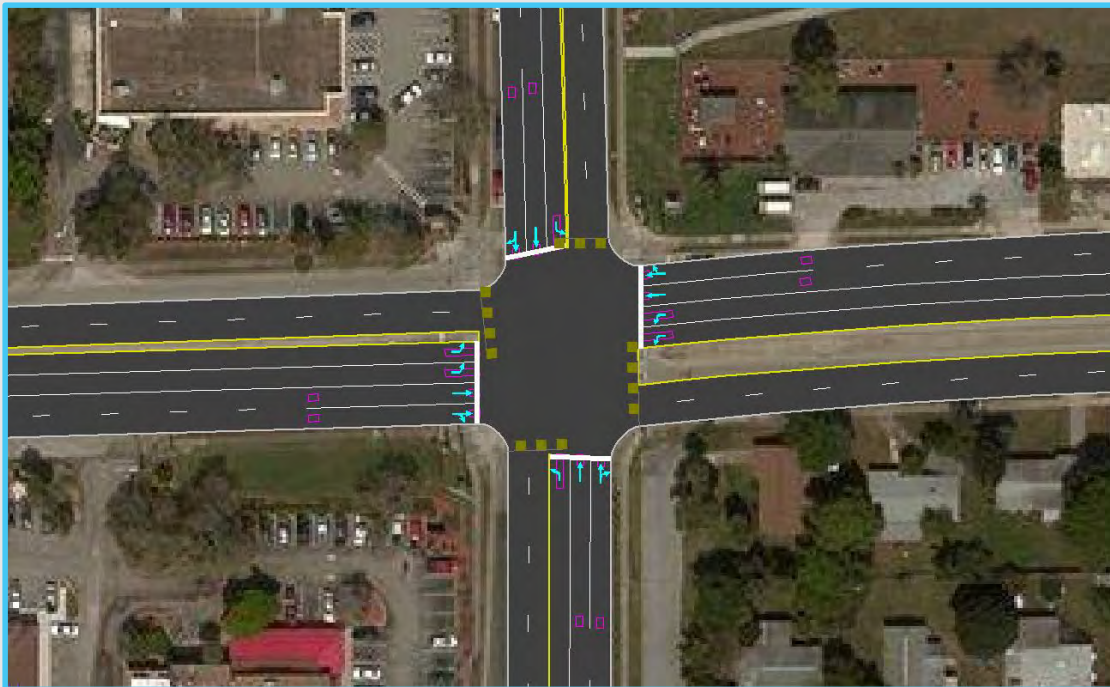
- **Future Build / NB, SB, and WB Right Turn Lanes**
LOS E in PM peak, 0 over-capacity movements



Build

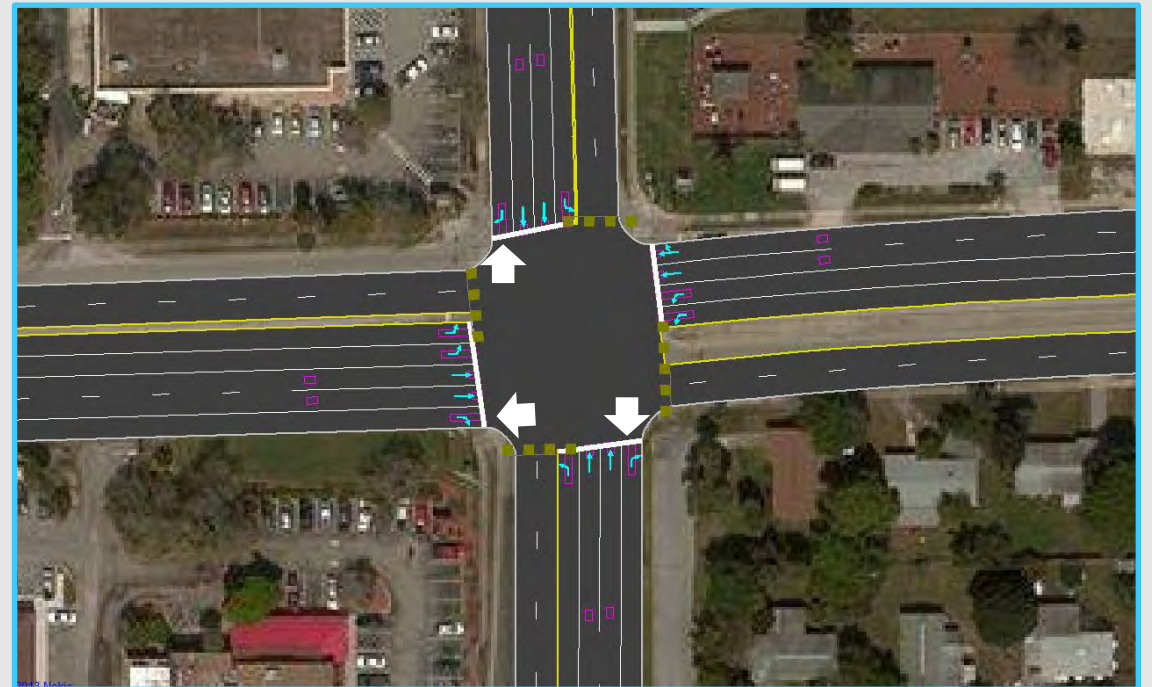
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS F in PM peak, 9 over-capacity movements



No-Build

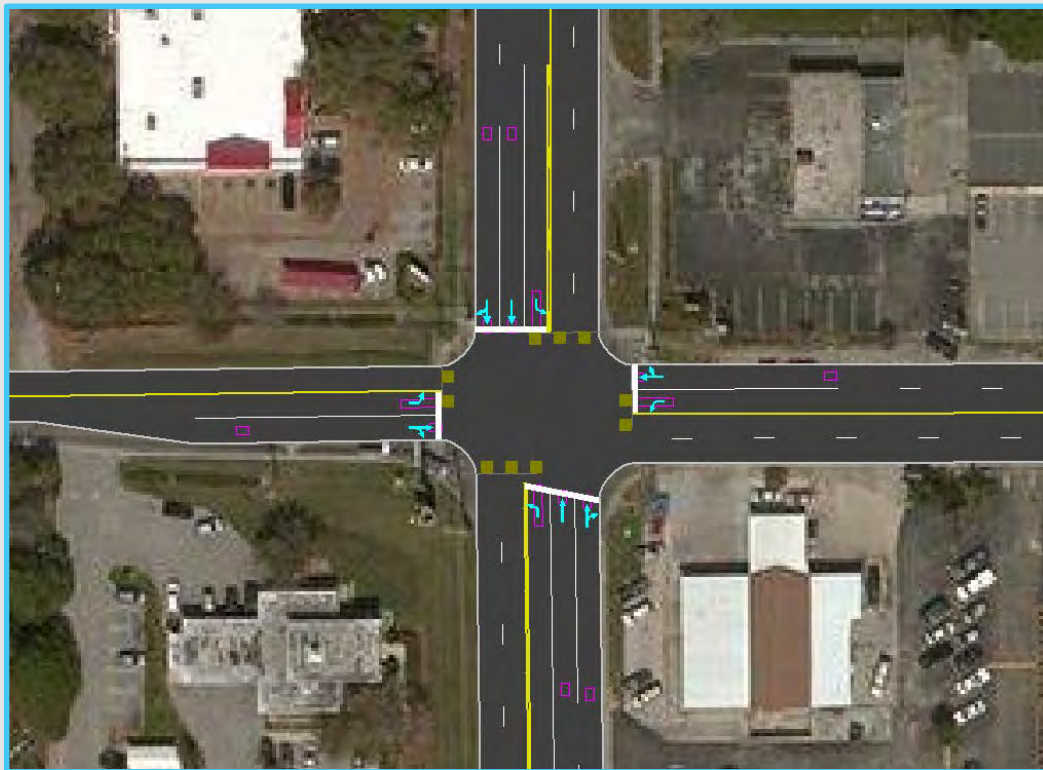
- **Future Build / NB, SB, and EB Right Turn Lanes**
LOS E in PM peak, 3 over-capacity movements



Build

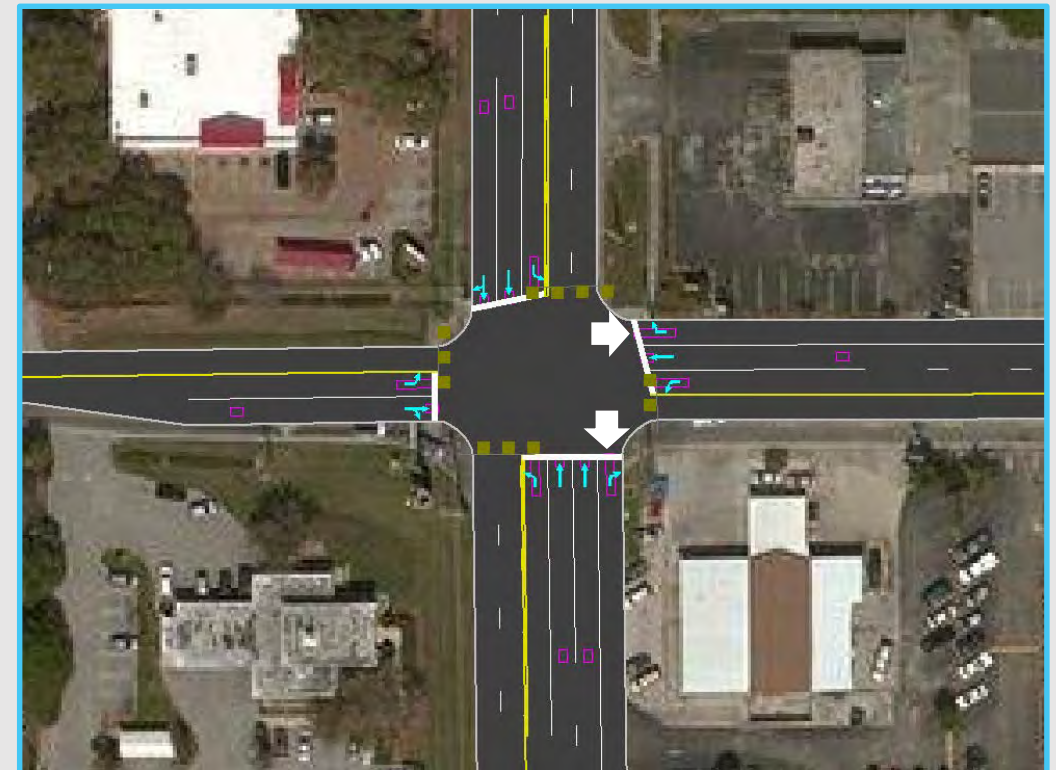
AURORA ROAD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS E in PM peak, 4 over-capacity movements



No-Build

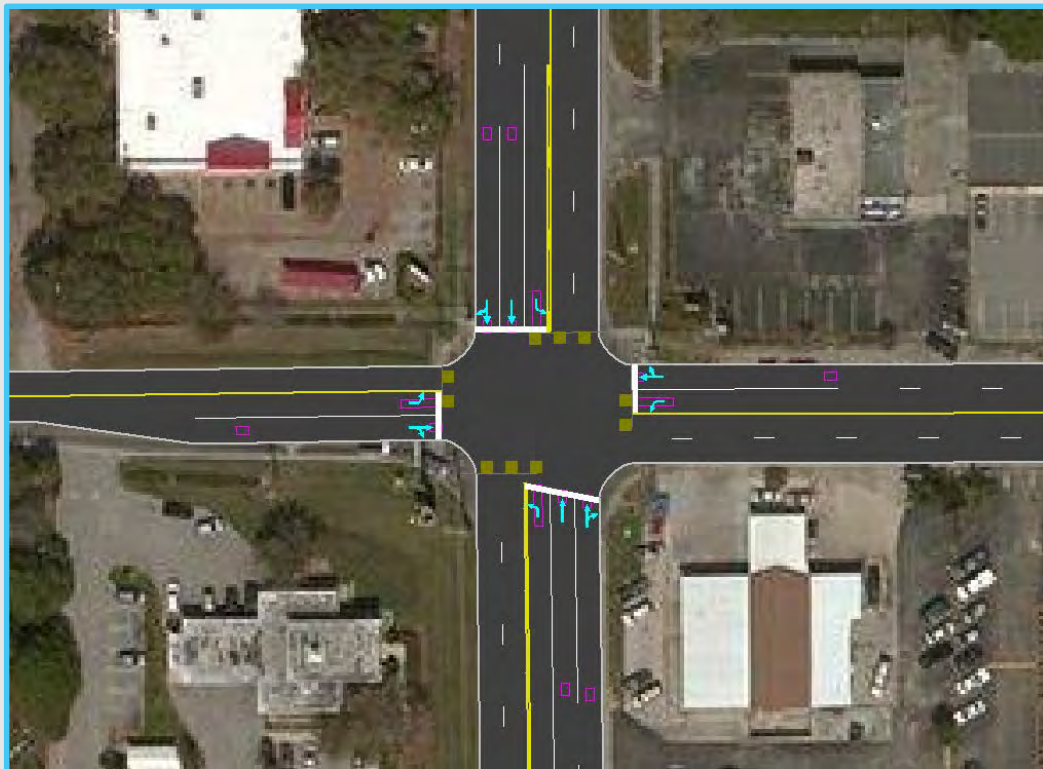
- **Future Build / NB and WB Right Turn Lanes**
LOS E in PM peak, 0 over-capacity movements



Build

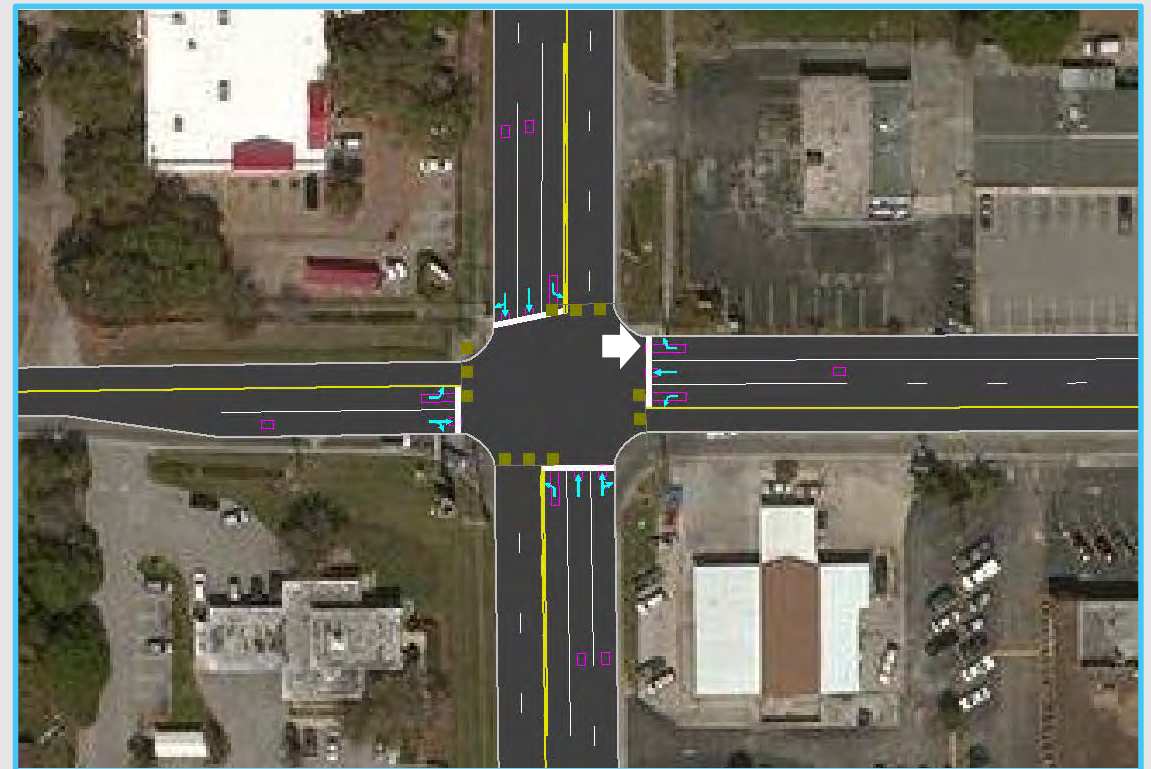
AURORA ROAD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS E in PM peak, 4 over-capacity movements



No-Build

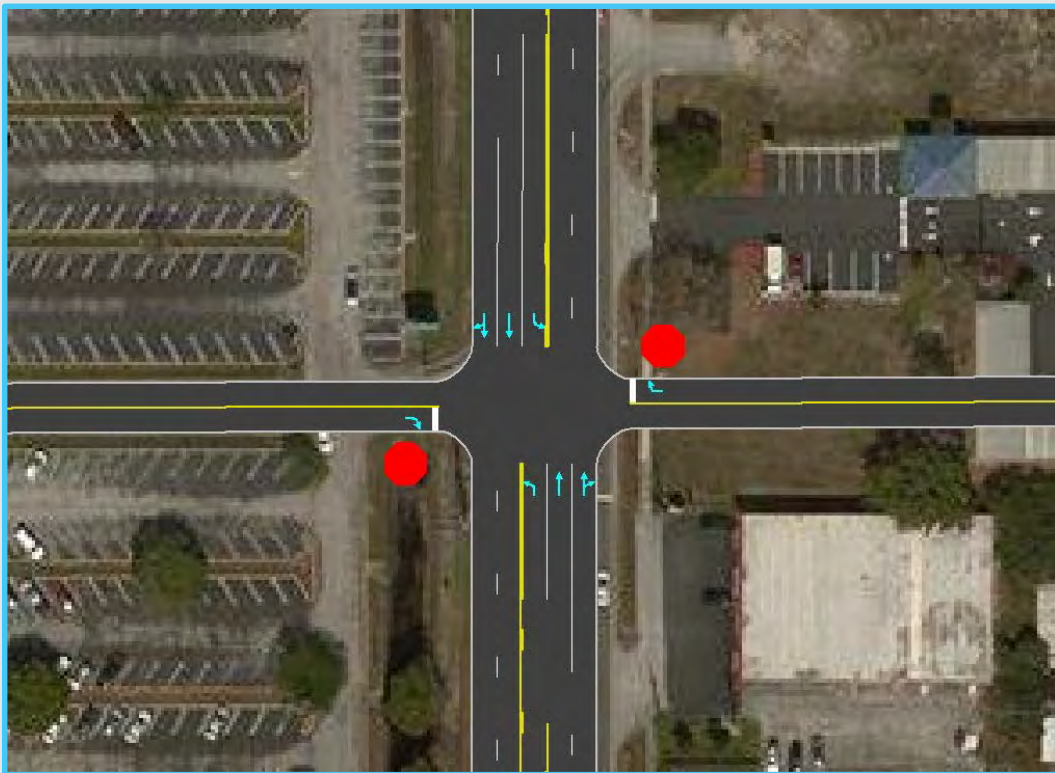
- **Future Build / WB Right Turn Lane Only**
LOS E in PM peak, 2 over-capacity movements



Build

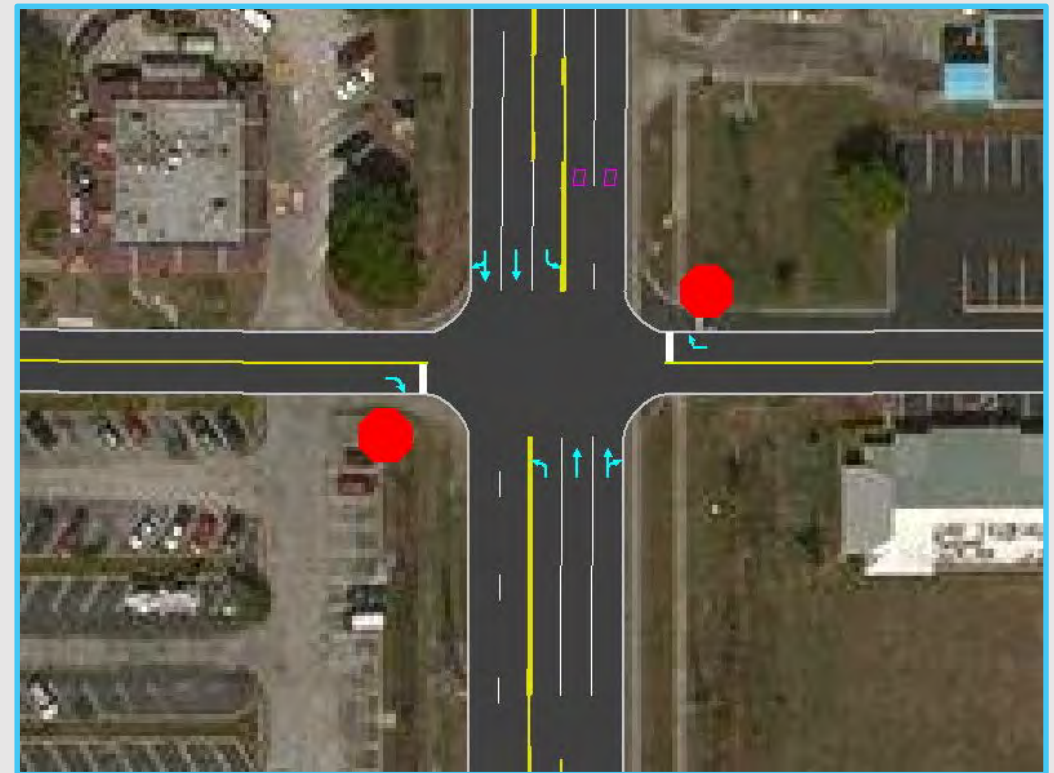
NORTHGATE PLAZA IMPROVEMENTS

- **Northgate Plaza / Directional Median Opening**
LOS C in PM Peak; 0 over-capacity movements



Build

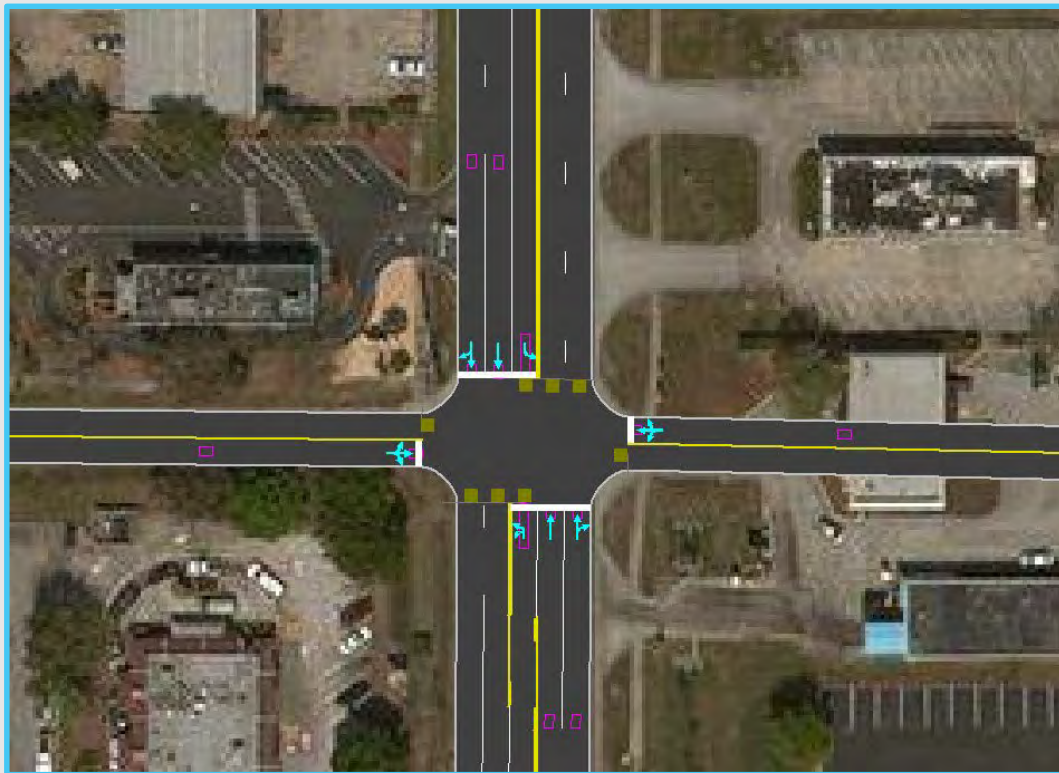
- **McDonald's Driveway / Directional Median Opening**
LOS C in PM Peak; 0 over-capacity movements



Build

NORTHGATE PLAZA IMPROVEMENTS

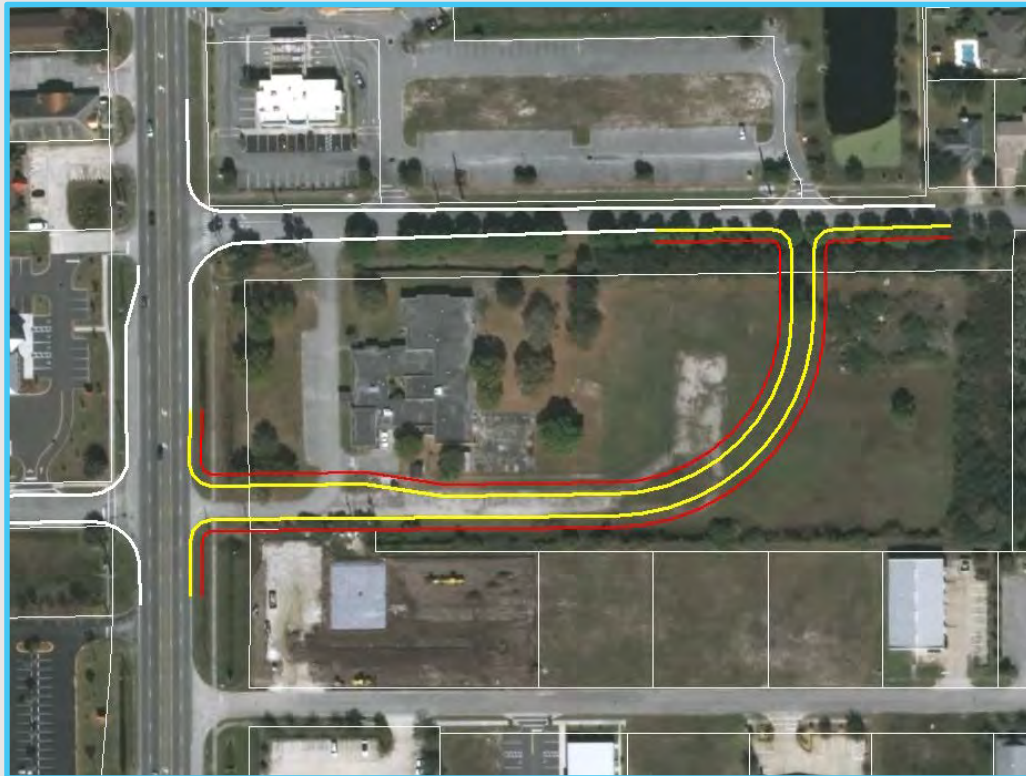
- **Northgate Street / New Signalized Intersection**
LOS A in PM Peak; 0 over-capacity movements



Build

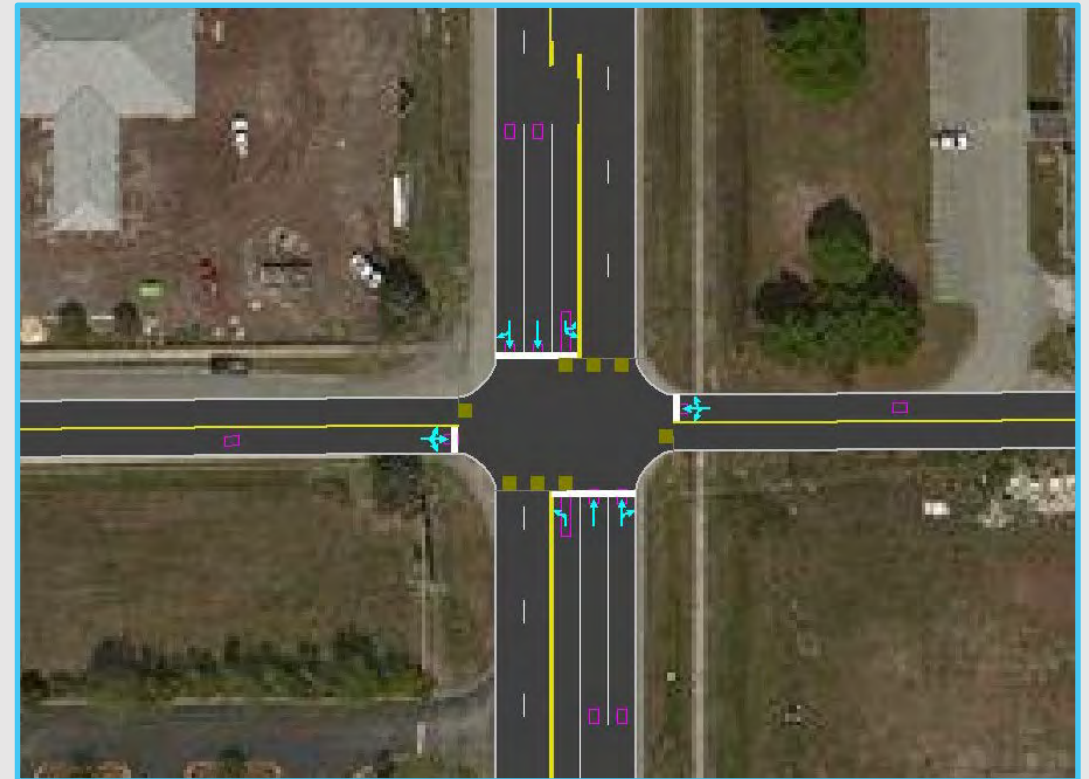
VENTURE LANE AND LANSING STREET IMPROVEMENTS

- **Lansing Street**
Re-Alignment



Build

- **Venture Lane / New Signalized Intersection**
LOS B in PM Peak; 0 over-capacity movements

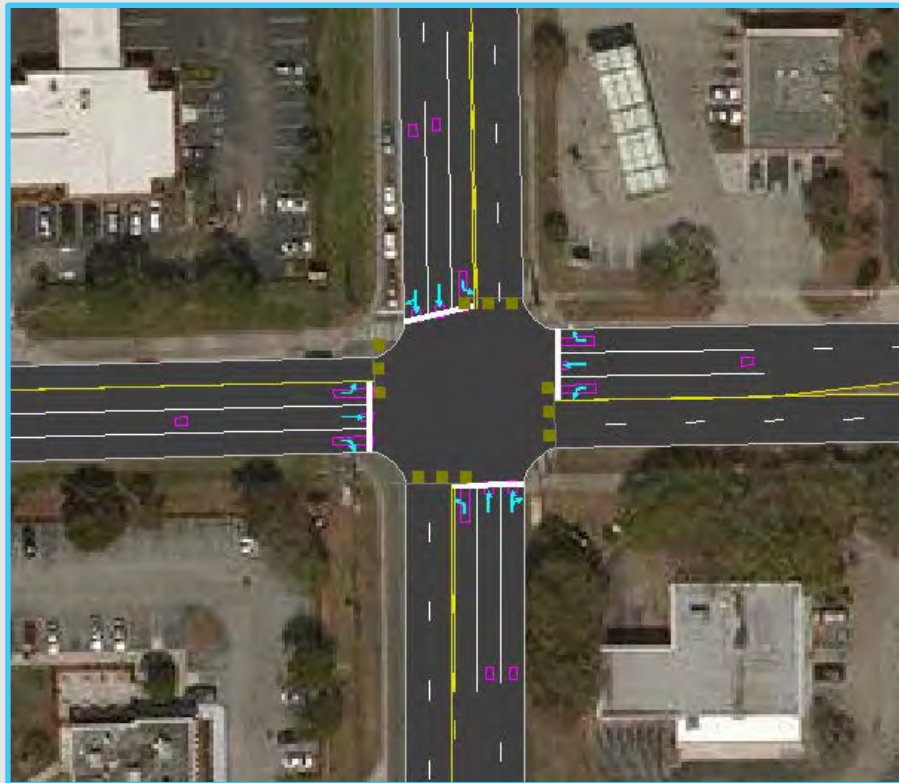


Build

LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

- **Future No-Build**

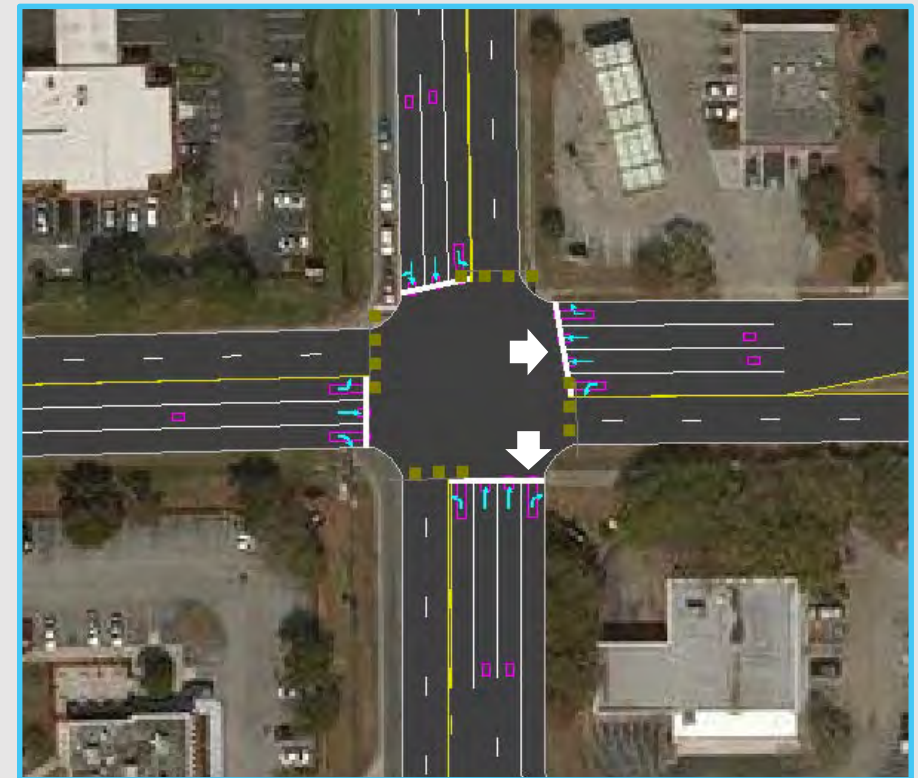
LOS E in PM peak, 5 over-capacity movements



No-Build

- **Future Build / NB Right Turn Lane and Second WB Through Lane**

LOS E in PM peak, 0 over-capacity movements



Build

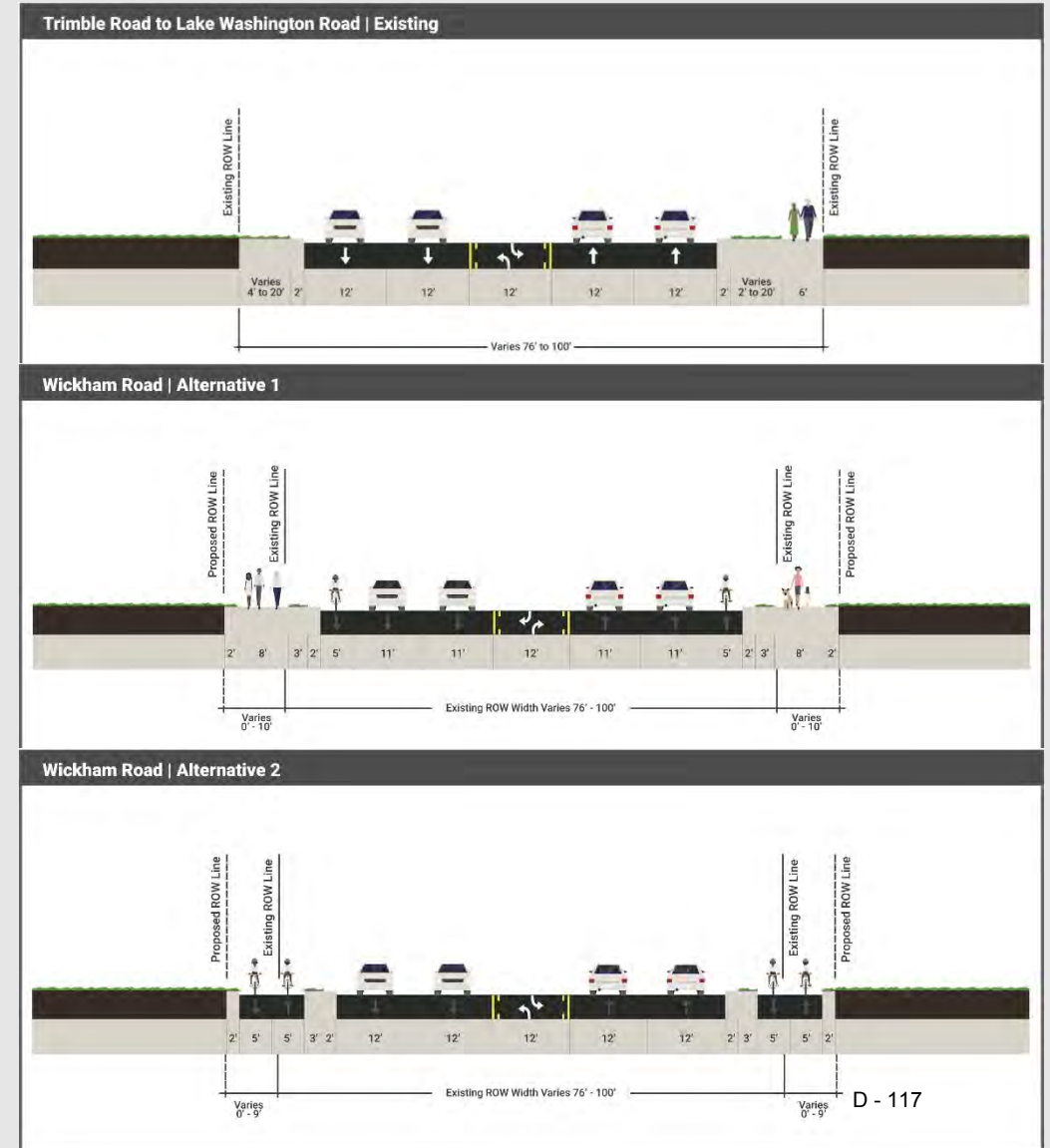
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 1

- Maintain existing two-way center left turn lane
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 2

- Maintain existing two-way center left turn lane
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side



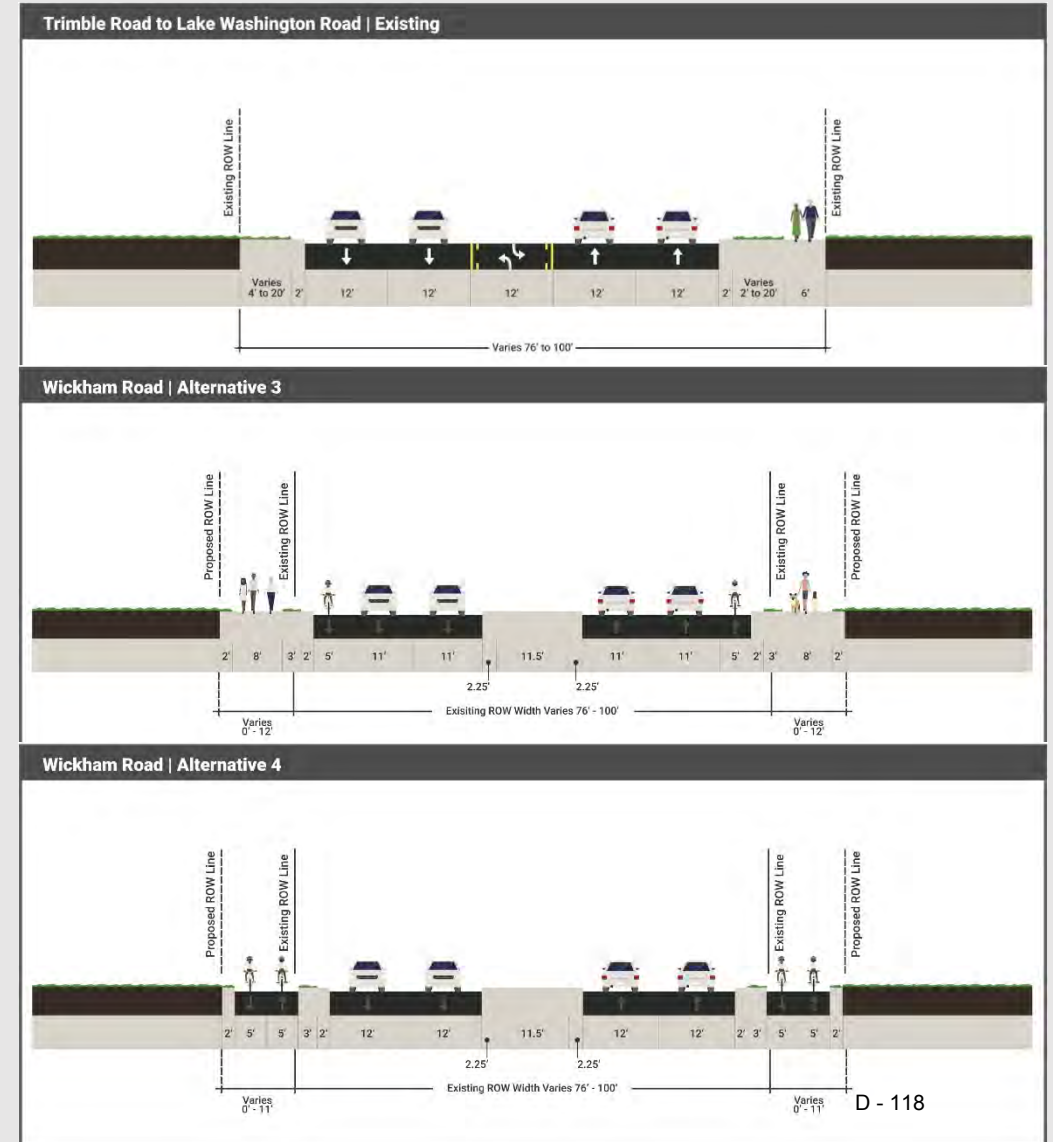
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 3

- Convert two-way center left turn lane to raised median
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 4

- Convert two-way center left turn lane to raised median
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



MEASURES OF EFFECTIVENESS

MEASURES OF EFFECTIVENESS

- Does the identified improvement incorporate elements to improve ped/bike mobility and safety?
- Does the identified improvement increase vehicular mobility?
- Does the identified improvement reduce vehicular and ped/bike crashes?
- What are the drainage, utility, and right-of-way impacts of the identified improvement?
- What is the cost of the identified improvement?



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



NEXT STEPS AND SCHEDULE

QUESTIONS / CONTACT INFORMATION

SCTPO Project Manager

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Melbourne, FL 32940

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Laura.carter@brevardfl.gov

Consultant Project Manager

Travis Hills, PE

225 East Robinson Street

Suite 450

Orlando, FL 32801

Phone: 407-540-0555

thills@kittelso.com





PAT Meeting #2

SUBJECT:	Wickham Road Operational Analysis - Future Alternatives Review
MEETING DATE:	August 18, 2017
MEETING TIME:	9:00 AM - 11:00 AM
VENUE:	Viera Governmental Center, Building C, Atlantic Room

Introduction and Attendees

A meeting was held with the Project Advisory Team (PAT) to discuss potential improvements and alternatives for the Wickham Road Operational Analysis. Below are the attendees of this meeting:

- Bob Kamm - SCTPO
- Laura Carter - SCTPO
- Steven Bostel - SCTPO
- Kim Smith - SCTPO
- Georganna Gillette - SCTPO
- Devin Swanson - Brevard County
- Rachel Gerena - Brevard County
- Jenni Lamb - City of Melbourne
- Todd Corwin - City of Melbourne
- Judy Pizzo - FDOT
- Travis Hills - KAI
- Daniel Torre - KAI
- David Bennett - Infrastructure Engineers

Wickham Road Operational Summary

Project Background and Overview

The following topics were reviewed during the meeting:

- Overall project schedule;
- Issues/opportunities identified from the existing conditions analysis;
- Results of the future no-build analysis;
- Future build improvements: turn lanes at signalized intersections and corridor-wide typical sections;
- Measures of effectiveness to evaluate alternatives; and

- Next steps and schedule moving forward.

The remainder of these notes summarizes the related comments and discussion from the group during the meeting.

Short Term Improvements

- There was discussion regarding the potential use of LED street lighting along the corridor. Further coordination with Brevard County will be needed to implement this improvement based on current standards.
- A traffic signal retiming study is currently in progress and should be completed by the end of 2017, however changes will not be implemented until early 2018.

Eau Gallie Boulevard Intersection Improvements

- The parcel on the northeast corner of Wickham Road and Eau Gallie Boulevard, owned by the Brevard County School Board, may potentially be purchased for re-development.
- There was discussion about the potential ROW impacts for the westbound and southbound right turn lanes. If the parcel on the northeast corner is re-developed, there could be an opportunity to include the ROW for a westbound right turn lane.
- Adding an eastbound right turn lane was discussed because there may be a need despite the relatively low volume in the existing condition. The low volume is possibly explained by drivers avoiding the intersection and traveling through the plaza in the southwest corner of the intersection.
- A comment was made stating that the deficiencies in the intersection should be in the northbound and southbound approaches, because the eastbound and westbound approaches have been improved over time.
- The Walgreens located at the intersection has been generating additional trips recently because of a closure to a nearby Walgreens and the subsequent redirection of customers to the Eau Gallie location.
- It was stated that acquiring ROW from the Aldi on Wickham Road could be difficult.
- For all intersection improvements, need to review the through movement queue vs the length of turn lanes to make sure the queue does not starve the turn lanes.

Aurora Road Intersection Improvements

- There was an emphasis made on the importance of pedestrian and crossing improvements. Since bus stops are located at the northwest and southeast corners of the intersection, there are attempts by pedestrians to cross Wickham Road where there are no facilities in order to make bus ride transfers. The suggestion that pedestrian improvements be made before traffic operations improvements, was stated.
- There was discussion regarding the issue of space on the westbound approach being illegally used by drivers as on-street parking. The recent addition of "No Parking" signs has led to a decrease in this issue. The suggestion was made of completely removing the pavement and replacing it with a sidewalk and buffer treatment.

- A comment was made stating that drainage for the intersection could be on private property instead of within public ROW.
- There is an existing sidewalk project on Aurora Road from west of Wickham Road to John Rodes Boulevard. This project was bid and awarded.

Northgate Plaza Improvements

- There are plans for a Twistee Treat to be built in Northgate Plaza.
- The residential development behind Northgate Plaza will have access to Wickham Road via Northgate Street.
- It was suggested that parking lot lanes in the northwest corner of the Northgate Plaza should be adjusted to allow for easier flow of traffic out of the McDonald's drive-thru. This would require coordination with the owner of Northgate Plaza.
- It was discussed that the owner of Northgate Plaza would need to be involved in the intersection alternative selection process, mainly to help determine where the traffic signal should be moved to, if it is moved at all.
- A comment was made stating that no dedicated southbound left turn lane at the existing traffic signal makes it difficult to access the storage area north of the intersection.
- There is the potential that traffic coming out of McDonald's onto Wickham Road will be backed up. This should be considered when deciding on a treatment option at the driveway. A dedicated southbound right turn lane into the McDonald's may be a potential option.

Venture Lane/Lansing Street Improvements

- The PAT was agreeable to the proposed realignment of Lansing Street to Venture Lane, and new traffic signal.
- A comment was made that the business park at Venture Lane has a lot of employees and there is a vacant parcel with the potential for future development.
- Instead of having a directional median at Lansing Street that allows for southbound left turns, it was suggested that the median be closed to only allow for westbound right turns out of Lansing Street. The southbound left movements would be re-directed to the proposed Venture Lane/Lansing Street signal.
- There is an active permit for development the parcel next to Wells Fargo north of Lansing Street, but there were no plans as of this meeting.
- The new traffic signal at Venture Lane would have to be coordinated with the corridor because of the close proximity to the proposed Northgate Street traffic signal relocation.
- There was discussion on how to accommodate access to the KinderCare across the street from Lansing Street:
 - KinderCare has access to the Launch Federal Credit Union parking lot, which has access to Venture Lane and the new traffic signal.

- Consider having a directional median opening on Wickham Road to allow for northbound left turns into KinderCare.

Lake Washington Road Intersection Improvements

- The placement of a directional median south of Lake Washington Road at the southern driveway for the LA Fitness allowing for southbound left turns, but prohibiting westbound left turns out of the driveway, was discussed.
- There are plans for developing the retention pond in the plaza southeast of the intersection (LA Fitness) into a bank, which would affect the volume entering the plaza.
- There was concern expressed over adding a westbound lane west of Wickham Road and dropping it at the driveway entering the Publix plaza. A review of standards on lane drop distance to confirm the concept, was suggested.
- The southbound bus stop in front of the Boston Market should be moved north of Lake Washington Road.
- Review the northbound and southbound left turn volumes to see if dual turn lanes could be considered. This may negate the need for the two westbound through lanes.

Typical Section Alternatives

- There was a suggestion to use 11' travel lanes in Alternative 4 and to possibly add landscaping to the typical sections.
- A question was asked on whether the proposed shared use path will be asphalt or concrete. While no decision has been made at this time, there was an expressed preference towards using concrete due to the lower maintenance costs.
- It was suggested that the dimensions for potential ROW impacts be moved to the top of the typical sections and be labeled to better differentiate from facility dimensions.
- **KAI was tasked with updating the typical sections based on the above discussion. These typical sections will be presented to the public alongside an alternatives matrix.**

Next Steps

- **Major Task Items**
 - Revise Future Alternatives to reflect comments and suggestions.
 - Contact Susan Hann from the Brevard County School Board to discuss the ROW for the proposed Lansing Street realignment and other potential impacts.
 - Coordinate alternatives review meeting with the PAT.

These meeting minutes are Travis Hills' interpretation of the comments, requests, and discussion during the meeting. Questions, additions, and/or clarifications should be directed to him at 407-373-1125 or thills@kittelson.com.

APPENDIX D – PVT MEETING #3 MATERIALS

PAT Meeting #3 – Future Alternatives Review Meeting Agenda



October 5, 2017

Viera Gov't Center, Atlantic Room, Building C, 3rd Floor

9:00 AM – 10:00 AM

Future Build Alternatives Discussion

1. Schedule Update
2. Future Build Alternatives
 - a. Short Term Improvements
 - b. Intersection Turn Lane Improvements
 - i. Intersection concept reviews
 - ii. Benefit/cost analysis based on operational analysis results and costs
 - c. Typical Section Alternatives
 - i. Revisions to sections based on PAT Meeting #2
 - ii. Measures of Effectiveness matrix review
3. Next Steps
 - a. Public Meeting scheduled for October 25th
 - b. Preferred Alternative Selection Meeting scheduled for October 26th
 - c. Presentation to TAC/CAC 12/11 and TPO Board 12/14

2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

FUTURE CONDITIONS ALTERNATIVES REVIEW | OCTOBER 5, 2017
PROJECT ADVISORY TEAM MEETING #3

 **KITTELSON**
& ASSOCIATES


INFRASTRUCTURE
ENGINEERS, INC.


SPACE COAST
TPO

AGENDA

- Schedule Update
- Short-Term Improvements
- Intersection Improvements
- Typical Section Alternatives
- Next Steps and Schedule



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



FUTURE BUILD ALTERNATIVES

FUTURE BUILD ALTERNATIVES OVERVIEW

- Short Term Improvements
- Wickham Road Intersection Improvements
- Wickham Road Typical Section Alternatives

SHORT TERM IMPROVEMENTS

- Pedestrian facility improvements at intersections
- Maintenance/near-term safety suggestions from RSA report
- Adaptive signal control/ITS related improvements aimed at reducing peak hour and non-reoccurring congestion - ongoing Brevard County projects
- Incorporate spot medians/directional median openings at specific locations
- LED corridor lighting
- PEDSAFE



2017

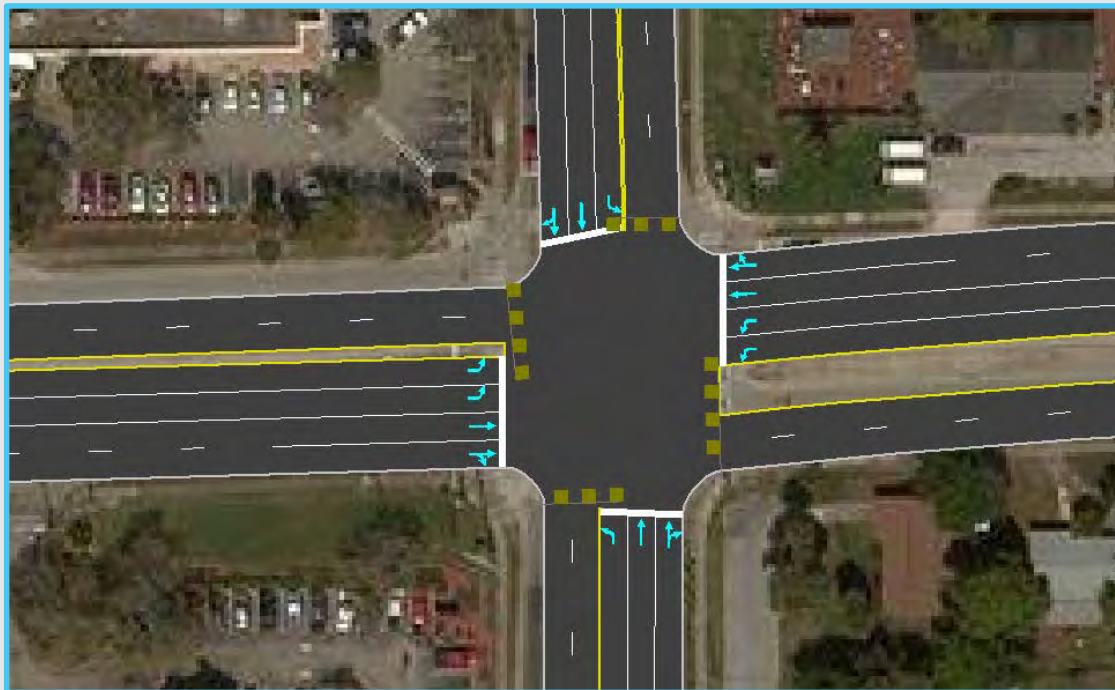
WICKHAM ROAD

OPERATIONAL ANALYSIS

INTERSECTION IMPROVEMENTS

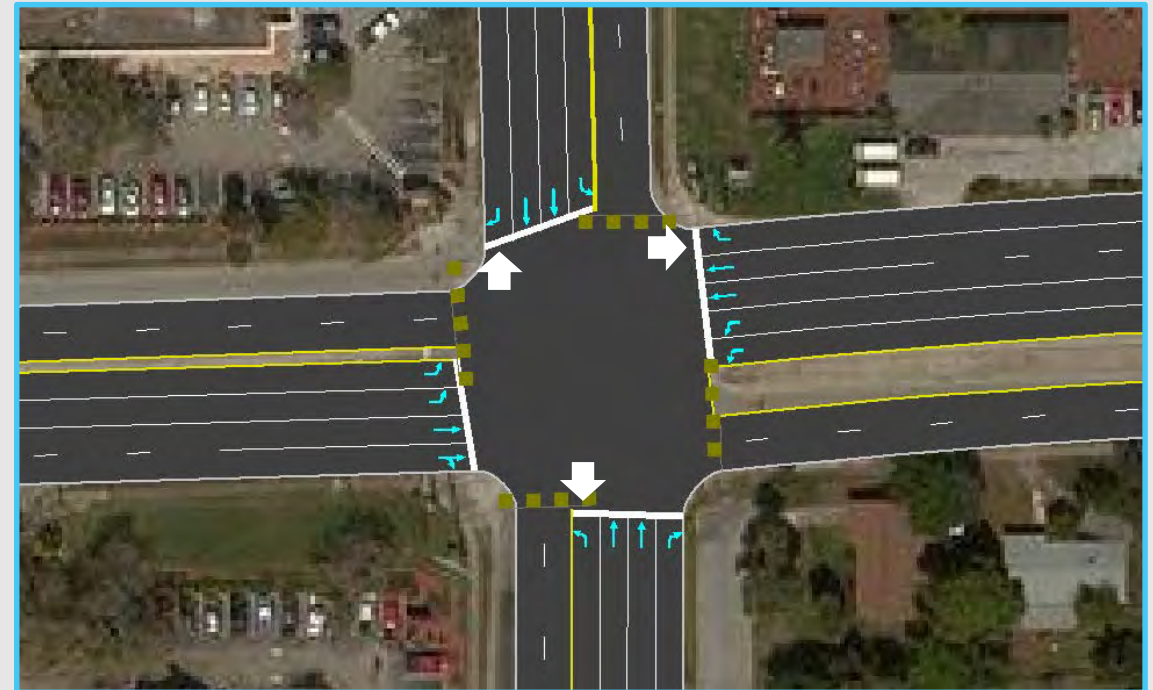
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS F in PM peak, 9 over-capacity movements



No-Build

- **Future Build / NB, SB, and WB Right Turn Lanes**
LOS E in PM peak, 0 over-capacity movements



Build Option A

EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

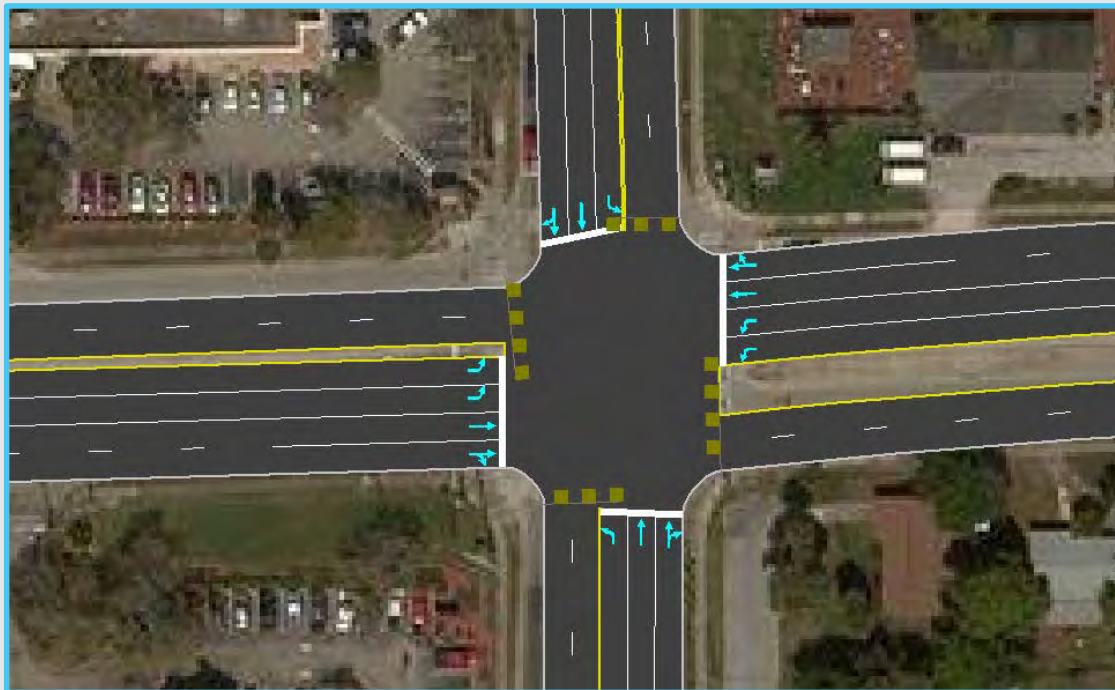
Future Build Option A / NB, SB, and WB Right Turn Lanes

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / WB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$800,000
Engineering/CEI	\$840,000
Roadway ROW	\$437,000
Total	\$4,077,000
Annualized User Benefit	\$2,122,576
Annualized Construction Cost	\$299,993
Benefit/Cost	7.08



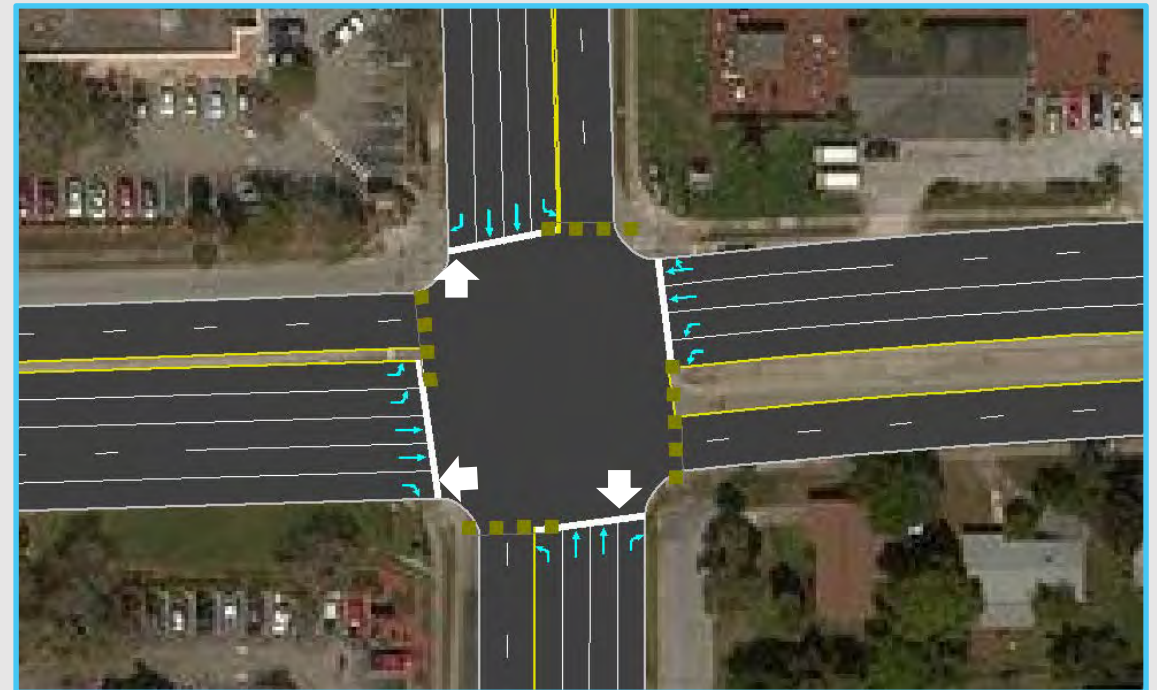
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS F in PM peak, 9 over-capacity movements



No-Build

- **Future Build / NB, SB, and EB Right Turn Lanes**
LOS E in PM peak, 3 over-capacity movements



Build Option B

EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

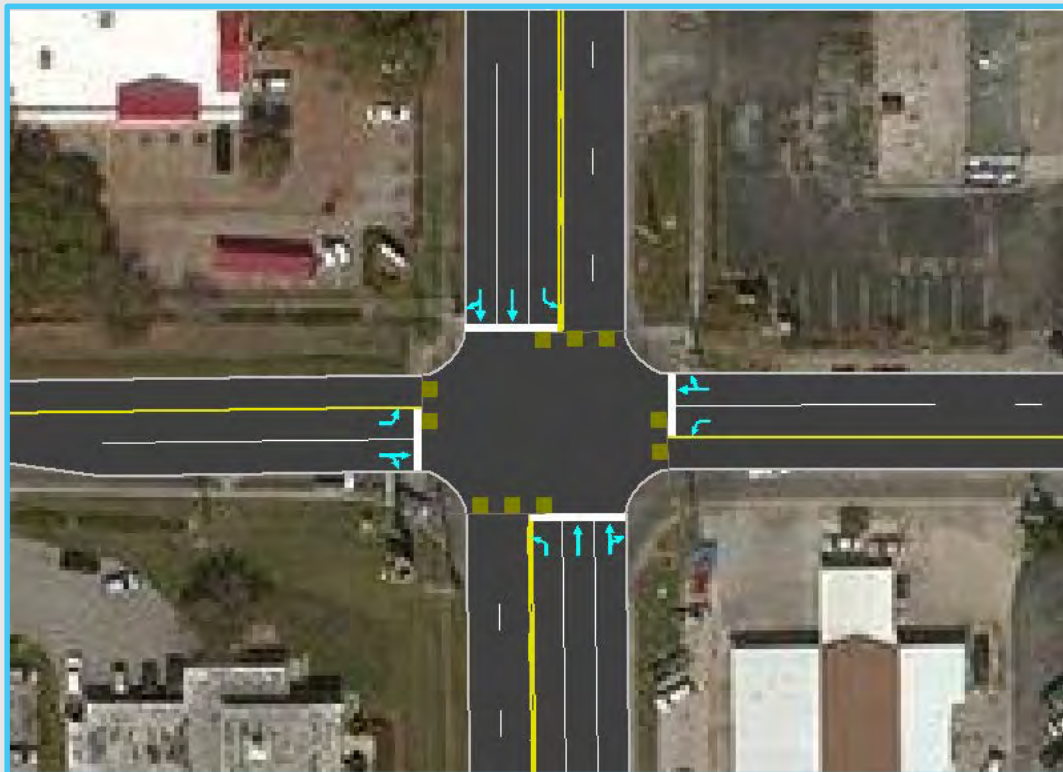
Future Build Option B / NB, SB, and EB Right Turn Lanes

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / EB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$900,000
Engineering/CEI	\$870,000
Roadway ROW	\$329,000
Total	\$4,099,000
Annualized User Benefit	\$2,077,080
Annualized Construction Cost	\$301,612
Benefit/Cost	6.89



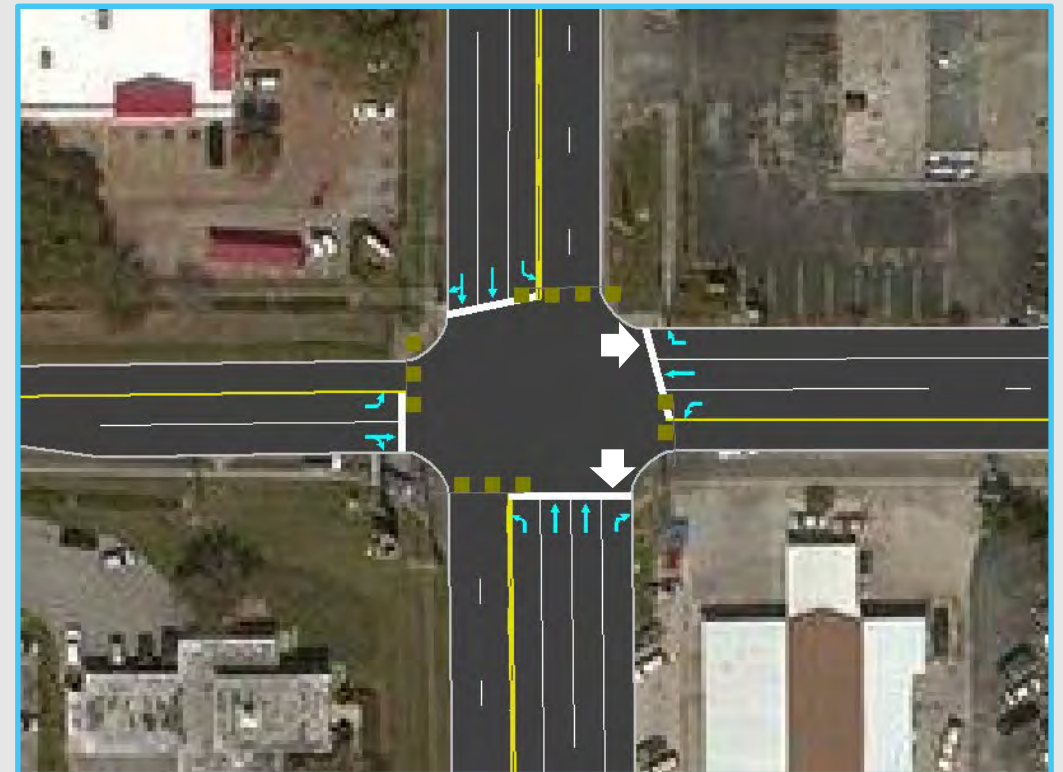
AURORA ROAD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS E in PM peak, 4 over-capacity movements



No-Build

- **Future Build / NB and WB Right Turn Lanes**
LOS E in PM peak, 0 over-capacity movements

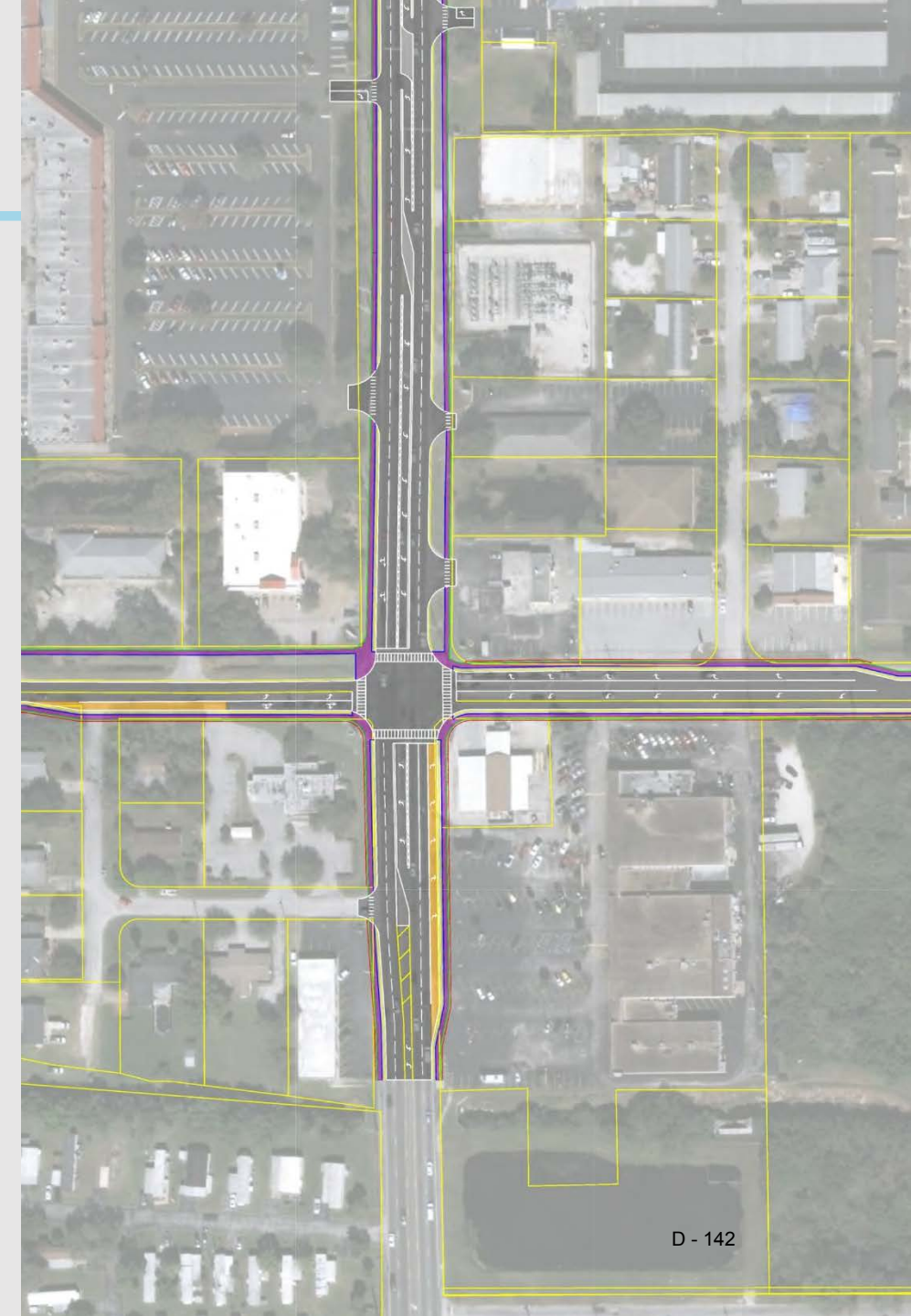


Build Option A

AURORA ROAD INTERSECTION IMPROVEMENTS

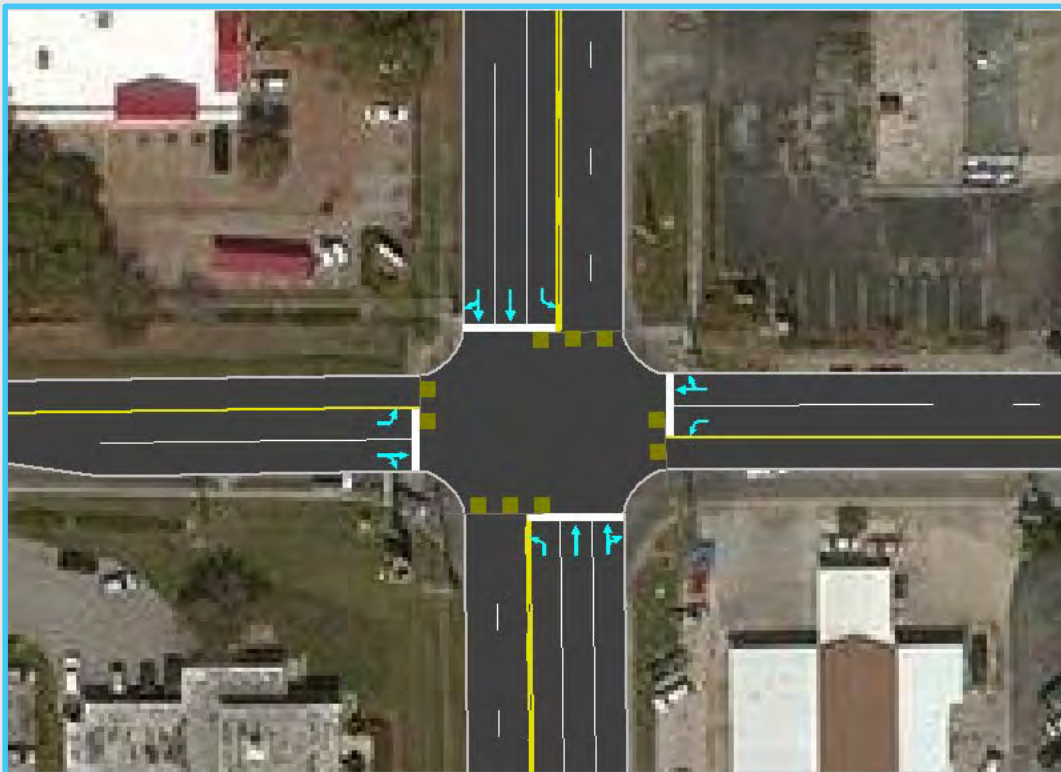
Future Build Option A / NB and WB Right Turn Lanes

Wickham Road at Aurora Road	
Alternative	NB/WB Right Turns
Construction	\$1,500,000
Utility Relocations	\$250,000
Engineering/CEI	\$530,000
Roadway ROW	\$1,184,000
Total	\$3,464,000
Annualized User Benefit	\$778,020
Annualized Construction Cost	\$254,887
Benefit/Cost	3.05



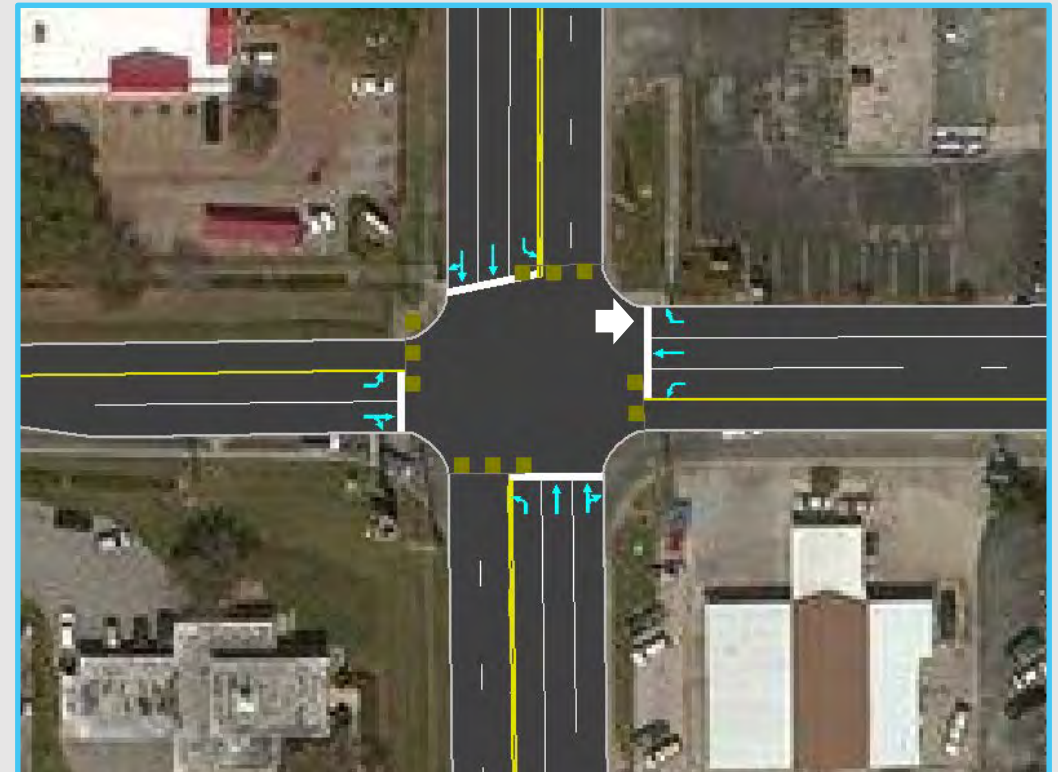
AURORA ROAD INTERSECTION IMPROVEMENTS

- **Future No-Build**
LOS E in PM peak, 4 over-capacity movements



No-Build

- **Future Build / WB Right Turn Lane Only**
LOS E in PM peak, 2 over-capacity movements

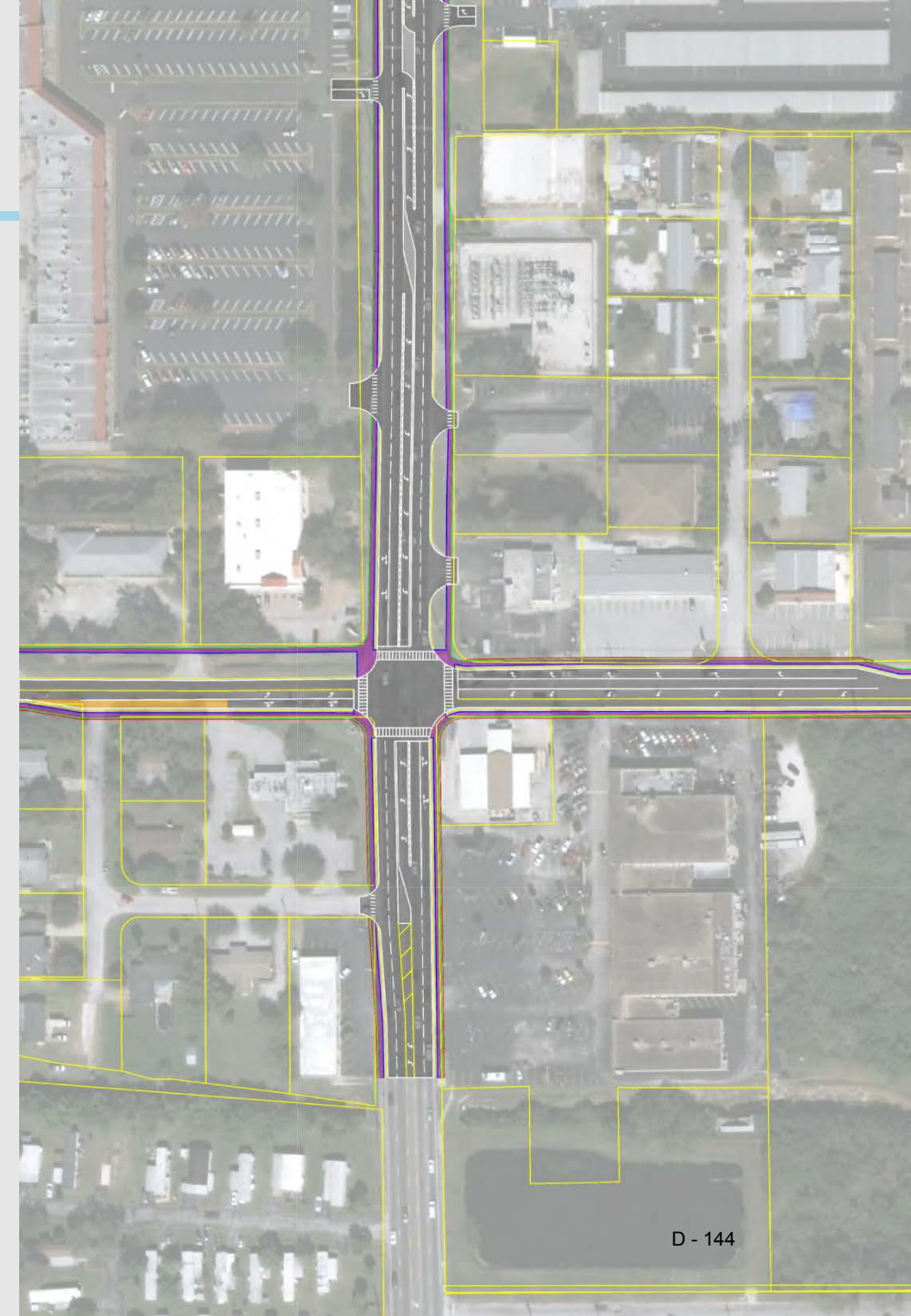


Build Option B

AURORA ROAD INTERSECTION IMPROVEMENTS

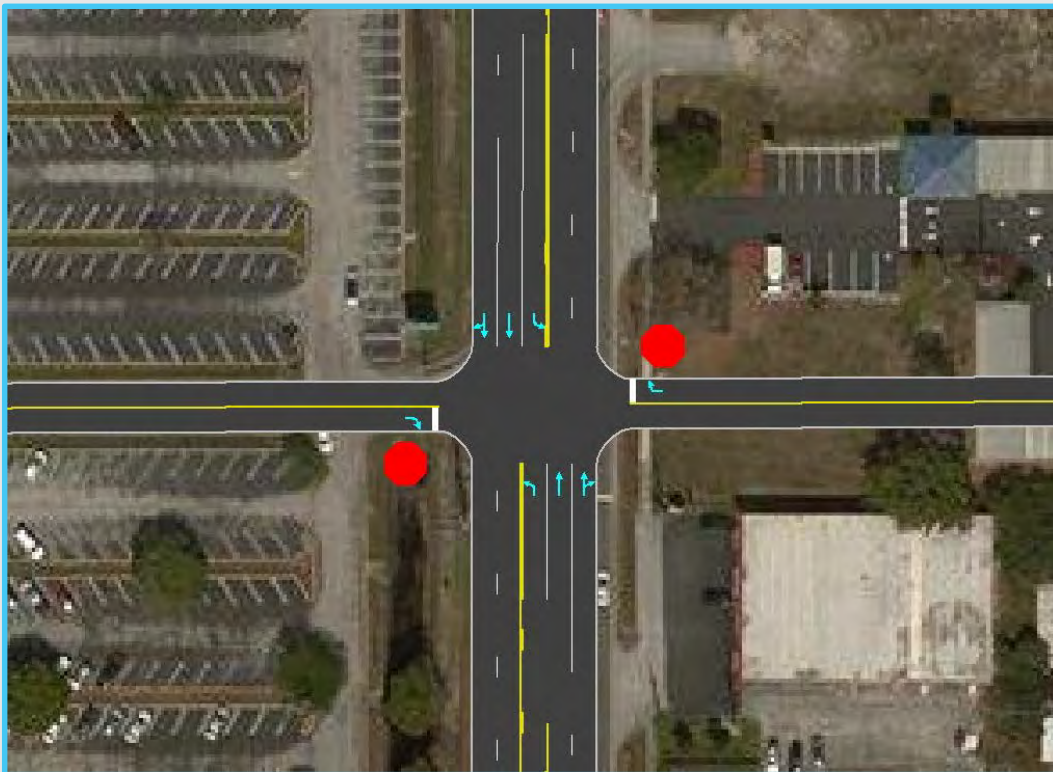
Future Build Option B / WB Right Turn Lane Only

Wickham Road at Aurora Road	
Alternative	WB Right Turn Lane Only
Construction	\$450,000
Utility Relocations	\$200,000
Engineering/CEI	\$450,000
Roadway ROW	\$634,000
Total	\$2,584,000
Annualized User Benefit	\$432,950
Annualized Construction Cost	\$190,135
Benefit/Cost	2.28



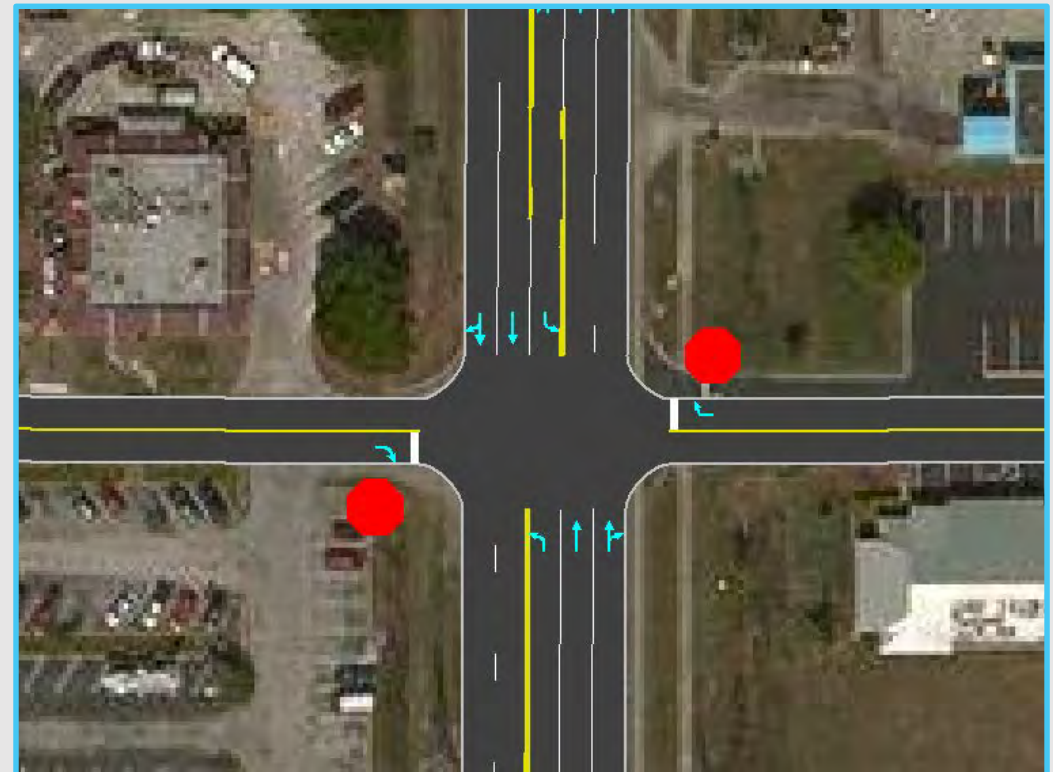
NORTHGATE PLAZA IMPROVEMENTS

- **Northgate Plaza / Convert to Directional Median Opening**
LOS C in PM Peak; 0 over-capacity movements



Build

- **McDonald's Driveway / Create Directional Median Opening**
LOS C in PM Peak; 0 over-capacity movements



Build

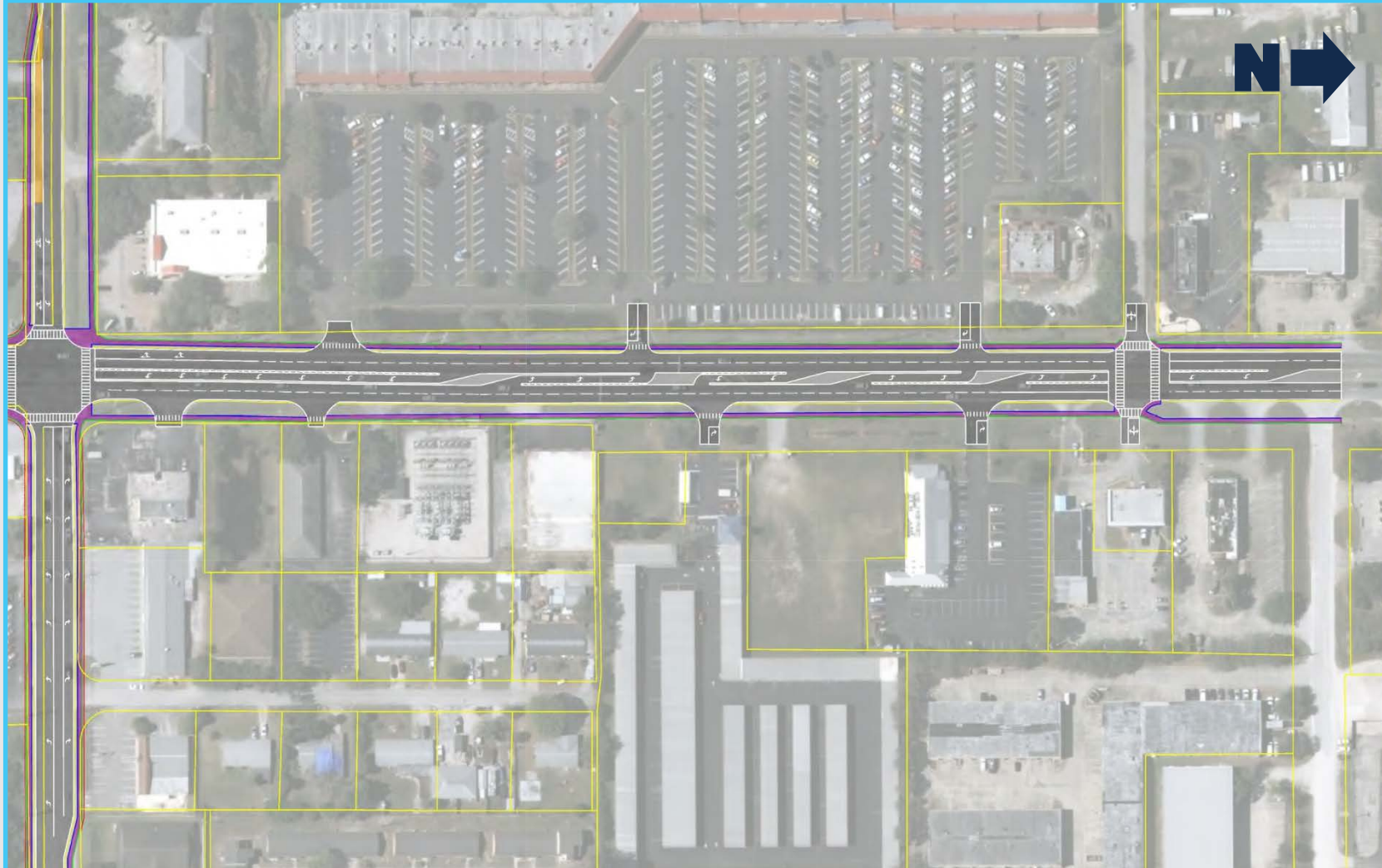
NORTHGATE PLAZA IMPROVEMENTS

- **Northgate Street / New Signalized Intersection**
LOS A in PM Peak; 0 over-capacity movements



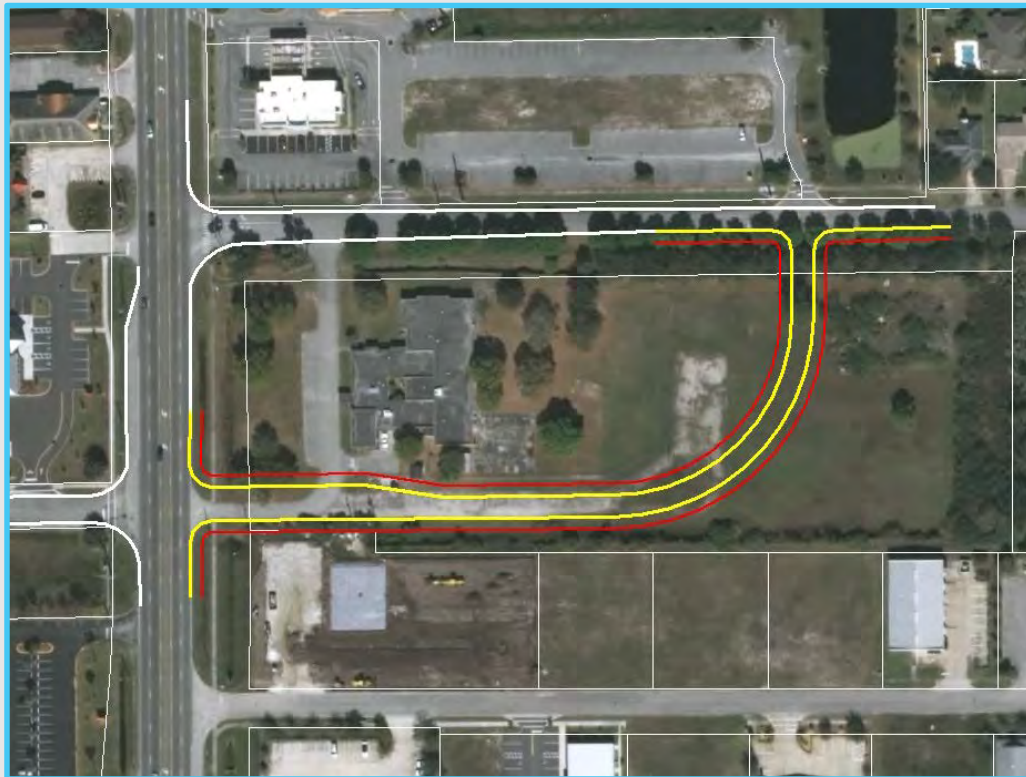
Build

NORTHGATE PLAZA IMPROVEMENTS



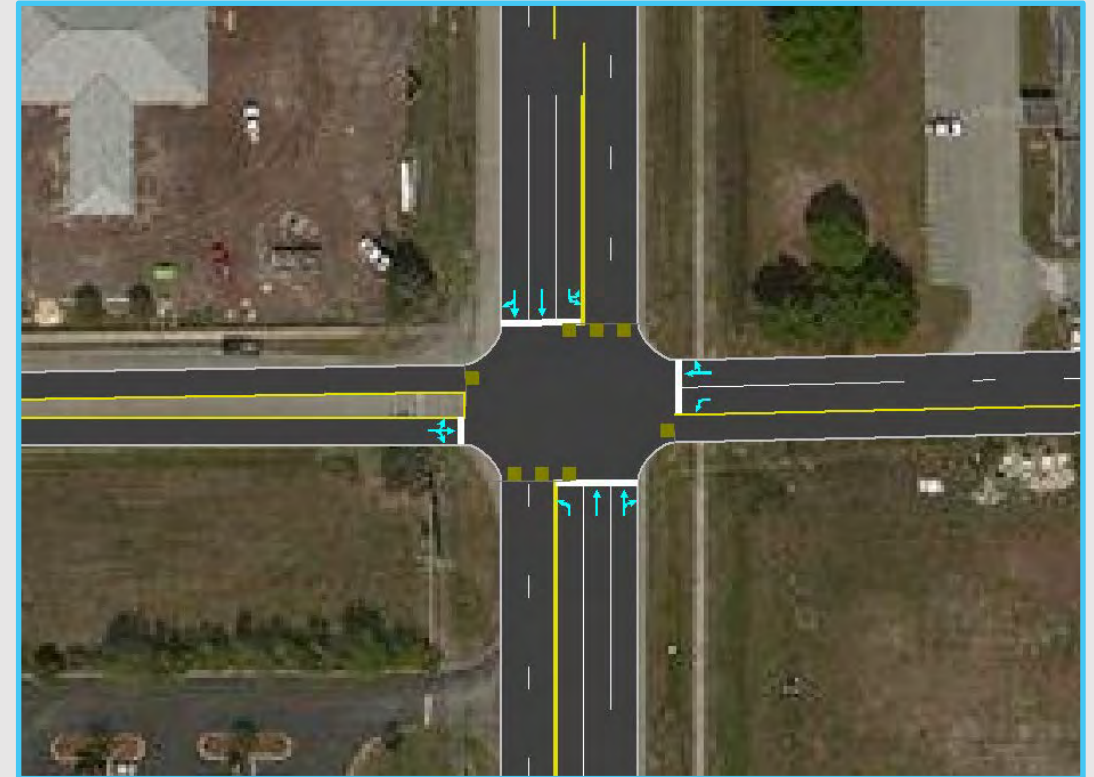
VENTURE LANE AND LANSING STREET IMPROVEMENTS

- **Lansing Street**
Re-Alignment



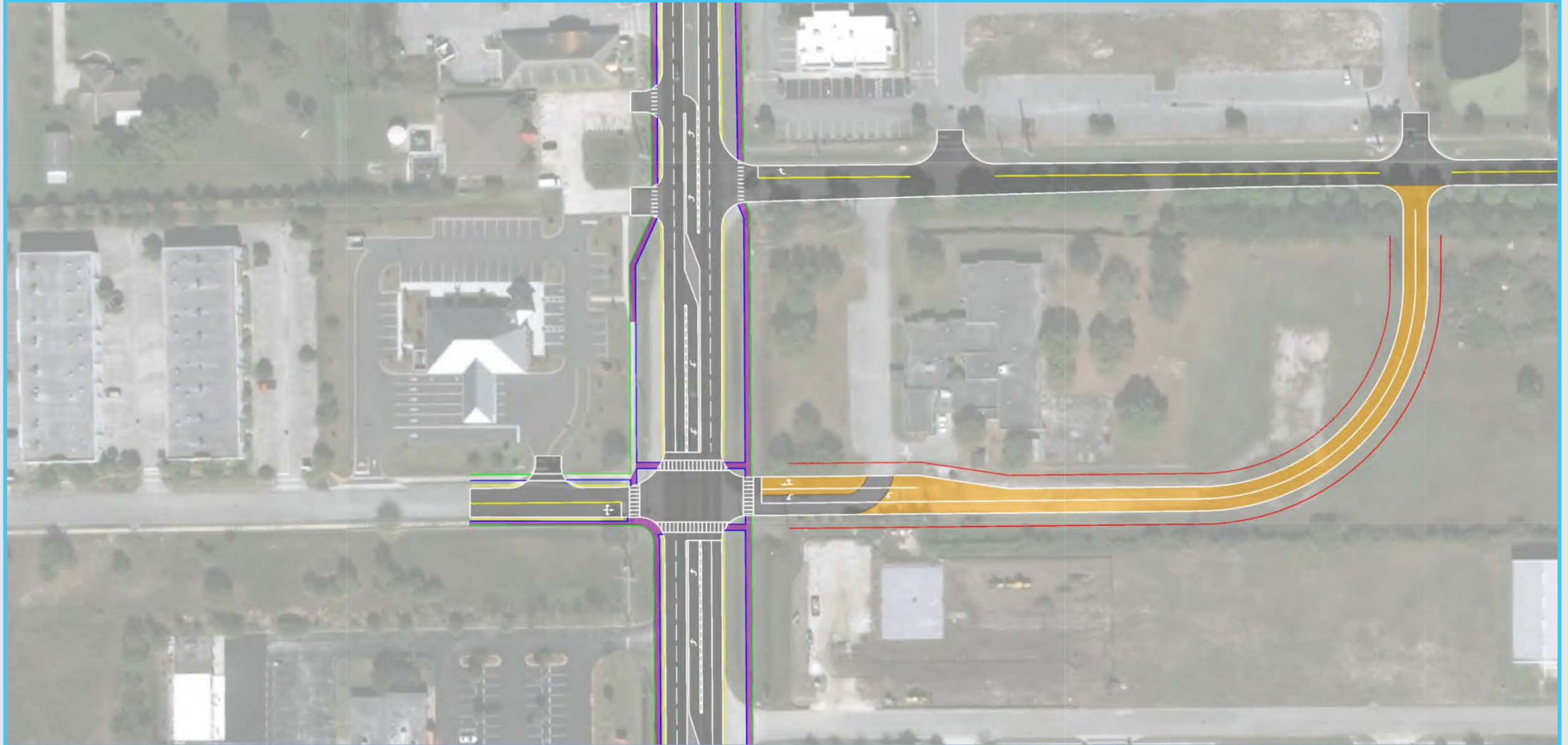
Build

- **Venture Lane / New Signalized Intersection**
LOS B in PM Peak; 0 over-capacity movements



Build

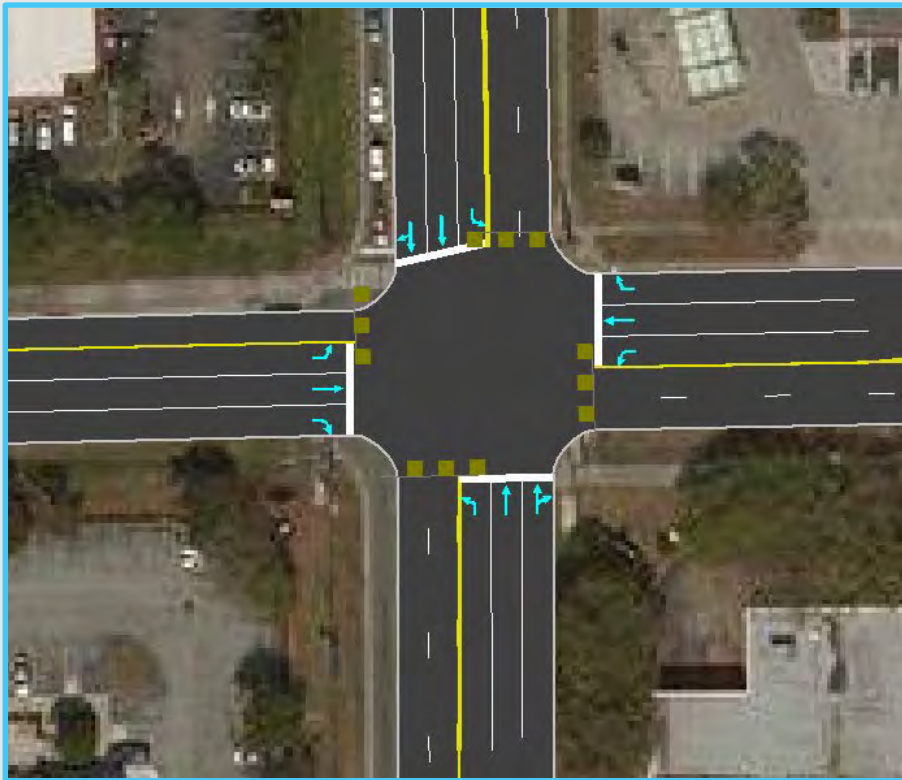
VENTURE LANE AND LANSING STREET IMPROVEMENTS



LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

- **Future No-Build**

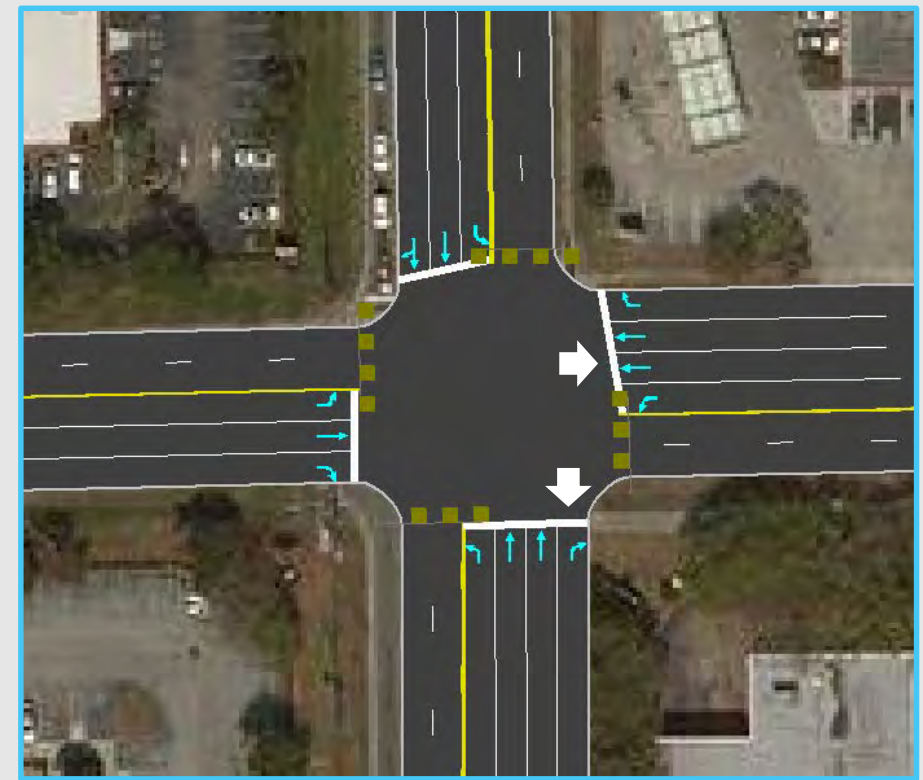
LOS E in PM peak, 5 over-capacity movements



No-Build

- **Future Build / NB Right Turn Lane and Second WB Through Lane**

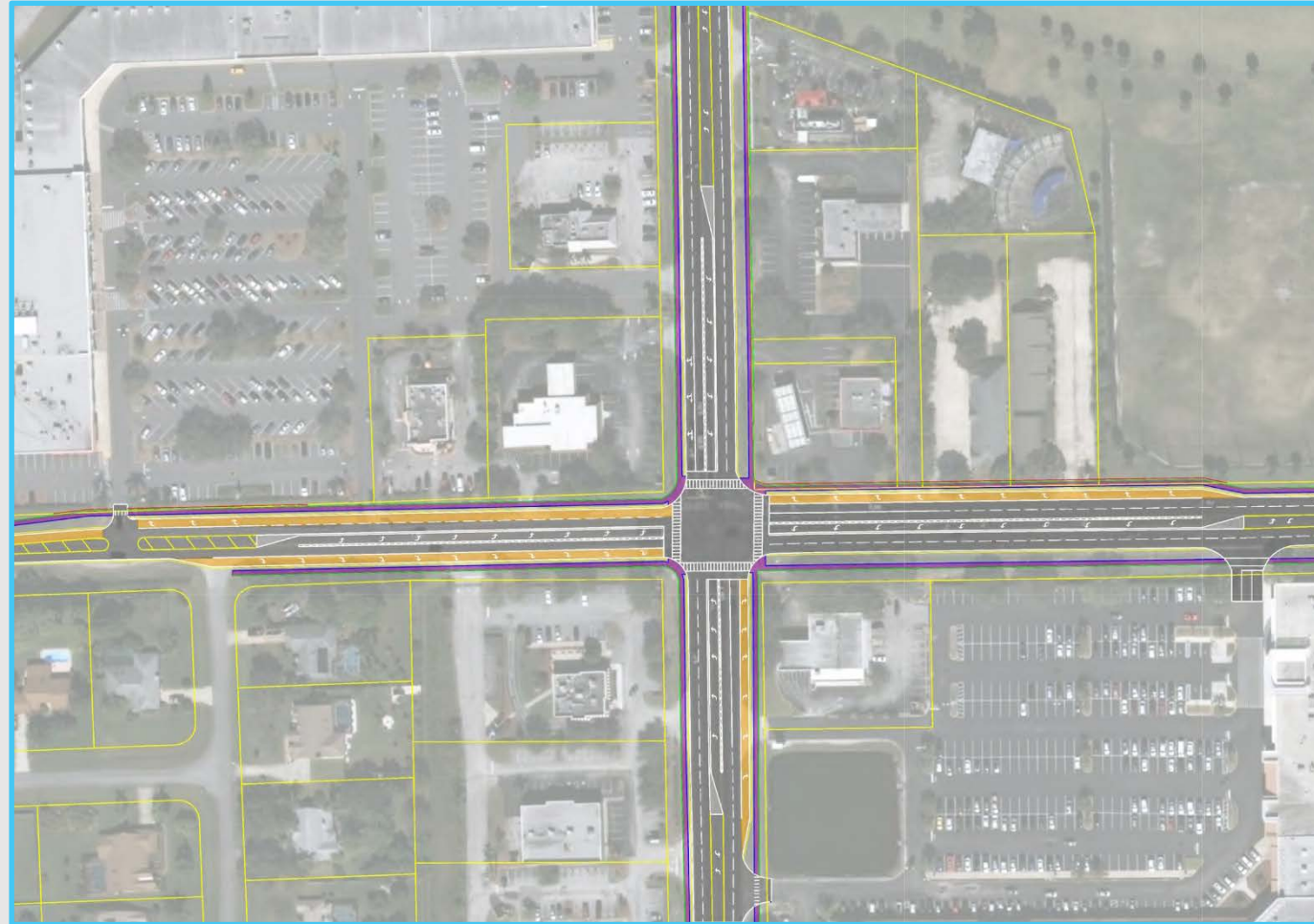
LOS E in PM peak, 0 over-capacity movements



Build

LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

Future Build / NB Right Turn Lane and 2nd WB Through Lane



LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

Potential WB Right Turn Lane Drop Alternatives

Wickham Road at Lake Washington Road	
Alternative	Lane Drop at Publix
Construction	\$2,290,000
Utility Relocations	\$150,000
Engineering/CEI	\$730,000
Roadway ROW	\$9,121,000
Total	\$12,291,000
Annualized User Benefit	\$1,173,277
Annualized Construction Cost	\$904,393
Benefit/Cost	1.30



LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

Potential WB Right Turn Lane Drop Alternatives

Wickham Road at Lake Washington Road	
Alternative	Lane Drop at Longwood Blvd
Construction	\$2,340,000
Utility Relocations	\$150,000
Engineering/CEI	\$750,000
Roadway ROW	\$9,132,000
Total	\$12,372,000
Annualized User Benefit	\$1,173,277
Annualized Construction Cost	\$910,353
Benefit/Cost	1.29





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



TYPICAL SECTION ALTERNATIVES

TRENDS IN BICYCLING DESIGN

Sharrow / Shared Lane Marking



- No separation from vehicles
- Encourages bicyclists to take full lane
- Applicable to low speed streets (30 MPH or lower)

Source: NACTO, Urban Bikeway Design Guide

Conventional Bike Lane



- Lane marking
- Increases predictability of user positioning and interaction
- Not comfortable for bicyclist on roadways with high speeds or multiple vehicle lanes

TRENDS IN BICYCLING DESIGN

Buffered Bike Lane



- Greater shy distance between vehicles and bicyclists
- Buffer provides more comfort and perceived safety
- Appeals to a wider cross-section of bicycle users

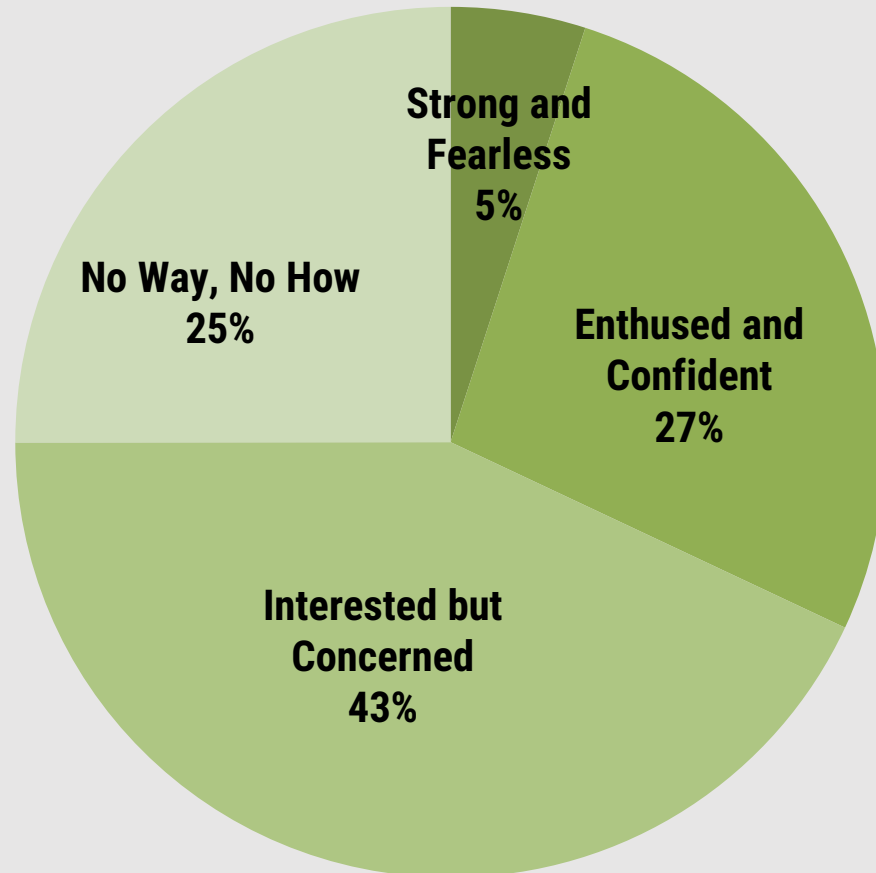
Shared Use Path



- Used by both pedestrians and bicyclists
- Increased comfort and safety for bicyclists
- Narrow width can hinder pedestrians

Source: NACTO, Urban Bikeway Design Guide

TYPES OF BICYCLISTS

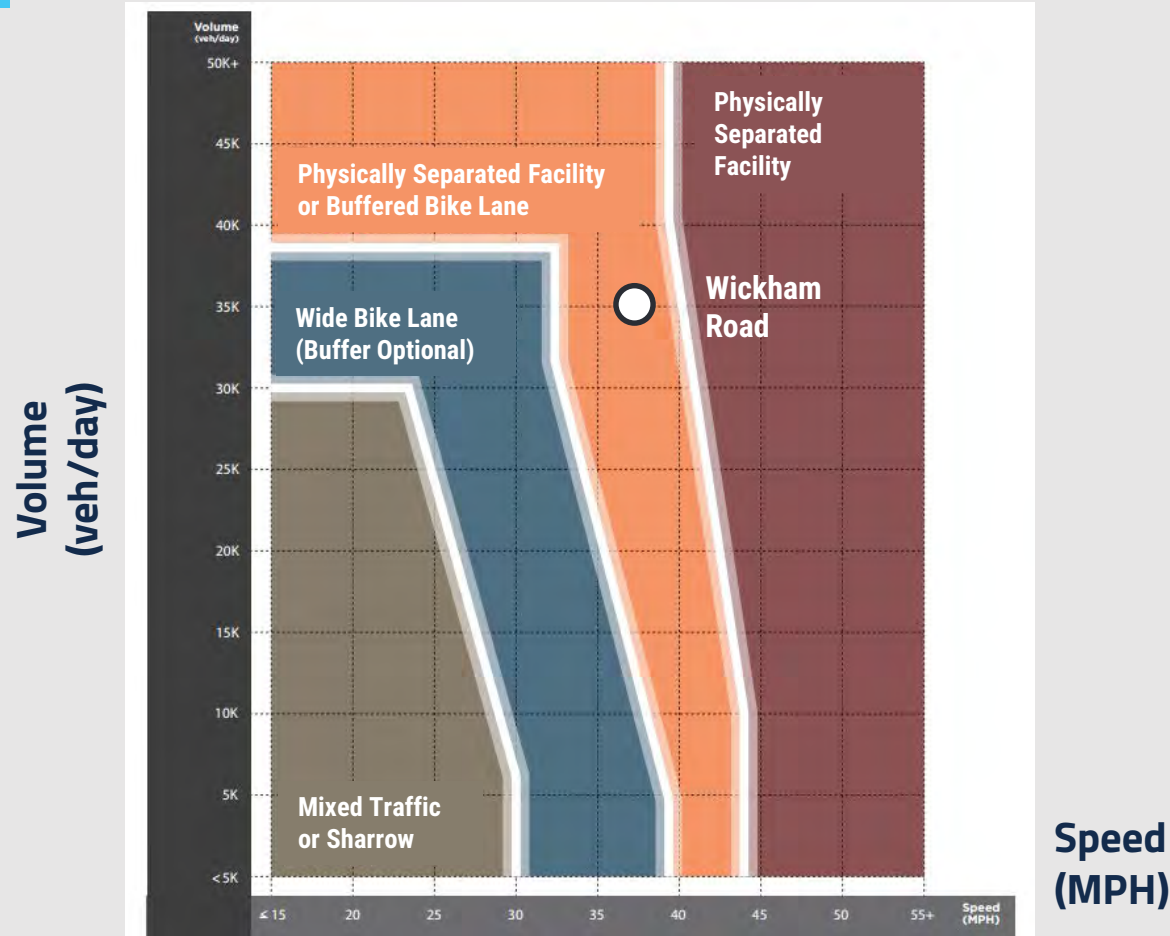


Source: National Institute for Transportation and Communities, Portland State University, Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S.

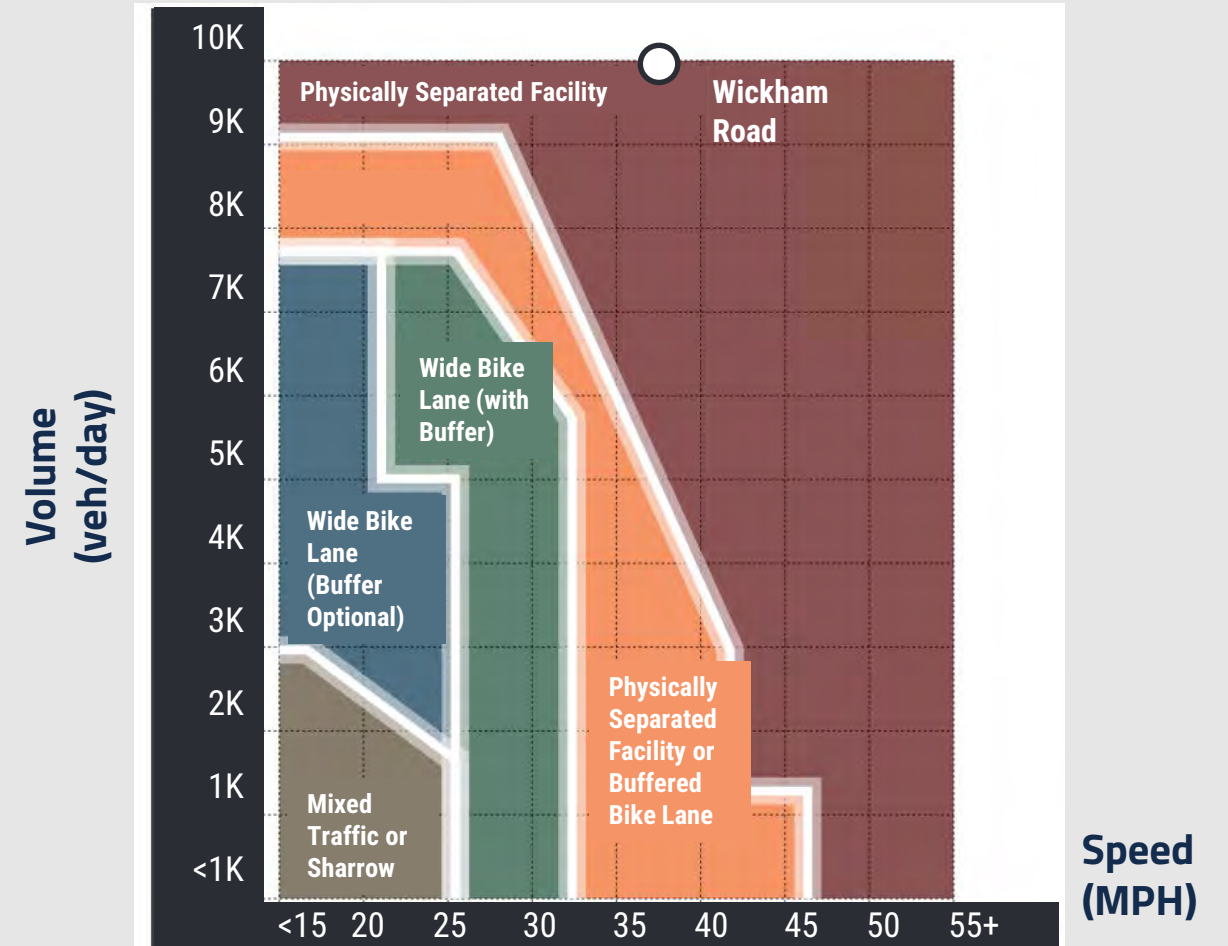


BICYCLING FACILITY PREFERENCE

CONFIDENT CYCLISTS



CONCERNED CYCLISTS



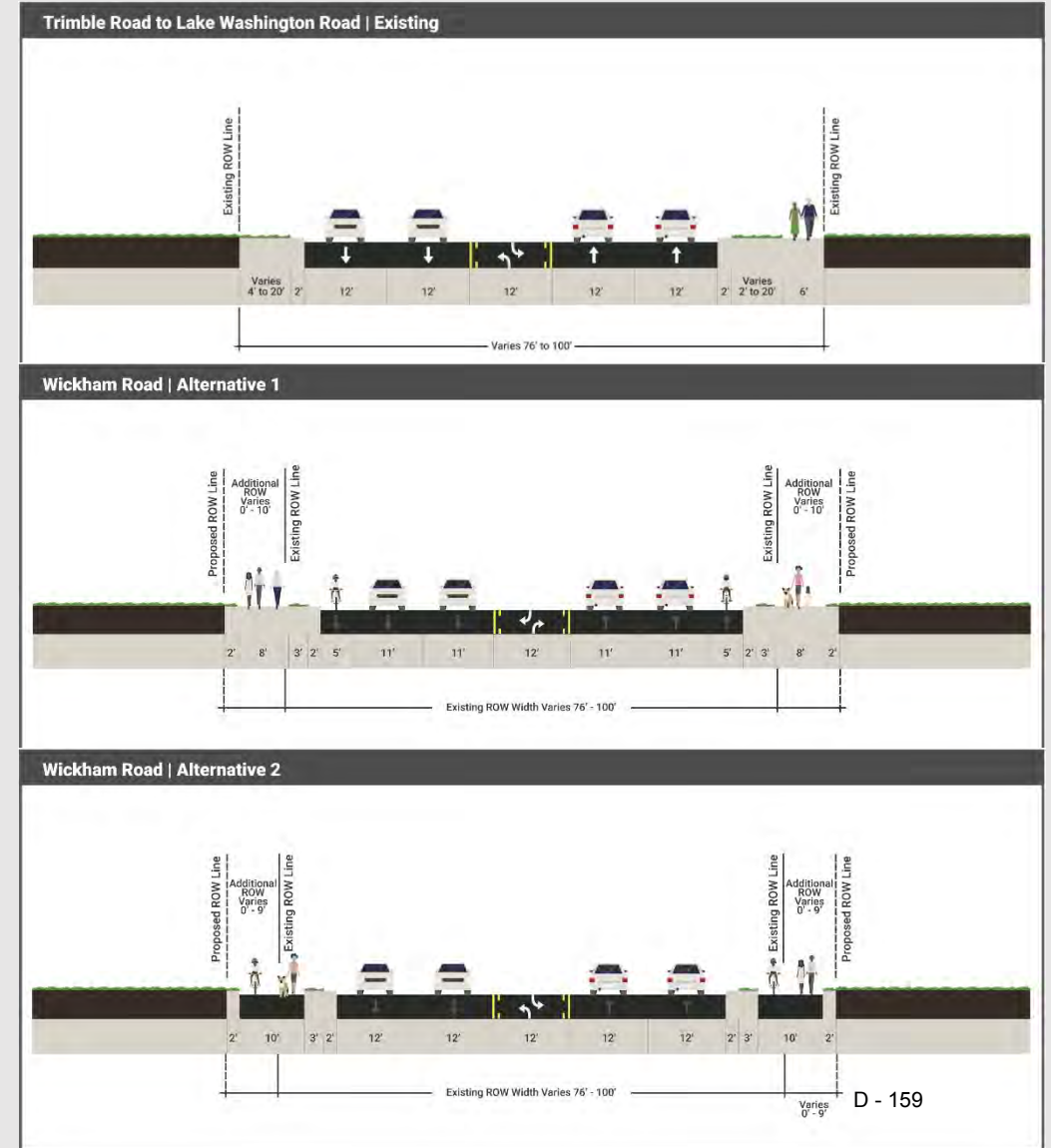
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 1

- Maintain existing two-way center left turn lane
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 2

- Maintain existing two-way center left turn lane
- Add 10' shared use path on west side
- Replace sidewalk on east side with 10' shared use path



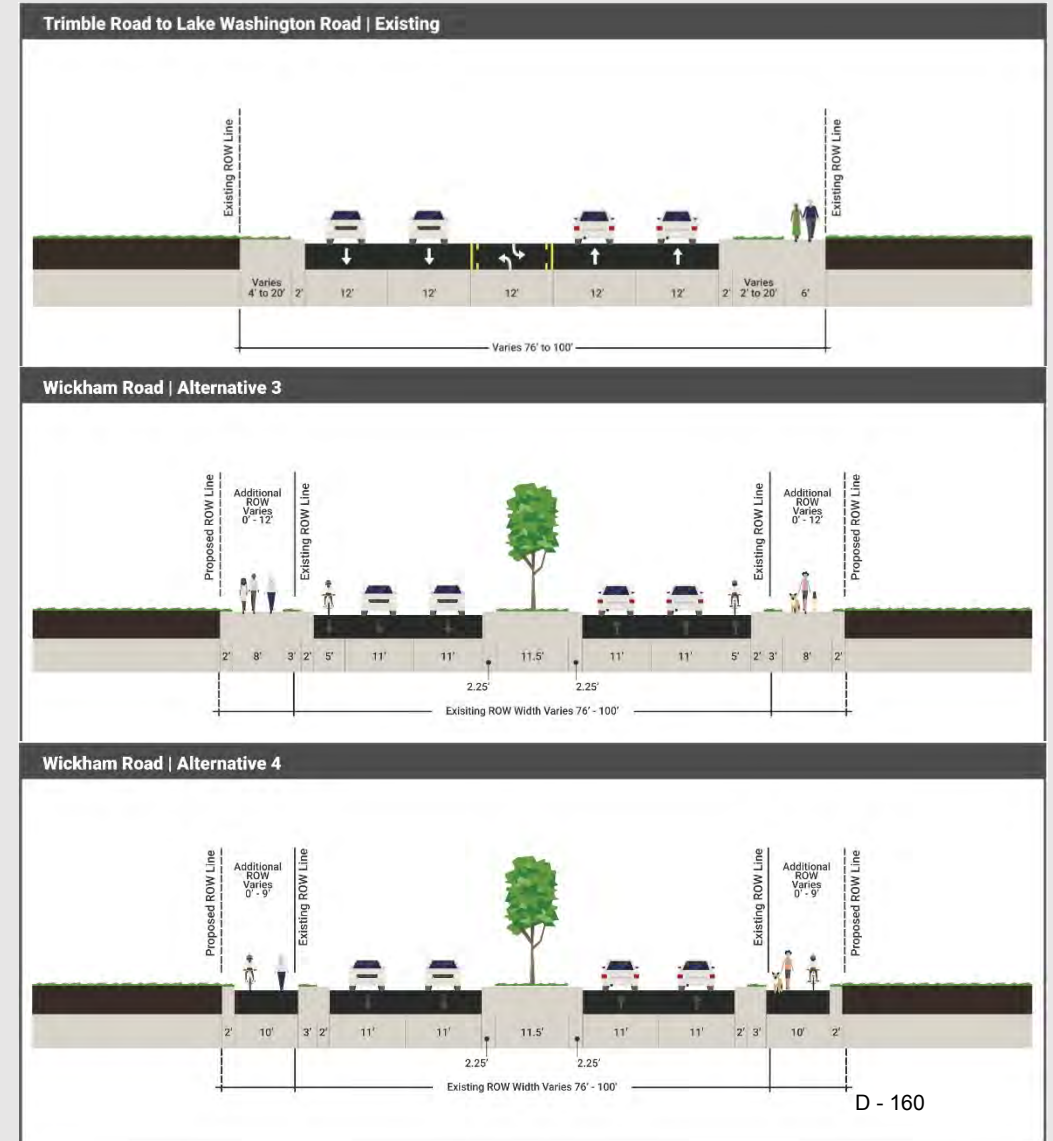
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 3

- Convert two-way center left turn lane to raised median
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 4

- Convert two-way center left turn lane to raised median
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side



TYPICAL SECTION MEASURES OF EFFECTIVENESS

Measure of Effectiveness	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Improve Pedestrian Mobility/Safety	High			
Improve Bicycle Mobility/Safety	Moderate	High	Moderate	High
Improve Vehicular Mobility	Moderate		Low	
Improve Vehicular Safety	Low		High	
Right-of-Way Impacts	High			
Drainage Impacts	High	Moderate	High	High
Utility Impacts	High			
Cost Comparison	Moderate	Low	High	High



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



NEXT STEPS AND SCHEDULE

QUESTIONS / CONTACT INFORMATION

SCTPO Project Manager

Laura Carter

2725 Judge Fran Jamieson Way

Building B, Room 105

Melbourne, FL 32940

Phone: 321-690-6890

Laura.carter@brevardfl.gov

Consultant Project Manager

Travis Hills, PE

225 East Robinson Street

Suite 450

Orlando, FL 32801

Phone: 407-540-0555

thills@kittelso.com





PAT Meeting #3

SUBJECT: Wickham Road Operational Analysis – Future Alternatives Review

MEETING DATE: October 5, 2017

MEETING TIME: 9:00 AM – 10:00 AM

VENUE: Viera Governmental Center, Building C, Atlantic Room

Introduction and Attendees

A meeting was held with the Project Advisory Team (PAT) to discuss potential improvements and alternatives for the Wickham Road Operational Analysis. Below are the attendees of this meeting:

- Laura Carter – SCTPO
- Steven Bostel – SCTPO
- Georganna Gillette – SCTPO
- Sarah Kraum – SCTPO
- Stuart Hughes – Brevard County
- Lauren Holman – Brevard County
- Devin Swanson – Brevard County
- Corrina Gumm – Brevard County
- Jim Liesenfelt – Space Coast Area Transit
- Jenni Lamb – City of Melbourne
- Travis Hills – KAI
- Daniel Torre – KAI

Wickham Road Operational Summary

Project Background and Overview

The following topics were reviewed during the meeting:

- Overall project schedule;
- Future build improvements: turn lanes at signalized intersections and corridor-wide typical sections;
- Measures of effectiveness to evaluate alternatives; and
- Next steps and schedule moving forward.

The remainder of these notes summarizes the related comments and discussion from the group during the meeting.

Short Term Improvements

- Brevard County is currently working on a signal retiming project from Sarno Road to Business Center Boulevard by the end of the year.

Eau Gallie Boulevard Intersection Improvements

- The parcels on the northeast corner of Wickham Road and Eau Gallie Boulevard may need a full parcel take for the westbound right turn lane improvement (Option A).
- The PAT was agreeable presenting both Option A and Option B to the public.

Aurora Road Intersection Improvements

- The parcel in the southeast corner of Wickham Road and Aurora Road (Buz's Automotive) may need a full parcel take for the northbound right turn lane improvement (Option A).
- The PAT was agreeable presenting both Option A and Option B to the public.

Northgate Plaza Improvements

- Revisit the drainage on the west side of Wickham Road at the McDonald's driveway.
- The PAT was agreeable to presenting the proposed improvements to the public.

Venture Lane/Lansing Street Improvements

- The PAT was agreeable to presenting the proposed new roadway connection and new signal at Wickham Road/Venture Lane to the public.

Lake Washington Road Intersection Improvements

- There was discussion of maintaining a full median opening on Lake Washington Road east of Wickham Road at the LA Fitness driveway.
- The PAT suggested that only the lane drop option at the Publix be shown at the public meeting.

Typical Section Alternatives

- For the typical section MOEs, there should be a differentiation between positive high marks and negative high marks for the public meeting.

Other Comments

- Short term pedestrian improvements along the corridor should be prioritized. Alternative concepts displaying pedestrian improvements at Aurora Road and Lake Washington Road will be developed for the public meeting.
- Make clear to the public in the cost tables that roadway ROW is subject to change and does not include potential full takes. Note that there is room for potential shoulders, eminent domain cases, etc.

Next Steps

- **Major Task Items**
 - Revise Future Alternatives to reflect comments and suggestions.

- Meet with Susan Hann from the Brevard County School Board to discuss the ROW for the proposed Lansing Street realignment and other potential impacts.

These meeting minutes are Travis Hills' interpretation of the comments, requests, and discussion during the meeting. Questions, additions, and/or clarifications should be directed to him at 407-373-1125 or thills@kittelsohn.com.

APPENDIX E – FUTURE ALTERNATIVES PUBLIC MEETING MATERIALS

MEETING NOTICES



OPEN HOUSE WEDNESDAY, OCTOBER 25, 2017

5:30 PM to 7:30 PM
Presentation at 6:00 PM
Wickham Park Community Center
2815 Leisure Way | Melbourne, FL 32935

SHARE YOUR VOICE!

You are invited to attend a public meeting for a study being conducted on Wickham Road by the Space Coast Transportation Planning Organization in coordination with Brevard County and the City of Melbourne.

Study Limits: Wickham Road from Eau Gallie Boulevard to Lake Washington Road

Study Purpose: To evaluate alternatives that improve congestion and safety and also address pedestrian, bicycle, and transit needs.

Meeting Purpose: The Study Team will present preliminary improvement alternatives based on the issues/opportunities identified during existing conditions analysis.



Space Coast Transportation Planning Organization
2725 Judge Fran Jamieson Way, Building B
Viera, FL 32940
Phone: 321-690-6890
www.spacecoasttpo.com

PRSR STD
ECRWSS
U.S. POSTAGE
PAID
EDDM RETAIL

Can't make the meeting? Please visit project website for more information and to leave your comments.

Project Website: spacecoasttpo.com/plan/wickham-road-operational-analysis

SCTPO Project Manager:

Laura Carter, Operations Manager
laura.carter@brevardfl.gov
321-690-6890

Consultant Project Manager:

Travis Hills, P.E., Kittelson & Associates, Inc.
thills@kittelson.com
407-540-0555

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to compliance with Title VI may do so by contacting Laura Carter, SCTPO Operations Manager, at 321-690-6890 or laura.carter@brevardfl.gov. Persons with disabilities who require special accommodations under the Americans with Disabilities Act or persons who require translation services, free of charges, should contact Travis Hills at 407-540-0555 or thills@kittelson.com, at least seven (7) days prior to the meeting. If you are hearing or speech impaired, please contact us by using the Florida Relay Service, 1-800-955-8771 (TDD), or 1-800-955-8770 (Voice).

*****ECRWSS*****

Local
Postal Customer



September 29, 2017

Subject: Wickham Road Operational Analysis
From Eau Gallie Boulevard to Lake Washington Road
Brevard County

Dear Elected Leader,

On behalf of the Space Coast Transportation Planning Organization (SCTPO), Brevard County, and the City of Melbourne, you are invited to attend the second public meeting for the Wickham Road Operational Analysis.

The **Wickham Road Operational Analysis** has evaluated alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle, and transit movements along the corridor. The analysis has focused on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road.

This is the second public meeting of the 14 month planning study. The purpose of the meeting is to present preliminary improvement alternatives based on the issues/opportunities identified during existing conditions analysis and receive input from interested stakeholders.

The Public Meeting is being held on **Wednesday, October 25, 2017** from **5:30 PM** to **7:30 PM** at the **Wickham Park Community Center**, located at **2815 Leisure Way, Melbourne, Florida 32935**. The meeting will begin as an open house at **5:30 PM** with a presentation at approximately **6:00 PM**.

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to SCTPO compliance with Title VI may do so by contacting Laura Carter, SCTPO Operations Manager by phone at 321-690-6890, or email laura.carter@brevardfl.gov.

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If you have any questions about the study or the meeting, please contact Laura Carter or Travis Hills at the contact information noted above.

Sincerely,

Bob Kamm
Space Coast Transportation Planning Organization, Executive Director



September 29, 2017

Subject: Wickham Road Operational Analysis
From Eau Gallie Boulevard to Lake Washington Road
Brevard County

Dear Government Partner,

On behalf of the Space Coast Transportation Planning Organization (SCTPO), Brevard County, and the City of Melbourne, **you are invited to attend the second public meeting for the Wickham Road Operational Analysis.**

The **Wickham Road Operational Analysis** has evaluated alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle, and transit movements along the corridor. The analysis has focused on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road.

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If you have any questions about the study or the meeting, please contact Laura Carter or Travis Hills at the contact information noted above.

Sincerely,

Laura Carter
Space Coast Transportation Planning Organization, Operations Manager

MEETING BOARDS/PRESENTATION

Title VI Compliance

The Space Coast Transportation Planning Organization (SCTPO) complies with various nondiscrimination laws and regulations, including Title VI of the Civil Rights Act of 1964 and the Americans with Disabilities Act (ADA).

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to SCTPO compliance with Title VI may do so by contacting:

LAURA CARTER
Operations Manager

2725 Judge Fran Jamieson Way
Building B, Room 105
Melbourne, FL 32940
Phone: 321-690-6890
laura.carter@brevardfl.gov

Why You Are Here:

- To participate in the Operational Analysis process
- To review future build alternatives along Wickham Road
- To provide your thoughts, concerns, and comments regarding the alternatives

Stay Informed by:

Visiting our website
spacecoasttpo.com/plan/wickham-road-operational-analysis

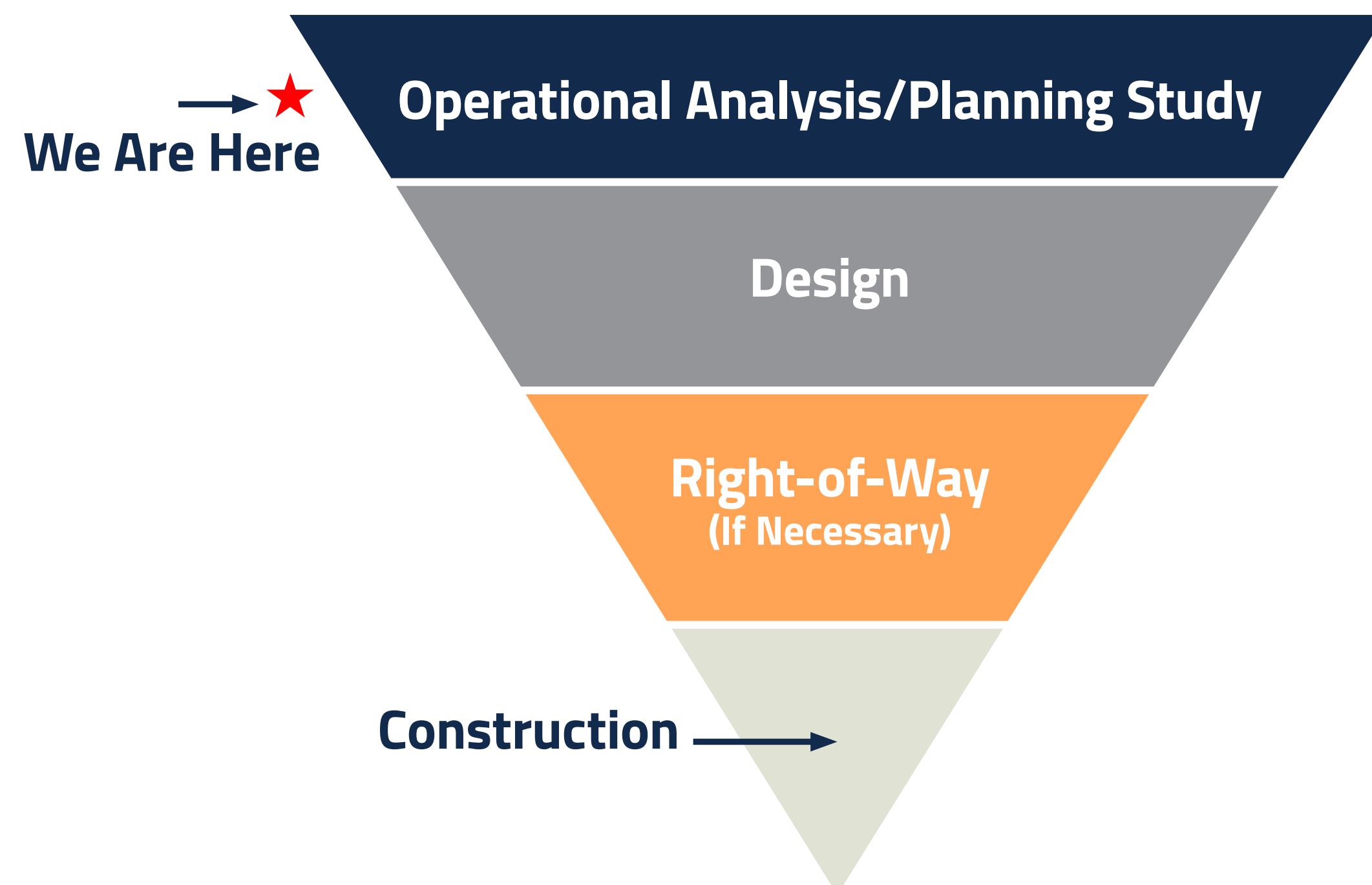
Contacting Laura Carter
 Operations Manager

2725 Judge Fran Jamieson Way
 Building B, Room 105
 Melbourne, FL. 32940
 321-690-6890
laura.carter@brevardfl.gov

How Can You Get Involved?

- Participate in open discussion with the project team
- Ask questions about specific aspects of the project
- Fill out a comment form with your input
- Request a small group / neighborhood meeting
- Visit our comment website at: maps.kittelson.com/wickhamroad

Where We Are:



Project Schedule

2017

2018

TASK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
Begin Study	★												
Existing Conditions Analysis													
Project Advisory Team Kick-Off Meeting		★											
Project Advisory Team Meeting #1				★									
Future Conditions Analysis													
Existing Conditions Public Meeting					★								
Alternatives Development													
Project Advisory Team Meeting #2								★					
Project Advisory Team Meeting #3									★				
Alternatives Development Public Meeting										We Are Here ★			
SCTPO TAC/CAC Presentation													★
SCTPO Board Meeting Presentation													★
Project Wrap Up													

TONIGHT'S AGENDA

5:30 PM to 6:00 PM
OPEN HOUSE

6:00 PM to 6:30 PM
PRESENTATION

6:30 PM to 7:30 PM
OPEN HOUSE

CONTACT US

**SCTPO
PROJECT MANAGER:**

Laura Carter
2725 Judge Fran Jamieson Way
Building B, Room 105
Melbourne, FL 32940
laura.carter@brevardfl.gov
321.690.6890

**CONSULTANT
PROJECT MANAGER:**

Travis Hills, PE
Kittelson & Associates, Inc.

225 E Robinson St.
Suite 450
Orlando, FL 32801
thills@kittelson.com
407.540.0555



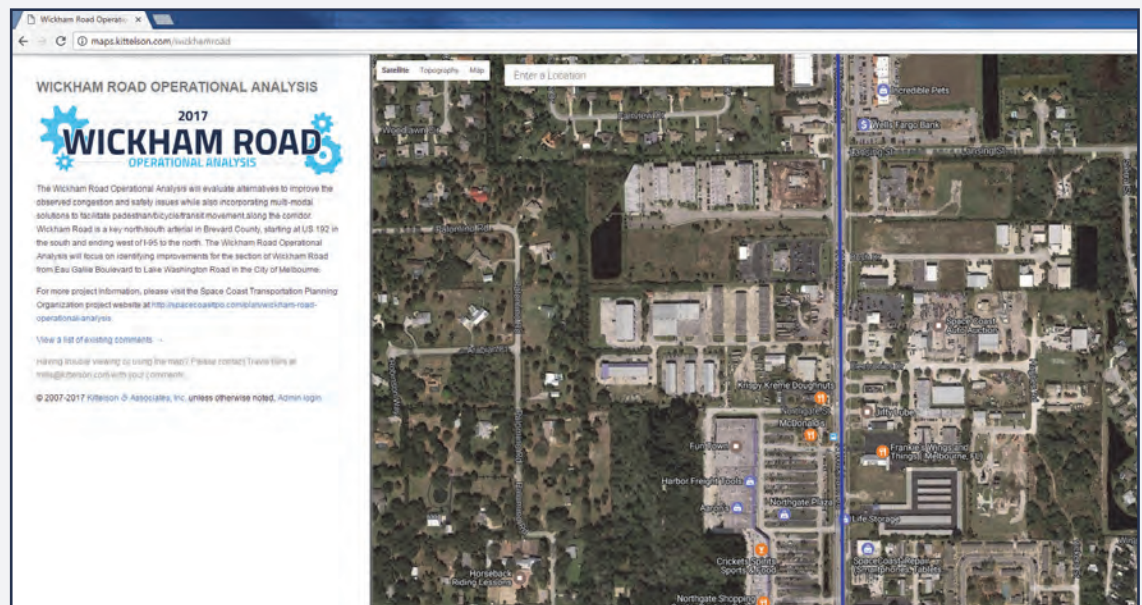
Welcome!

Welcome to the **Wickham Road Operational Analysis Alternatives Public Meeting**. The Wickham Road Operational Analysis has evaluated alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle and transit movement along the corridor. The analysis has focused on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road in the City of Melbourne.

This is the second public meeting of the 14 month planning study. The purpose of the meeting is to present preliminary improvement alternatives based on the issues/opportunities identified during existing conditions analysis and receive input from interested stakeholders.

Your Input is Valuable!

Anyone wishing to submit comments or concerns may do so at this meeting, or by visiting our Interactive Map at maps.kittelson.com/wickhamroad. The public comment period will remain open until close of business November 15, 2017.



Next Steps

The next steps in the Operational Analysis will be to develop the preferred intersection and corridor alternatives based on public feedback. The preferred alternative will be presented to the TPO Board and governing committees in December 2017.

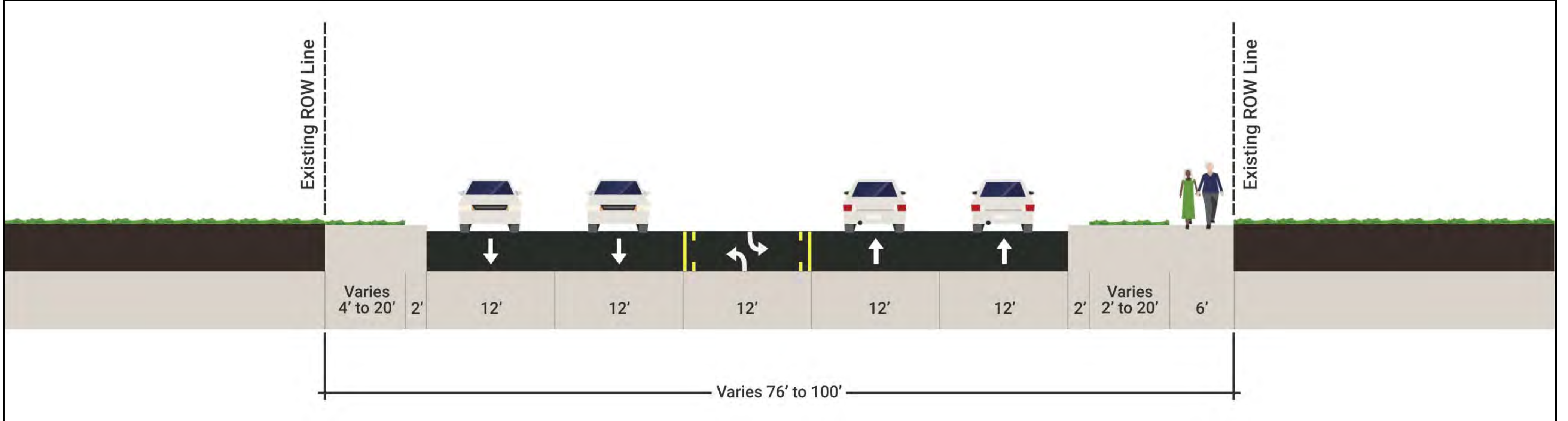
Project Schedule

2017

2018

TASK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
Begin Study	★												
Existing Conditions Analysis													
Project Advisory Team Kick-Off Meeting		★											
Project Advisory Team Meeting #1				★									
Future Conditions Analysis													
Existing Conditions Public Meeting					★								
Alternatives Development													
Project Advisory Team Meeting #2								★					
Project Advisory Team Meeting #3									★				
Alternatives Development Public Meeting								We Are Here ★					
SCTPO TAC/CAC Presentation													★
SCTPO Board Meeting Presentation													★
Project Wrap Up													

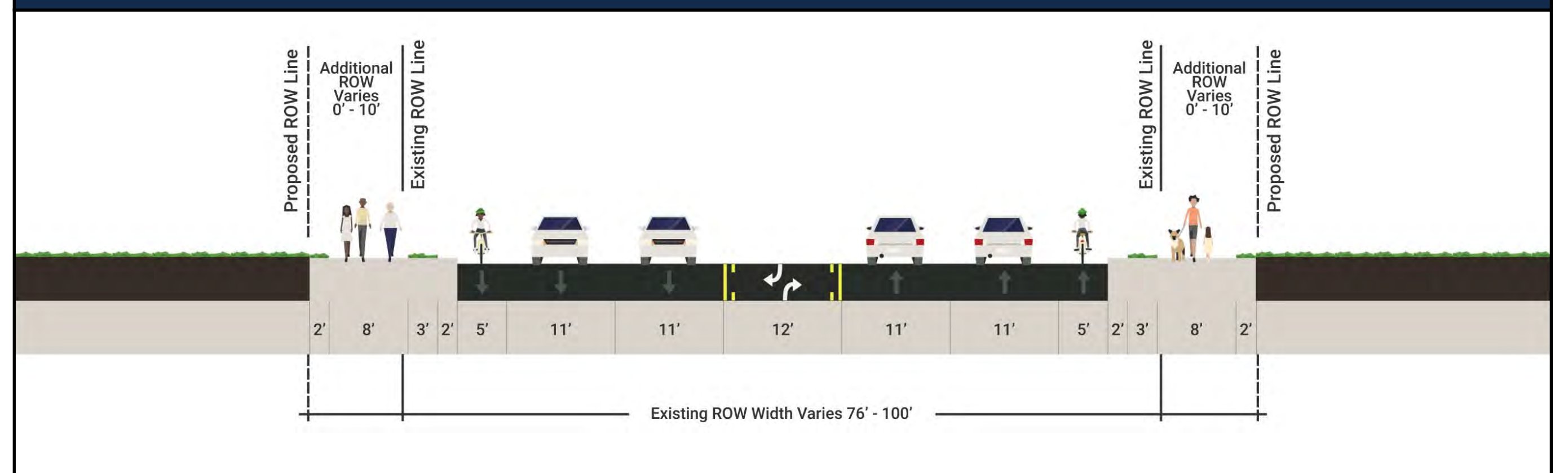
Trimble Road to Lake Washington Road | Existing



Alternative 1

- Maintain existing two-way center left turn lane
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

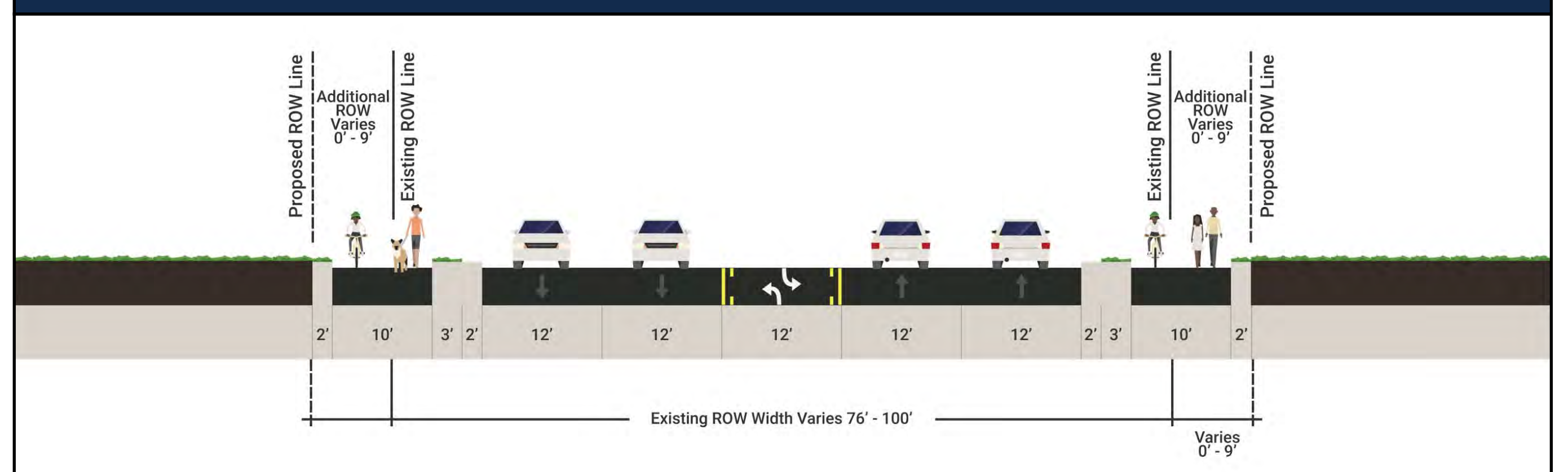
Wickham Road | Alternative 1



Alternative 2

- Maintain existing two-way center left turn lane
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side

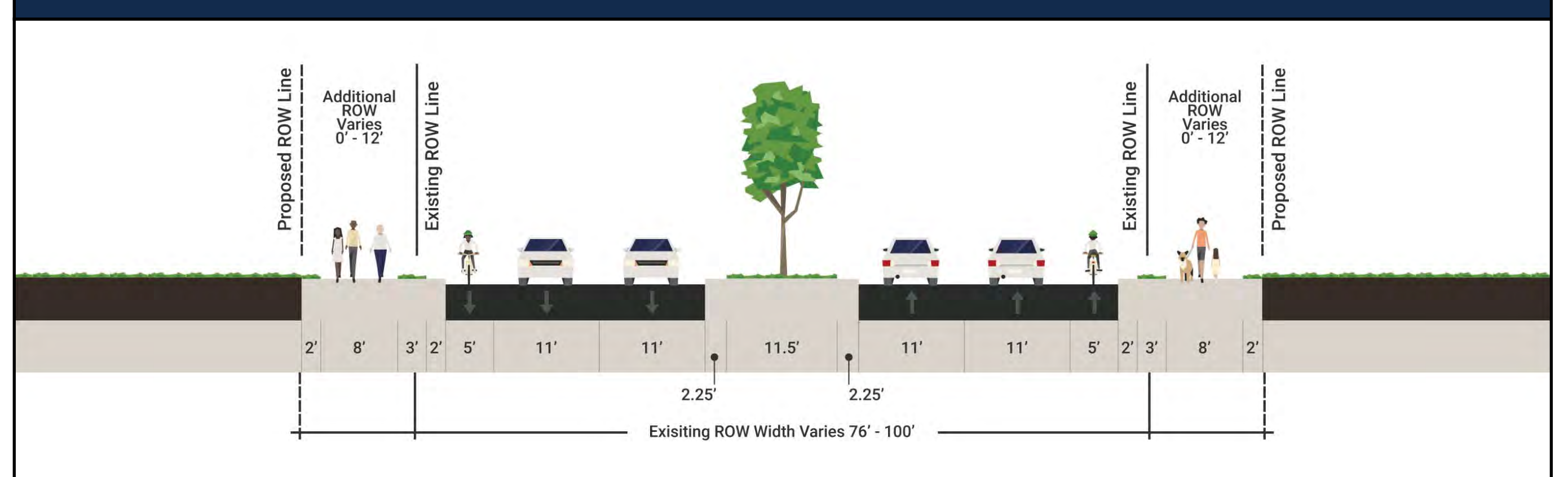
Wickham Road | Alternative 2



Alternative 3

- Convert two-way center left turn lane to raised median
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

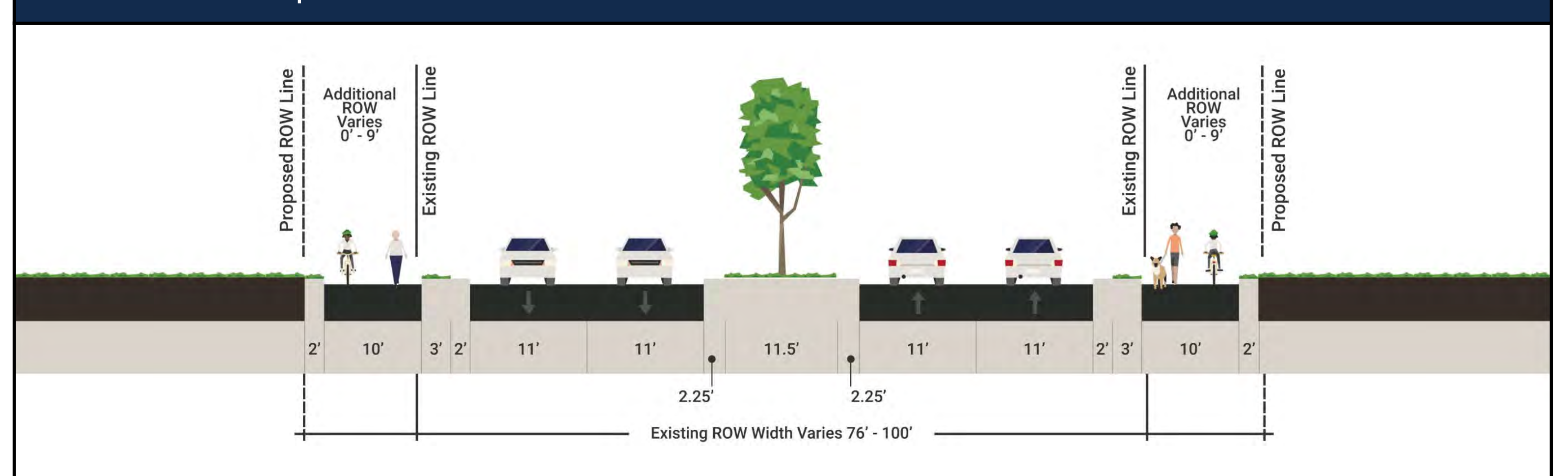
Wickham Road | Alternative 3



Alternative 4

- Convert two-way center left turn lane to raised median
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side

Wickham Road | Alternative 4



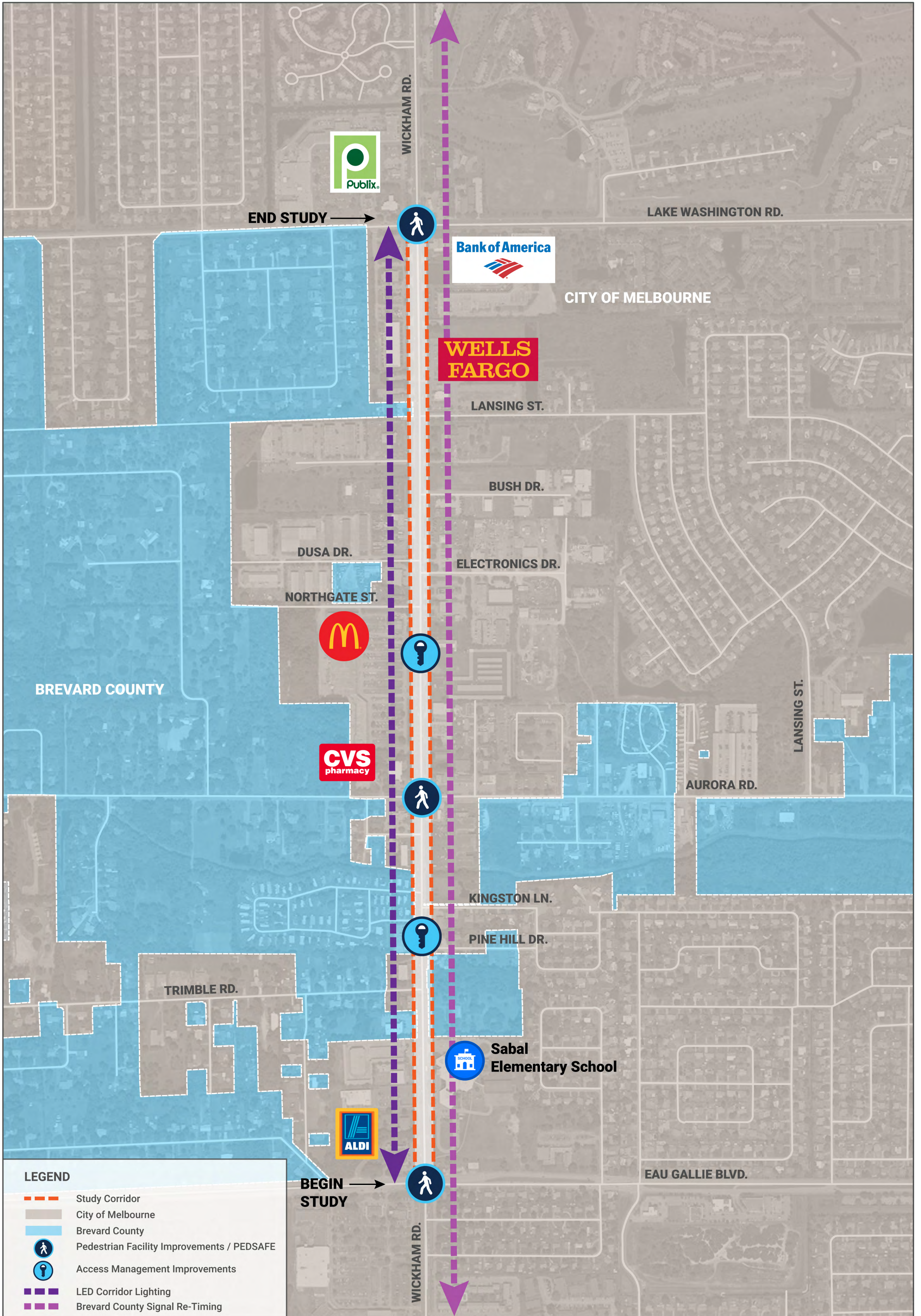


FIGURE 3 | AURORA ROAD SHORT TERM IMPROVEMENTS

Short Term Improvements

- Adding crosswalks to east and south legs
- Adding pedestrian landing pad to SE corner
- Rebuilding pedestrian landing pads on SW, NE, and NW corners
- Adding bus stop landing pads and sidewalk connections

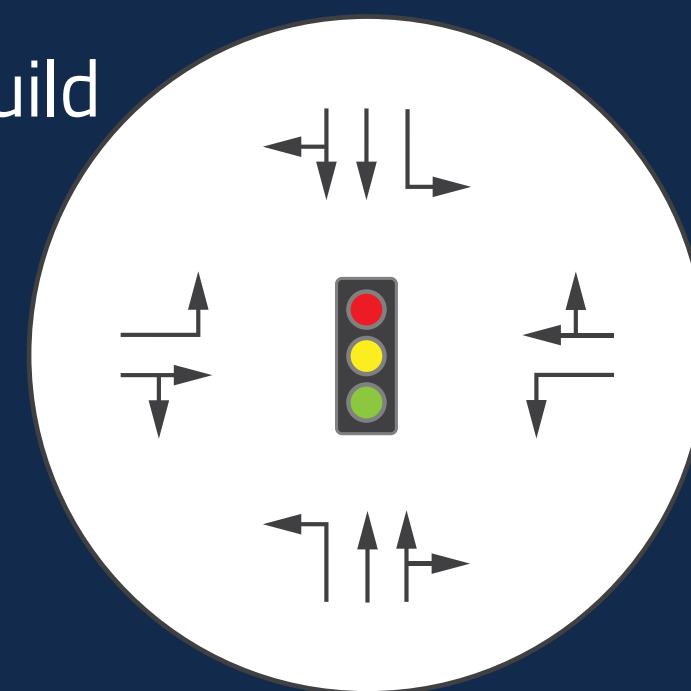
Wickham Road at Aurora Road

Construction	\$50,000
Utility Relocations	\$0
Engineering/CEI	\$20,000
Roadway ROW	\$123,000
Total	\$193,000

Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.

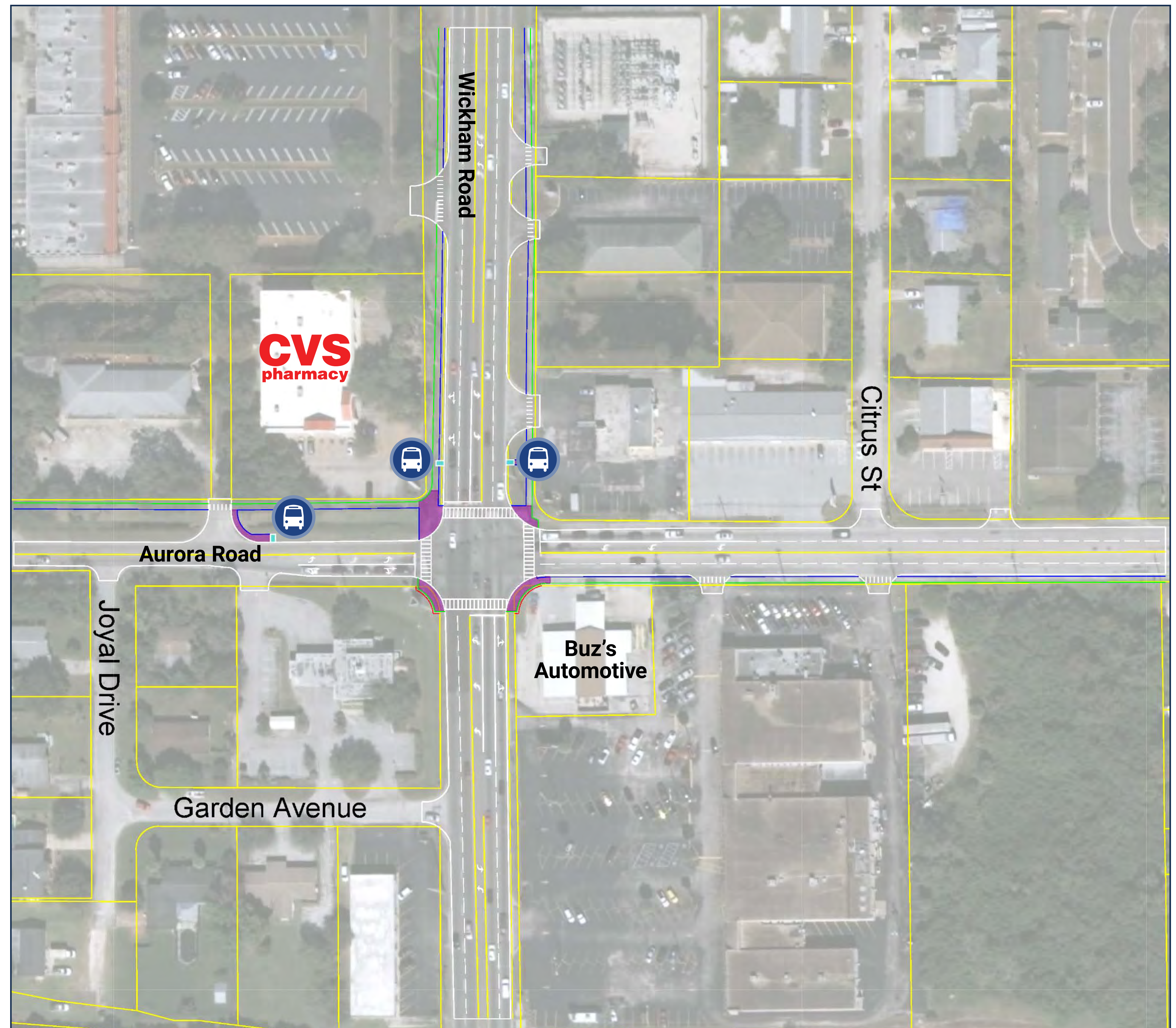
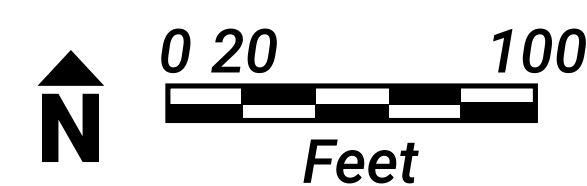
Lane Configuration | Aurora Road

No-Build



Legend

- New Sidewalk
- Concrete Median
- ⊗ Transit Stop
- Back of Curb
- Front of Sidewalk
- Back of Sidewalk
- Proposed ROW



Short Term Improvements

- Adding crosswalks to west and south legs
- Adding pedestrian landing pad to SW corner
- Rebuilding pedestrian landing pads on NE and SE corners
- Adding bus stop landing pads and sidewalk connections

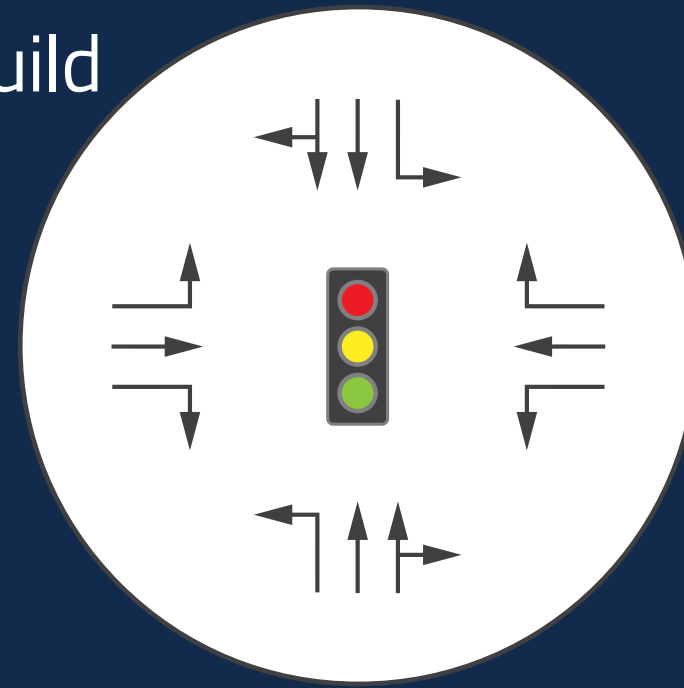
Wickham Road at Lake Washington Road

Construction	\$50,000
Utility Relocations	\$100,000
Engineering/CEI	\$45,000
Roadway ROW	\$0
Total	\$195,000

Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.

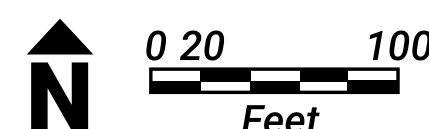
Lane Configuration | Lake Washington Road

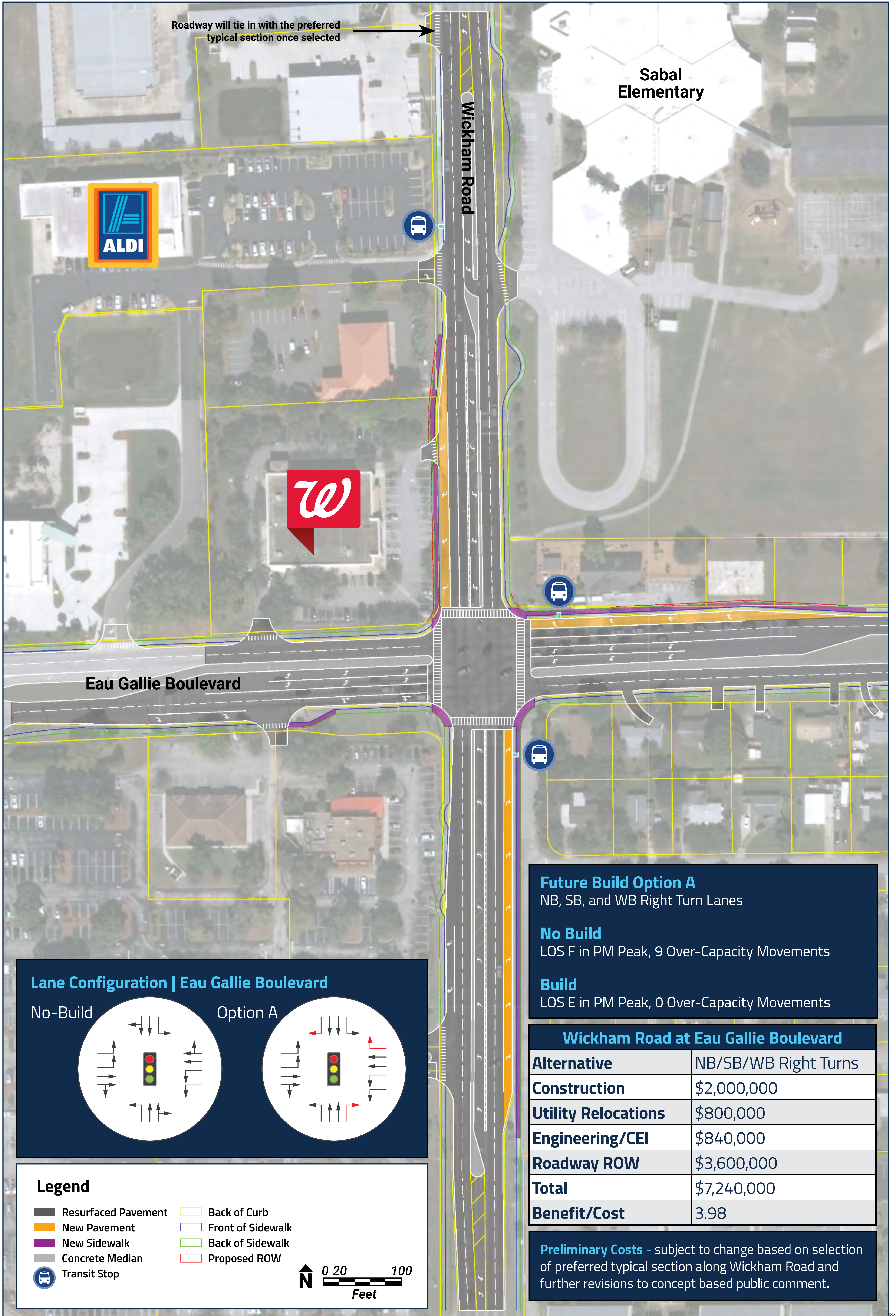
No-Build



Legend

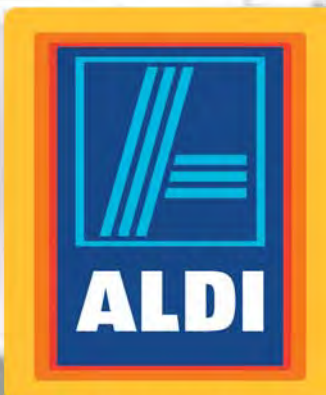
- New Sidewalk
- Concrete Median
- Transit Stop
- Back of Curb
- Front of Sidewalk
- Back of Sidewalk
- Proposed ROW





Roadway will tie in with the preferred typical section once selected

Sabal Elementary

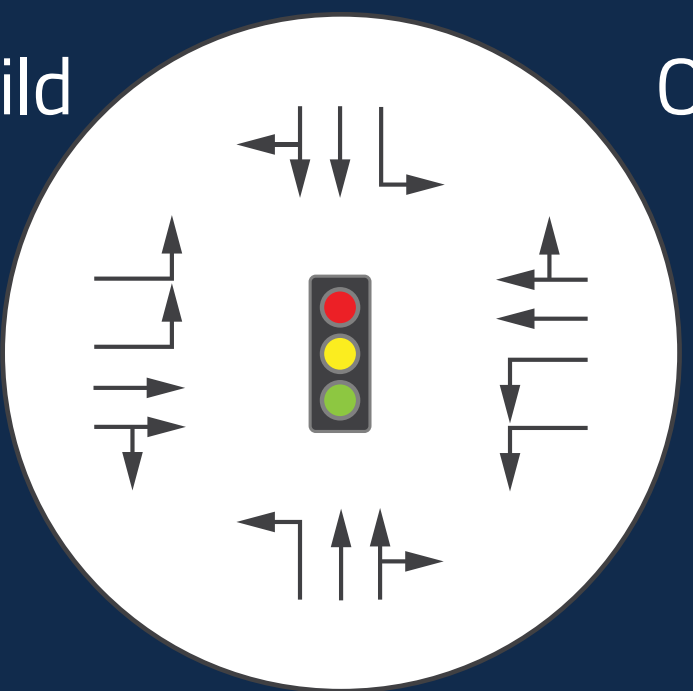


Eau Gallie Boulevard

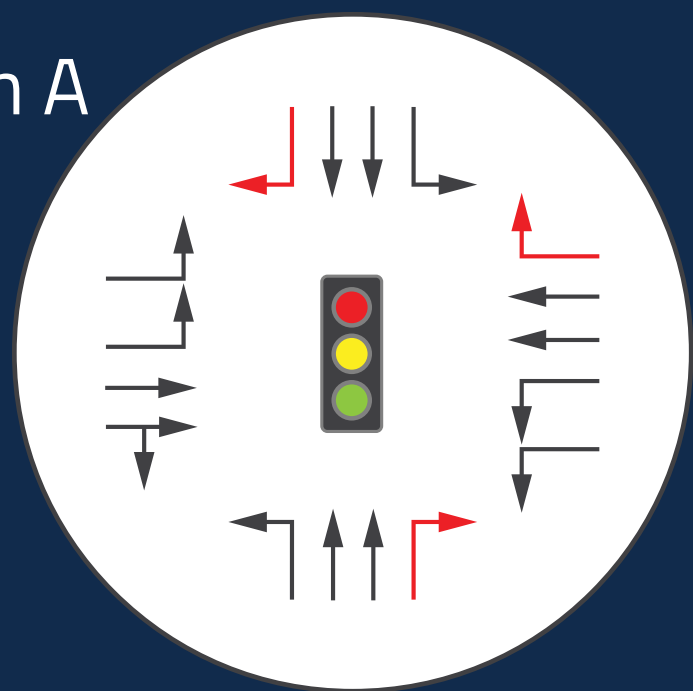
Wickham Road

Lane Configuration | Eau Gallie Boulevard

No-Build

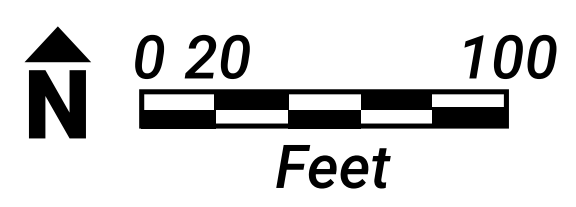


Option A



Legend

- Resurfaced Pavement
- New Pavement
- New Sidewalk
- Concrete Median
- Transit Stop
- Back of Curb
- Front of Sidewalk
- Back of Sidewalk
- Proposed ROW



Future Build Option A
 NB, SB, and WB Right Turn Lanes

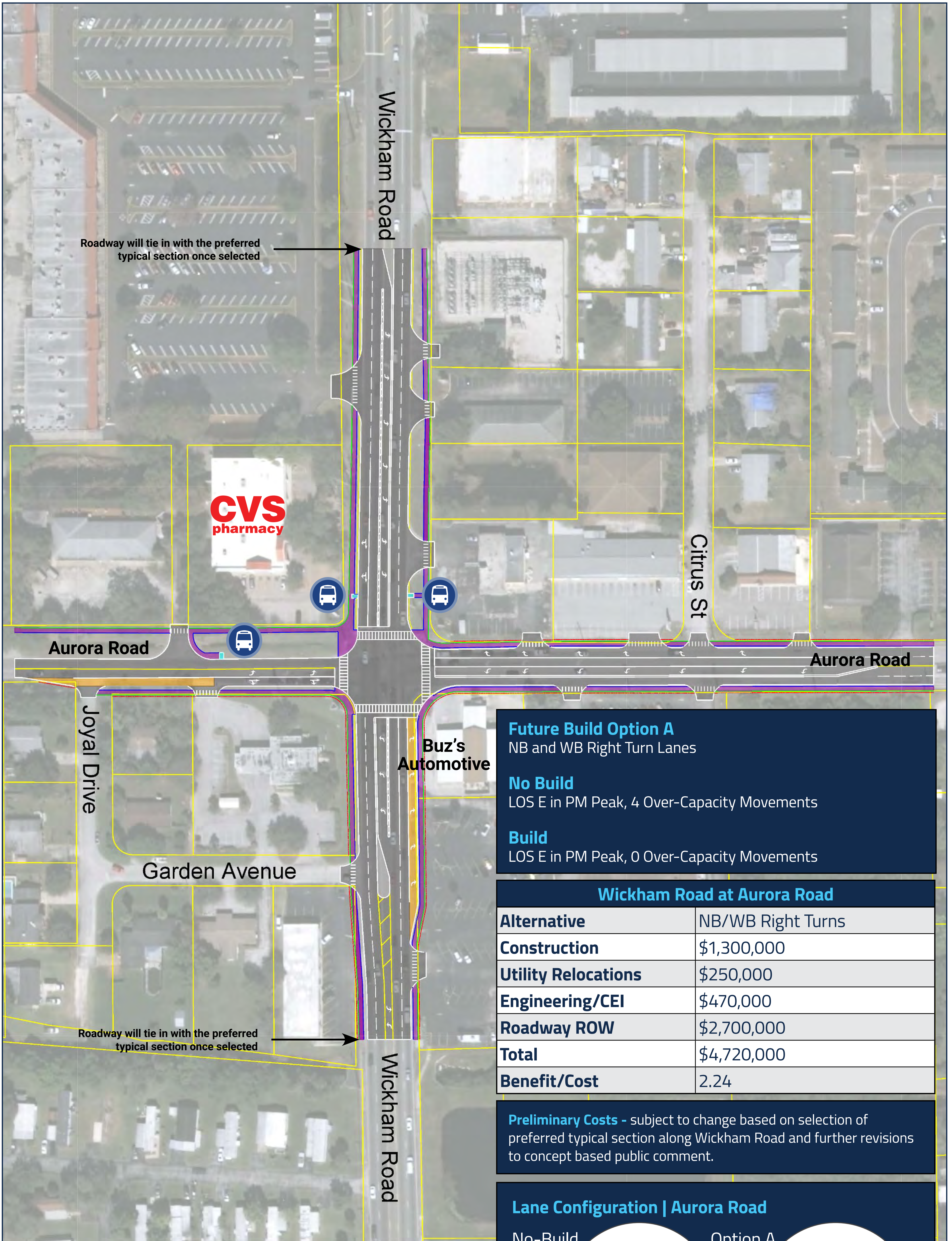
No Build
 LOS F in PM Peak, 9 Over-Capacity Movements

Build
 LOS E in PM Peak, 0 Over-Capacity Movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB/SB/WB Right Turns
Construction	\$2,000,000
Utility Relocations	\$800,000
Engineering/CEI	\$840,000
Roadway ROW	\$3,600,000
Total	\$7,240,000
Benefit/Cost	3.98

Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.





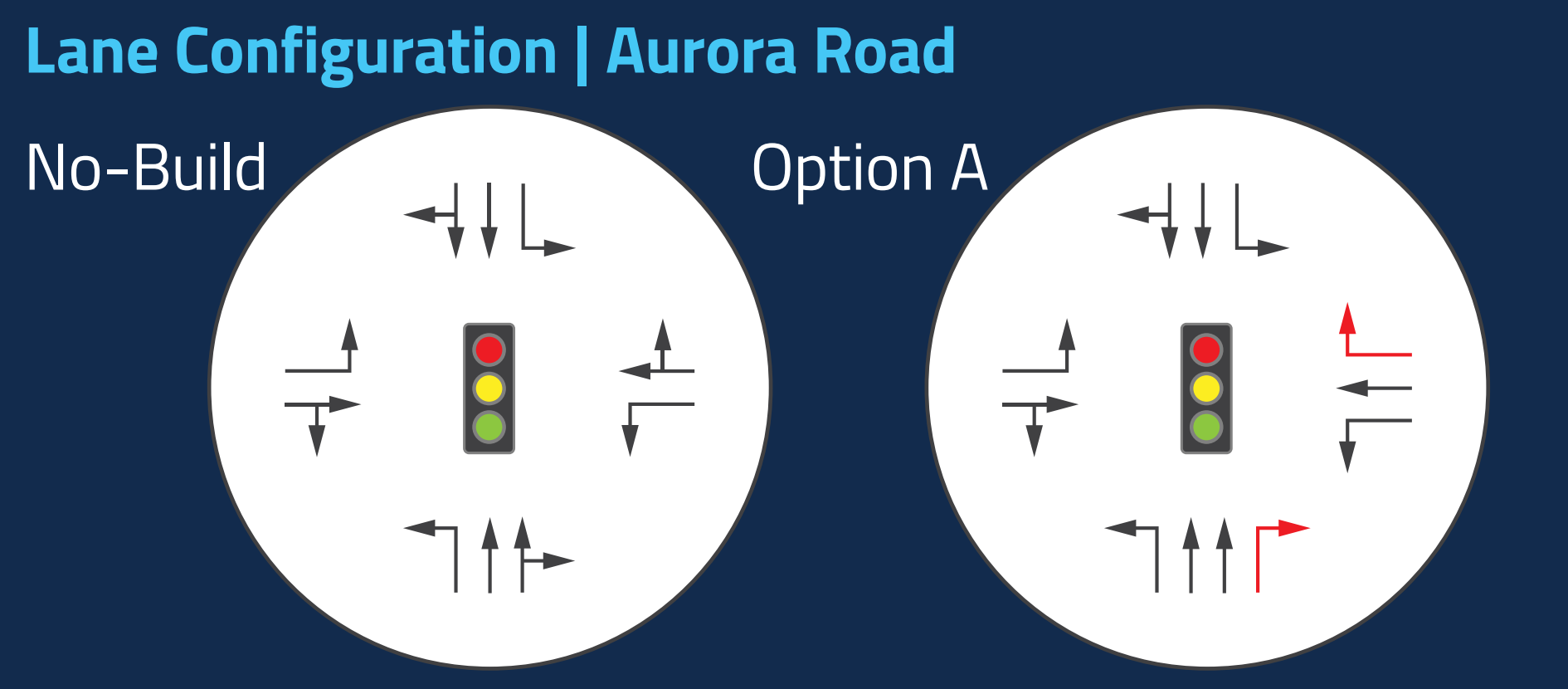
Future Build Option A
 NB and WB Right Turn Lanes

No Build
 LOS E in PM Peak, 4 Over-Capacity Movements

Build
 LOS E in PM Peak, 0 Over-Capacity Movements

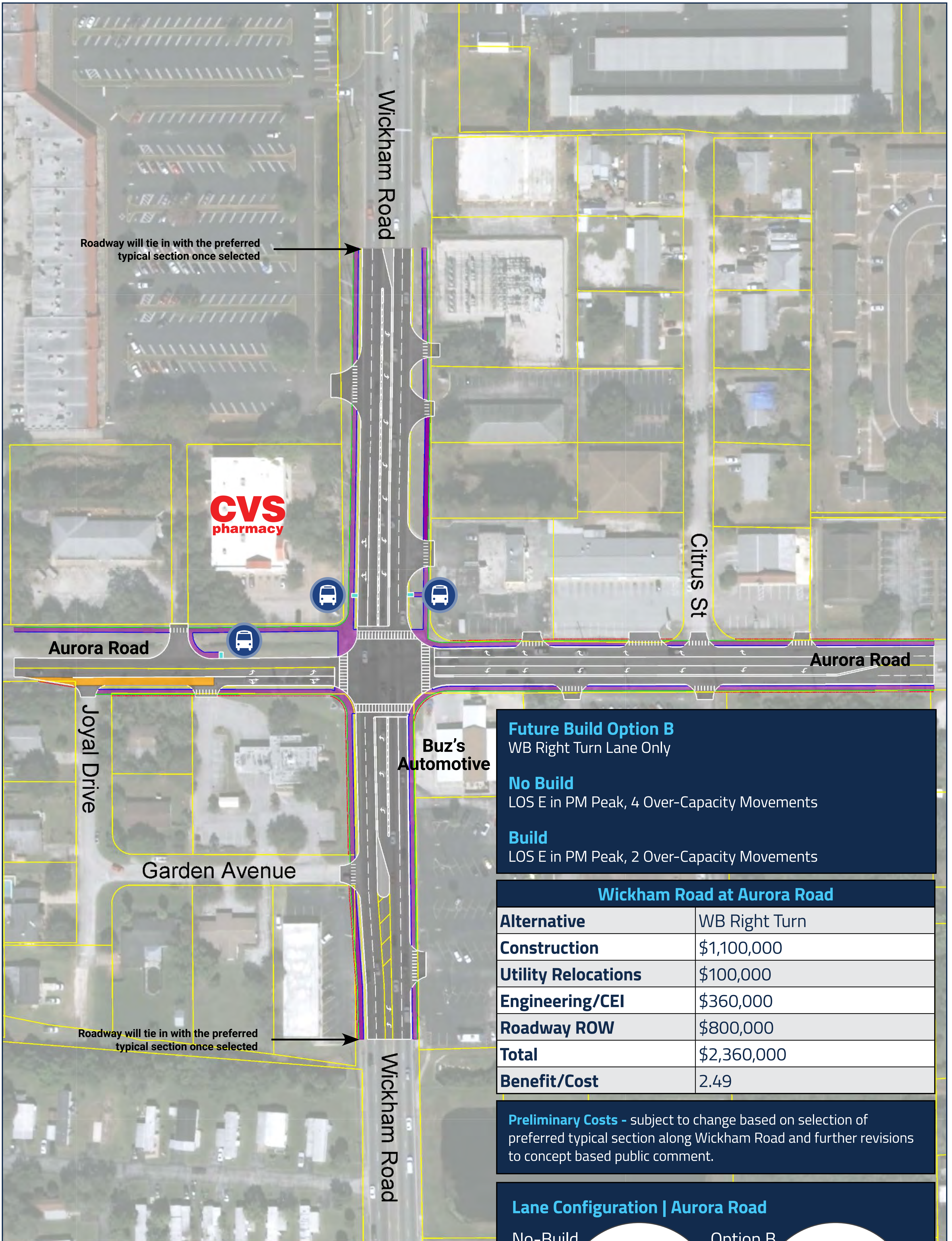
Wickham Road at Aurora Road	
Alternative	NB/WB Right Turns
Construction	\$1,300,000
Utility Relocations	\$250,000
Engineering/CEI	\$470,000
Roadway ROW	\$2,700,000
Total	\$4,720,000
Benefit/Cost	2.24

Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.



Legend

- Resurfaced Pavement
- Back of Curb
- New Pavement
- Front of Sidewalk
- New Sidewalk
- Back of Sidewalk
- Concrete Median
- Proposed ROW
- 🚌 Transit Stop



Future Build Option B
 WB Right Turn Lane Only

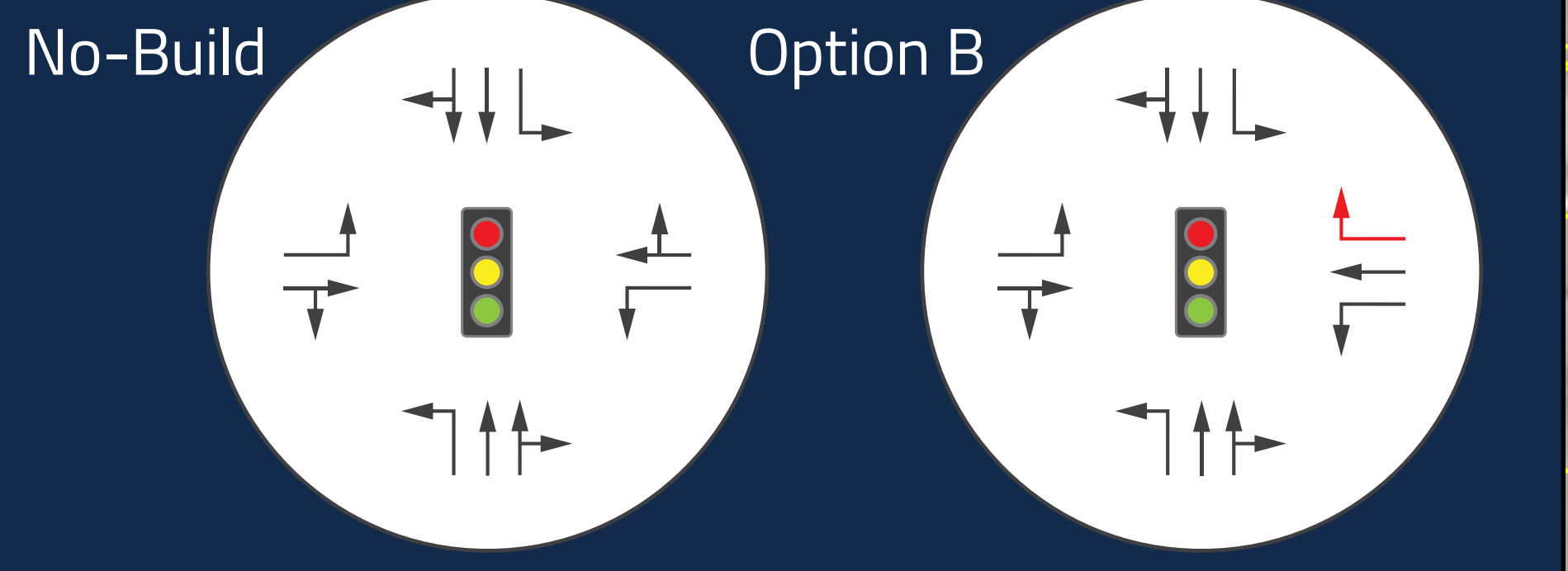
No Build
 LOS E in PM Peak, 4 Over-Capacity Movements

Build
 LOS E in PM Peak, 2 Over-Capacity Movements

Wickham Road at Aurora Road	
Alternative	WB Right Turn
Construction	\$1,100,000
Utility Relocations	\$100,000
Engineering/CEI	\$360,000
Roadway ROW	\$800,000
Total	\$2,360,000
Benefit/Cost	2.49

Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.

Lane Configuration | Aurora Road



Legend

- Resurfaced Pavement
- New Pavement
- New Sidewalk
- Concrete Median
- Transit Stop
- Back of Curb
- Front of Sidewalk
- Back of Sidewalk
- Proposed ROW

0 20 100
 Feet

N

FIGURE 9 | NORTHGATE PLAZA ACCESS MANAGEMENT IMPROVEMENTS



Roadway will tie in with the preferred typical section once selected

Electronics Drive

Northgate Street



Northgate Plaza Signal

Wickham Road

Northgate Plaza Build

LOS C in PM Peak, 0 Over-Capacity Movements

McDonald's Build

LOS C in PM Peak, 0 Over-Capacity Movements

Northgate Street Build

LOS A in PM Peak, 0 Over-Capacity Movements

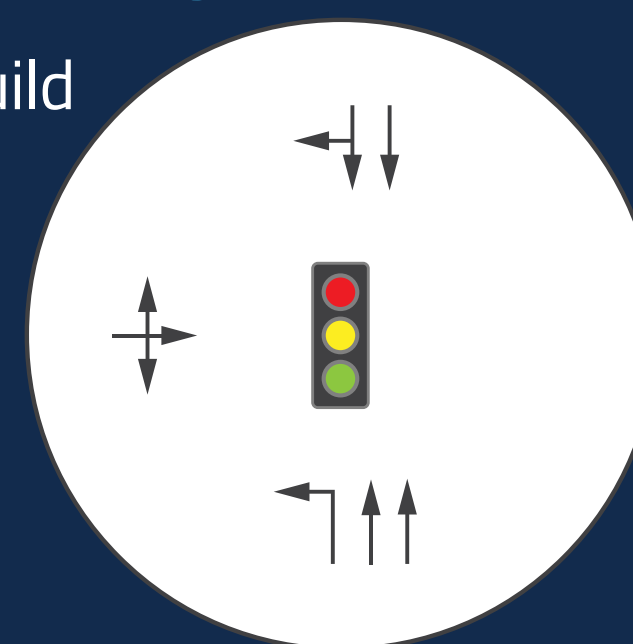
Wickham Road at Northgate Plaza

Construction	\$900,000
Utility Relocations	\$250,000
Engineering/CEI	\$350,000
Roadway ROW	\$30,000
Total	\$1,530,000

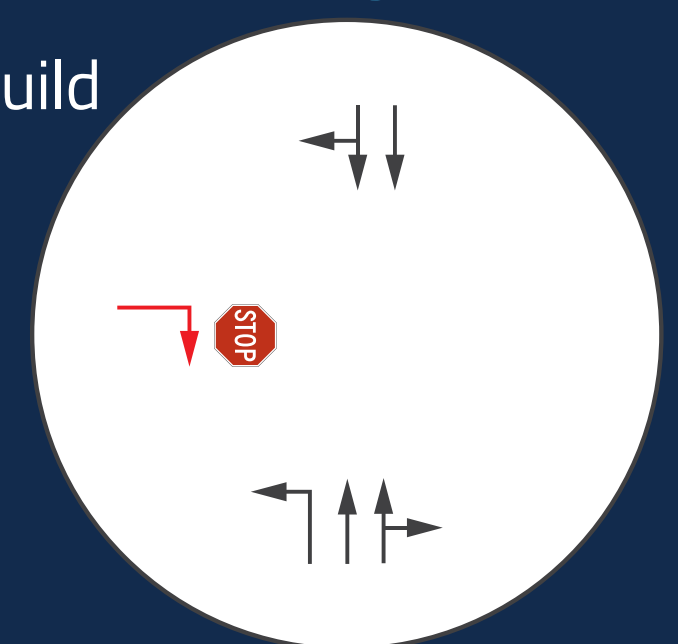
Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.

Lane Configuration | Northgate Plaza Signal

No-Build

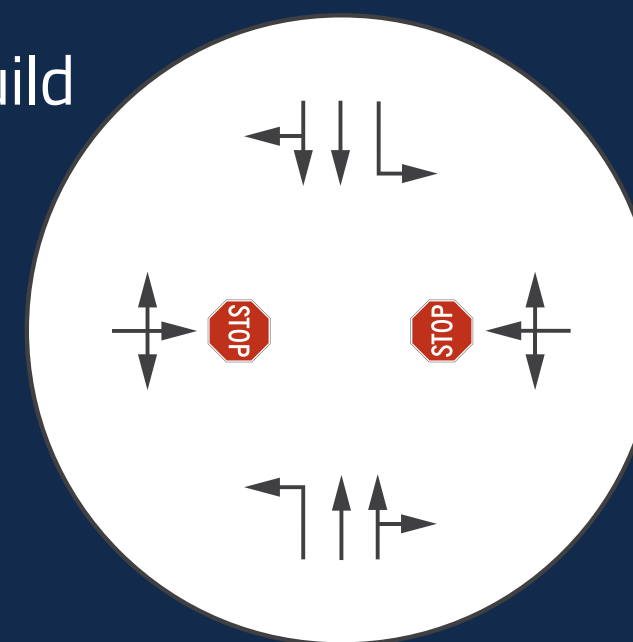


Build

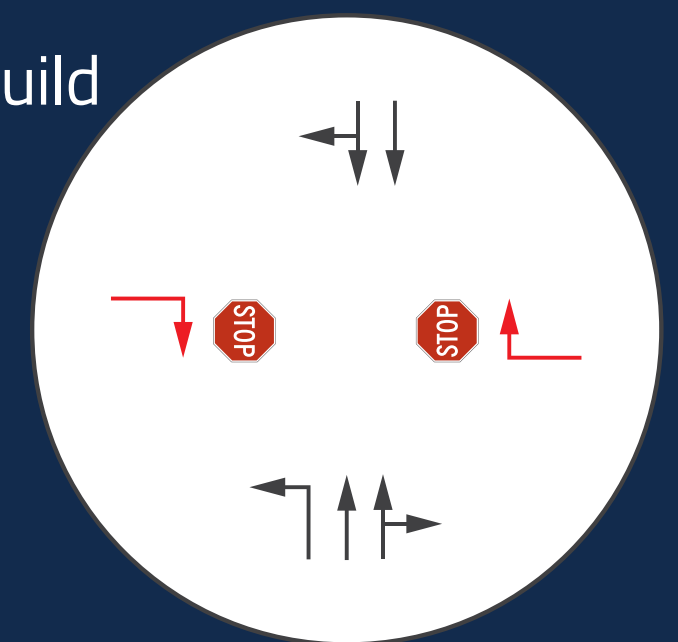


Lane Configuration | McDonald's

No-Build

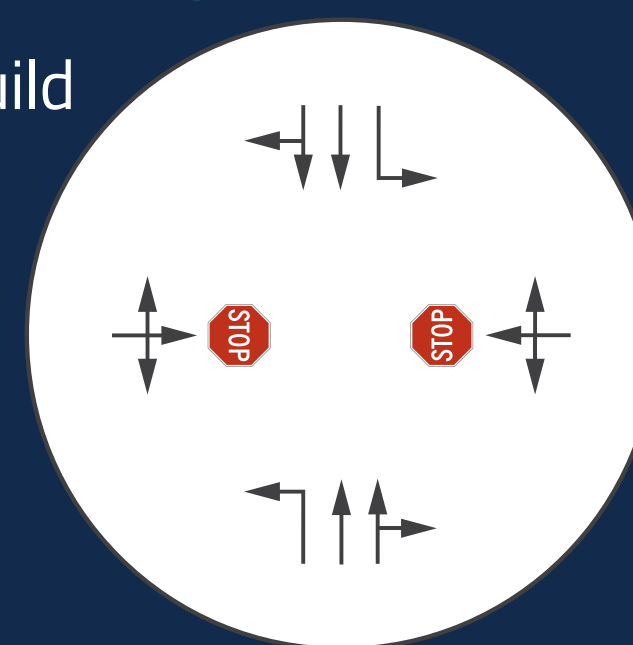


Build

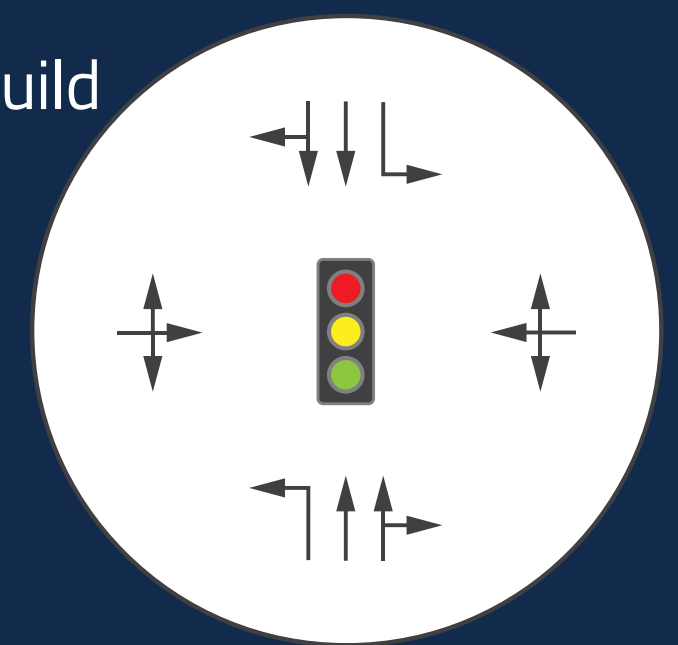


Lane Configuration | Northgate Street

No-Build



Build



Legend

- Resurfaced Pavement
- New Pavement
- New Sidewalk
- Concrete Median
- Transit Stop
- Back of Curb
- Front of Sidewalk
- Back of Sidewalk
- Proposed ROW

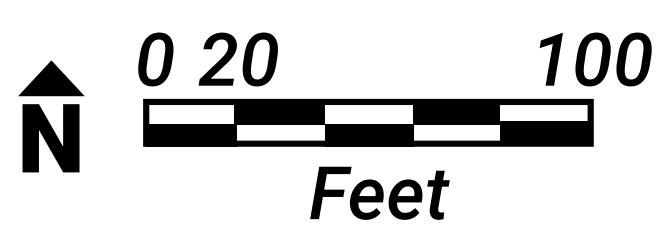


FIGURE 10 | VENTURE LANE AND LANSING STREET INTERSECTION IMPROVEMENTS

Build

LOS B in PM Peak, 0 Over-Capacity Movements

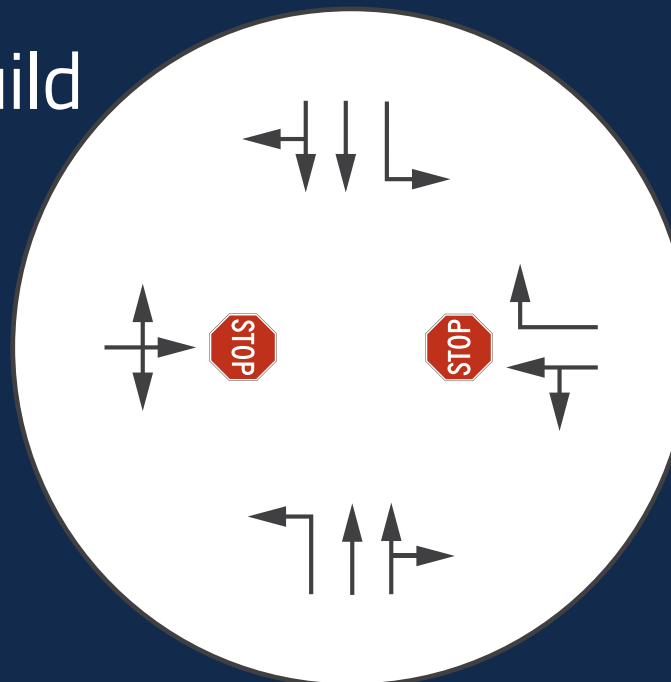
Wickham Road at Venture Lane and Lansing Street

Construction	\$1,300,000
Utility Relocations	\$0
Engineering/CEI	\$390,000
Roadway ROW	\$4,850,000
Total	\$6,540,000

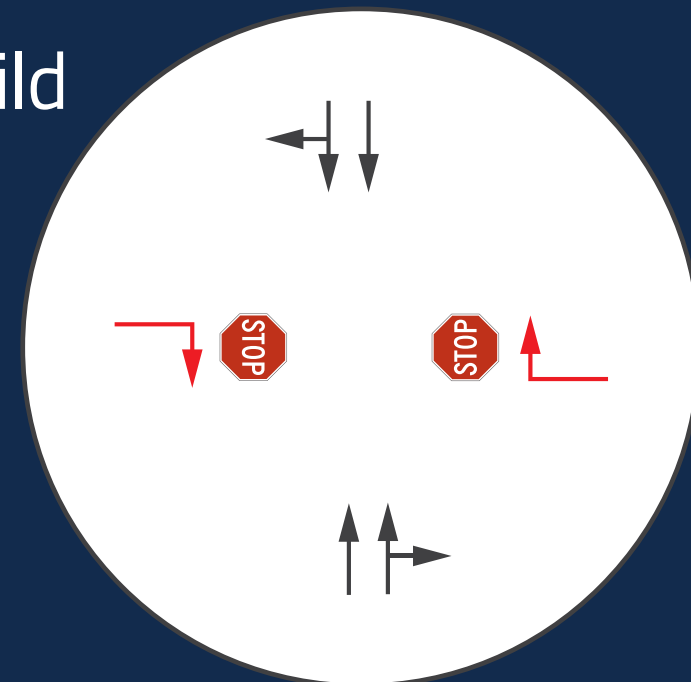
Concept feasibility still under discussion with Brevard County School Board

Lane Configuration | Lansing Street

No-Build

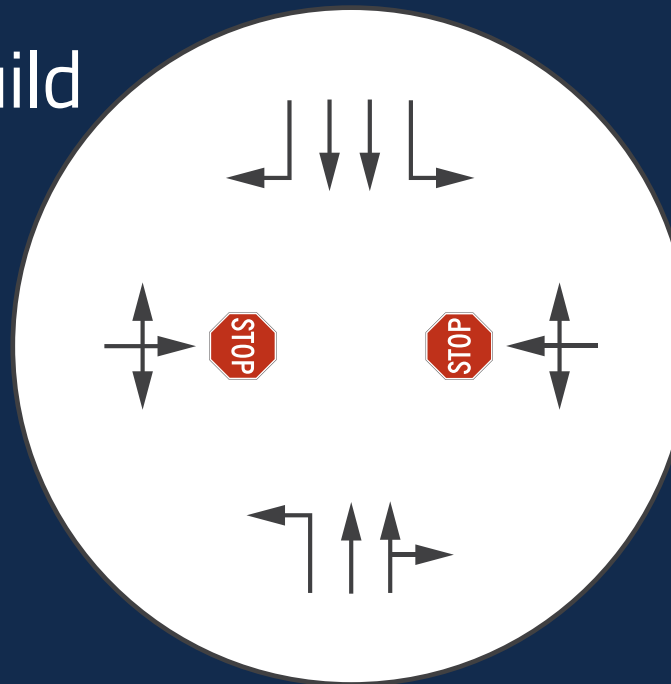


Build

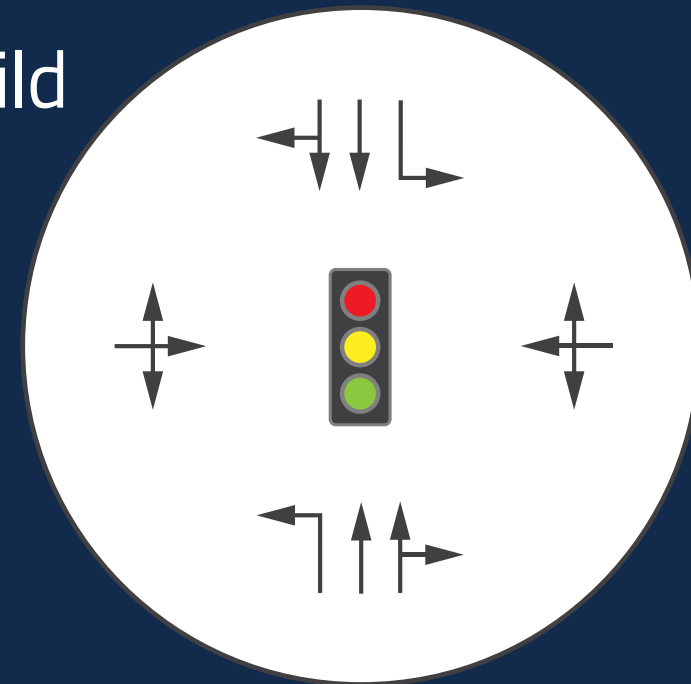


Lane Configuration | Venture Lane

No-Build



Build



Legend

- Resurfaced Pavement
- New Pavement
- New Sidewalk
- Concrete Median
- Transit Stop
- Back of Curb
- Front of Sidewalk
- Back of Sidewalk
- Proposed ROW

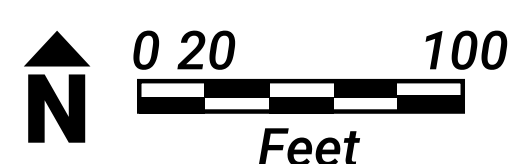


FIGURE 11 | LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

Future Build
 NB Right Turn Lane and 2nd WB Through Lane

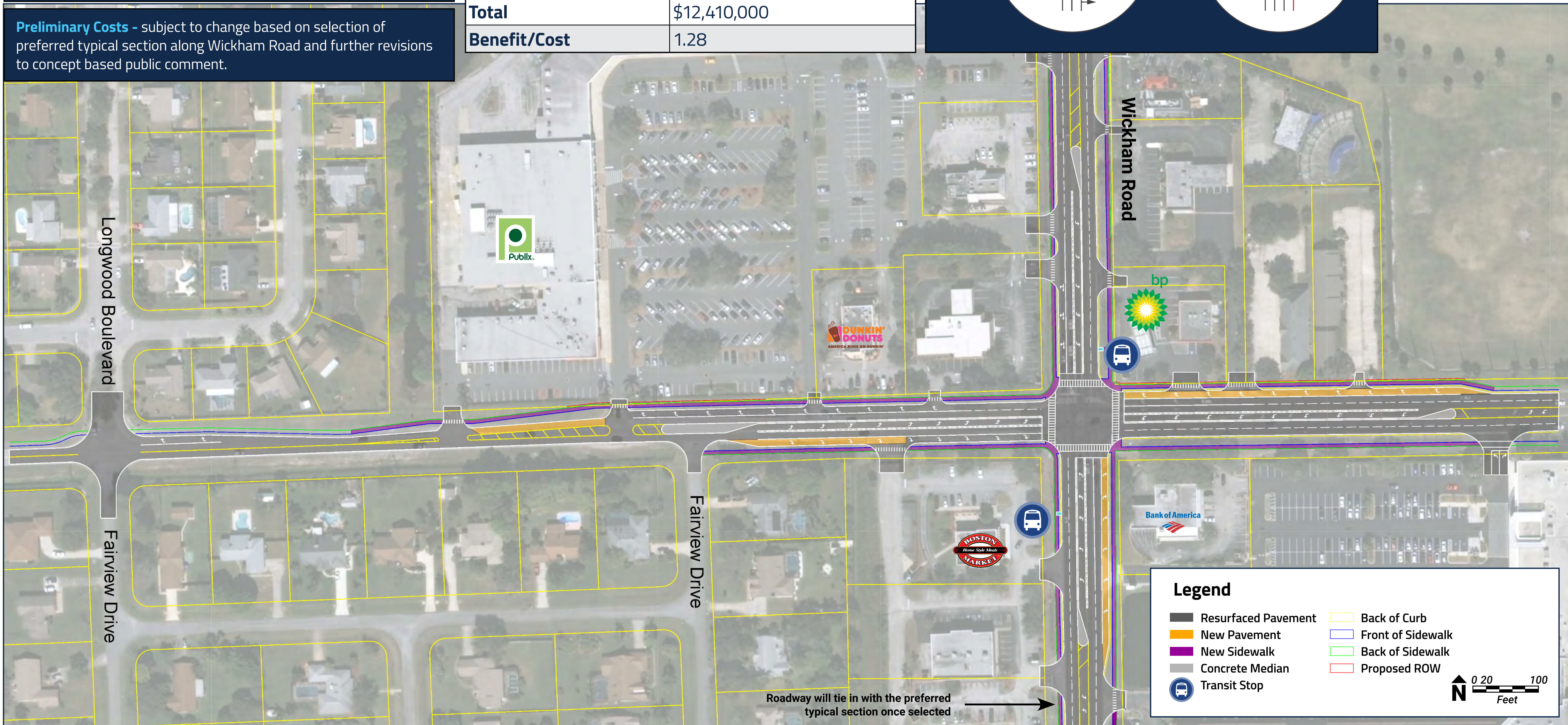
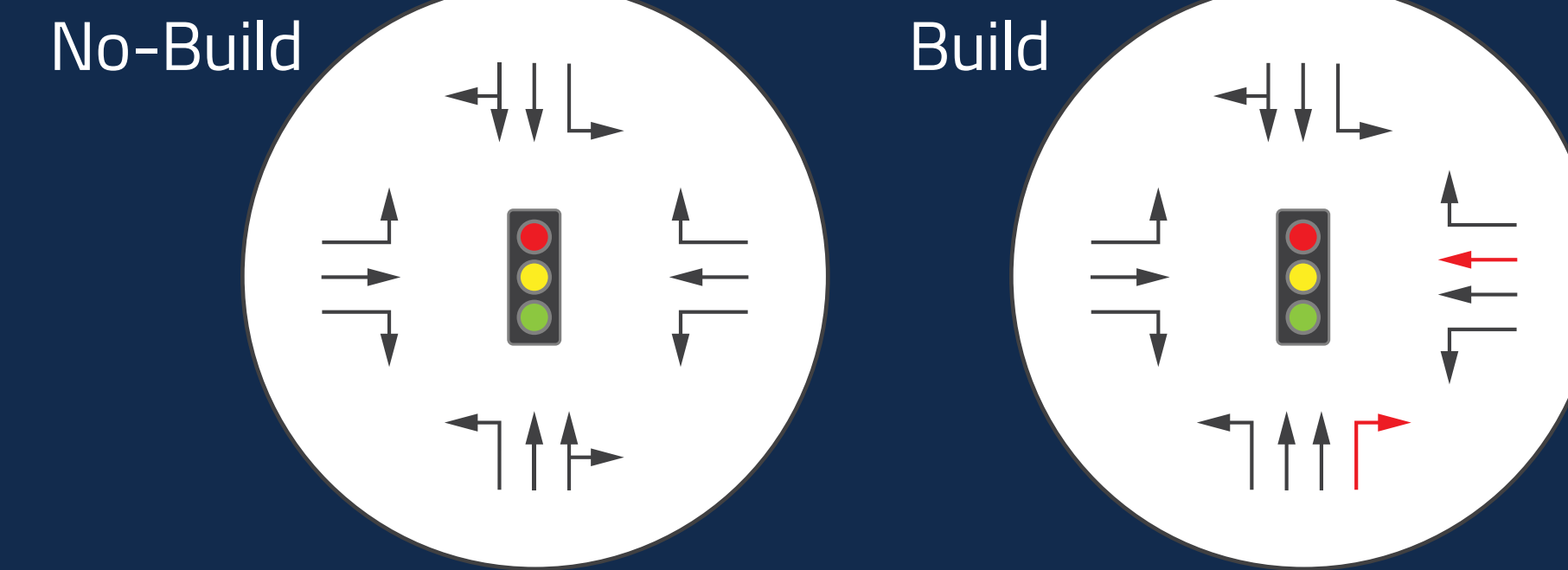
No-Build
 LOS E in PM Peak, 5 Over-Capacity Movements

Build
 LOS E in PM Peak, 0 Over-Capacity Movements

Preliminary Costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based public comment.

Wickham Road at Lake Washington Road	
Alternative	Lane Drop at Publix
Construction	\$2,300,000
Utility Relocations	\$400,000
Engineering/CEI	\$810,000
Roadway ROW	\$8,900,000
Total	\$12,410,000
Benefit/Cost	1.28

Lane Configuration | Lake Washington Road



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

FUTURE CONDITIONS ALTERNATIVES REVIEW | OCTOBER 25, 2017
PUBLIC MEETING #2

 **KITTELSON**
& ASSOCIATES


INFRASTRUCTURE
ENGINEERS, INC.


SPACE COAST
TPO

AGENDA

- Study Schedule Update
- Issues/Opportunities Review
- Future Conditions Analysis
- Short-Term Improvement Opportunities
- Intersection Improvements
- Roadway Improvement Alternatives
- Next Steps and Schedule

STUDY CORRIDOR

LEGEND

- Study Corridor
- City of Melbourne
- Brevard County





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



ISSUES / OPPORTUNITIES REVIEW

MULTI-MODAL ISSUES AND OPPORTUNITIES

LEGEND

-  Pedestrian Mobility Emphasis Intersection
-  Transit Stop Enhancements
-  Pedestrian Facility Gaps
-  Bicycle Facility Enhancements



Pedestrian Mobility Emphasis Intersections
Intersection Concepts



Transit Stop Enhancements
Preferred Alternative Concept Development








**Pedestrian Facility Gaps and
Bicycle Facility Enhancements**
Preferred Alternative Concept Development



VEHICULAR, UTILITY, AND DRAINAGE ISSUES AND OPPORTUNITIES

LEGEND

-  Left-Turn Crash Emphasis Intersection
-  Left-Turn/Angle Crash Emphasis Area
-  Peak Hour Queuing
-  Utilities Adjacent to Roadway
-  Drainage Facilities Adjacent to Roadway



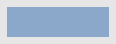
Left-Turn Crash Intersections
Intersection Concepts



Left-Turn/Angle Crash Areas
Preferred Alternative Concept Development



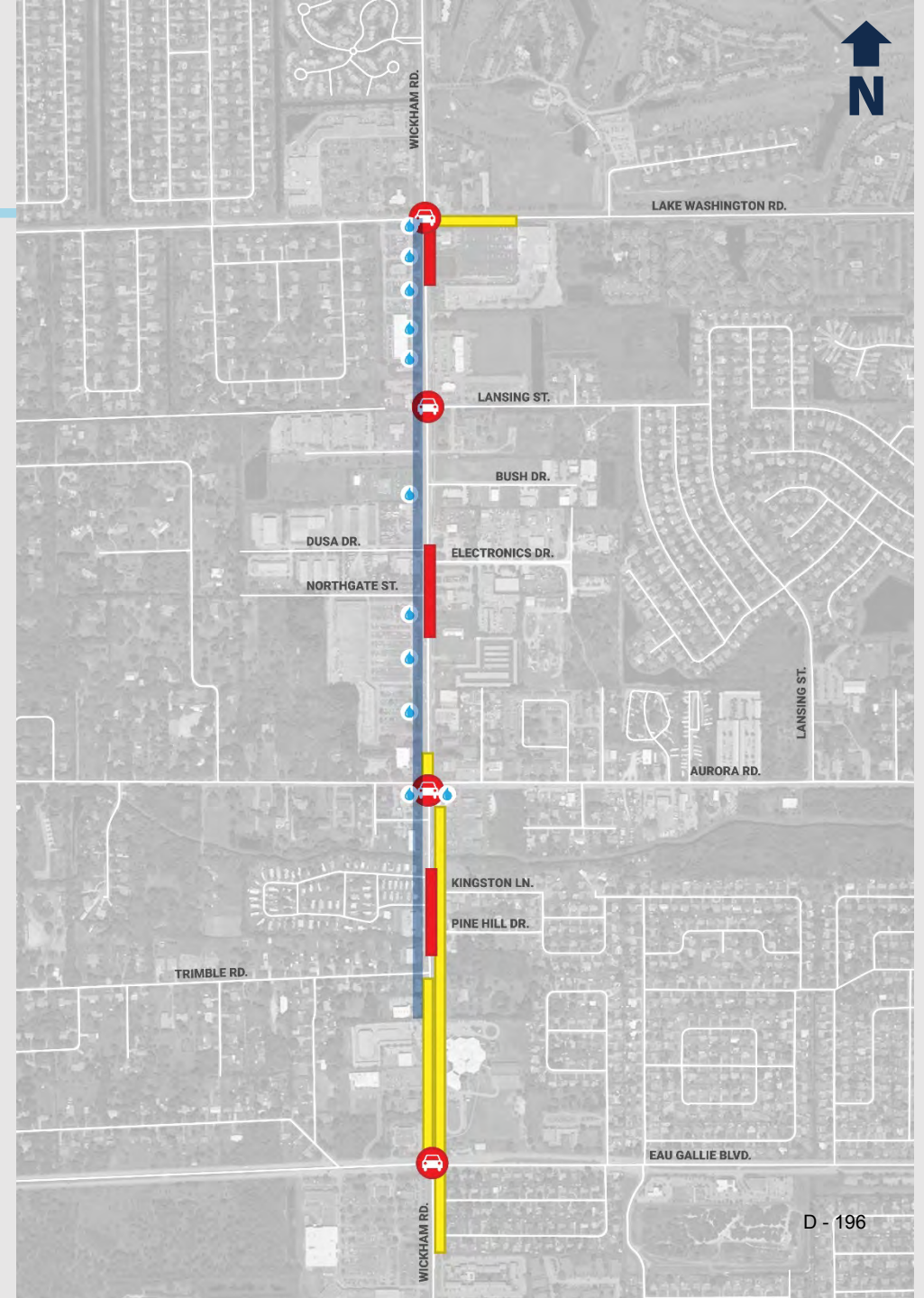
Peak Hour Queuing
Intersection Concepts



Utilities and Drainage



Typical Section and Preferred Alternative Concept Development





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

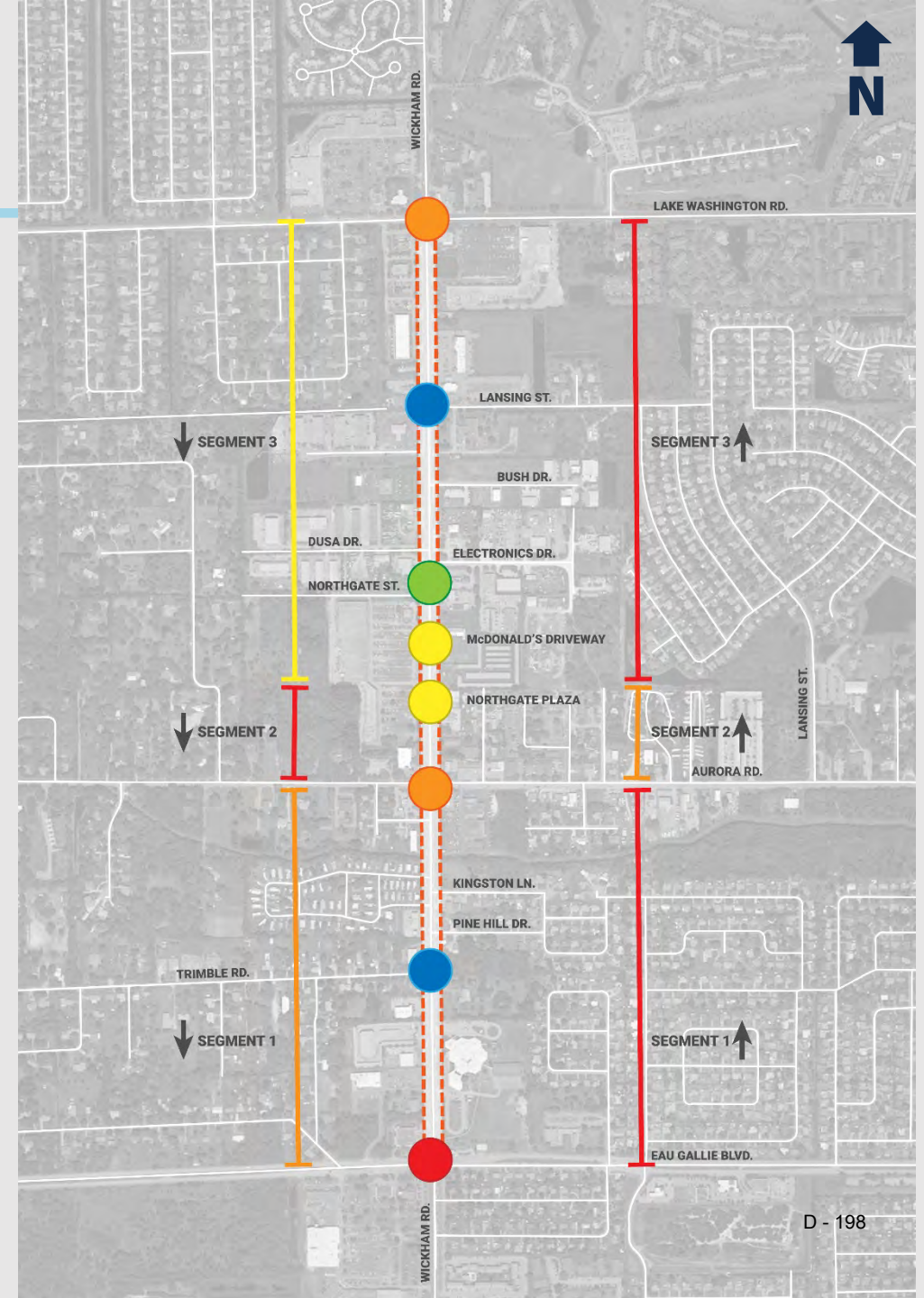


FUTURE NO-BUILD ANALYSIS

FUTURE NO-BUILD OPERATIONS

By 2040 if no improvements implemented, Wickham Road will only experience increased congestion

- LOS E/F anticipated NB from Eau Gallie to Lake Washington
- LOS E/F anticipated SB from Northgate Plaza to Eau Gallie
- Eau Gallie, Aurora, and Lake Washington anticipated to operate at LOS E or F





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

FUTURE BUILD ALTERNATIVES

FUTURE BUILD ALTERNATIVES OVERVIEW

- Short Term Improvements
- Wickham Road Intersection Improvements
- Wickham Road Typical Section Alternatives

SHORT TERM IMPROVEMENTS

- Pedestrian facility improvements at intersections
- Adaptive signal control/ITS related improvements aimed at reducing peak hour and non-reoccurring congestion - ongoing Brevard County projects
- Incorporate spot medians/directional median openings at specific locations
- LED corridor lighting
- PEDSAFE





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



INTERSECTION IMPROVEMENTS

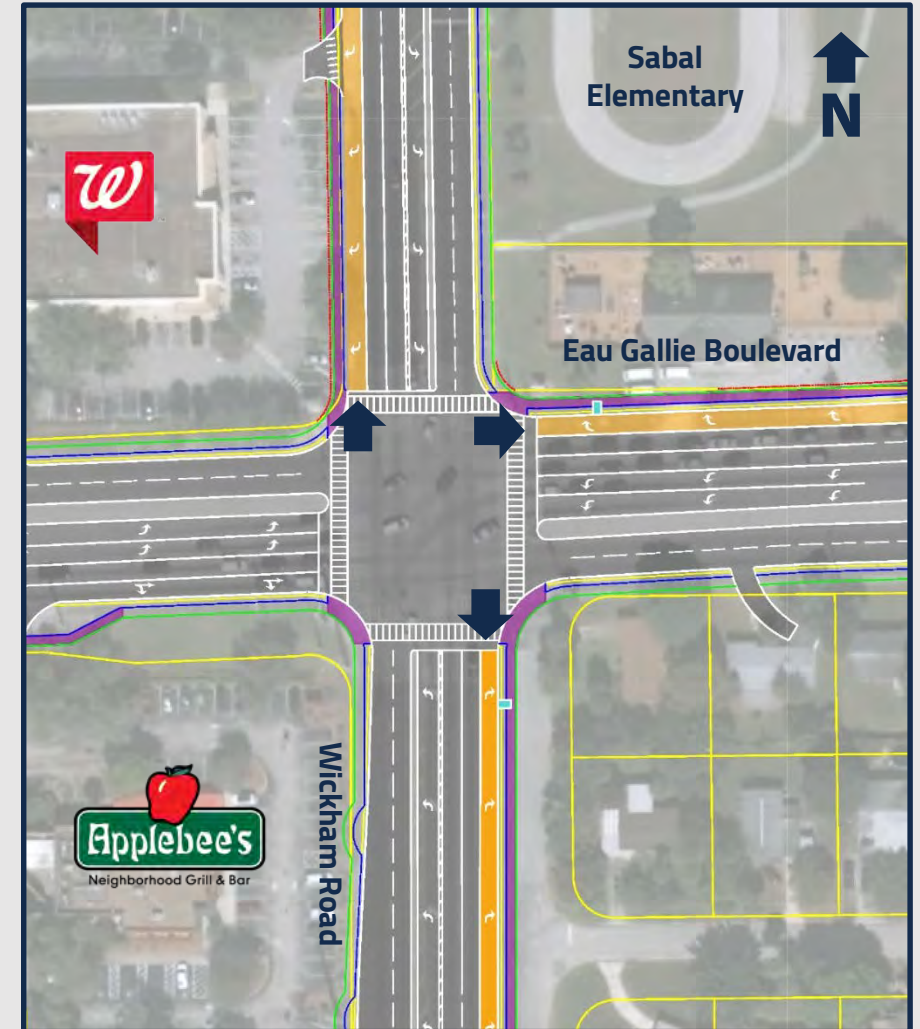
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

Future Build Option A / NB, SB, and WB Right Turn Lanes

- **No-Build**
LOS F in PM peak,
9 over-capacity movements
- **Build**
LOS E in PM peak,
0 over-capacity movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / WB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$800,000
Engineering/CEI	\$840,000
Roadway ROW	\$3,600,000
Total	\$7,240,000
Benefit/Cost	3.98

Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.



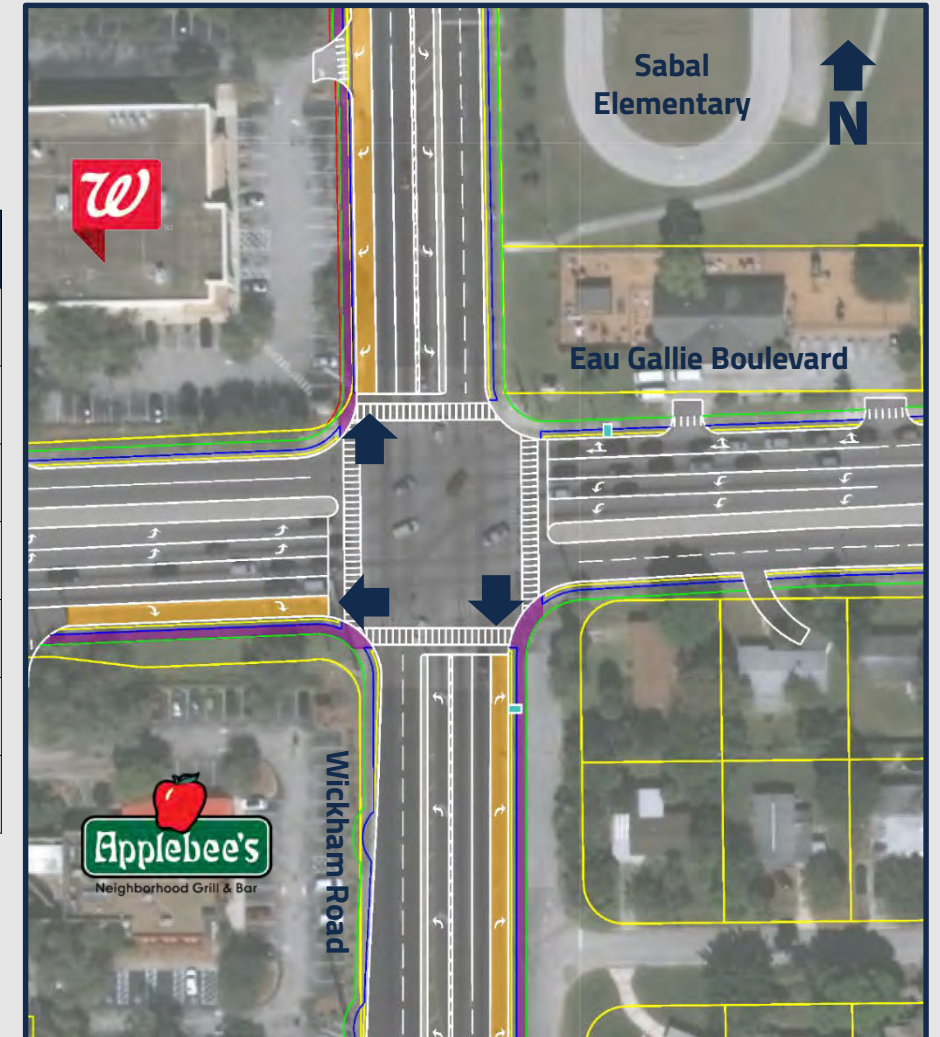
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

Future Build Option B / NB, SB, and EB Right Turn Lanes

- **No-Build**
LOS F in PM peak,
9 over-capacity movements
- **Build**
LOS E in PM peak,
3 over-capacity movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / EB Right Turn Lanes
Construction	\$1,900,000
Utility Relocations	\$900,000
Engineering/CEI	\$840,000
Roadway ROW	\$400,000
Total	\$4,040,000
Benefit/Cost	6.99

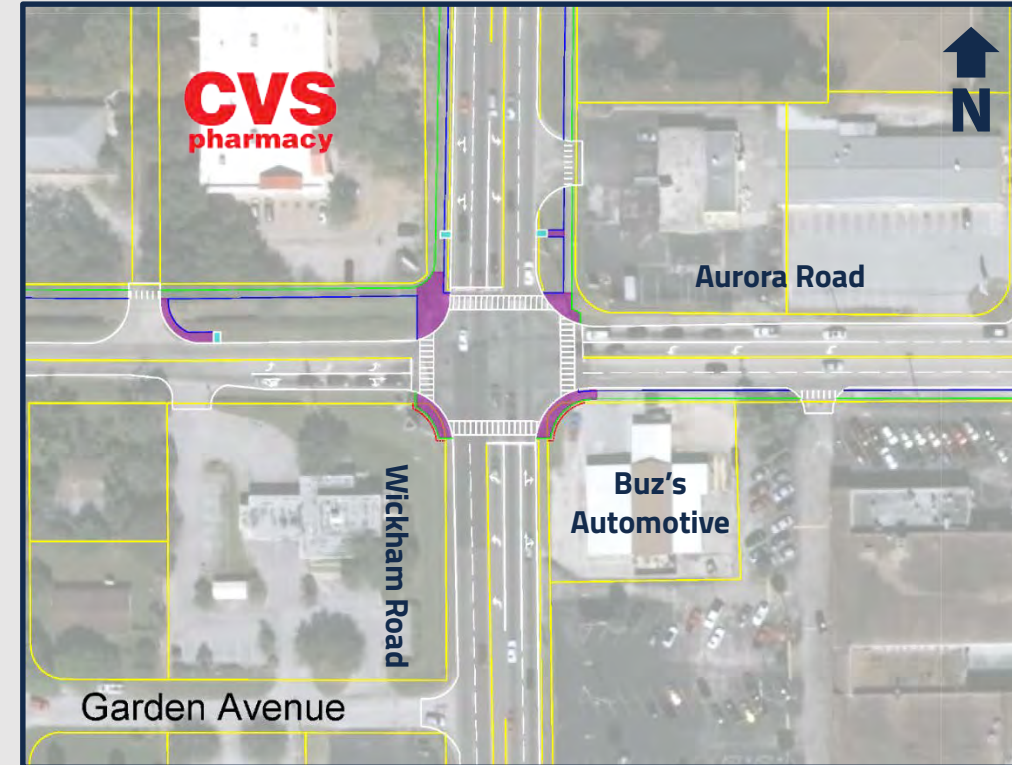
Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.



AURORA ROAD SHORT TERM IMPROVEMENTS

- Adding crosswalks to east and south legs
- Adding pedestrian landing pad to SE corner
- Rebuilding pedestrian landing pads on SW, NE, and NW corners
- Adding bus stop landing pads and sidewalk connections

Wickham Road at Aurora Road	
Construction	\$16,000
Utility Relocations	\$0
Engineering/CEI	\$3,000
Roadway ROW	\$123,000
Total	\$142,000

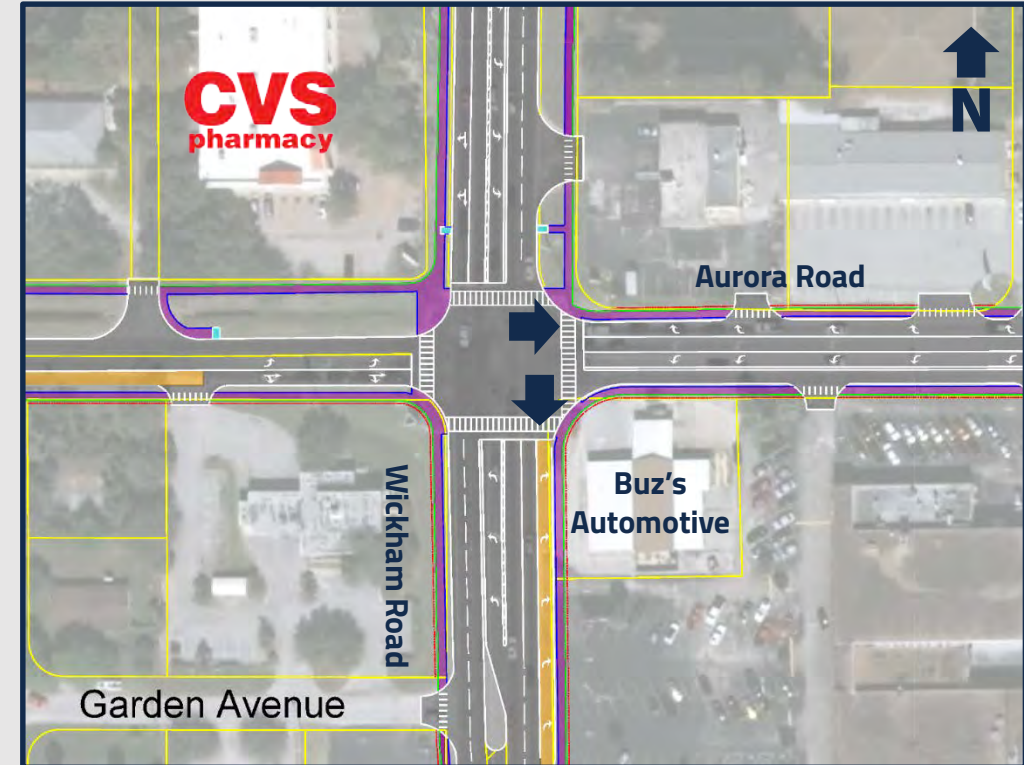


AURORA ROAD INTERSECTION IMPROVEMENTS

Future Build Option A / NB and WB Right Turn Lanes

- **No-Build**
LOS E in PM peak,
4 over-capacity movements
- **Build**
LOS E in PM peak,
0 over-capacity movements

Wickham Road at Aurora Road	
Alternative	NB/WB Right Turns
Construction	\$1,300,000
Utility Relocations	\$250,000
Engineering/CEI	\$470,000
Roadway ROW	\$2,700,000
Total	\$4,720,000
Benefit/Cost	2.24



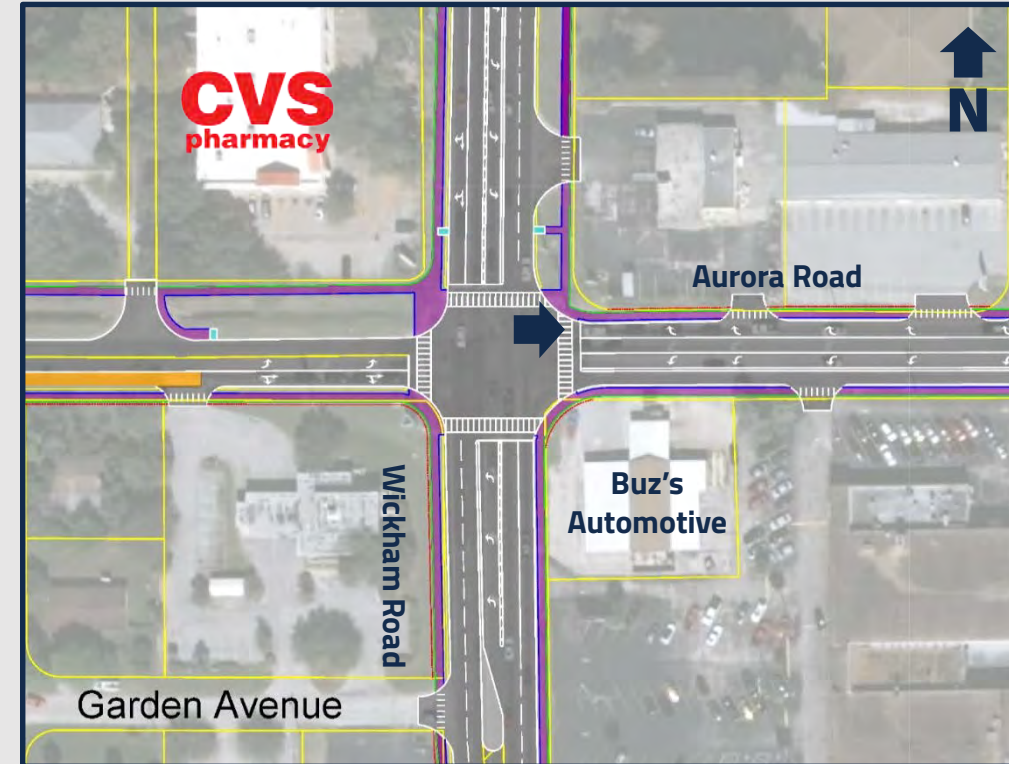
Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.

AURORA ROAD INTERSECTION IMPROVEMENTS

Future Build Option B / WB Right Turn Lane Only

- **No-Build**
LOS E in PM peak,
4 over-capacity movements
- **Build**
LOS E in PM peak,
2 over-capacity movements

Wickham Road at Aurora Road	
Alternative	WB Right Turn Lane Only
Construction	\$1,100,000
Utility Relocations	\$100,000
Engineering/CEI	\$360,000
Roadway ROW	\$800,000
Total	\$2,360,000
Benefit/Cost	2.49



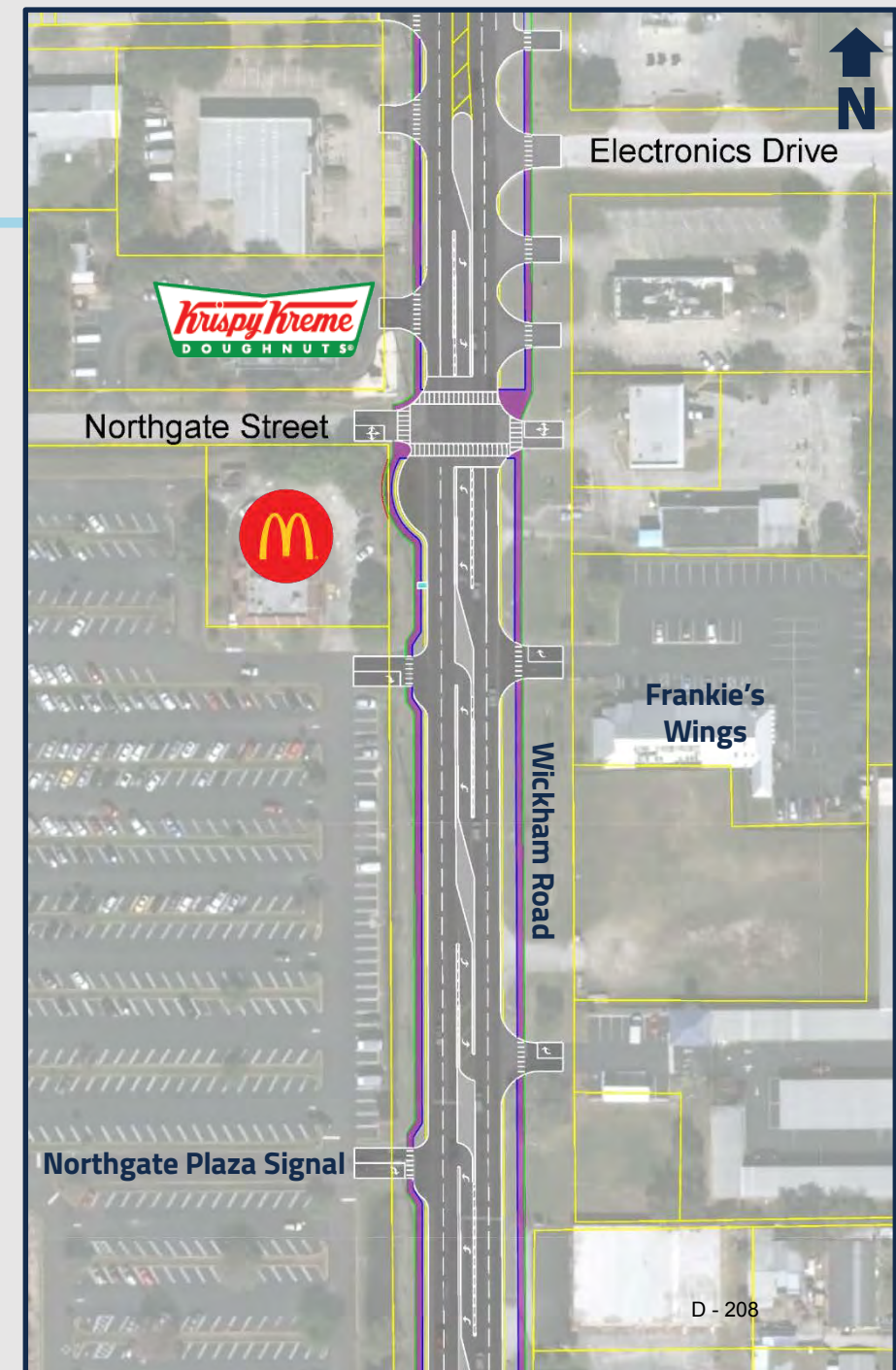
Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.

NORTHGATE PLAZA IMPROVEMENTS

Move Signal to Northgate Street and Add Medians

- **Northgate Plaza Build**
LOS C in PM peak, 0 over-capacity movements
- **Northgate Street Build**
LOS A in PM peak, 0 over-capacity movements
- **McDonald's Build**
LOS C in PM peak, 0 over-capacity movements

Wickham Road at Northgate Plaza	
Construction	\$900,000
Utility Relocations	\$250,000
Engineering/CEI	\$350,000
Roadway ROW	\$30,000
Total	\$1,530,000



VENTURE LANE AND LANSING STREET IMPROVEMENTS

New access road around existing school, signalized intersection at Wickham Road and Venture Lane

- **Build**
LOS B in PM peak,
0 over-capacity movements

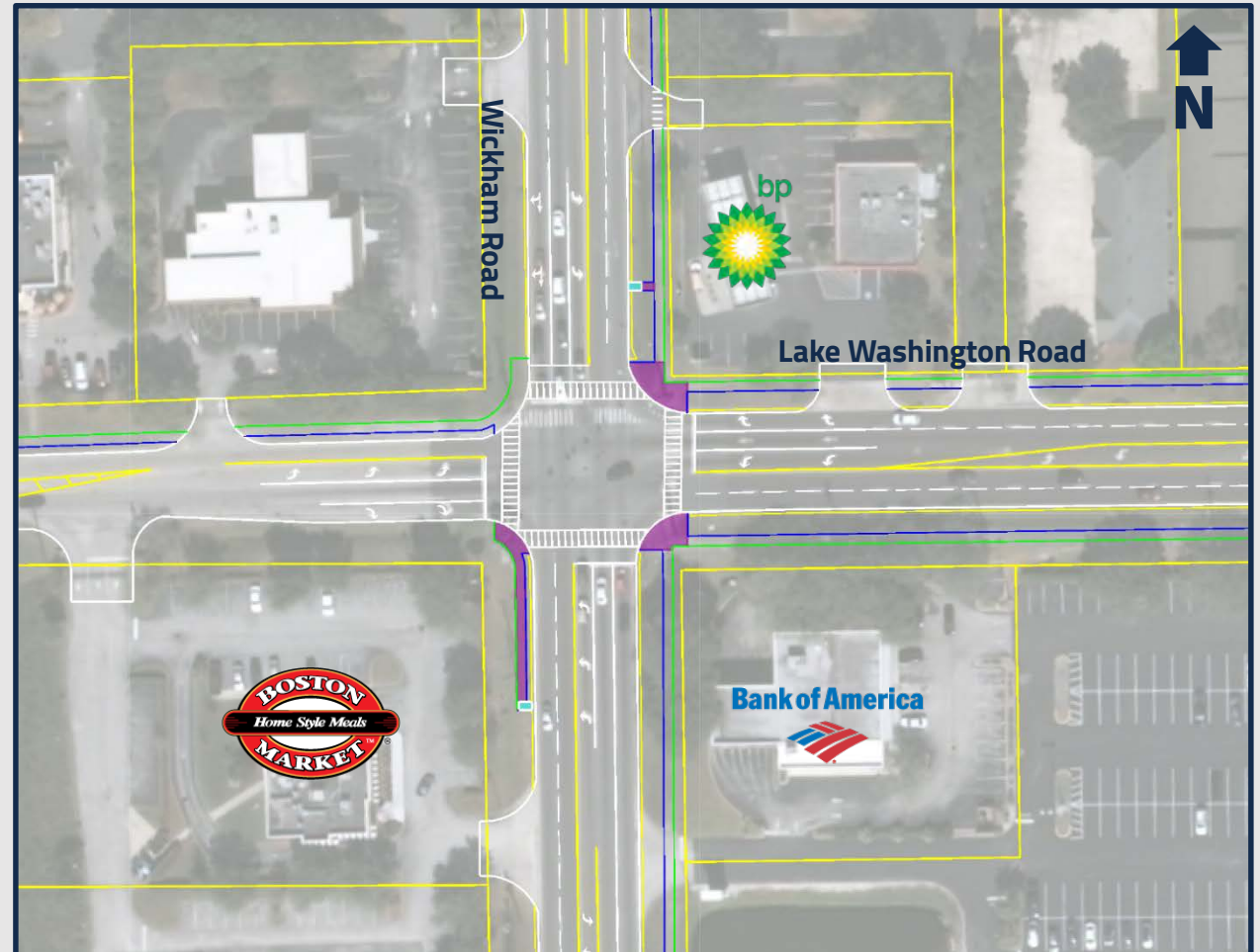
Wickham Road at Venture Lane and Lansing Street	
Construction	\$1,300,000
Utility Relocations	\$0
Engineering/CEI	\$390,000
Roadway ROW	\$4,850,000
Total	\$6,540,000

Concept feasibility still under discussion with Brevard County School Board



LAKE WASHINGTON ROAD SHORT TERM IMPROVEMENTS

- Adding crosswalks to west and south legs
- Adding pedestrian landing pad to SW corner
- Rebuilding pedestrian landing pads on NE and SE corners
- Adding bus stop landing pads and sidewalk connections



Wickham Road at lake Washington Road	
Construction	\$17,000
Utility Relocations	\$100,000
Engineering/CEI	\$35,000
Roadway ROW	\$0
Total	\$152,000

LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

Future Build / NB Right Turn Lane and 2nd WB Through Lane

- No-Build**

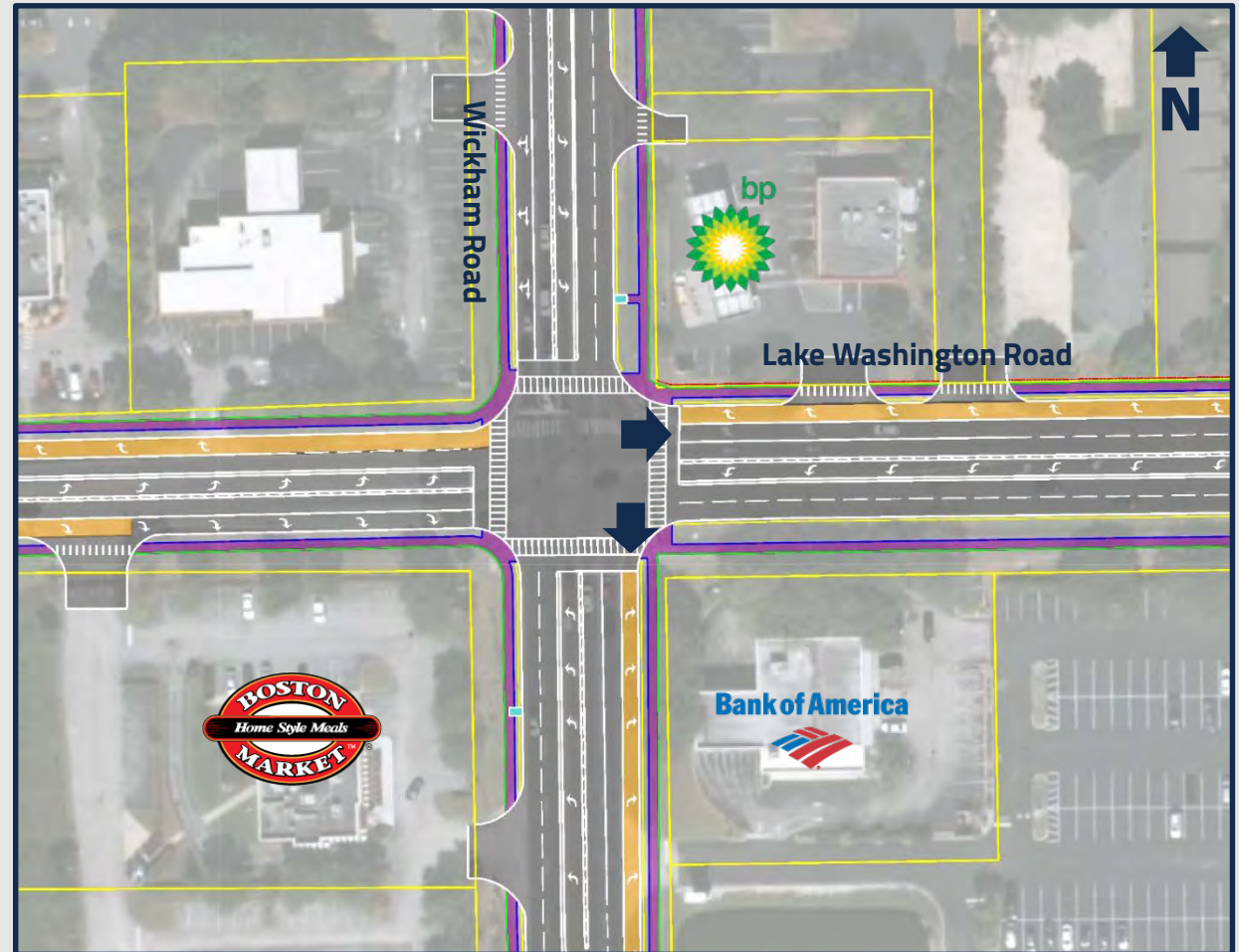
LOS E in PM peak,
5 over-capacity movements

- Build**

LOS E in PM peak,
0 over-capacity movements

Wickham Road at Lake Washington Road	
Alternative	WB Lane Drop at Publix
Construction	\$2,300,000
Utility Relocations	\$400,000
Engineering/CEI	\$810,000
Roadway ROW	\$8,900,000
Total	\$12,410,000
Benefit/Cost	1.28

Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.



LAKE WASHINGTON ROAD INTERSECTION IMPROVEMENTS

Potential WB Right Turn Lane Drop Alternative





2017

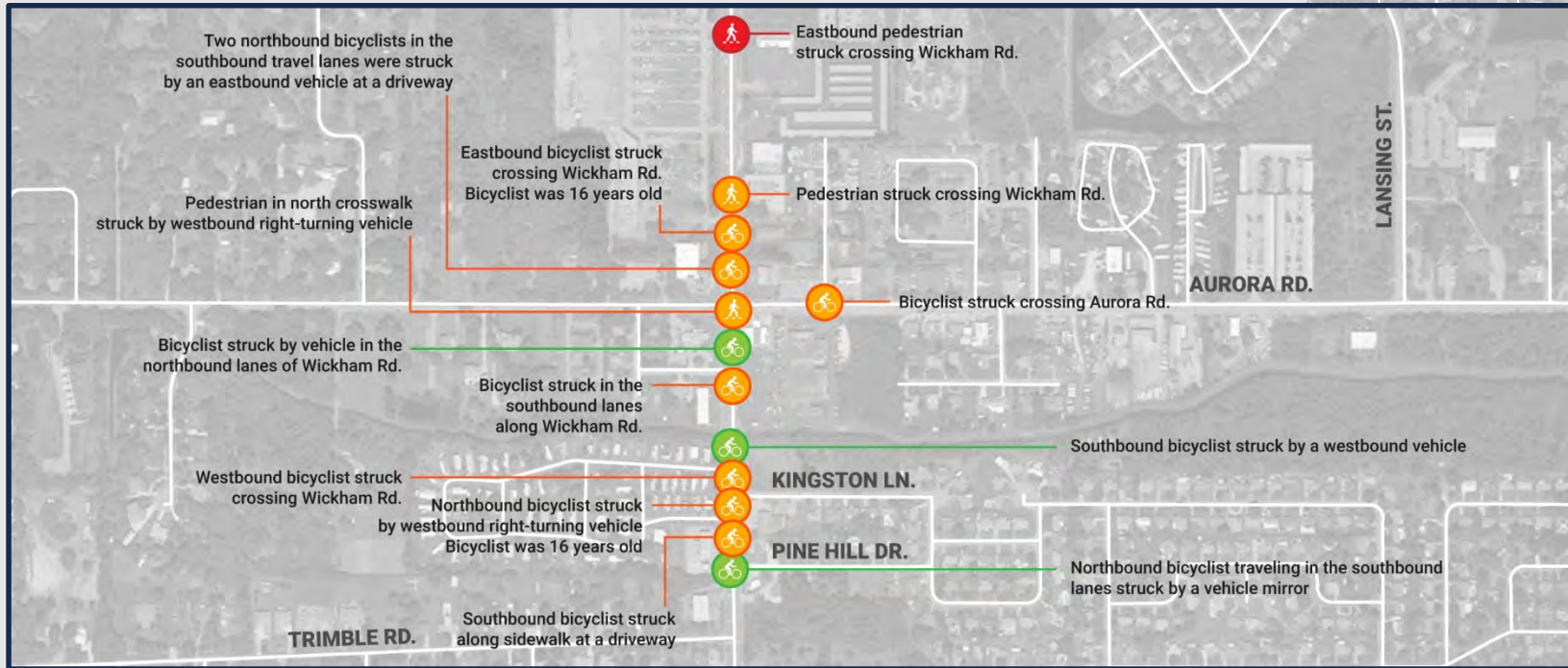
WICKHAM ROAD

OPERATIONAL ANALYSIS



TYPICAL SECTION ALTERNATIVES

PEDESTRIAN AND BICYCLE CRASH HISTORY (2011-2015)



● **Fatality**
● **Injury**
● **Property Damage Only**

TRENDS IN BICYCLING DESIGN

Sharrow / Shared Lane Marking



- No separation from vehicles
- Encourages bicyclists to take full lane
- Applicable to low speed streets (30 MPH or lower)

Source: NACTO, Urban Bikeway Design Guide

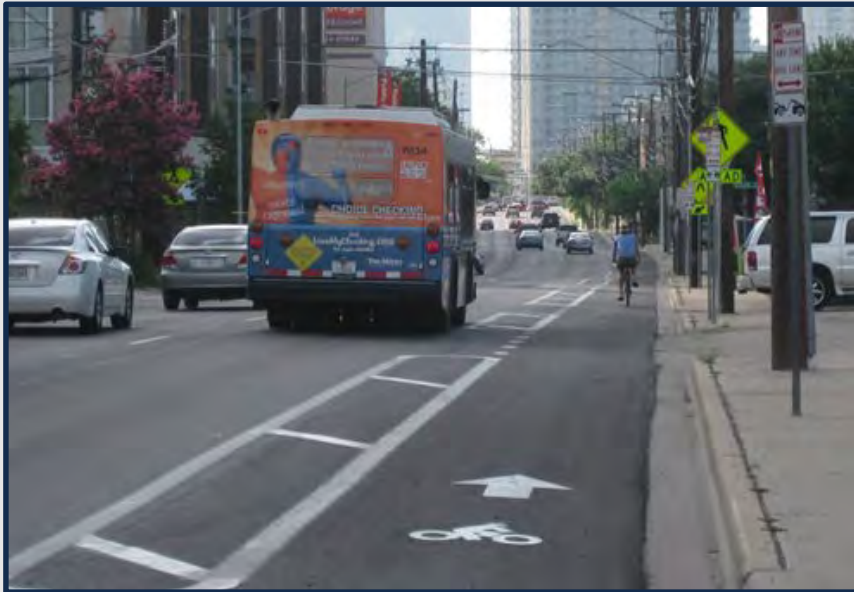
Conventional Bike Lane



- Lane marking
- Increases predictability of user positioning and interaction
- Not comfortable for bicyclist on roadways with high speeds or multiple vehicle lanes

TRENDS IN BICYCLING DESIGN

Buffered Bike Lane



- Greater shy distance between vehicles and bicyclists
- Buffer provides more comfort and perceived safety
- Appeals to a wider cross-section of bicycle users

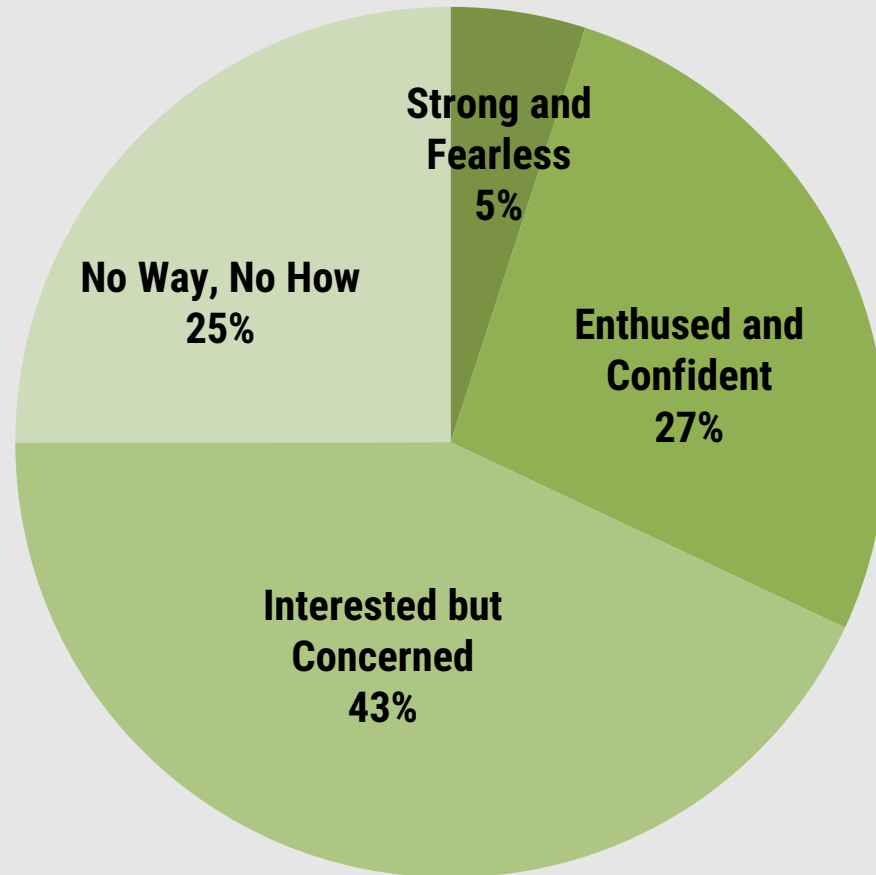
Shared Use Path



- Used by both pedestrians and bicyclists
- Increased comfort and safety for bicyclists
- Narrow width can hinder pedestrians

Source: NACTO, Urban Bikeway Design Guide

TYPES OF BICYCLISTS

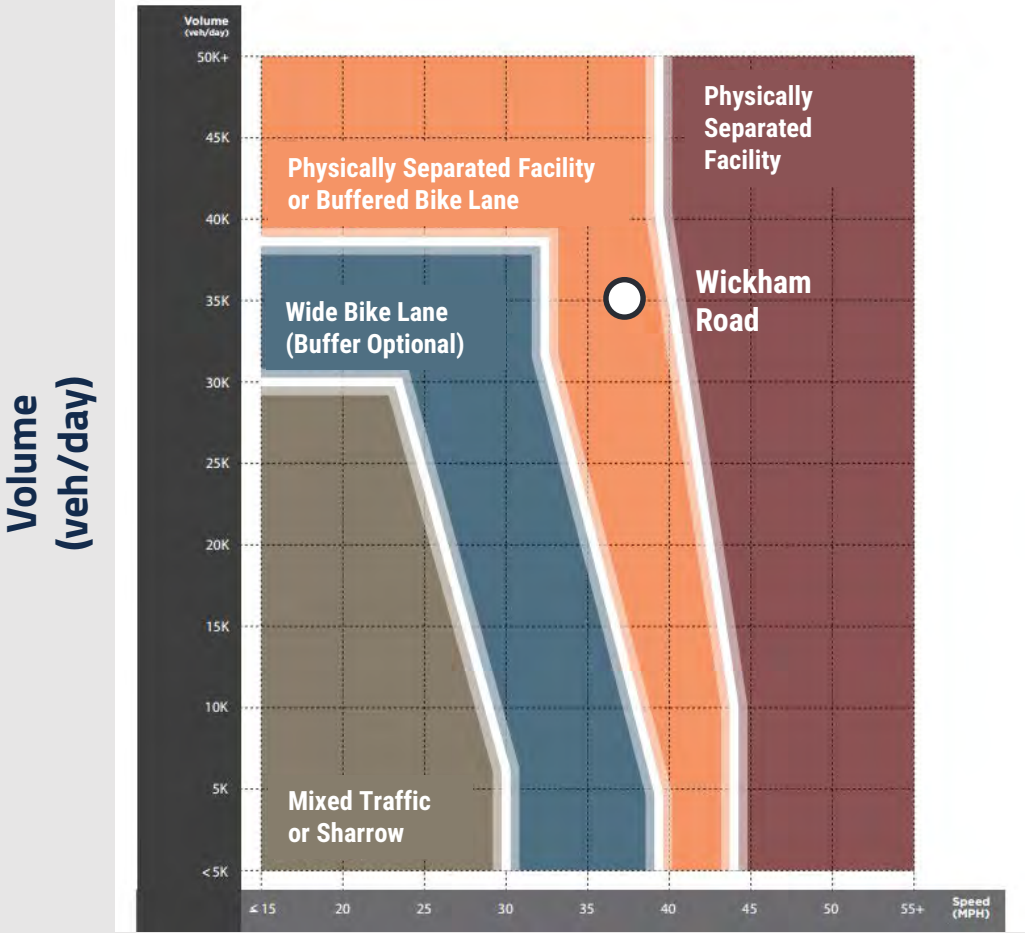


Source: National Institute for Transportation and Communities, Portland State University, Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S.

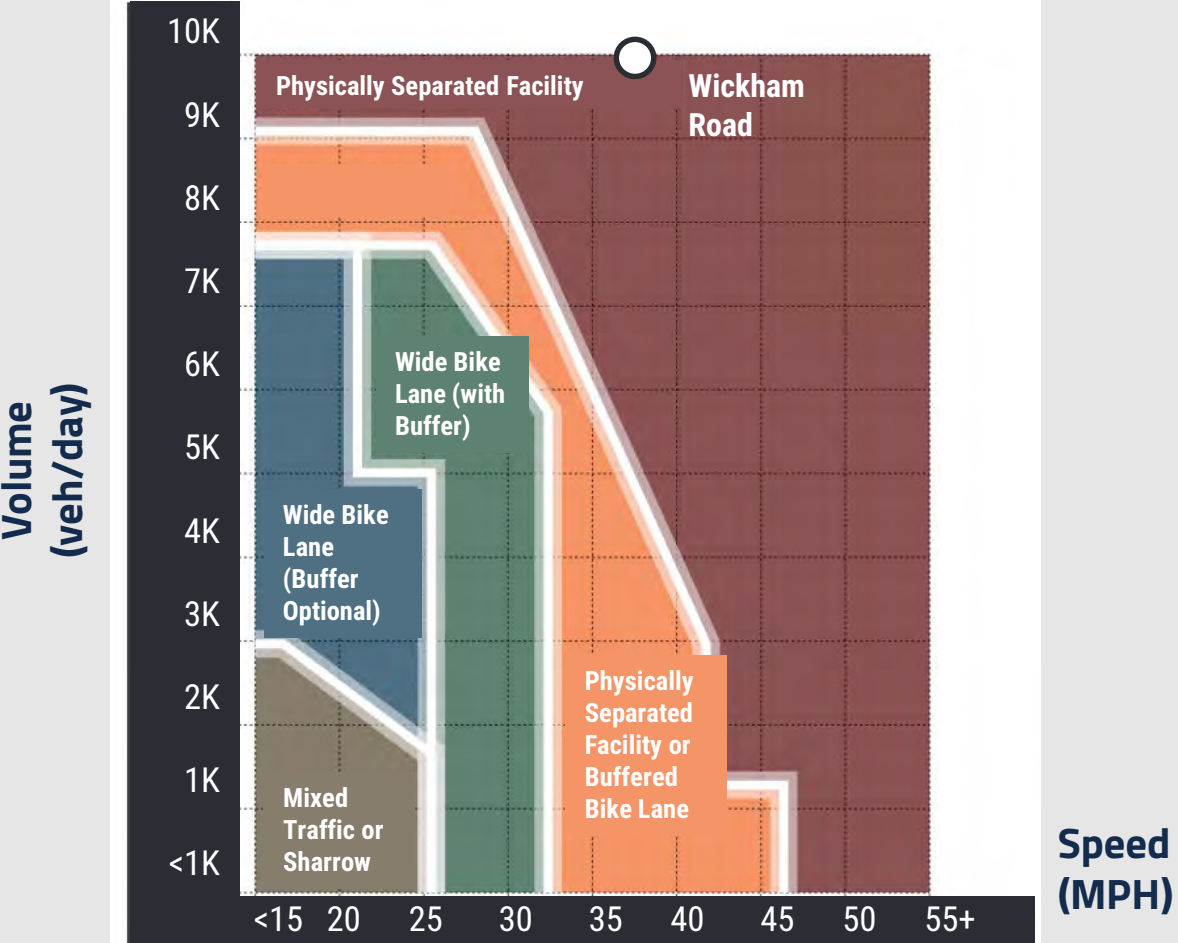


BICYCLING FACILITY PREFERENCE

CONFIDENT CYCLISTS



CONCERNED CYCLISTS



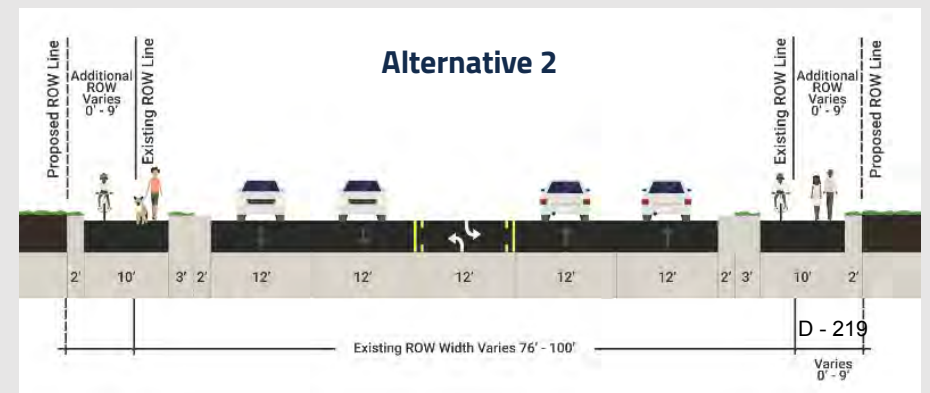
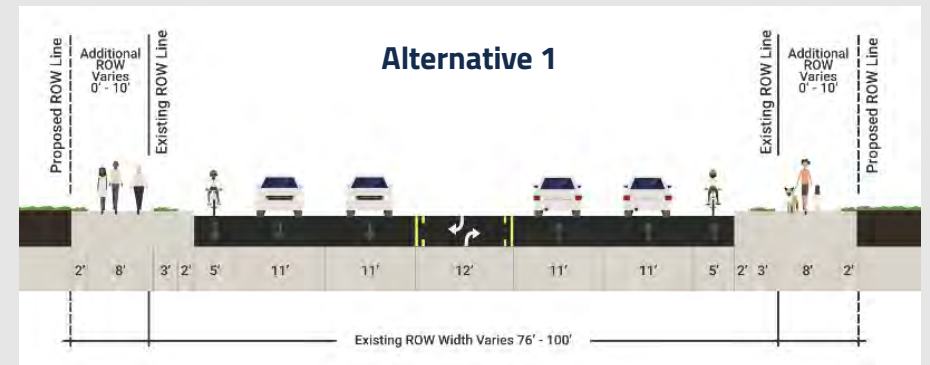
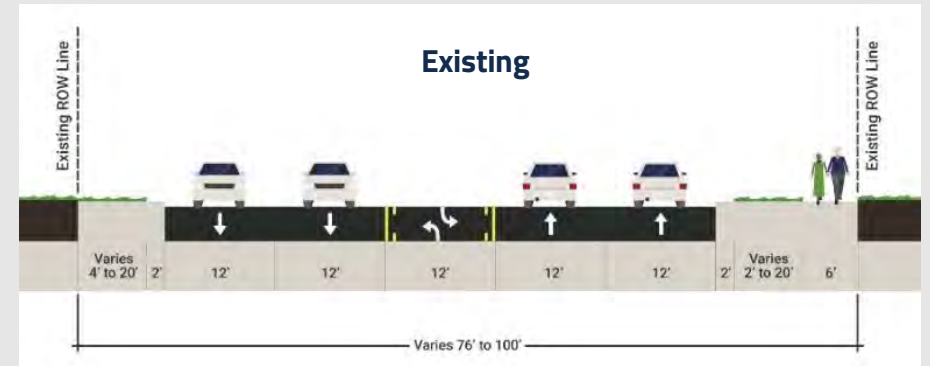
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 1

- Maintain existing two-way center left turn lane
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 2

- Maintain existing two-way center left turn lane
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side



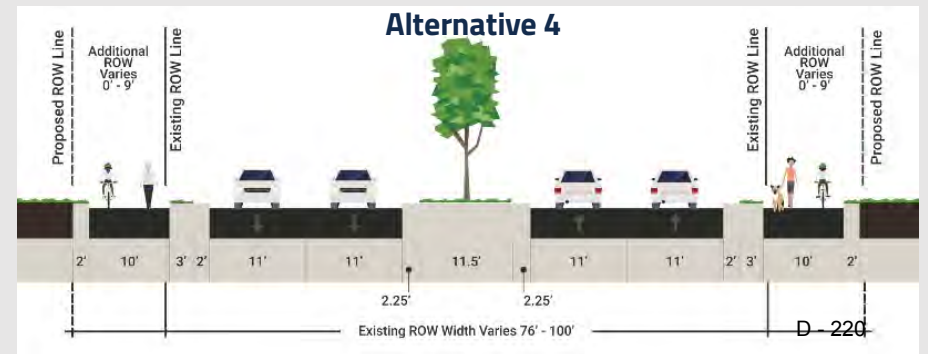
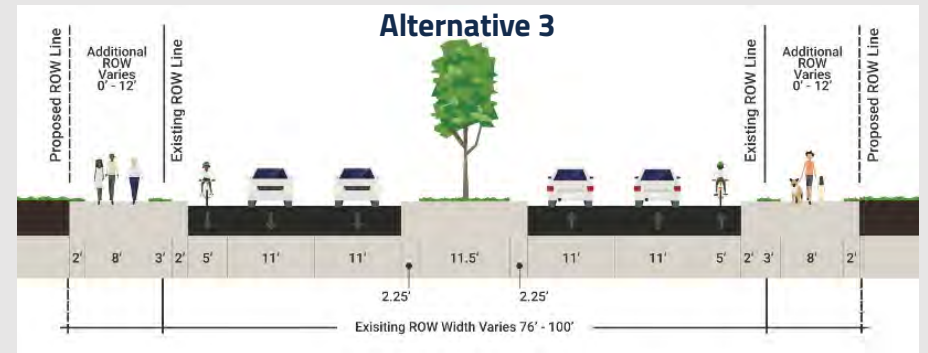
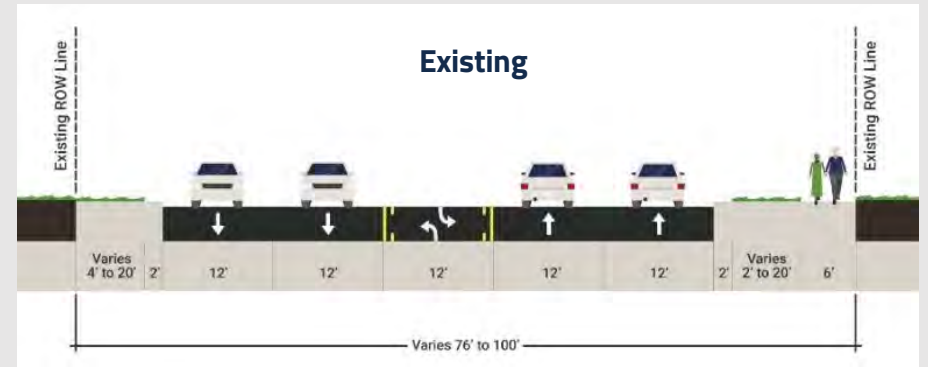
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 3

- Convert two-way center left turn lane to raised median
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 4

- Convert two-way center left turn lane to raised median
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side



TYPICAL SECTION MEASURES OF EFFECTIVENESS

✓ Positive Impacts

✓ Moderate Impacts

\$ Least Cost

\$\$ Moderate Cost

\$\$\$ High Cost

Measure of Effectiveness	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Improve Pedestrian Mobility/Safety	✓	✓	✓	✓
Improve Bicycle Mobility/Safety	✓	✓	✓	✓
Improve Vehicular Mobility	No Change	No Change	✓	✓
Improve Vehicular Safety	✓	No Change	✓	✓
Right-of-Way Impacts	\$\$\$	\$\$\$	\$\$\$	\$\$\$
Drainage Impacts	\$\$\$	\$\$	\$\$\$	\$\$\$
Utility Impacts	\$\$\$	\$\$\$	\$\$\$	\$\$\$
Total Cost Comparison	\$\$	\$	\$\$\$	\$\$\$



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



NEXT STEPS AND SCHEDULE

HOW CAN YOU GET INVOLVED?

- Review the concept boards
- Complete the comment form or on-line survey
- Comment using Wickham Road website
- Study Team presenting to TPO Board on December 14th at 3 P.M.

QUESTIONS / CONTACT INFORMATION

SCTPO Project Manager

Laura Carter

2725 Judge Fran Jamieson Way

Building B, Room 105

Melbourne, FL 32940

Phone: 321-690-6890

Laura.carter@brevardfl.gov

Consultant Project Manager

Travis Hills, PE

225 East Robinson Street

Suite 450

Orlando, FL 32801

Phone: 407-540-0555

thills@kittelso.com



MEETING SUMMARY



Future Alternatives Public Meeting

SUBJECT:	Wickham Road Operational Analysis
MEETING DATE:	Wednesday October 25 th , 2017
MEETING TIME:	5:30 PM – 7:30 PM
VENUE:	Wickham Park Community Center, Room 1, 2815 Leisure Way, Melbourne FL 32935

Introduction and Attendees

The Wickham Road Operational Analysis evaluated alternatives to improve the observed congestion and safety issues while also incorporating multi-modal solutions to facilitate pedestrian, bicycle, and transit movements along the corridor. The analysis focused on identifying improvements for the section of Wickham Road from Eau Gallie Boulevard to Lake Washington Road. This is the second of two public meetings being held throughout the 14 month planning study. The purpose of the meeting was to present the improvement alternatives developed for the corridor and receive input from interested stakeholders. Thirty-two members of the public participated in the public meeting with 13 additional local government, Space Coast Transportation Planning Organization (SCTPO), and consultant staff. Two Elected Officials attended the Public Meeting. The sign-in sheets for the meeting are attached.

Meeting Outreach Tools and Meeting Statistics

The SCTPO uses a multi-faceted social media campaign to reach out to the general public regarding public meetings. **Table 1** below displays the social media outreach activities and comments related to those activities.

Table 1: Social Media Outreach Activities

ITEM/TOOL	COMMENTS
Meeting Flyer/Postcard Property Owners Mail List (Every Door Direct Mail)	Utilized UPSP; direct mail out of Postcards to local zip codes # Postcards Mailed = 8,577 Delivered to post office 9/29/17
Elected Officials Emailed	25-30 Days Prior to Public Meeting Transmitted September 29, 2017
Appointed Officials Emailed	25-30 Days Prior to Public Meeting Transmitted September 29, 2017
Website	SCTPO popup on home page; calendar and project page
Social Media (Facebook/Twitter)	Posted one week prior, in early afternoon by SCTPO
Social Media (Facebook/Twitter)	Posted one week prior, in early afternoon by SCTPO
Press Release	SCTPO transmitted
Meeting Documents & Maps	Posted on website
Meeting PowerPoint Presentation	Posted on website
City of Melbourne Public Involvement Officer	Coordinated with PIO; posted on City website
Meeting Notice Post at Community Center	Flyer posted at facility
Meeting Notices in SCTPO Agenda Packages	SCTPO TAC/CAC/TPO October agenda packages
Announcement Flyers Provided to BOCC D4 and D5 Commissioners	Flyers provided to commissioner offices

As noted in the introduction, 32 members of the public participated in the meeting along with 13 local government, SCTPO, and consultant staff. The tables below provide additional meeting statistics:

Attendees Overview

Public: 32
Staff/consultants/local govt. agencies: 13
Total: 45

Disabilities/Impairments

Visually Impaired: 1

Ethnicity

Caucasian	20
Hispanic	1
Black or African American	1
Pacific Islander	
Other	1
No answer	4

Age Range

Under 30	2
30-45	1
45-60	8
over 60	14
No answer	2

Meeting Summary

The Public Meeting was an open house type format, with 30 minutes reserved at the beginning for the public to review the concept boards/handouts and ask questions of the study team staff. Once the initial question and answer time finished, Laura Carter, the SCTPO project manager, and Travis Hills, the consultant project manager, gave a presentation outlining the following topics about the project:

- Project Background/Overview;
- Issues/Opportunities along Corridor;
- Intersection and Typical Section Alternatives;
- Measures of Effectiveness; and
- Schedule and Next Steps.

After the presentation was completed, the public was encouraged to review the concept boards and ask any additional questions of the study team staff. The Public Meeting adjourned at 7:30 PM. The presentation given at the Public Meeting is attached.

Summary of Public Comment

The public that attended the meeting were encouraged to provide comments on the project. Twenty-seven comment forms were received by the study team from the public. Below is a summary of the comments received from the public:

Project Feedback

The public was asked to select their preferred alternative at Eau Gallie Boulevard, Aurora Road, and for the typical sections along the roadway. The following provides the number of votes each alternative received.

Eau Gallie	Total
No Change	3
Option A - NB/SB/WB	16
Option B - NB/SB/EB	8
Aurora	Total
No Change	1
Option A - NB/WB	13
Option B - WB	9
Typical Sections	Total
Alt. 1 - Bike lanes in roadway, 8' sidewalk	1
Alt. 2 - Shared use path	15
Alt. 3 - Raised median, bike lanes in roadway, 8' sidewalk	1
Alt. 4 - Raised median, shared use path	10

Other Questions or Comments

- On Eau Gallie Option A, there is no school bus lane.
- Support for traffic light at Venture Lane – 3 comments.
- There are traffic concerns that should be looked at: #1 people ignore the right-turn-only sign exiting from the strip mall @ Lake Washington onto Wickham; and #2 people ignore the right-turn lane on Lake Washington at Wickham going east and drive through the intersection.
- Need a sensor to prevent right-turn when pedestrian has walk sign.
- Not all drivers look for those on bikes.
- Landscaped median would beautify area, but due to the number of businesses this would not be feasible due to the removal of two-way left-turn lane.
- This section of Wickham needs to be 3 lanes in each direction due to amount of traffic, which is going to get worse in the coming years due to growth.
- Look to add a NB right into Sabal Elementary.

- Doesn't support shared use paths as cyclists can travel 30-35 MPH and this is too fast to mix with pedestrians.
- Please leave some green space on Wickham Road.
- Figure 11 needs substantial change related to Publix Shopping Center access from Lake Washington from the west.
- The short term improvements are a priority.

Next Steps

The following are next steps for the project:

- Preferred Alternative selection – October/November 2017
- Preferred Alternatives to be presented at the December SCTPO Meetings – December 11 and 14, 2017

This summary is Travis Hills' interpretation of the meeting. Questions should be directed to him at 407-540-0555.

Attachments

- General Public Sign-In Sheets
- Public Meeting Mailer
- Public Meeting Mailer Coverage Area
- Elected and Appointed Officials Letters
- Public Meeting Title VI Compliance Board
- Public Meeting "Why Are We Here" Board
- Public Meeting Handout and Comment Forms
- Public Meeting Future Alternatives Boards
- Public Meeting Presentation

ELECTED OFFICIAL? (Y/N)	GOV'T AGENCY STAFF? (Y/N)	NAME	E-MAIL ADDRESS	HOW DID YOU FIND OUT ABOUT THIS MEETING?					
				EMAIL	MAILER	WEBSITE	SOCIAL MEDIA	WORD OF MOUTH	OTHER
		Joyce Riley	rileyjoyce@gmail.com		✓				
		CLARK ELLIS	CELLIST77@CFL.RR.COM ✓	✓					
		Pamela Hall	Rev Pamela.Hall@gmail.com ✓						
N	N	WYNN ARNOLD			X				
X		Debbie Thomas	Debbie.Thomas@mbfl.org						
N		JOHN THOMAS	john.thomas.wis@gmail.com					✓	
		Erica Snow	Erica.Snow@BFLMBFL.org						
N	N	S Spaulding	espauldin@bfl.org		X				
N	N	Brittany Huber	Brittany@yale.com Brittany@yale.com						✓
N	N	Carolyn Howell	chowell5@cfl.rr.com		✓				
N	N	CINDY BOURNE			X				
N	N	Kelly Haskins	khaskins@launchfl.com						X
N	N	Rick Neale							
✓	N	Gordon Nelson	nelson@flsu.edu		X				
		MARIA TOth							
N	Y	Devin Swanson			X				

ELECTED OFFICIAL? (Y/N)	GOV'T AGENCY STAFF? (Y/N)	NAME	E-MAIL ADDRESS	HOW DID YOU FIND OUT ABOUT THIS MEETING?					
				EMAIL	MAILER	WEBSITE	SOCIAL MEDIA	WORD OF MOUTH	OTHER
		Maria Rigging	MERRI@GALLOP.COM		✓			✓	
		Travis Hill							
		Michael Eyle							
		Sho Wang							
		David Torre							
	Y	Laura Carter							✓
		GEORGE GRATE			✓				
		PEGGY "			✓				
		JANET KULL	JANETPARALEGAL@YAHOO		✓				
		DAVID BENNETT							✓
		Charles Pilney	chuck.joyce@bellsoots.NET						
	Y	Abby Rex							
		Kay Hildebrand	khilde99@gmail.com		✓				
N	W	Eric Hoppenbrouwer	eric.hoppenbrouwer@outlook.com				✓		
N	N	JOSEPH CHAKKO	JCHAKKO@YAHOO.COM					✓	
N	N	Robert Hasch	rhasch@churchfco.com		✓				
N	N	JOE MIRACHI	JMIRACHI@LAUNCHFOU.COM		✓				

ELECTED OFFICIAL? (Y/N)	GOV'T AGENCY STAFF? (Y/N)	NAME	E-MAIL ADDRESS	HOW DID YOU FIND OUT ABOUT THIS MEETING?					
				EMAIL	MAILER	WEBSITE	SOCIAL MEDIA	WORD OF MOUTH	OTHER
N	Y	Sarah Kraum	sarah.kraum@brevardfl.gov	X					X
N	N	Venus Wolfe				X	X		
N	N	Joslin Arnold	None		X				
N	N	Dave Lenzi	NONE		X				
N	N	B. Moore	↓						
Y	N	Scott Ellis	sellis@spacey.net		X				
N	Y	Jenni Lamb	jenni.lamb@mlbfl.org	X					
N	Y	Kim Smith							

MEETING FEEDBACK



Alternatives Public Meeting – October 25, 2017

1. Please indicate the degree to which you agree with the following statements as a result of attending the Wickham Road Alternatives Public Meeting (CIRCLE ONE)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have increased my understanding of the purpose of the Wickham Road Study	1	2	3	4	5
I have increased my understanding of the project process	1	2	3	4	5
I was able to have my transportation question(s) answered	1	2	3	4	5
The presentation was helpful and informative	1	2	3	4	5
The visual aids were beneficial (handouts, display boards)	1	2	3	4	5
Staff were friendly and professional	1	2	3	4	5
The location of the Open House was appropriate	1	2	3	4	5
The time of the Open House was appropriate	1	2	3	4	5

2. How can we improve the Open House? _____

3. [OPTIONAL]
 Zip Code _____

4. Age range and Ethnicity

_____ under 30	_____ Caucasian
_____ 30-45	_____ Hispanic
_____ 45-60	_____ Black or African American
_____ over 60	_____ Pacific Islander
	_____ Other

Thank you for your time and participation!
Please place completed form in "Feedback" box

PROJECT FEEDBACK



You can also cast your vote here:
https://www.surveymonkey.com/r/Wickham_Rd

Which Eau Gallie Boulevard Intersection Improvement do you prefer? (Please choose one)

No Changes

Option A
 Add NB/SB/WB Right Turn Lanes

Option B
 Add NB/SB/EB Right Turn Lanes

Which Aurora Road Intersection Improvement do you prefer? (Please choose one)

No Changes

Option A
 Add NB/WB Right Turn Lanes

Option B
 Add WB Right Turn Lane

Which Roadway improvement do you prefer? (Please choose one) No Changes

Keeping existing two-way center turn lane:

Alternative 1: Bike lanes adjacent to travel lanes

Alternative 2: Shared use paths

Converting two-way center turn lane with medians:

Alternative 3: Bike lanes adjacent to travel lanes

Alternative 4: Shared use paths

Other Questions or Comments: _____

APPENDIX F – STAKEHOLDER MEETING NOTES

BREVARD COUNTY SCHOOL BOARD STAKEHOLDER MEETING

BC School Board Meeting – Future Alternatives Review Agenda



October 16, 2017

Space Coast TPO Conference Room

10:00 AM – 11:00 AM

Future Build Alternatives Discussion

1. Project Background/Overview
2. Issues/Opportunities Review
3. Future Build Alternatives
 - a. Short Term Improvements
 - b. Intersection Turn Lane Improvements
 - i. Eau Gallie Option A and B
 - ii. Lansing/Venture Realignment
 - c. Typical Section Alternatives
4. Next Steps
 - a. Public Meeting scheduled for October 25th
 - b. Preferred Alternative Selection Meeting scheduled for October 26th
 - c. Presentation to TAC/CAC 12/11 and TPO Board 12/14

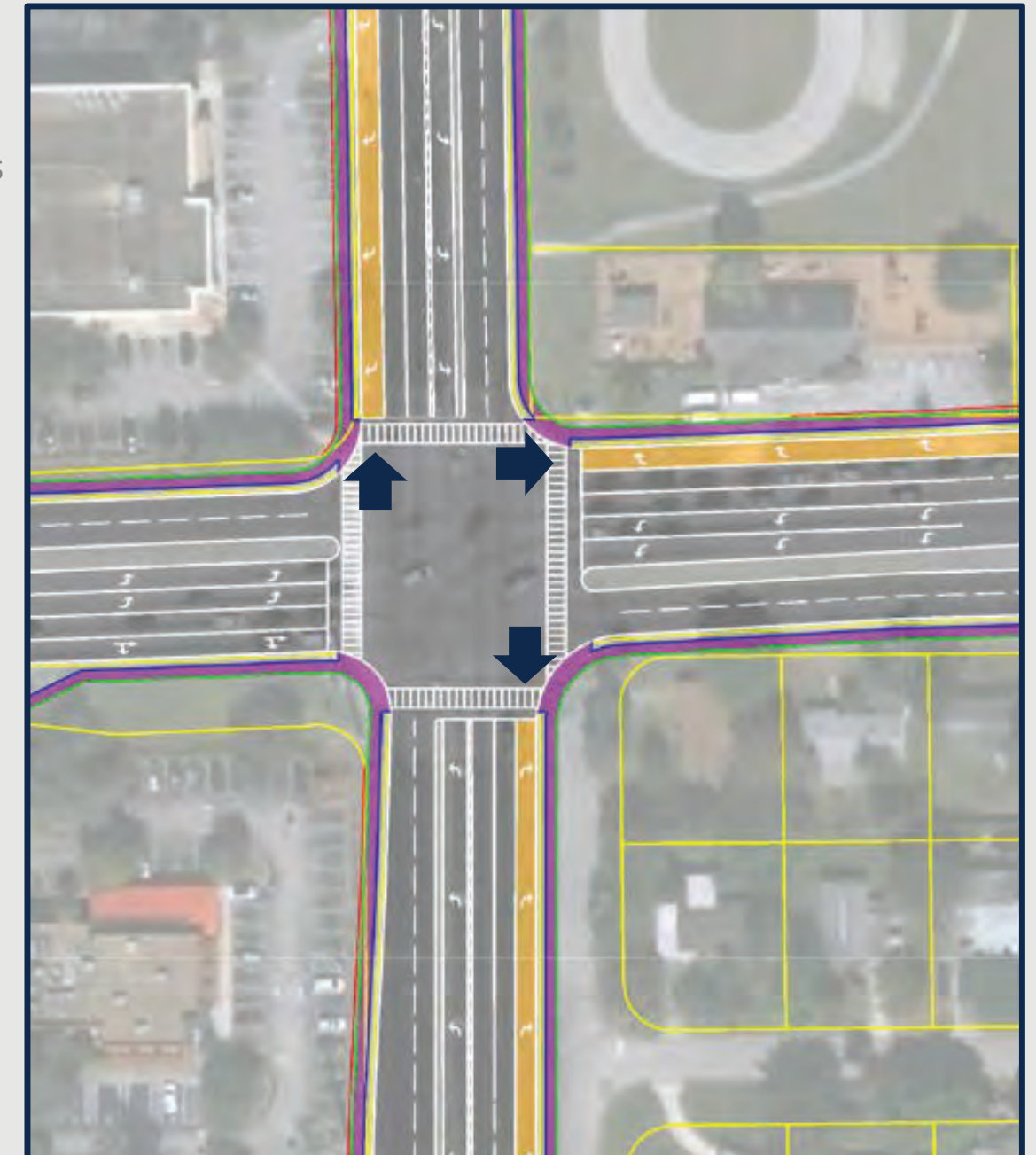
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

Future Build Option A / NB, SB, and WB Right Turn Lanes

- **No-Build**
LOS F in PM peak, 9 over-capacity movements
- **Build**
LOS E in PM peak, 0 over-capacity movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / WB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$800,000
Engineering/CEI	\$840,000
Roadway ROW	\$437,000
Total	\$4,077,000
Benefit/Cost	7.08

Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.





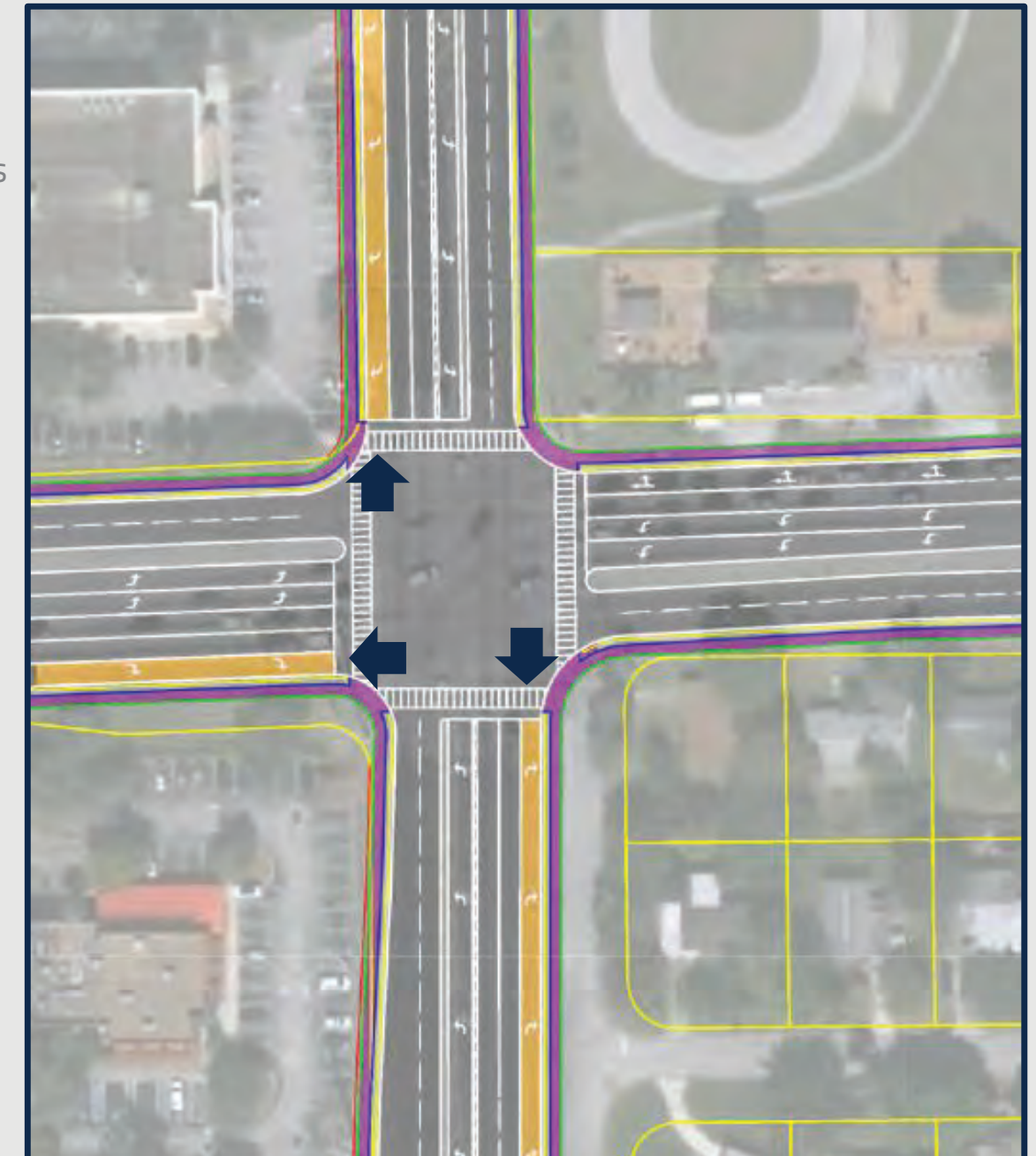
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

Future Build Option B / NB, SB, and EB Right Turn Lanes

- **No-Build**
LOS F in PM peak, 9 over-capacity movements
- **Build**
LOS E in PM peak, 3 over-capacity movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / EB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$900,000
Engineering/CEI	\$870,000
Roadway ROW	\$329,000
Total	\$4,099,000
Benefit/Cost	6.89

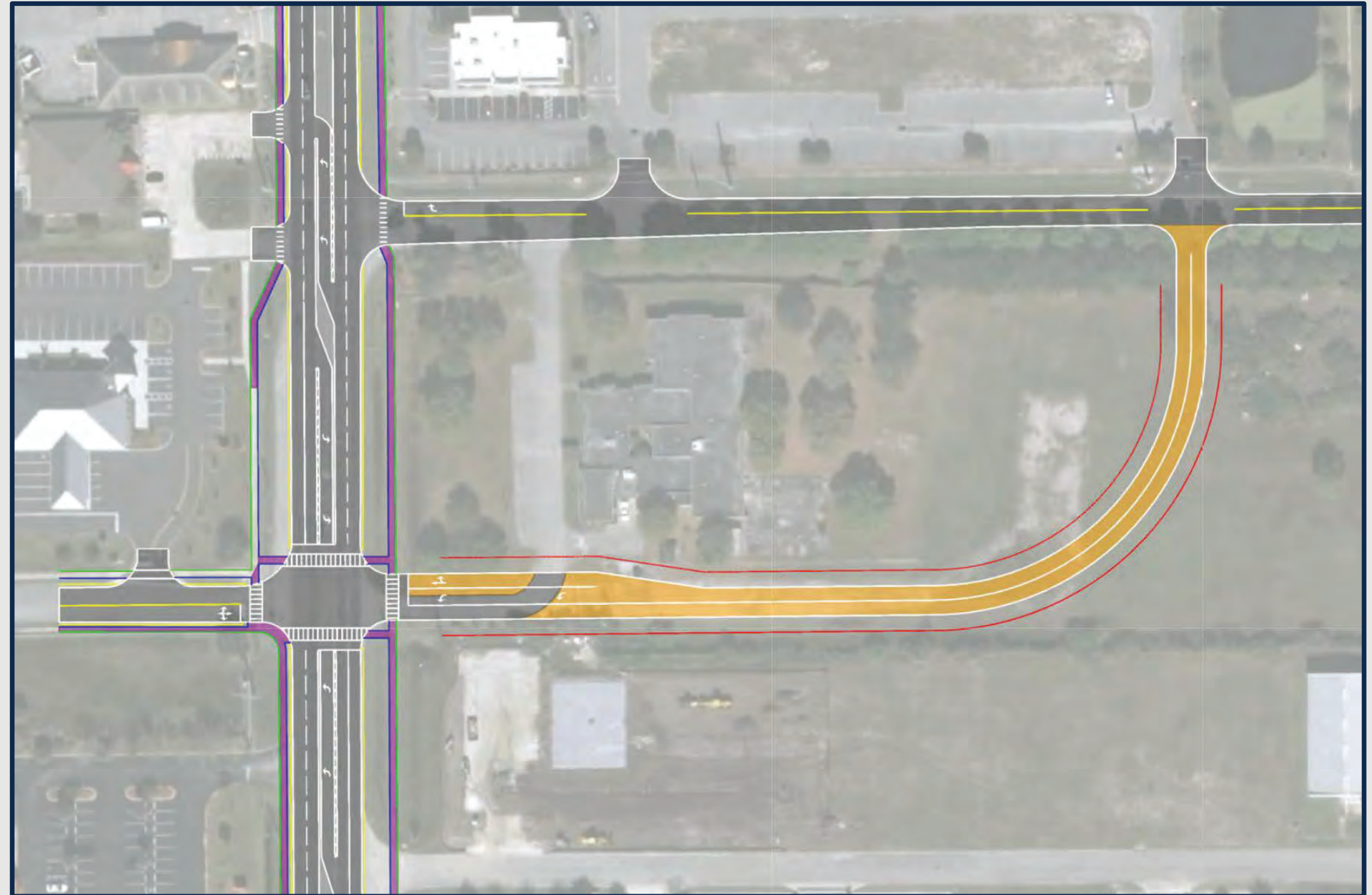
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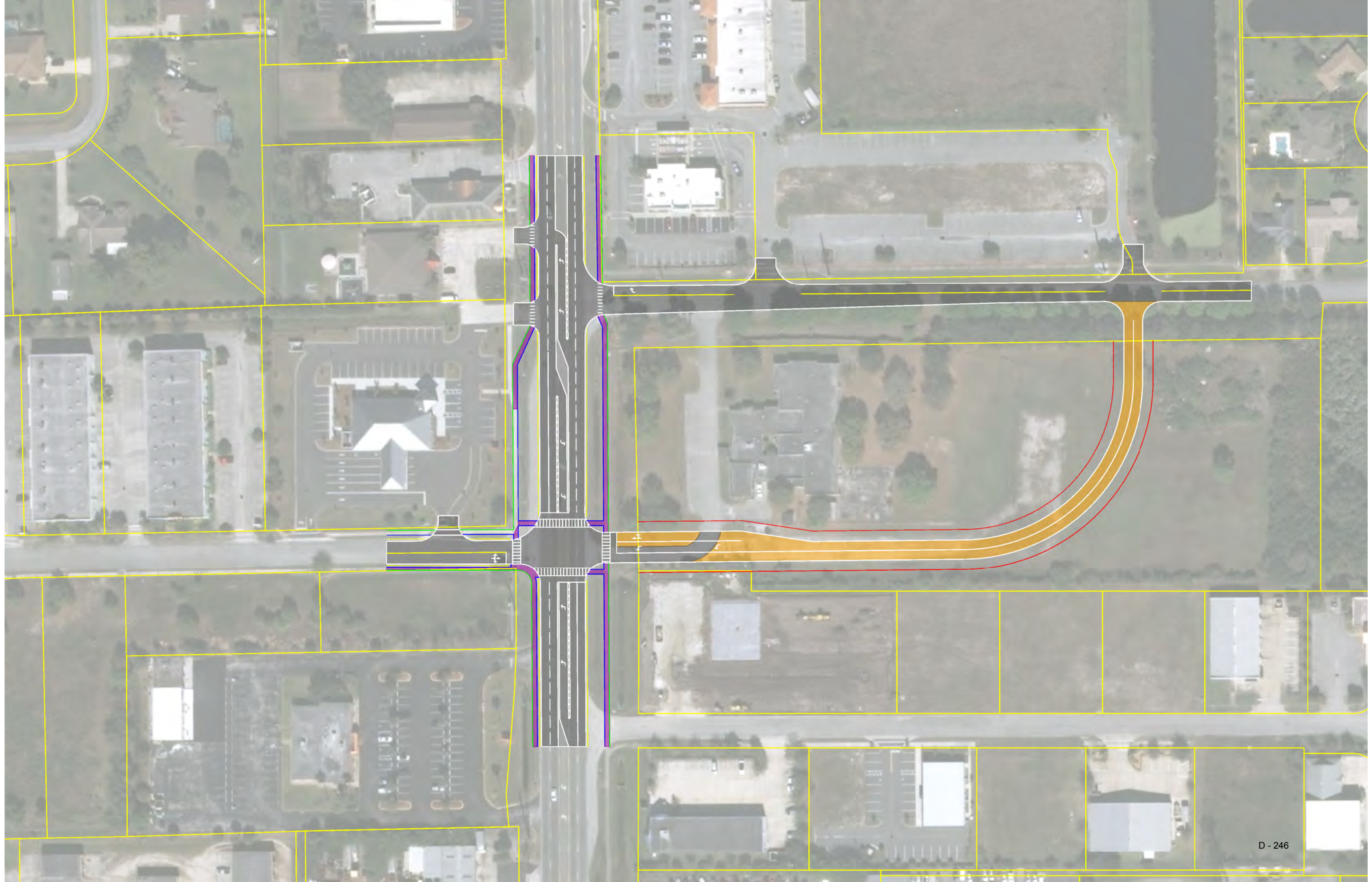




VENTURE LANE AND LANSING STREET IMPROVEMENTS

- **Build**
LOS B in PM peak, 0 over-capacity movements





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

FUTURE CONDITIONS ALTERNATIVES REVIEW | OCTOBER 5, 2017
PROJECT ADVISORY TEAM MEETING #3

 **KITTELSON**
& ASSOCIATES


INFRASTRUCTURE
ENGINEERS, INC.


SPACE COAST
TPO



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

The graphic features the year '2017' at the top. Below it, the main title 'WICKHAM ROAD' is written in a large, bold, white-outlined font. Underneath the main title, the subtitle 'OPERATIONAL ANALYSIS' is written in a smaller, solid blue font. The text is flanked by several blue gear icons of varying sizes, suggesting a mechanical or engineering theme. The entire graphic is centered on a dark blue background that shows a blurred street scene with cars and trees.

PROJECT BACKGROUND / OVERVIEW

STUDY CORRIDOR

LEGEND

- Study Corridor
- City of Melbourne
- Brevard County





2017

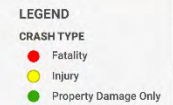
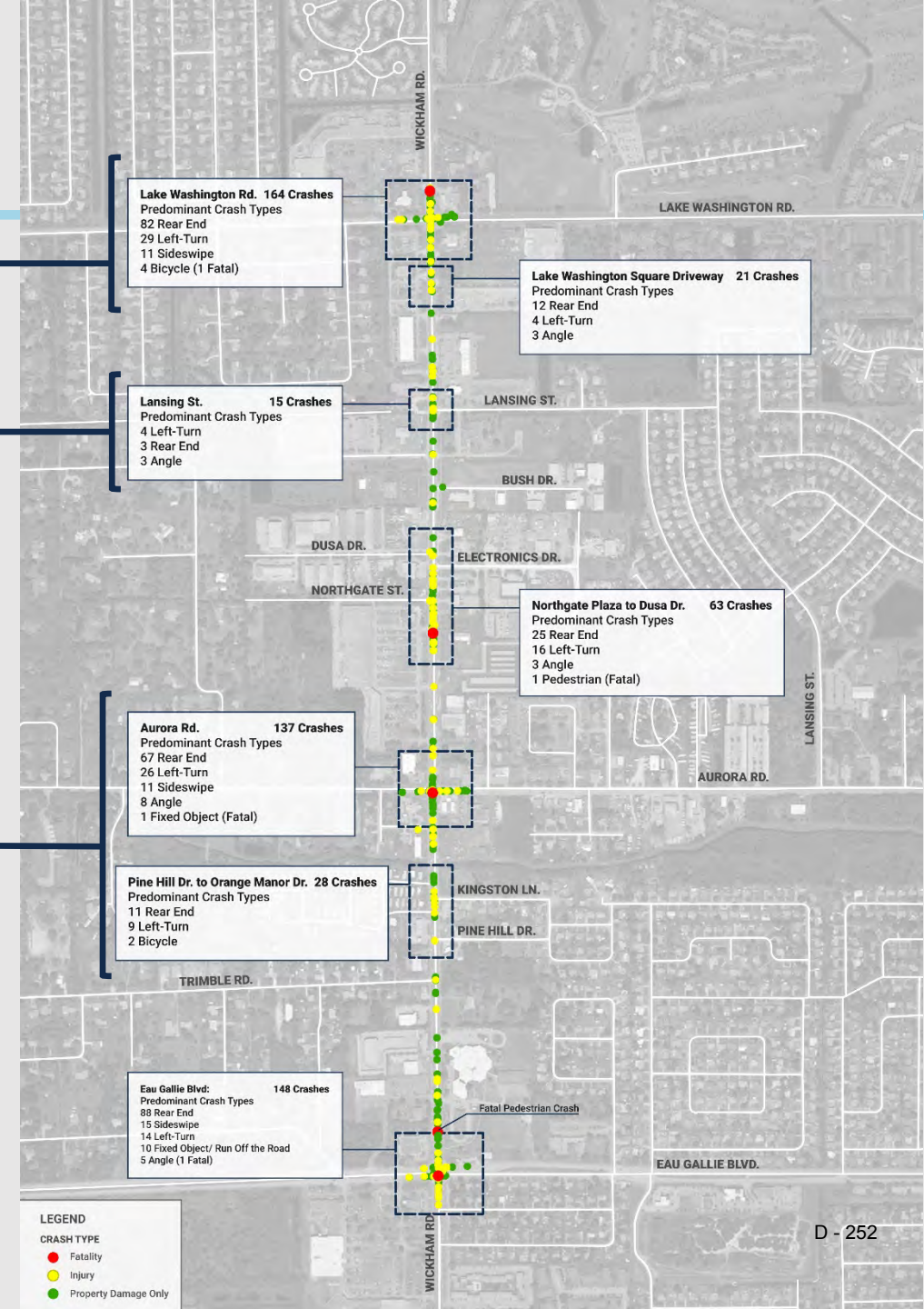
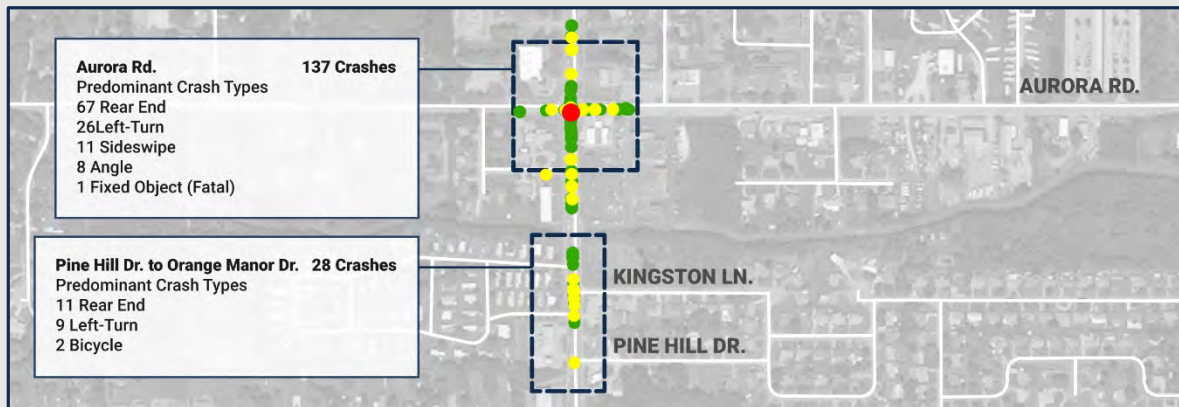
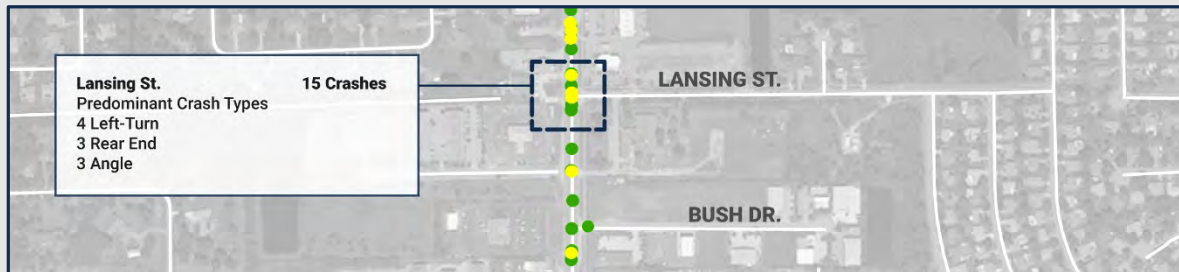
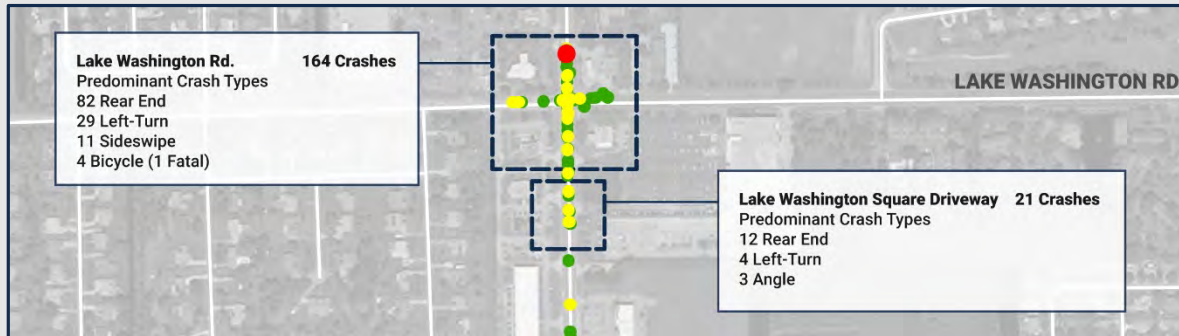
WICKHAM ROAD

OPERATIONAL ANALYSIS



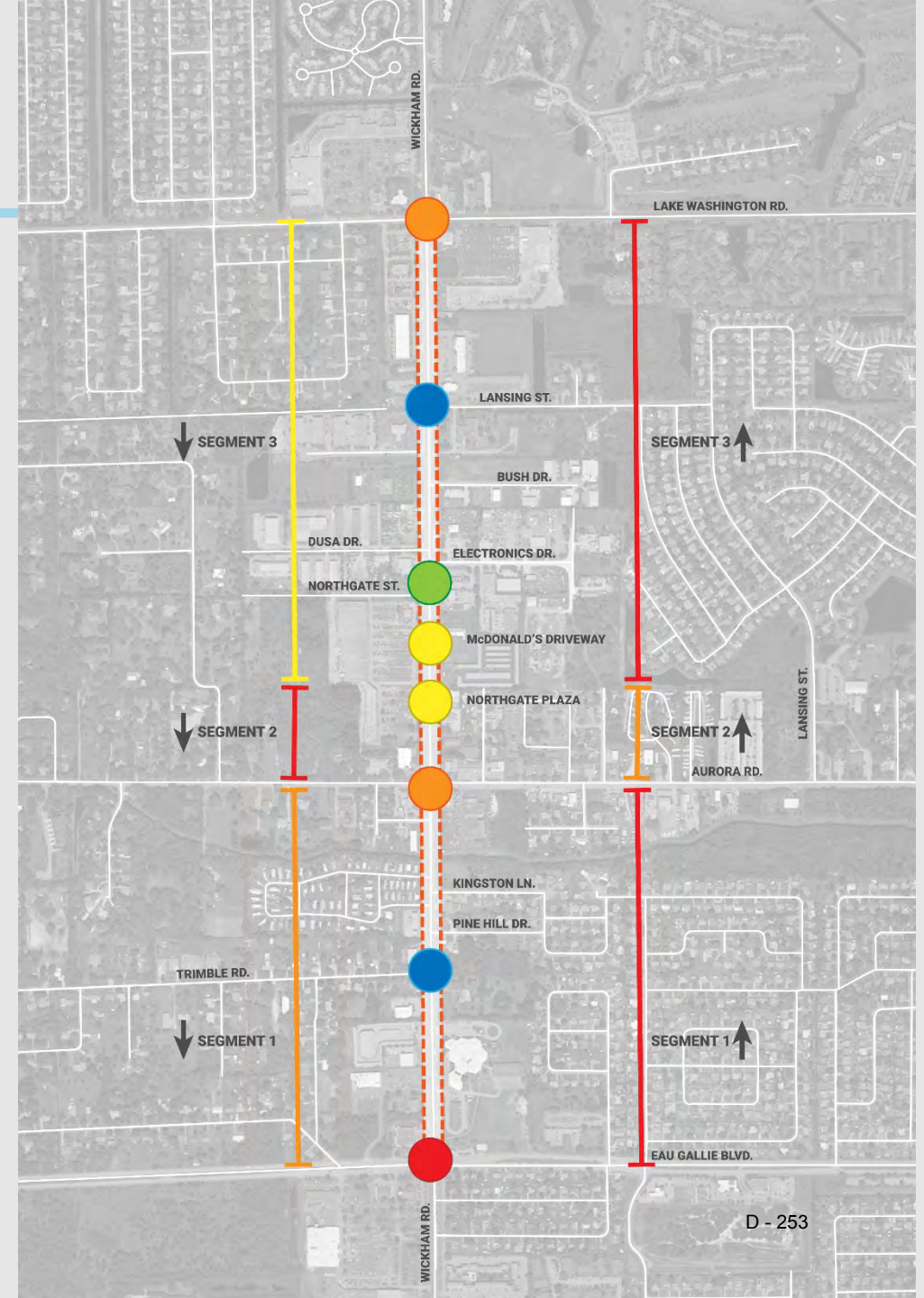
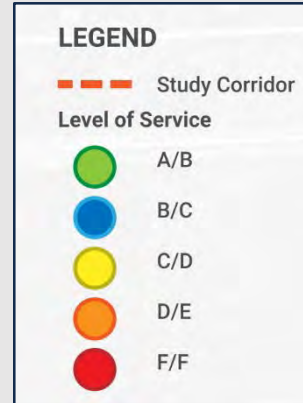
ISSUES / OPPORTUNITIES REVIEW

CRASH HISTORY (2011-2015)

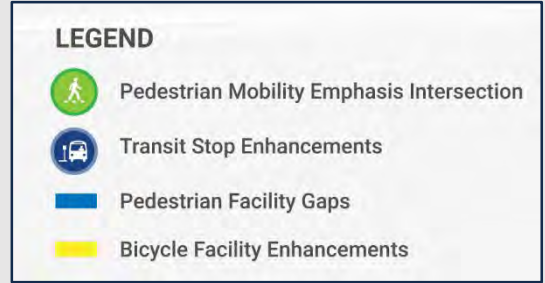


FUTURE NO-BUILD OPERATIONS

- LOS E/F anticipated NB from Eau Gallie to Lake Washington
- LOS E/F anticipated SB from Northgate Plaza to Eau Gallie
- Eau Gallie, Aurora, and Lake Washington anticipated to operate at LOS E or F



MULTI-MODAL ISSUES AND OPPORTUNITIES








- **Pedestrian Mobility Emphasis Intersections**
Intersection Concepts
- **Transit Stop Enhancements**
Preferred Alternative Concept Development
- **Pedestrian Facility Gaps and Bicycle Facility Enhancements**
Preferred Alternative Concept Development

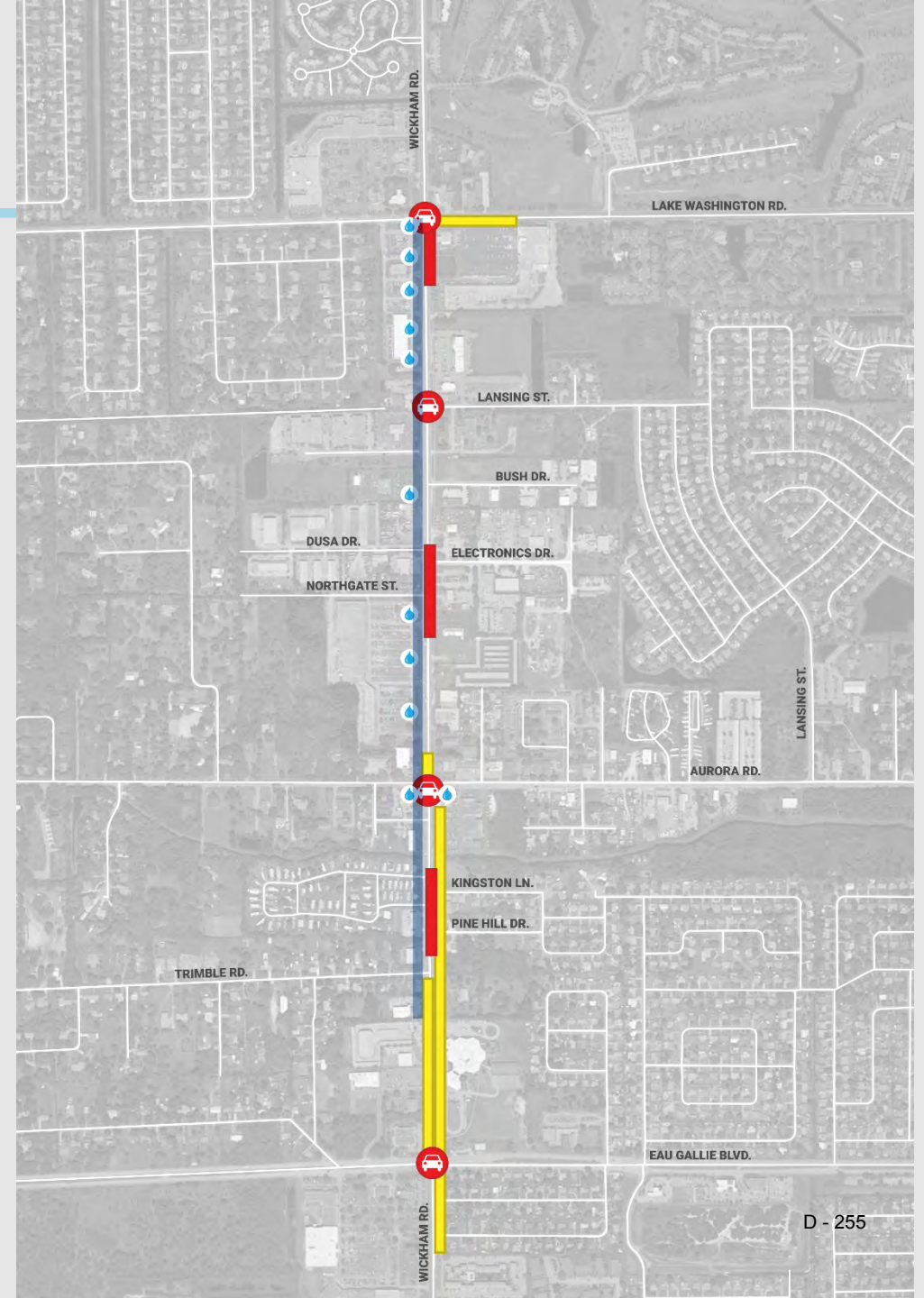


VEHICULAR, UTILITY, AND DRAINAGE ISSUES AND OPPORTUNITIES

LEGEND

-  Left-Turn Crash Emphasis Intersection
-  Left-Turn/Angle Crash Emphasis Area
-  Peak Hour Queuing
-  Utilities Adjacent to Roadway
-  Drainage Facilities Adjacent to Roadway

- **Left-Turn Crash Intersections**
Intersection Concepts
- **Left-Turn/Angle Crash Areas**
Preferred Alternative Concept Development
- **Peak Hour Queuing**
Intersection Concepts
- **Utilities and Drainage**
Typical Section and Preferred Alternative Concept Development





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



FUTURE BUILD ALTERNATIVES

SHORT TERM IMPROVEMENTS

- Pedestrian facility improvements at intersections
- Maintenance/near-term safety suggestions from RSA report
- Adaptive signal control/ITS related improvements aimed at reducing peak hour and non-reoccurring congestion - ongoing Brevard County projects
- Incorporate spot medians/directional median openings at specific locations
- LED corridor lighting
- PEDSAFE



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WICKHAM ROAD

OPERATIONAL ANALYSIS



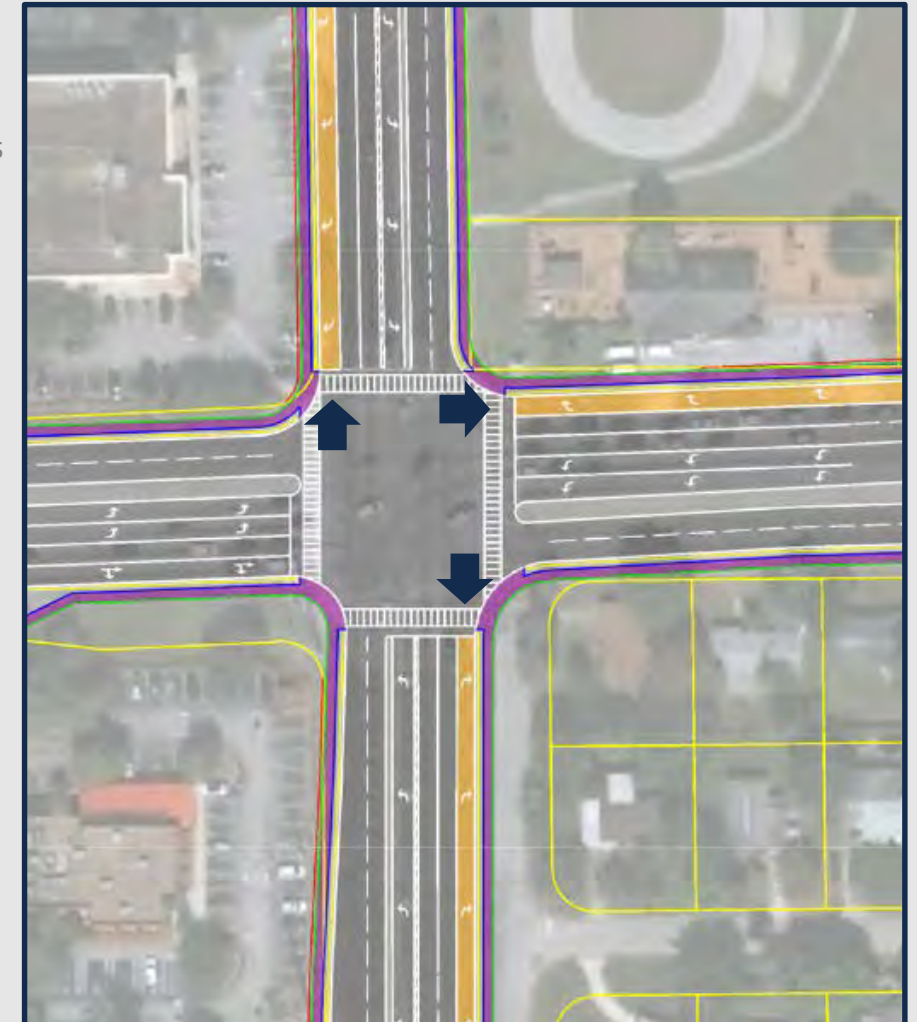
INTERSECTION IMPROVEMENTS

EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

Future Build Option A / NB, SB, and WB Right Turn Lanes

- **No-Build**
LOS F in PM peak, 9 over-capacity movements
- **Build**
LOS E in PM peak, 0 over-capacity movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / WB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$800,000
Engineering/CEI	\$840,000
Roadway ROW	\$437,000
Total	\$4,077,000
Benefit/Cost	7.08



Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.

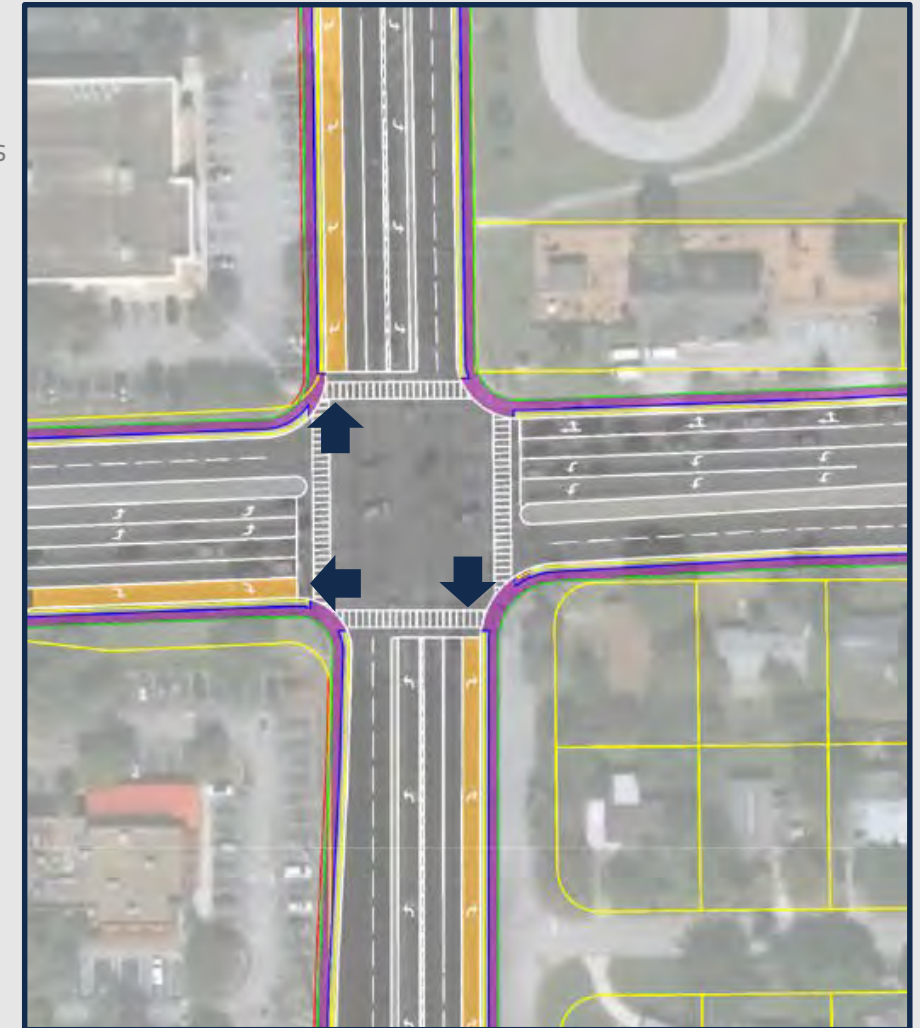
EAU GALLIE BOULEVARD INTERSECTION IMPROVEMENTS

Future Build Option B / NB, SB, and EB Right Turn Lanes

- **No-Build**
LOS F in PM peak, 9 over-capacity movements
- **Build**
LOS E in PM peak, 3 over-capacity movements

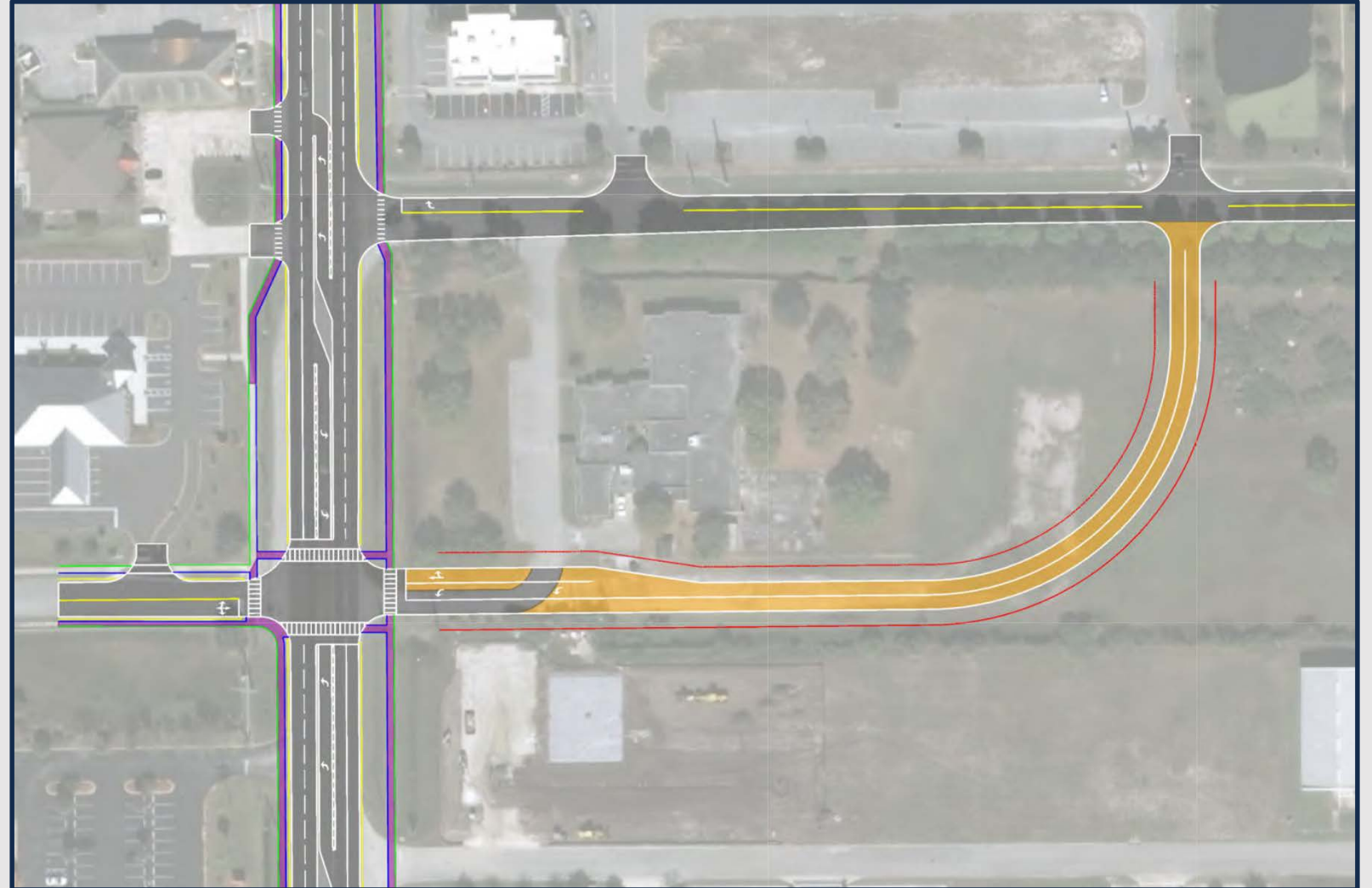
Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / EB Right Turn Lanes
Construction	\$2,000,000
Utility Relocations	\$900,000
Engineering/CEI	\$870,000
Roadway ROW	\$329,000
Total	\$4,099,000
Benefit/Cost	6.89

Preliminary costs - subject to change based on selection of preferred typical section along Wickham Road and further revisions to concept based on public comment.



VENTURE LANE AND LANSING STREET IMPROVEMENTS

- **Build**
LOS B in PM peak, 0 over-capacity movements





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

TYPICAL SECTION ALTERNATIVES

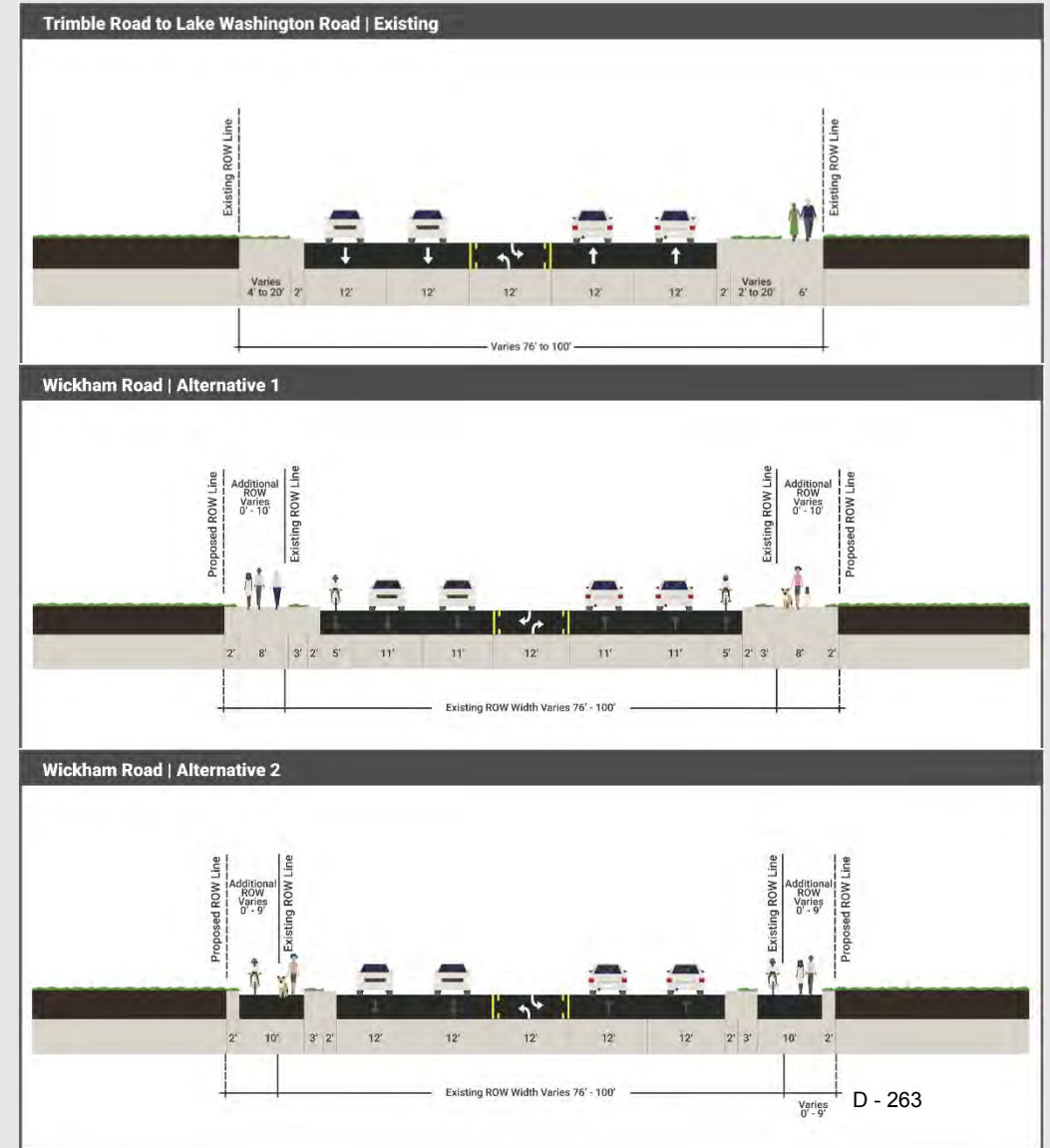
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 1

- Maintain existing two-way center left turn lane
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 2

- Maintain existing two-way center left turn lane
- Add 10' shared use path on west side
- Replace sidewalk on east side with 10' shared use path



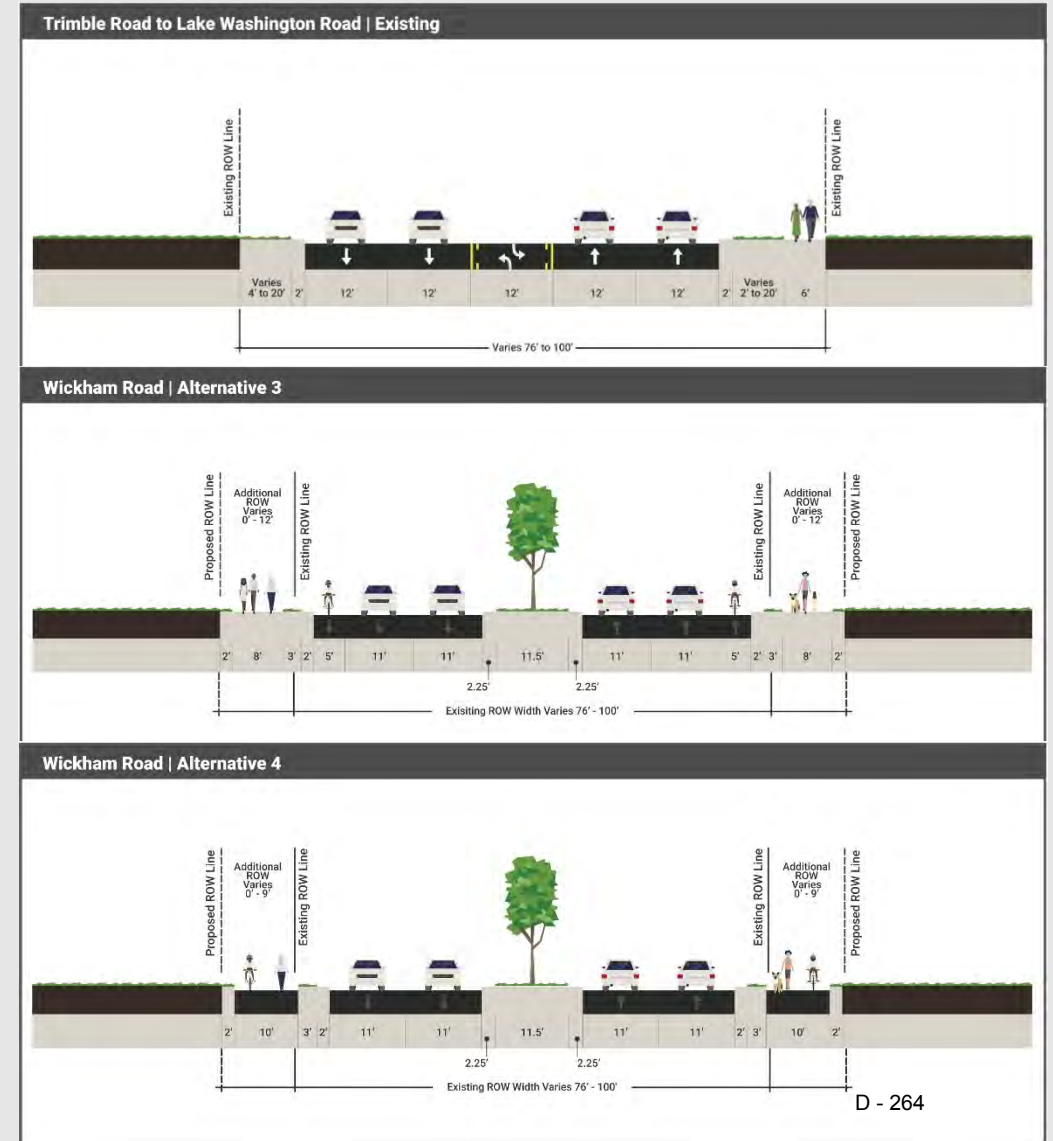
WICKHAM ROAD TYPICAL SECTION ALTERNATIVES

Alternative 3

- Convert two-way center left turn lane to raised median
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 4

- Convert two-way center left turn lane to raised median
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



NEXT STEPS AND SCHEDULE

QUESTIONS / CONTACT INFORMATION

SCTPO Project Manager

Laura Carter

2725 Judge Fran Jamieson Way

Building B, Room 105

Melbourne, FL 32940

Phone: 321-690-6890

Laura.carter@brevardfl.gov

Consultant Project Manager

Travis Hills, PE

225 East Robinson Street

Suite 450

Orlando, FL 32801

Phone: 407-540-0555

thills@kittelso.com





Brevard County School Board Meeting

SUBJECT:	Wickham Road Operational Analysis – Brevard County School Board Meeting
MEETING DATE:	October 16, 2017
MEETING TIME:	10:00 AM – 11:00 AM
VENUE:	SCTPO Conference Room, 2725 Judge Fran Jamieson Way Building B, Room 105

Introduction and Attendees

A meeting was held with Sue Hann, Director of Planning and Project Management at Brevard County Public Schools to discuss potential improvements and alternatives for the Wickham Road Operational Analysis. Below are the attendees of this meeting:

- Laura Carter – SCTPO
- Kim Smith – SCTPO
- Sue Hann – Brevard County Public Schools
- Travis Hills – KAI
- Daniel Torre – KAI

Project Background and Overview

The following topics were reviewed during the meeting:

- Overall project schedule;
- Future build improvements: turn lanes at signalized intersections and corridor-wide typical sections;
- Potential impacts to Brevard County Public Schools property;
- Measures of effectiveness to evaluate alternatives; and
- Next steps and schedule moving forward.

The remainder of these notes summarizes the related comments and discussion from the group during the meeting.

General Meeting Notes

- McDonald's on Northgate is currently under construction to include a second drive-thru lane.

- Wawa approached the School Board regarding purchasing land from Sabal Elementary School, though no official proposal has been submitted as of the time of this meeting.
 - Wawa may have already purchased the parcels in the northeast corner of Eau Gallie/Wickham;
 - School Board does not seem opposed to having Wawa purchase part of Sabal Elementary property;
 - Discussion on the southbound left-turns being made into Sabal Elementary School right now and potential access management issues that would arise if those left-turns were restricted into the school. This would include the impacts of U-Turn movements on the SB approach on Wickham (with a no right-turn on red) was discussed.
 - Suggestion by Ms. Hann to meet with the principal of Sabal Elementary to discuss potential impacts.
- Lansing Street Realignment –
 - Fencing would be needed along the new roadway for security purposes.
 - KAI to evaluate how to provide access to staff and students to the school beyond just access at Lansing Street.
 - KAI to remove the additional lane currently shown for WB Venture Road so it becomes a single lane approach.
 - Suggestion by Ms. Hann to meet with the principal of the Alternative Learning Center to discuss potential impacts of the new roadway.
 - Ms. Hann will follow up with internal School Board staff at the school to get impressions on the realignment.

Next Steps

- **Major Task Items**
 - Revise Future Alternatives to reflect comments and suggestions.
 - Meet with the principals of Sabal Elementary and the Alternative Learning Center to discuss the potential improvements and impacts to school property.

These meeting minutes are Travis Hills' interpretation of the comments, requests, and discussion during the meeting. Questions, additions, and/or clarifications should be directed to him at 407-373-1125 or thills@kittelson.com.

SOUTH AREA ALTERNATIVE LEARNING CENTER STAKEHOLDER MEETING



South Area Alternative Learning Center Meeting

SUBJECT:	Wickham South Area Alternative Learning Center Meeting
MEETING DATE:	November 16, 2017
MEETING TIME:	1:30 PM – 2:00 PM
VENUE:	South Area Alternative Learning Center, 2175 N Wickham Rd, Melbourne, FL 32935

Introduction and Attendees

A meeting was held with the principal of the South Alternative Learning School to discuss the proposed Lansing Street realignment to Venture Lane. Below are the attendees of this meeting:

- Gregory Rubick – South Area Alternative Learning Center
- Sue Hann – Brevard County Schools
- Laura Carter – SCTPO
- Travis Hills – KAI
- Daniel Torre – KAI

Venture Lane/Lansing Street Improvements

- The main concern the school has is the potential impact the realignment can have on parking availability.
 - Currently, the school has capacity for approximately 15 parking spots in front of the school, adjacent to Wickham Road.
 - School staff, up to 20 people, park on the south side of the school, a conflict point with the proposed realignment.
 - Currently, there are two student drivers out of 56 enrolled students. Last year, there were seven student drivers out of 114 enrolled students.
- There is discussion between the School and the School Board to have a separate portable with a maximum capacity of 20 students added to the school property.
 - The preference of the school is to have the portable located on the northeast corner of the property and operate separately.
 - A suggestion was made to add parking facilities for the new portable.

- The eastern portion of the parcel, which would also be east of the proposed realignment, currently experiences flooding during normal rain events.
 - A suggestion was made for a possible pond in that location since it is currently unused land.

Next Steps

- **Major Task Items**
 - **KAI to develop three alternative parking lot configurations at the following locations:**
 - **Parking improvements in front of the school (Lot A);**
 - **Additional parking on the southeast corner of the school (Lot B);**
 - **Additional parking by the proposed portable area in the northeast corner of the school (Lot C).**
 - **In addition to these parking lot concepts, sidewalk connections to the school will also be added.**

These meeting minutes are Travis Hills' interpretation of the comments, requests, and discussion during the meeting. Questions, additions, and/or clarifications should be directed to him at 407-373-1125 or thills@kittelso.com.

APPENDIX G – SCTPO BOARD/COMMITTEES PRESENTATION

2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

PREFERRED ALTERNATIVES OVERVIEW | DECEMBER 11 AND 14, 2017
TAC/CAC AND TPO BOARD PRESENTATIONS

 **KITTELSON**
& ASSOCIATES


INFRASTRUCTURE
ENGINEERS, INC.


SPACE COAST
TPO

AGENDA

- Study Background/Schedule
- Public Involvement Activities
- Issues/Opportunities Review
- Future Conditions Analysis
- Short-Term Improvement Opportunities
- Intersection Improvements
- Roadway Improvement Alternatives
- Next Steps



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



STUDY BACKGROUND/SCHEDULE

STUDY BACKGROUND

- Countywide Safety Analysis conducted 2014
- Performed Road Safety Audits in 2015/2016
- Citizen pedestrian concerns at key intersections

LEGEND

- Study Corridor
- City of Melbourne
- Brevard County





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



PUBLIC INVOLVEMENT ACTIVITIES

PUBLIC INVOLVEMENT ACTIVITIES

- Project Advisory Team consisting of TPO, FDOT, Brevard County, City of Melbourne, and Space Coast Area Transit
- Held 2 public meetings and received overwhelming support for preferred alternatives
 - 91 total attendees
 - Project website had 39 comments and 459 total "Likes"
- Coordinated with School Board during alternatives analysis stage of study





2017

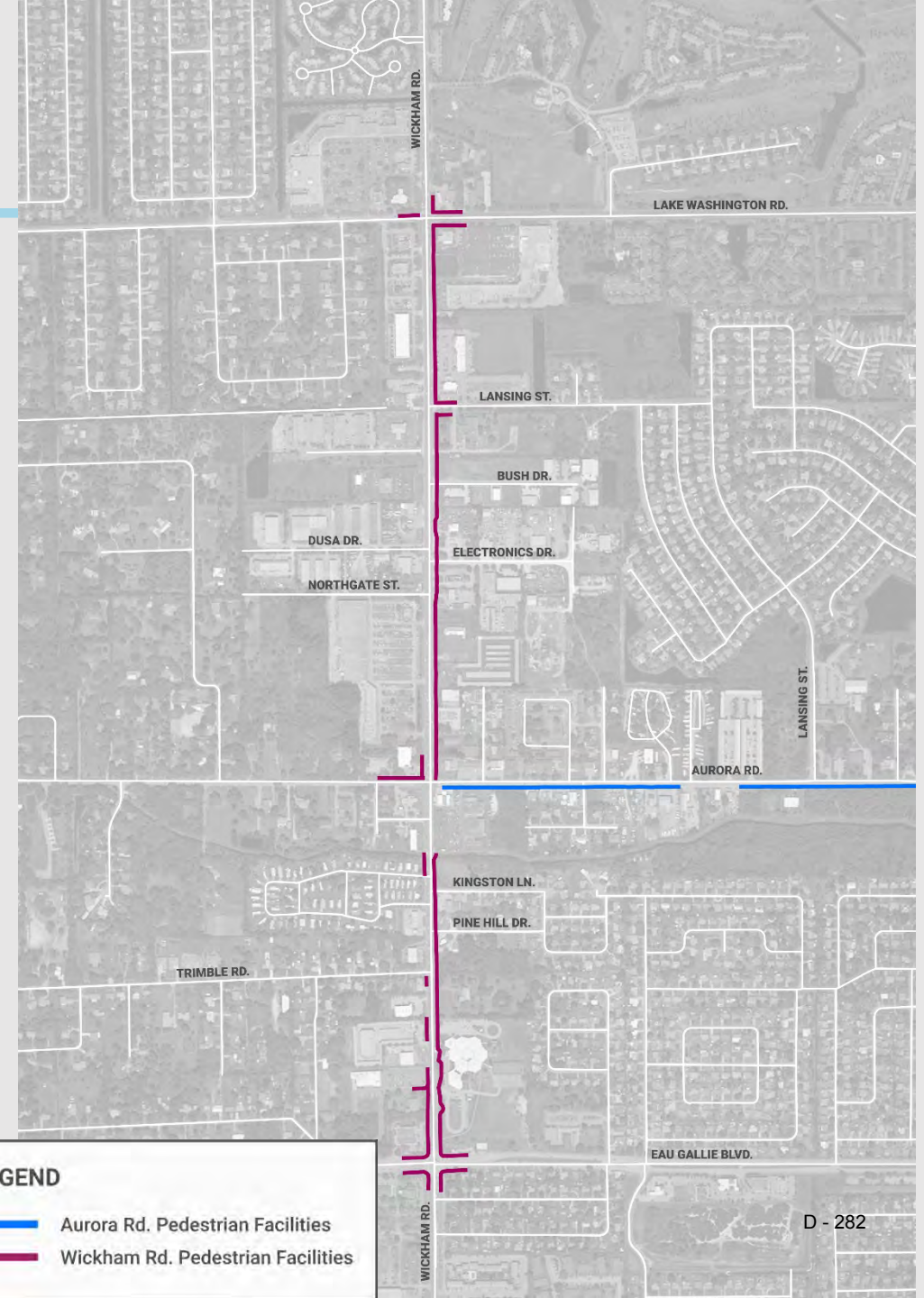
WICKHAM ROAD

OPERATIONAL ANALYSIS



ISSUES / OPPORTUNITIES REVIEW

EXISTING PEDESTRIAN FACILITIES



LEGEND

- Aurora Rd. Pedestrian Facilities
- Wickham Rd. Pedestrian Facilities

EXISTING DRAINAGE AND UTILITIES



CRASH HISTORY (2011-2015)

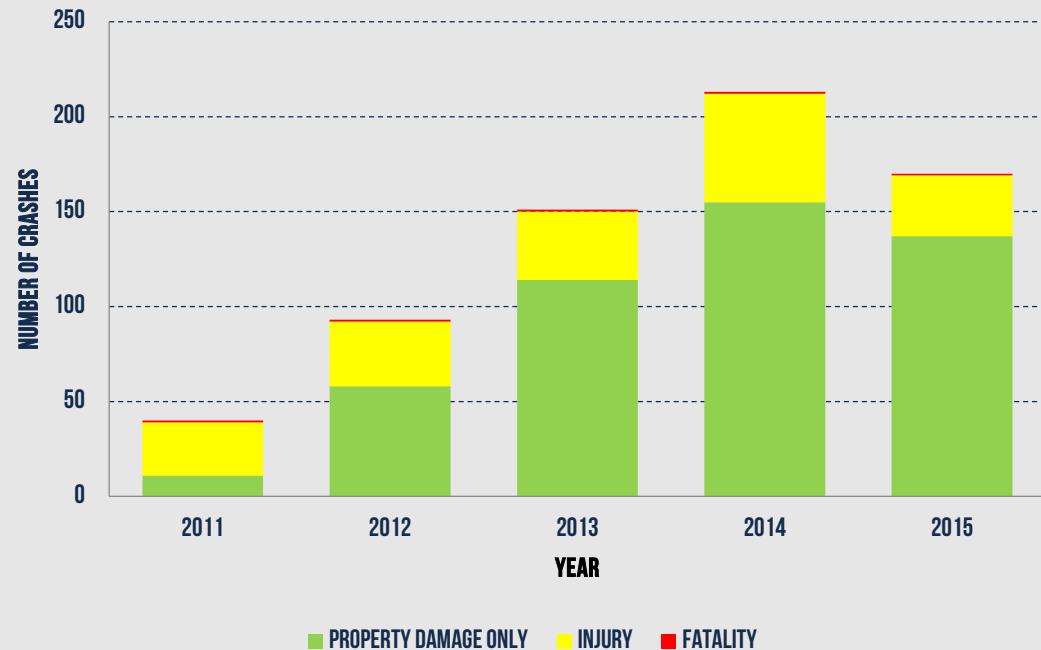
667 crashes from 2011 to 2015

- 5 fatal (1 percent) and 187 injury crashes (28 percent)
- 80 percent of the crashes occurred on a weekday (Monday through Friday)
- 33 percent of the crashes occurred between 3 PM and 6 PM

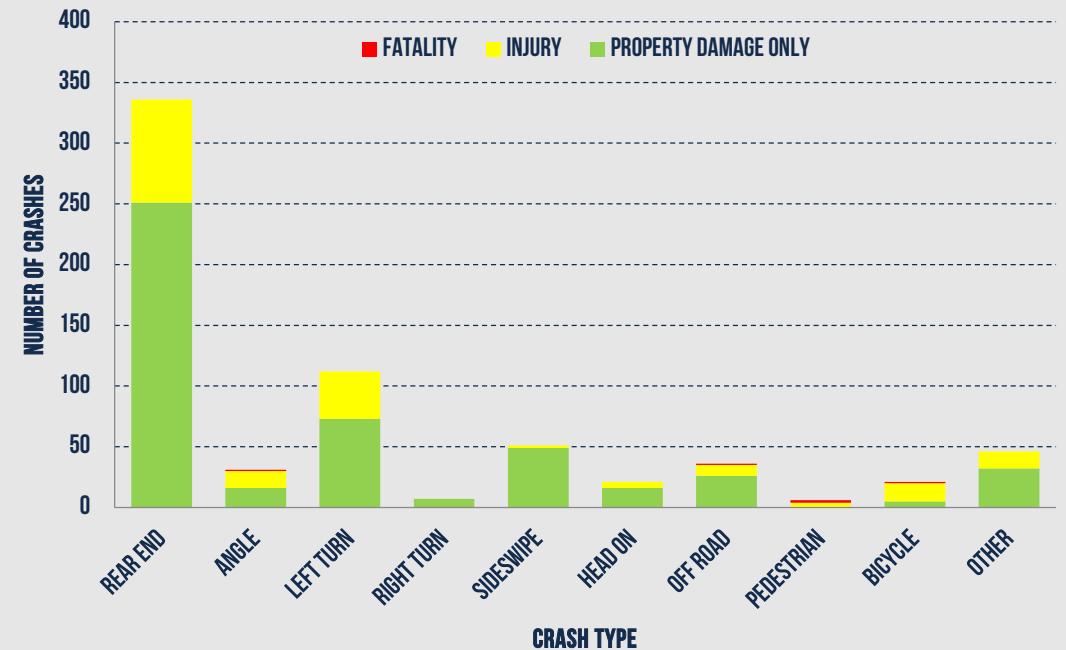
21 bicycle crashes

6 pedestrian crashes

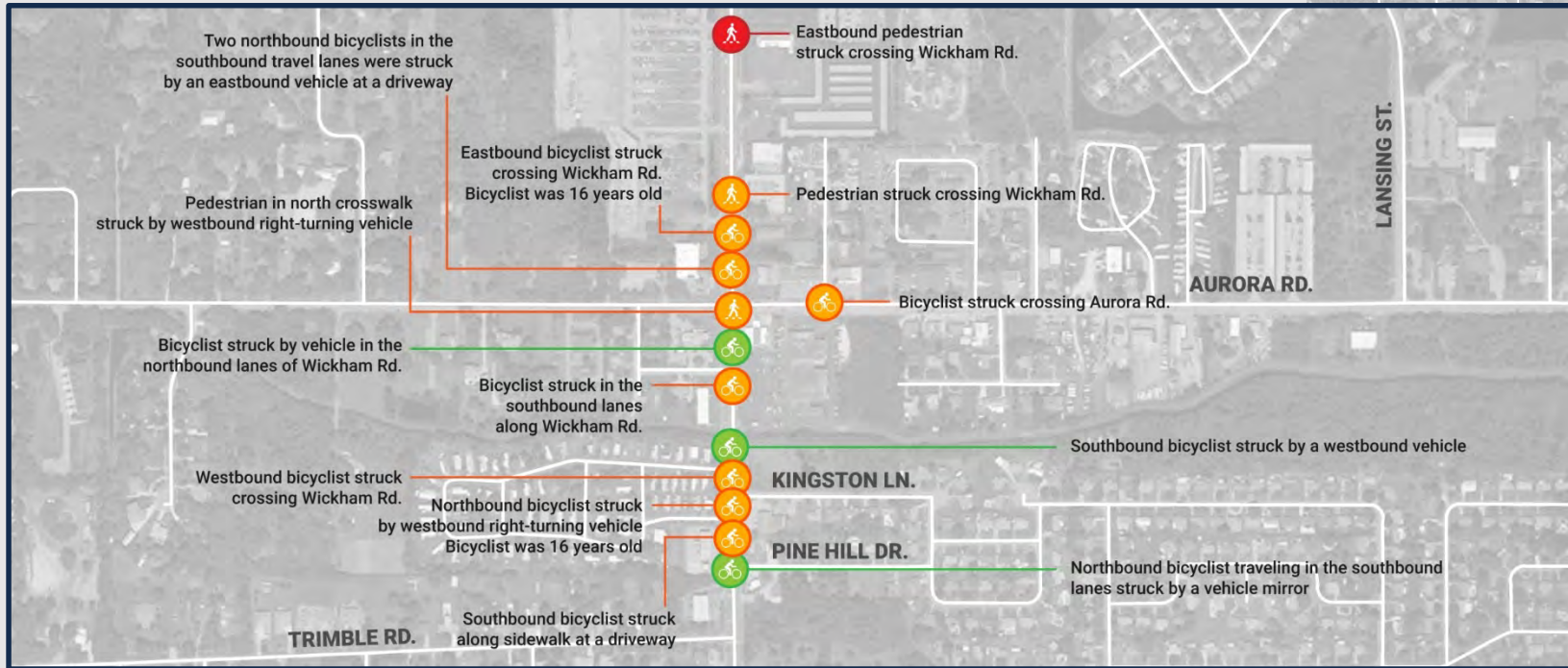
CRASHES BY YEAR AND SEVERITY



CRASHES BY TYPE AND SEVERITY




PEDESTRIAN AND BICYCLE CRASH HISTORY (2011-2015)



● **Fatality**
● **Injury**
● **Property Damage Only**

MULTI-MODAL ISSUES AND OPPORTUNITIES

LEGEND

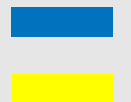
-  Pedestrian Mobility Emphasis Intersection
-  Transit Stop Enhancements
-  Pedestrian Facility Gaps
-  Bicycle Facility Enhancements



Pedestrian Mobility Emphasis Intersections
Intersection Concepts



Transit Stop Enhancements
Preferred Alternative Concept Development





**Pedestrian Facility Gaps and
Bicycle Facility Enhancements**
Preferred Alternative Concept Development



VEHICULAR, UTILITY, AND DRAINAGE ISSUES AND OPPORTUNITIES

LEGEND

-  Left-Turn Crash Emphasis Intersection
-  Left-Turn/Angle Crash Emphasis Area
-  Peak Hour Queuing
-  Utilities Adjacent to Roadway
-  Drainage Facilities Adjacent to Roadway



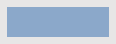
Left-Turn Crash Intersections
Intersection Concepts



Left-Turn/Angle Crash Areas
Preferred Alternative Concept Development



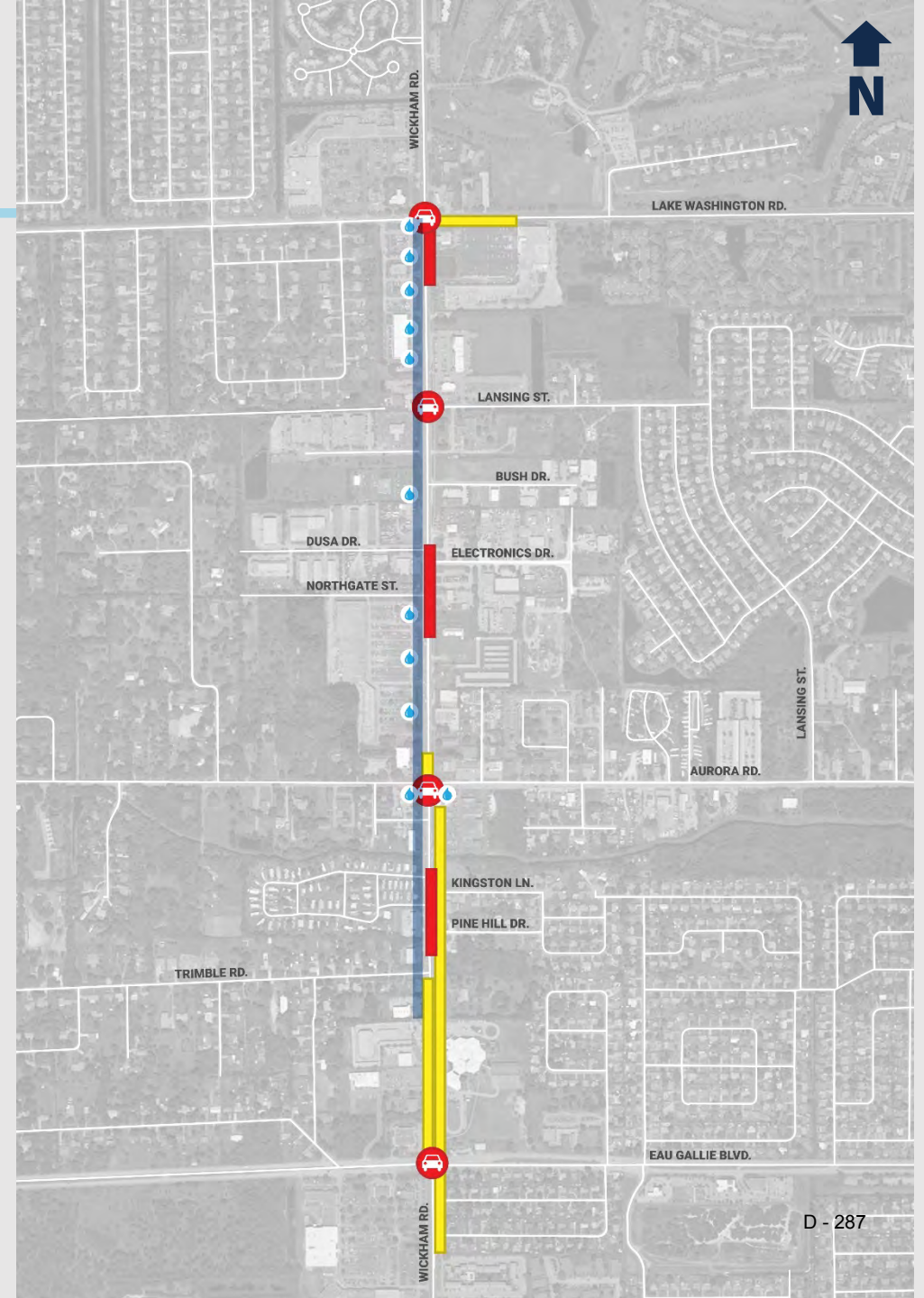
Peak Hour Queuing
Intersection Concepts



Utilities and Drainage



Typical Section and Preferred Alternative Concept Development





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

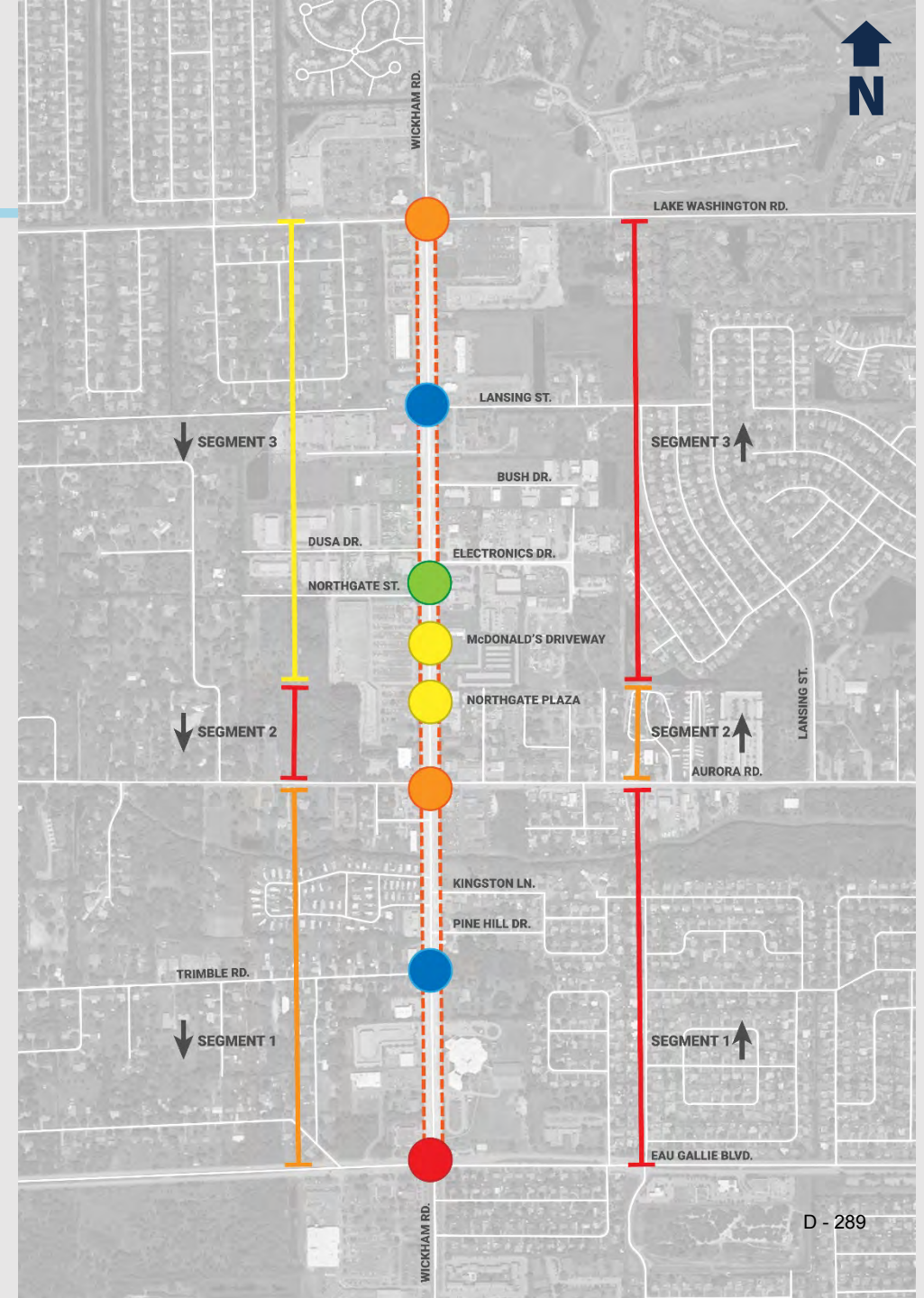


FUTURE CONDITIONS ANALYSIS

FUTURE CONDITIONS OPERATIONS

By 2040 if no improvements implemented, Wickham Road will only experience increased congestion

- LOS E/F anticipated NB from Eau Gallie to Lake Washington
- LOS E/F anticipated SB from Northgate Plaza to Eau Gallie
- Eau Gallie, Aurora, and Lake Washington anticipated to operate at LOS E or F





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



PREFERRED ALTERNATIVES

PREFERRED ALTERNATIVES OVERVIEW

- Short-Term Improvement Opportunities
- Intersection Improvements
- Roadway Improvement Alternatives



2017

WICKHAM ROAD

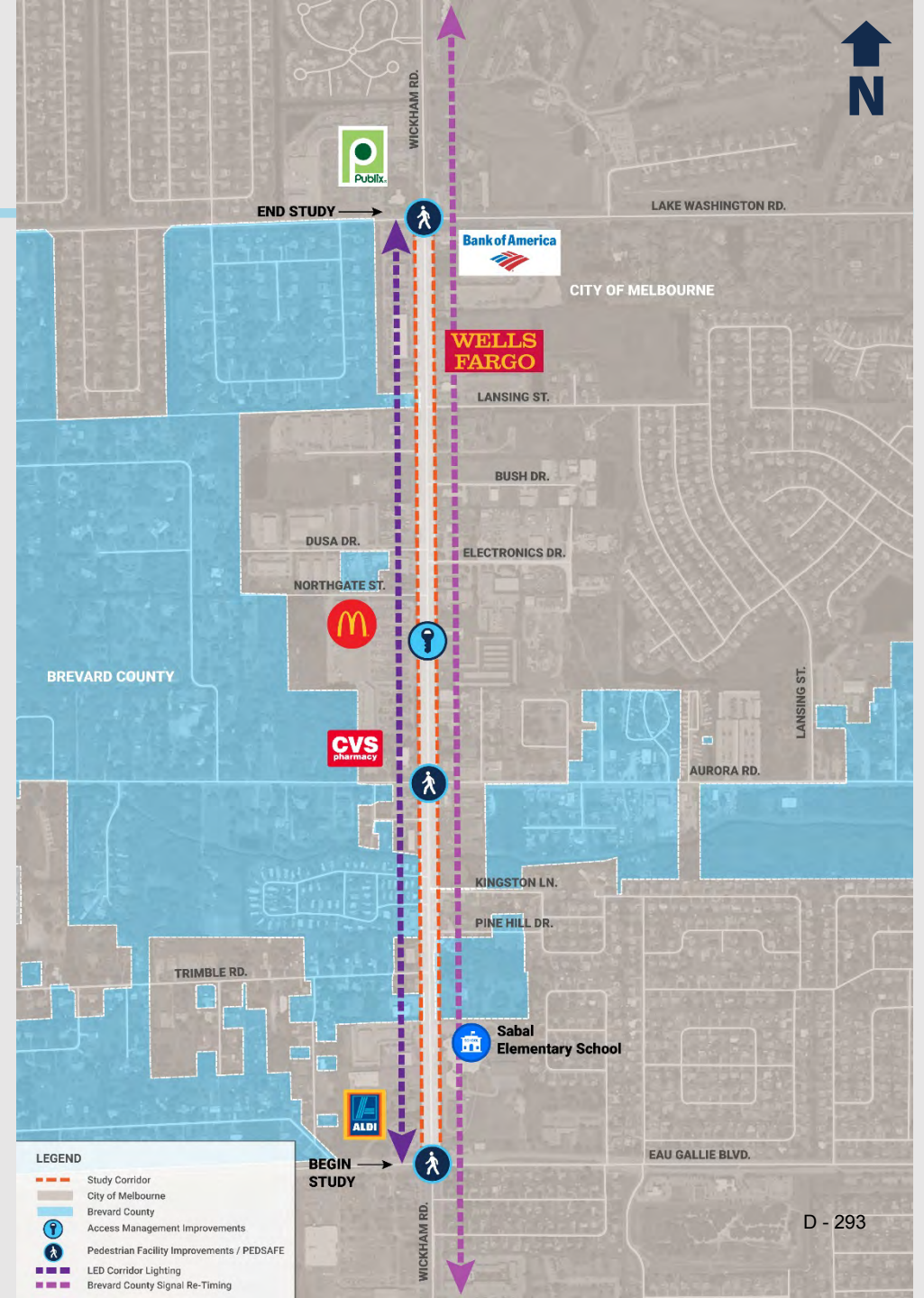
OPERATIONAL ANALYSIS



**SHORT-TERM IMPROVEMENT
OPPORTUNITIES**

SHORT TERM IMPROVEMENTS

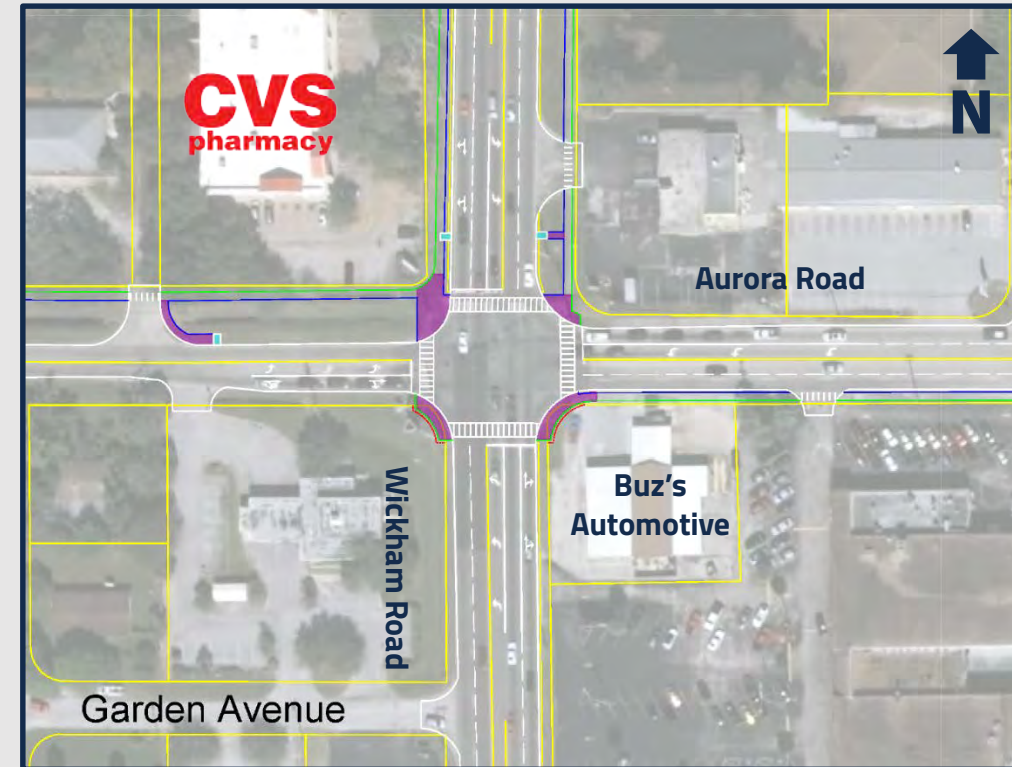
- Pedestrian facility improvements at intersections
- Adaptive signal control/ITS related improvements aimed at reducing peak hour and non-reoccurring congestion - ongoing Brevard County projects
- Incorporate spot medians/directional median openings at Northgate Plaza
- LED corridor lighting - 40% of ped/bike crashes occurred at night
- PEDSAFE



AURORA ROAD SHORT TERM IMPROVEMENTS

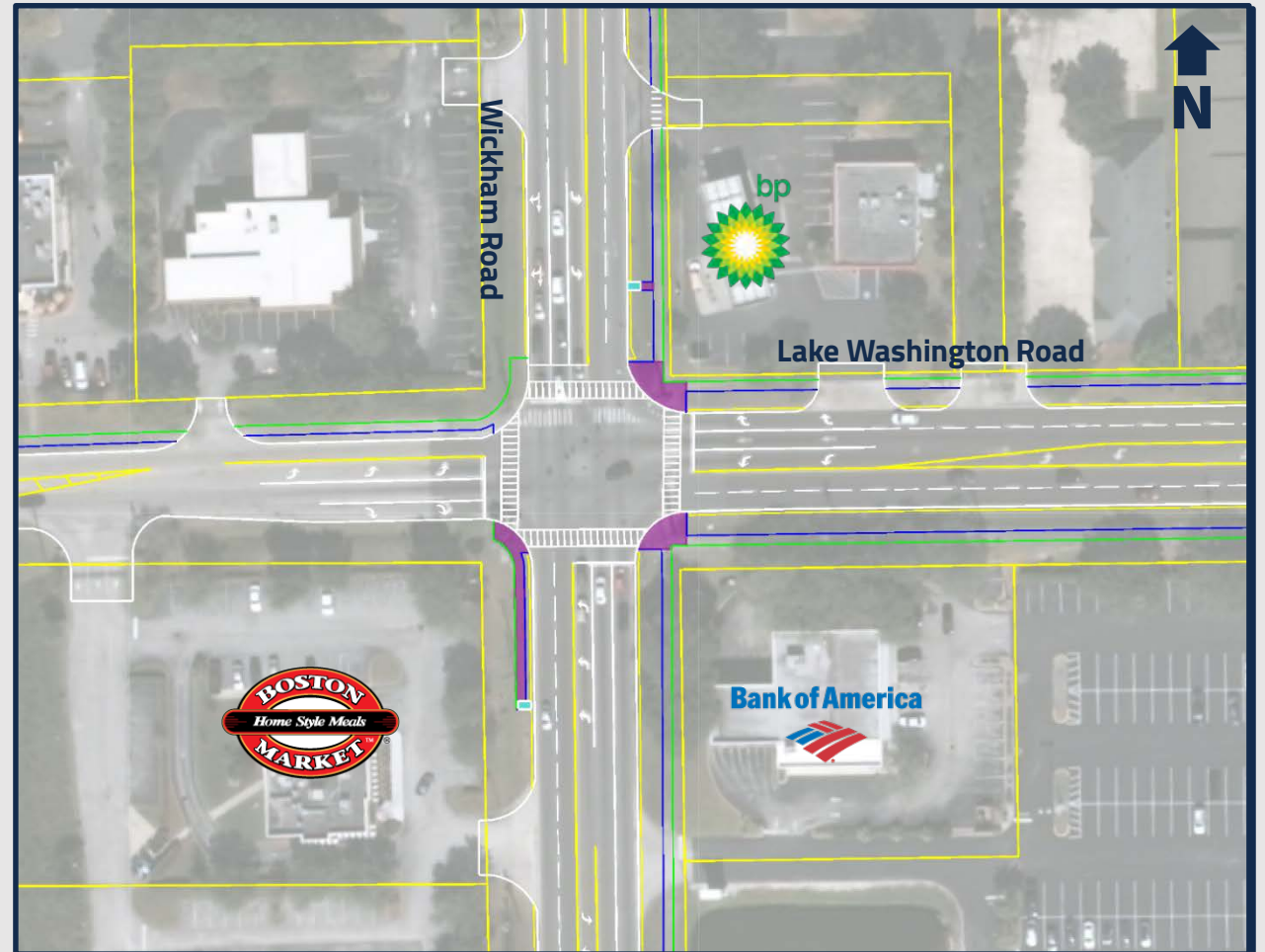
- Adding crosswalks to east and south legs
- Adding pedestrian landing pad to SE corner
- Rebuilding pedestrian landing pads on SW, NE, and NW corners
- Adding bus stop landing pads and sidewalk connections

Wickham Road at Aurora Road	
Construction	\$60,000
Utility Relocations	\$0
Engineering/CEI	\$20,000
Roadway ROW	\$80,000
Total	\$160,000



LAKE WASHINGTON ROAD SHORT TERM IMPROVEMENTS

- Adding crosswalks to west and south legs
- Adding pedestrian landing pad to SW corner
- Rebuilding pedestrian landing pads on NE and SE corners
- Adding bus stop landing pads and sidewalk connections



Wickham Road at lake Washington Road	
Construction	\$50,000
Utility Relocations	\$0
Engineering/CEI	\$20,000
Roadway ROW	\$0
Total	\$70,000



2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



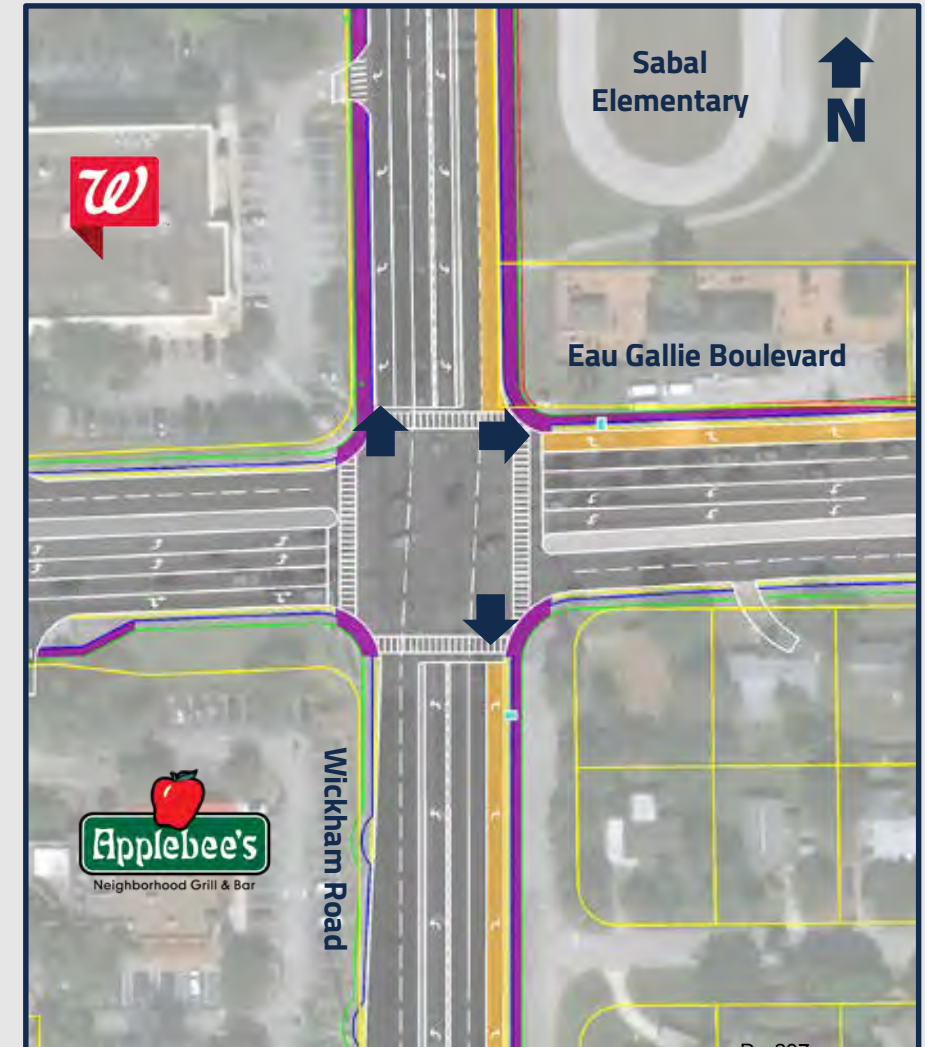
INTERSECTION IMPROVEMENTS

EAU GALLIE BOULEVARD PREFERRED ALTERNATIVE

Add NB, SB, and WB Right Turn Lanes

- **No-Build**
LOS F in PM peak,
9 over-capacity movements
- **Build**
LOS E in PM peak,
0 over-capacity movements

Wickham Road at Eau Gallie Boulevard	
Alternative	NB / SB / WB Right Turn Lanes
Construction	\$2,700,000
Utility Relocations	\$700,000
Engineering/CEI	\$1,000,000
Roadway ROW	\$8,500,000
Total	\$12,900,000
Benefit/Cost	3.17

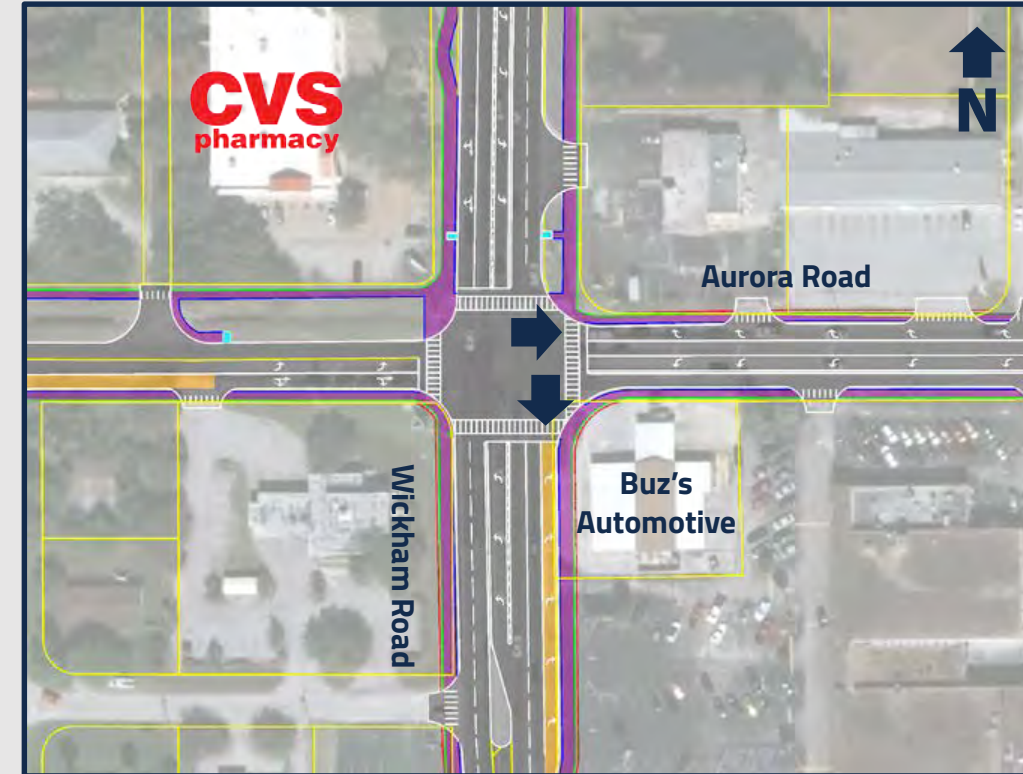


AURORA ROAD PREFERRED ALTERNATIVE

Add NB and WB Right Turn Lanes

- **No-Build**
LOS E in PM peak,
4 over-capacity movements
- **Build**
LOS E in PM peak,
0 over-capacity movements

Wickham Road at Aurora Road	
Alternative	NB/WB Right Turns
Construction	\$1,400,000
Utility Relocations	\$50,000
Engineering/CEI	\$400,000
Roadway ROW	\$2,700,000
Total	\$4,550,000
Benefit/Cost	3.16

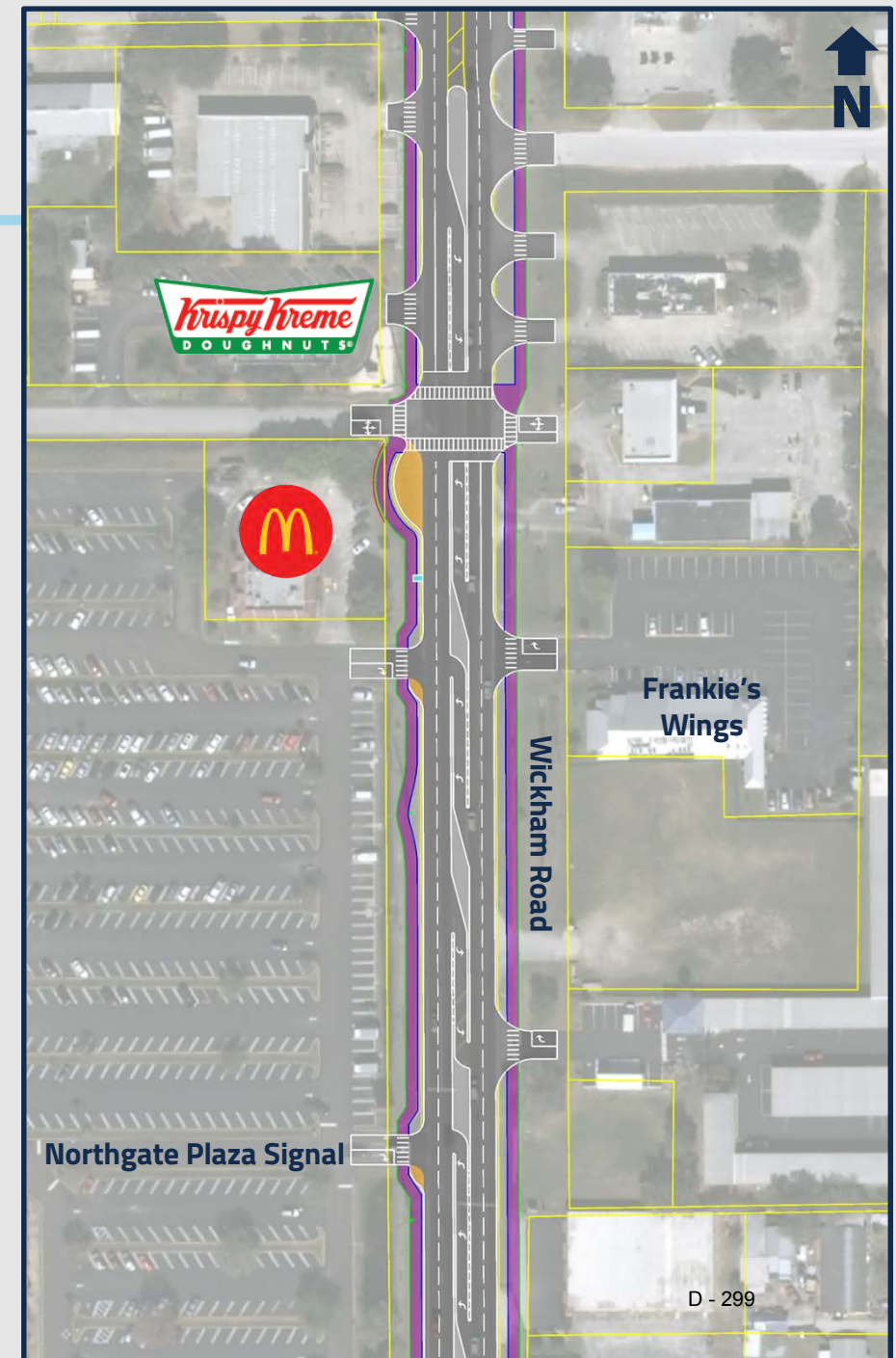


NORTHGATE PLAZA IMPROVEMENTS

Move Signal to Northgate Street and Add Medians

- **Northgate Plaza Build**
LOS C in PM peak, 0 over-capacity movements
- **Northgate Street Build**
LOS A in PM peak, 0 over-capacity movements
- **McDonald's Build**
LOS C in PM peak, 0 over-capacity movements

Wickham Road at Northgate Plaza	
Construction	\$1,000,000
Utility Relocations	\$0
Engineering/CEI	\$300,000
Roadway ROW	\$100,000
Total	\$1,400,000



VENTURE LANE AND LANSING STREET IMPROVEMENTS

New access road around existing school, signalized intersection at Wickham Road and Venture Lane

- **Build**
LOS B in PM peak,
0 over-capacity movements

Wickham Road at Venture Lane and Lansing Street	
Construction	\$1,700,000
Utility Relocations	\$0
Engineering/CEI	\$500,000
Roadway ROW	\$9,200,000
Total	\$11,400,000

Concept feasibility still under discussion with Brevard County School Board



LAKE WASHINGTON ROAD PREFERRED ALTERNATIVE

Add NB Right Turn Lane and 2nd WB Through Lane

- No-Build**

LOS E in PM peak,
5 over-capacity movements

- Build**

LOS E in PM peak,
0 over-capacity movements

Wickham Road at Lake Washington Road	
Alternative	WB Lane Drop at Publix
Construction	\$2,600,000
Utility Relocations	\$400,000
Engineering/CEI	\$900,000
Roadway ROW	\$4,600,000
Total	\$8,500,000
Benefit/Cost	2.47



LAKE WASHINGTON ROAD PREFERRED ALTERNATIVE

WB Lane Drop at Publix





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS



**ROADWAY IMPROVEMENT
ALTERNATIVES**

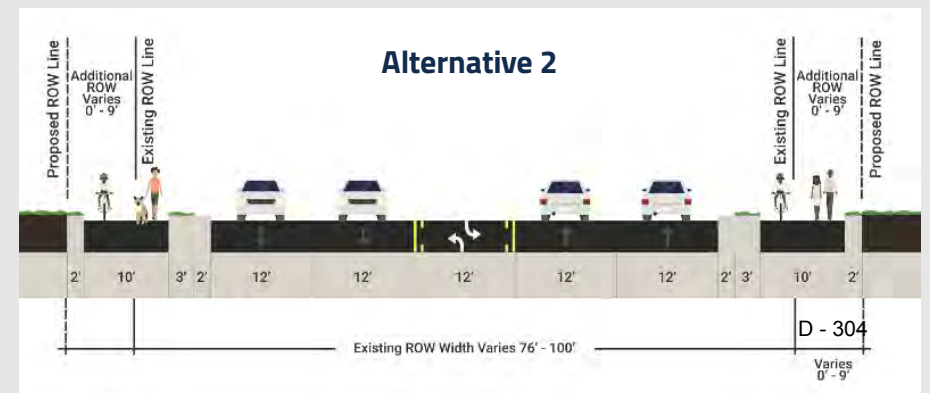
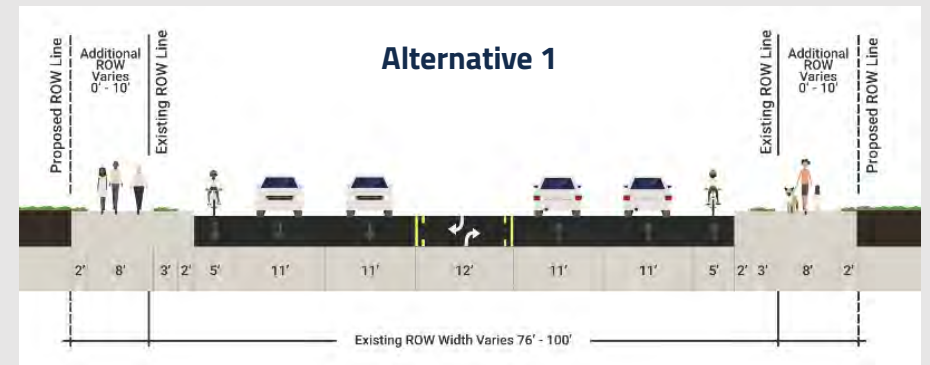
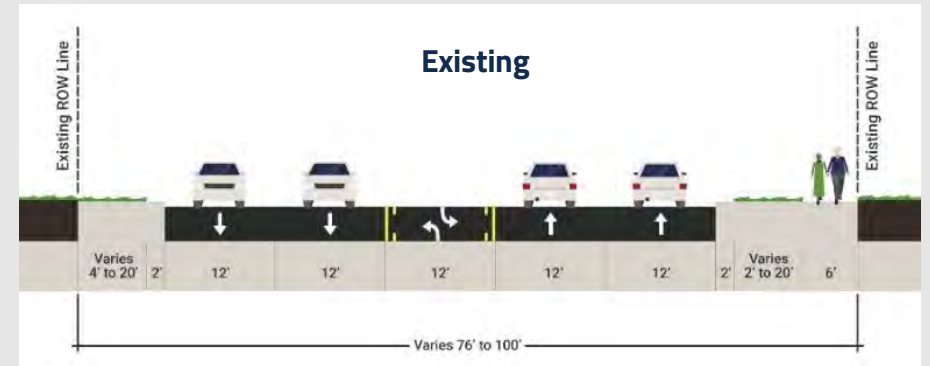
ROADWAY IMPROVEMENT ALTERNATIVES

Alternative 1

- Maintain existing two-way center left turn lane
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 2

- Maintain existing two-way center left turn lane
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side



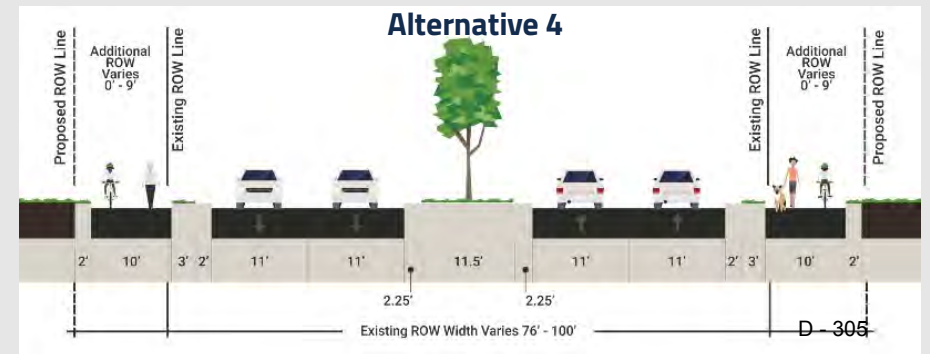
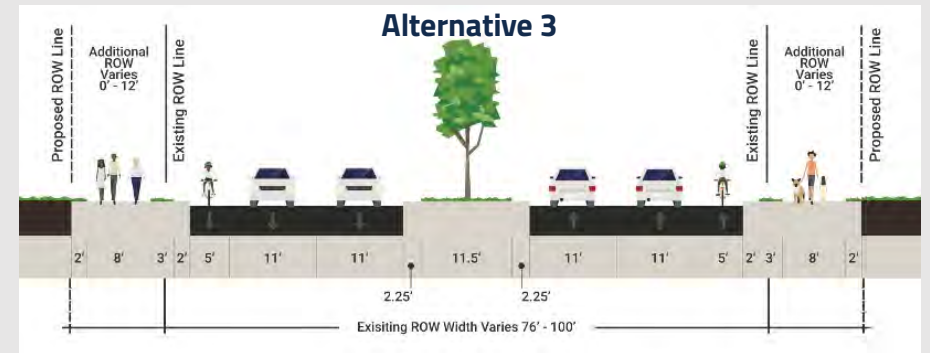
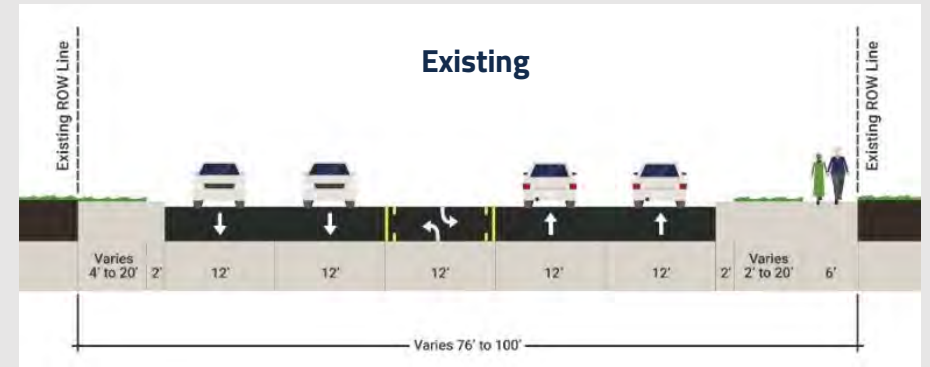
ROADWAY IMPROVEMENT ALTERNATIVES

Alternative 3

- Convert two-way center left turn lane to raised median
- Add bike lanes adjacent to travel lanes
- Add sidewalk on the west side and rebuild all existing sidewalks

Alternative 4

- Convert two-way center left turn lane to raised median
- Add 10' shared use path on west side
- Replace sidewalk with 10' shared use path on east side



MEASURES OF EFFECTIVENESS

✓ Positive Impacts

✓ Moderate Impacts

\$ Least Cost

\$\$ Moderate Cost

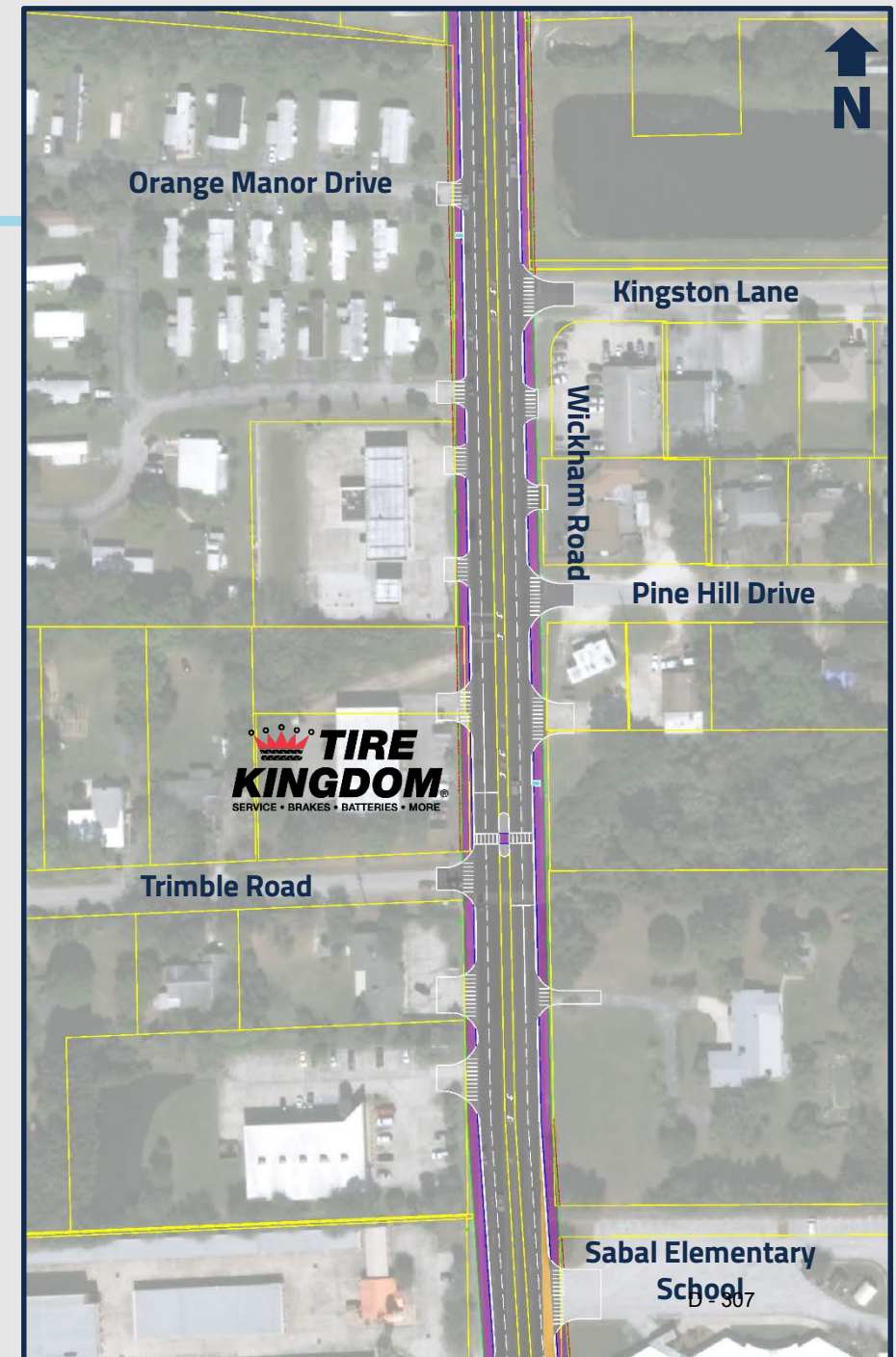
\$\$\$ High Cost

Measure of Effectiveness	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Improve Pedestrian Mobility/Safety	✓	✓	✓	✓
Improve Bicycle Mobility/Safety	✓	✓	✓	✓
Improve Vehicular Mobility	No Change	No Change	✓	✓
Improve Vehicular Safety	✓	No Change	✓	✓
Right-of-Way Impacts	\$\$\$	\$\$	\$\$\$	\$\$\$
Drainage Impacts	\$\$\$	\$\$	\$\$\$	\$\$\$
Utility Impacts	\$\$\$	\$\$	\$\$\$	\$\$\$
Total Cost Comparison	\$\$	\$	\$\$\$	\$\$\$

EAU GALLIE TO AURORA IMPROVEMENTS

Shared-Use Path Additions on East and West Sides

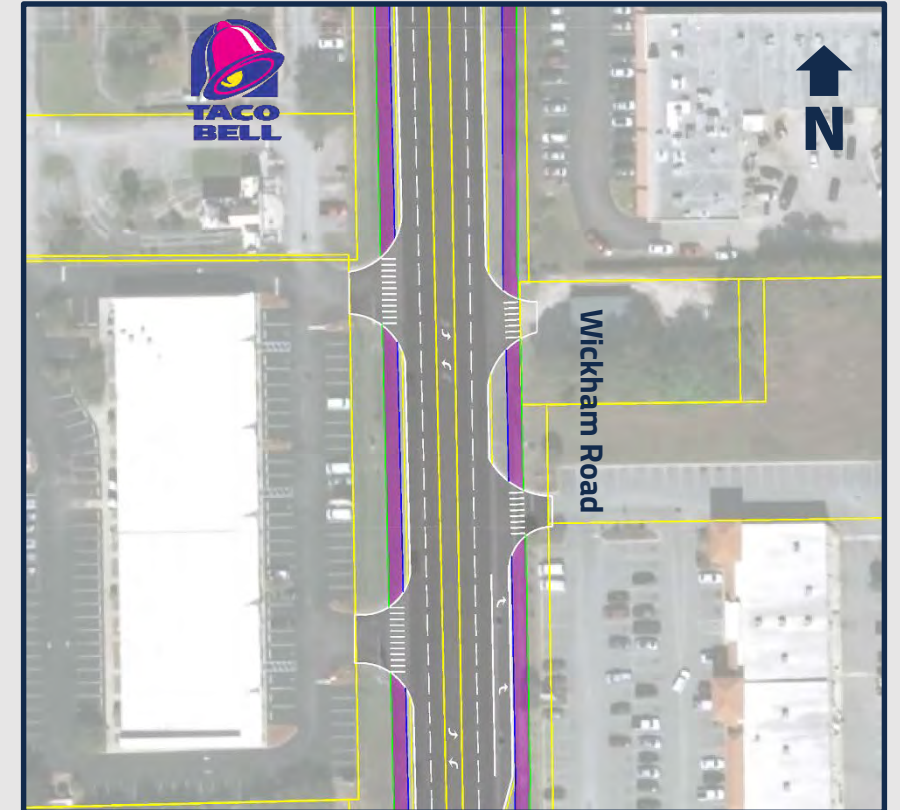
Wickham Road at Northgate Plaza	
Construction	\$600,000
Utility Relocations	\$0
Engineering/CEI	\$200,000
Roadway ROW	\$900,000
Total	\$1,700,000



LANSING TO LAKE WASHINGTON IMPROVEMENTS

Shared-Use Path Additions on East and West Sides

Wickham Road at Northgate Plaza	
Construction	\$250,000
Utility Relocations	\$0
Engineering/CEI	\$80,000
Roadway ROW	\$0
Total	\$330,000





2017

WICKHAM ROAD

OPERATIONAL ANALYSIS

The graphic features the year '2017' at the top. Below it, the title 'WICKHAM ROAD' is written in a large, bold, white-outlined font. Underneath the title, the subtitle 'OPERATIONAL ANALYSIS' is written in a smaller, solid blue font. The text is flanked by several blue gear icons of varying sizes, suggesting a focus on mechanics or engineering. The entire graphic is set against a dark blue background that is a semi-transparent overlay of a street scene with cars and trees.

NEXT STEPS

IMPLEMENTATION PLAN

Short-Term Improvements	
Construction/Utility	\$110,000
Engineering/CEI	\$40,000
Roadway ROW	\$80,000
Total Cost	\$230,000

Short-Term Improvements - Aurora and Lake Washington Pedestrian Improvements

Near-Term Intersection Improvements	
Construction/Utility	\$7,850,000
Engineering/CEI	\$2,300,000
Roadway ROW	\$15,800,000
Total Cost	\$29,950,000

Near-Term Intersection Improvements - Eau Gallie Boulevard, Aurora Road, and Lake Washington Road

Long-Term Corridor Improvements	
Construction/Utility	\$3,550,000
Engineering/CEI	\$1,080,000
Roadway ROW	\$10,200,000
Total Cost	\$14,830,000

Long-Term Corridor Improvements

- Northgate Plaza Access Management and Signal Relocation
- Venture Lane/Lansing Street New Roadway and Signal
- Shared-Use Path Additions from Eau Gallie to Aurora and Lansing to Lake Washington

QUESTIONS?



APPENDIX H – ONLINE COMMENTS RECEIVED

Comment	Date Added	Likes	Addressed in Study?
I am with Launch Federal Credit Union. We would ideally like to see a stoplight at the corner of Venture and Wickham. Lansing would divert down to the east side of Wickham just south of the South Area Alternate Learning Center creating a direct east west intersection. This would have multiple benefits for our members, the Wickham Business Park to the west of our facility, any future development down Venture Road, and the people living in the housing development east of Wickham. This location has the benefit of not disrupting the large power poles that were recently installed on the west side of Wickham. This location also moves a proposed light at Lansing's current intersection further south from Lake Washington Road.	10-May-17	159	Yes - A signal alternative at Venture Lane is currently being explored and discussed with the Brevard County School Board
An alternate method to make the Lansing Street Venture Lane intersections safer would be to install two stoplights. (One at each intersection.) The two new stoplights would be programmed to act as a single unit. A green light on Wickham would be a red light for east west traffic at both the Venture Lane and Lansing Street intersections. A stop signal on Wickham would stop all north south traffic at both intersections. At this point east/west traffic at both the Venture Lane and Lansing Street intersections would get a green light. This gives safe north/south access to the shopping center at 2255 Wickham, Wells Fargo, Residents of Lansing Ridge, South Area Alternate Learning Center, Wickham KinderCare, Launch Federal Credit Union, and the Wickham Business Park. Venture Lane Intersection – On a green signal Eastbound Traffic wanting to travel north will make a left to go north on Wickham where they will be stopped by the red light at the Lansing Street intersection. Westbound Traffic wishing to go south will turn left on Wickham toward the signal at the Northgate Shopping Center. Lansing Street Intersection – On a green signal Westbound Traffic wanting to travel south will make a left to go south on Wickham where they will be stopped by the red light at the Venture Lane intersection. Eastbound traffic wanting to travel north will turn left and travel to the signal at the Lake Washington intersection.	11-May-17	192	Yes - A signal alternative at Venture Lane is currently being explored and discussed with the Brevard County School Board. With this alternative, Lansing traffic would be diverted south on a new roadway connection to the intersection of Venture Lane and Wickham Road. Right turns to travel North along Wickham Road will still be allowed at Lansing Street.
While waiting for the project to proceed, please shave down sidewalk blocks on the east side of Wickham for the benefit of wheelchairs, pedestrians and bicycles. Location is approximate.	21-May-17	57	Yes - A maintenance request has been put in to Brevard County
Please do not wait for completion of project to add a crosswalk and signal at this corner, east side crossing north and south. This is long overdue for pedestrians, bicycles and other modes of transportation.	21-May-17	10	Yes - To be addressed as part of the short term pedestrian improvements at this intersection
A sidewalk here (between Aurora and Kingston) would be very helpful for pedestrians and cyclists, in addition to the already mentioned need for additional crosswalks at the intersection of Aurora and Wickham. This would be a small project and would connect several miles of sidewalk north and south of here. My family, which includes several young children, often walks or rides along Wickham Road, and navigating the parking lot here and the intersection is terrifying. We would walk or bike more frequently if this stretch of Wickham and the intersection were safer.	23-May-17	6	Yes - This is being addressed as part of the typical section alternatives along the corridor
Sidewalk not continuous (west side of Wickham, south of Trimble Road).	16-Jun-17	2	Yes - This is being addressed as part of the typical section alternatives along the corridor
Need a safe place for people to disembark the bus, a sidewalk for pedestrians, and a covered bus stop bench that is not in the middle of the sidewalk (west side of Wickham across from Kingston Lane).	16-Jun-17	2	Yes - This is being addressed as part of the typical section alternatives and intersection improvements along the corridor
The intersection is a hot mess with no consideration to pedestrian traffic (Wickham and Aurora intersection).	16-Jun-17	2	Yes - To be addressed as part of the short term pedestrian improvements and longer term overall improvements at this intersection
No consideration to pedestrian traffic looking to cross over Wickham Road in to the Northgate Plaza and McDonalds. And of course no sidewalk for the pedestrians on the west side of Wickham to go north or south for bus stops.	16-Jun-17	1	Yes - A signal is currently being considered at the Northgate Street intersection which would include pedestrian facilities. The sidewalk is being addressed as part of the typical section alternatives along the corridor
Really bad place for people to disembark for a bus. Need a platform area, sidewalk, and a covered bench (west side at McDonalds).	16-Jun-17	0	Yes - This is being addressed as part of the typical section alternatives along the corridor
The right-turn lane from Lake Washington to Wickham is horrible. The crosswalk is in the right turn lane.	16-Jun-17	1	Yes - To be addressed as part of the short term pedestrian improvements and longer term overall improvements at this intersection
No continuous sidewalk on the west side of Wickham for those walking to or from the bus stop and no pedestrian crosswalks to get to the bus stop (SE corner of Wickham/Lake Washington).	16-Jun-17	1	Yes - This is being addressed as part of the typical section alternatives along the corridor
Signage for Wickham business park blocks visibility for exiting cars and limits visibility sidewalk facilities. Please refer to more updated maps of this site. Stop sign, stop line and pedestrian crosswalk that are in place cause the cars to stop far back and limit line of site.	16-Jun-17	0	Yes - This will be investigated by the project team and discussed as a short term improvement
Lack of contiguous sidewalk, no covered bus stop bench that does not sit in the middle of the sidewalk and a nice platform for people to disembark the bus (west side of Wickham at Portofino Villas).	16-Jun-17	1	Yes - This is being addressed as part of the typical section alternatives along the corridor. The bus stop issues will be addressed as part of the preferred alternative concept layout.

Uniform markings of pedestrian crosswalks. Not a consistent message to car drivers (Weston Drive intersection).	16-Jun-17	0	Yes - This will be addressed during the preferred alternative concept layout for the project
No pedestrian crossing area with bus stop, stop sign right up on Wickham road and the island with signage blocks visibility of cars exiting the development (west side of Wickham at Portofino Villas).	16-Jun-17	1	Yes - This will be addressed during the preferred alternative concept layout for the project
Please DO NOT put marked bike lanes on this portion of the road (south section near Eau Gallie). If the municipalities cannot properly maintain the debris that accumulates in dedicated bike lanes then the cyclist cannot ride in them. As a cyclist not having a continuous flow of bike lanes facility the length of Wickham...the design pushing me into a conflict area when the lanes randomly starts and end. The car drivers are not watching for this because they are not educated and many of the cyclist are not either. The speeds though a majority of this stretch is 35mph the solutions would be a 14' out lane with sharrows.	16-Jun-17	2	Yes - This is being addressed as part of the typical section alternatives along the corridor
Please take care of the pedestrians with this project and make this corridor walkable with some beautification. It is a hot mess with many design mistakes that need to be fixed. And please address county and city zoning that sidewalks are a transportation issue not a zoning issue. Developers should NOT be building sidewalks...these sidewalks are inconsistent in design, function and placement and can put people in harms way.	16-Jun-17	2	Yes - This is being addressed as part of the typical section alternatives along the corridor
The last thing I want to see on Wickham Rd. is more traffic lights. If you must have something for traffic calming, entrance and egress on to Wickham a traffic circle makes more sense	16-Jun-17	3	Yes - The project is only looking to possibly add one more traffic signal along the corridor. To address short term congestion issues, Brevard County is currently working on signal re-timing projects along the corridor. To address longer term congestion issues, the intersection improvement alternatives would be adding lanes to facilitate better vehicle movements along the corridor
Crossing from West to East across Wickham a pedestrian actually has to enter the right turn lane to get on to the ramp headed north bound on Wickham. I witnessed a man in a wheelchair try to negotiate this. A car that had pulled forward to make a right turn (N. bound) on to Wickham had to back up to let the wheelchair through (Lake Washington intersection).	16-Jun-17	2	Yes - To be addressed as part of the short term pedestrian improvements and longer term overall improvements at this intersection
The entire length of Wickham needs a 4 foot shoulder to be used as a bike lane. It should not be marked as such though since there is no money to clean and maintain it. Cyclist should have the ability to enter the lane of traffic with cars with out fear of ticketing when the shoulder is full of debris and not being maintained.	16-Jun-17	5	Yes - This is being addressed as part of the typical section alternatives along the corridor
Sorry not to see some of the simple, inexpensive improvements for ped/cyclists that your report notes while studies continue. Example: zebra stripes right here at Aurora crossing on east side of Wickham, to show drivers where to stop for those crossing the street. Also, shave down sidewalk where blocks are very high and should be flush with the rest of sidewalk. Dangerous for walkers and bikes and wheelchairs.	23-Jun-17	2	Yes - This will be added to the short term improvement alternatives discussed in the final report. The sidewalk maintenance issue is being coordinated with Brevard County
On this corner and Eau Gallie, remember that all those diagonal crossing ramps off the curb have to go. They are difficult for anyone to navigate on wheels, and of course this one puts the pedestrian in the traffic lane while waiting for the light to change.	20-Aug-17	1	Yes - To be addressed as part of the short term pedestrian improvements and longer term overall improvements at this intersection