



**Welcome**

**Virtual Public Meeting**

**S.R. 44 at Kepler Road Roundabout**

**Volusia County**

**August 6, 2020**

**Financial Project Identification (FPID) No.: 431922-1**

Welcome to the virtual public meeting regarding the design of a new roundabout at the intersection of State Road 44 and Kepler Road.

- Introduce the design to the community
- Obtain your comments and answer questions
- Provide an update on the project schedule
- A public hearing will be held at a later date.



The purpose of this meeting is to introduce the design concepts to the community, provide an opportunity for questions and comments, and update you on the project schedule. A public hearing for this project will be held at a later date.



## TITLE VI

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 FDOT compliance with Title VI may do so by contacting either:

DeLand Office  
Florida Department of Transportation  
District Five Title VI Coordinator  
Jennifer Smith  
719 South Woodland Boulevard  
DeLand, Florida 32720  
386-943-5367  
[jennifer.smith2@dot.state.fl.us](mailto:jennifer.smith2@dot.state.fl.us)

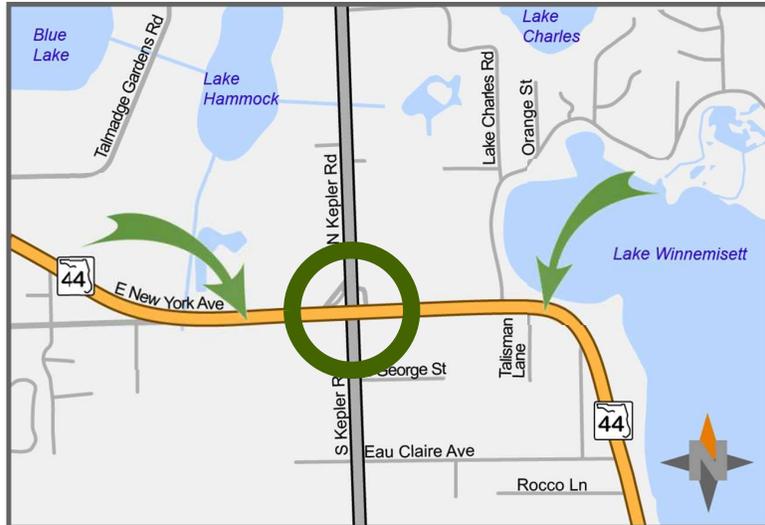
Tallahassee Office  
Florida Department of Transportation  
Statewide Title VI Coordinator  
Jacqueline Paramore  
605 Suwannee Street, Mail Station 65  
Tallahassee, Florida 32399-0450  
850-414-4753  
[jacqueline.paramore@dot.state.fl.us](mailto:jacqueline.paramore@dot.state.fl.us)

All inquiries or complaints will be handled according to FDOT procedure and in an expeditious manner.

This meeting is being held in accordance with state and federal regulations, including Title VI of the Civil Rights Act. Public participation is encouraged and solicited without regard to race, color, religion, sex, age, national origin, disability or family status.

Persons wishing to express their concerns about Title VI may do so by contacting Jennifer Smith, FDOT District 5 Title VI coordinator at [jennifersmith2@dot.state.fl.us](mailto:jennifersmith2@dot.state.fl.us) or 386-943-5367, or Jacqueline Paramore, FDOT statewide Title VI coordinator at [Jacqueline.paramore@dot.state.fl.us](mailto:Jacqueline.paramore@dot.state.fl.us) or 850-414-4753.

- The project is in DeLand, Volusia County
- Intersection of S.R. 44 and Kepler Road
- Limits begin west of Kepler Road and extend past Talisman Lane



This project is located in Volusia County adjacent to the City of DeLand. The project includes replacing the existing traffic signal with a new roundabout at the intersection of S.R. 44 and Kepler Road and roadway widening to create a three-lane section to accommodate left turning vehicles along S.R. 44 east of Kepler Road.

The project limits begin west of Kepler Road and extend east past Talisman Lane.

- S.R. 44 – one lane in each direction with turn lanes at the intersection
- Kepler Road – one lane in each direction with turn lanes at the intersection
- Outside paved shoulders
- No pedestrian facilities



The existing intersection consists of one travel lane in each direction with right and left turn lanes along both S.R. 44 and Kepler Road. There are no sidewalks and bicyclists use the paved shoulders and bicycle through lanes at the intersection.

There is also new development proposed in 3 out of the 4 quadrants of the intersection, including a new gas station to replace the existing Circle K, a 7-Eleven gas station, and an animal hospital. These are proposed to be in-place prior to construction of the intersection improvement.

## Safety

- 81 total crashes 2011-2015
  - 33 injury crashes (41%)
  - 22 angle or left-turn crashes (27%)



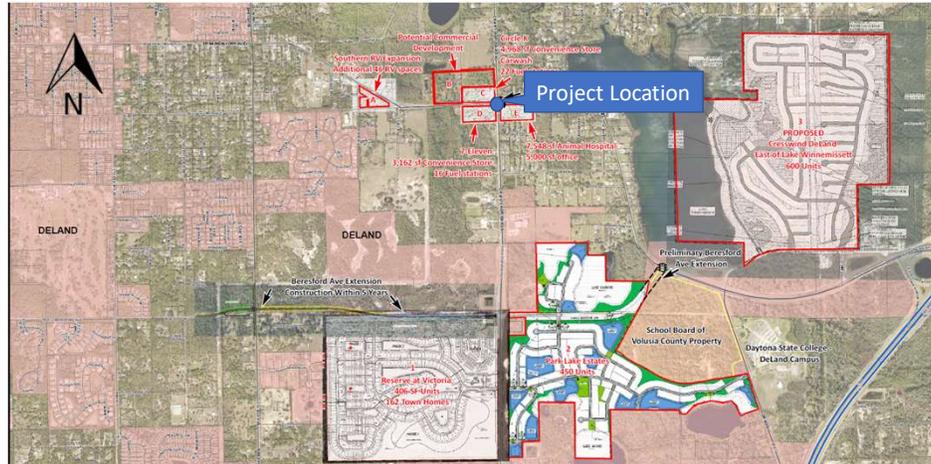
## Operations

- Approach delays (2017 analysis)
  - 48 seconds AM peak
  - 141 seconds PM peak
- PM peak back-ups stretch ¼ mile



This intersection experiences a high-volume of injury related crashes and significant traffic back-ups in the AM and PM peak hours. From the study period between 2011-2015 there were 81 total crashes with 33, or 41%, resulting in injuries. This includes 22 angle or left-turn crashes.

Based on traffic volumes from 2017, intersection approach delays range from 48 seconds in the AM peak hour to 141 seconds in the PM peak. The means traffic backups can extend a quarter of a mile at this intersection. The goal of this project is to enhance safety and improve operations at this intersection.



Traffic projections were updated earlier this year to account for planned development

These problems will only get worse as traffic volumes continue to increase in this corridor. This map shows the adjacent planned development noted earlier as well as substantial new residential development proposed in the area. The traffic projections for this project have been updated to account for this future planned development.

Roundabouts reduce the chances for the most serious types of accidents

62

Angle crashes (T-bone) involving fatalities at Volusia County intersections from 2014 through 2018\*

0

Fatalities associated with side-swipe collisions at Volusia County intersections from 2014 through 2018\*

70%

Estimated reduction in the number of serious injuries and fatalities in this roundabout versus the signal-controlled intersection\*\*

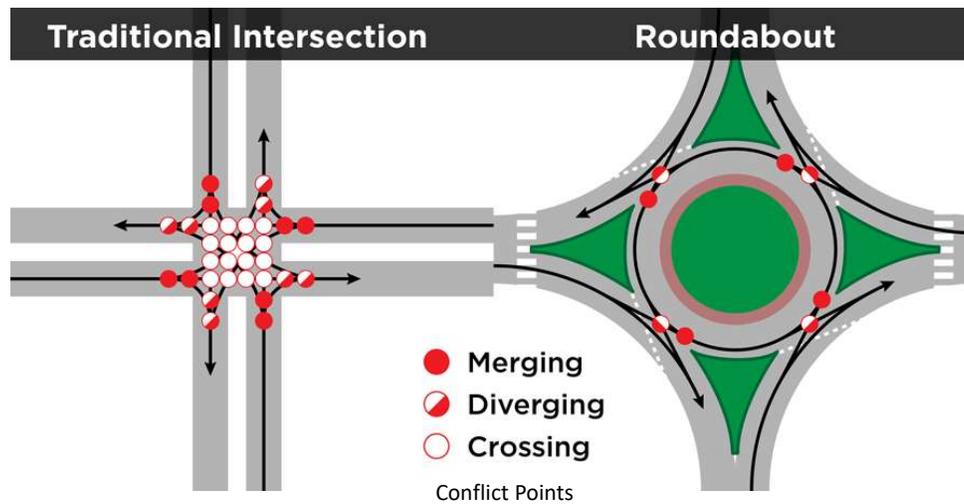


\*Source – National Highway Traffic Safety Administration  
\*\* Source – 2018 Feasibility Study

A roundabout was selected for this intersection to improve safety first and foremost. Between 2014-2018 there were 62 angle or “T-Bone” crashes resulting in at least one fatality at intersections in Volusia County. Roundabouts are a proven countermeasure to reduce these most serious types of accidents at intersections.

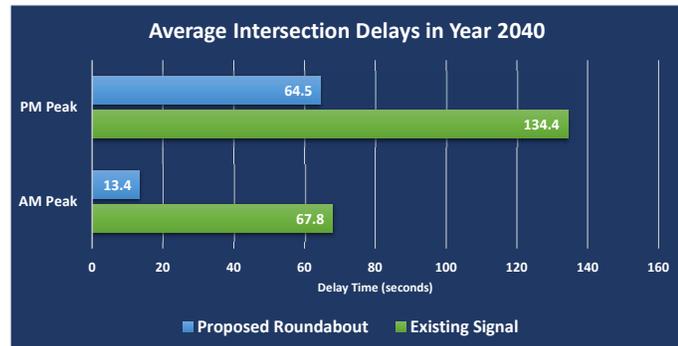
Roundabouts are not a magic-pill to eliminate all accidents, but due to the reduced speeds and traffic patterns of this intersection type, crashes are typically limited to minor fender-bender rear-end or sideswipe crash types that do not result in serious injury or fatalities. From this same period there were no fatalities at Volusia County intersections from side-swipe crashes.

At this intersection, it is estimated that the chance of serious injury or fatal crashes is reduced by 70% compared to the existing signal.

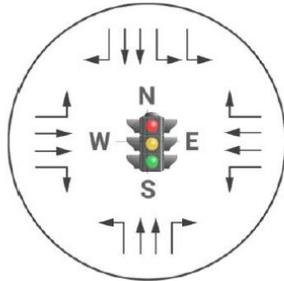


The primary reason for this reduction of serious accidents at this intersection is due to a reduced amount of conflict points, or interaction between vehicles. At a traditional signalized intersection as shown on the left-hand side, the white circles identify locations where vehicular paths can cross one-another, which can lead to potentially dangerous angle type crashes. Conversely, for the roundabout shown to the right, the opportunities for vehicles to cross paths at high-speeds have been eliminated and replaced with merging conflict points, which limit the severity of a potential crash if one were to occur.

The proposed roundabout will reduce delays at the intersection

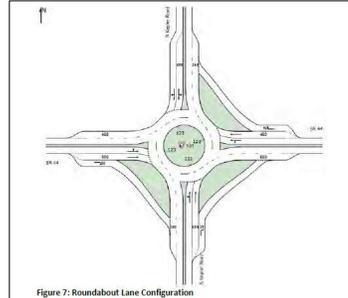


As traffic back-ups are a common occurrence at this intersection today, the roundabout will also significantly reduce congestion. The proposed roundabout will reduce traffic delays by approximately 52% in the PM rush hour and 80% in the AM in the design year of 2040.



Best signal-controlled option:

- Dual southbound left turn lanes with auxiliary through lanes in each direction



Best roundabout option:

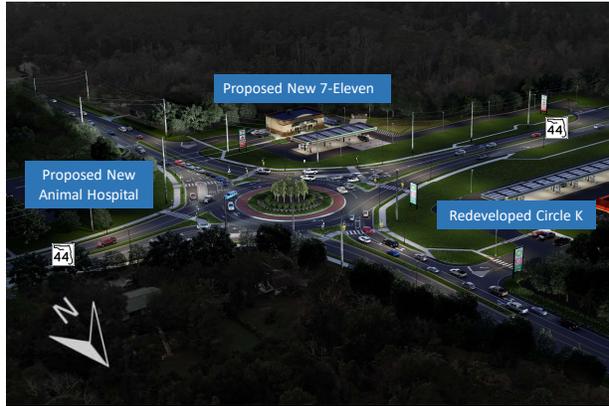
- Two-lane roundabout with right turn bypass lanes

The Department analyzed a variety of options to enhance safety and relieve congestion at this intersection. The alternatives that best improved traffic operations in the 2040 design year included a traffic signal with two through lanes in all directions and two southbound left turn lanes shown on the left, and a two-two lane roundabout with right-turn “bypass” lanes as shown on the right.

	No Change	Traffic Signal + Added Lanes	Roundabout + Right Bypass Lanes
Best Reduction in Average AM Peak Delays	X	X	✓
Best Reduction in Average PM Peak Delays	X	✓	X
Enhances Safety	X	X	✓
Limits ROW Needs	X	X	✓
Overall Cost-Benefit	X	X	✓

The roundabout option compares favorably to the signal option for operational, safety and cost benefits

Comparing these two alternatives, the roundabout was selected based on the safety enhancements, comparable reduction in traffic delays, less right-of-way impact, and the overall resulting cost-benefit.



*Renderings of proposed roundabout during the day and at night (looking from northeast to southwest)*

This is what the proposed roundabout will look like once constructed looking from northeast to southwest. In addition to the roundabout, improvements include pedestrian and bicycle facilities, landscaping in the center island and lighting for vehicular traffic as well as pedestrians.



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## Video

Now we'll take a look at the roundabout in action. Starting from north of the intersection looking south, this video shows the proposed roundabout as well as the adjacent future development including the redeveloped Circle K in the foreground, new 7-eleven to the near right, and new animal hospital in the far right across the intersection. The traffic that you see is the actual forecasted traffic volume during PM rush hour in the 2040 design year.

Looking past the intersection to the east along S.R. 44, note the roadway widening for the left-turn that extends to Talisman Lane. Each entry approach to the roundabout consists of two-lanes in each direction with right-turn "bypass" lanes in the 3 of 4 quadrants.

As vehicles approach the roundabout note how they slow down and yield to oncoming traffic and then proceed when traffic is clear. Additionally, there are sidewalks and crosswalks at all approaches. Pedestrians will activate the Rapid-Rectangular Flashing Beacons, or RRFBs, prior to crossing. There are also bicycle ramps at each approach to allow cyclists to exit the roadway and utilize the sidewalk if they so choose.



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### Animation video

To safely navigate the roundabout, it is important to follow the signing and pavement markings. Once a driver is in the correct lane, they should not change lanes within the roundabout.

To continue straight through, drivers may use either of the two lanes, yield to pedestrians and oncoming traffic and proceed (as shown here).



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### Animation Video

Left-turn maneuvers can only be made from the inside lane. Drivers will perform the same yield operation and then proceed past the on-coming lanes and follow the circle to make the left turn (as shown here).

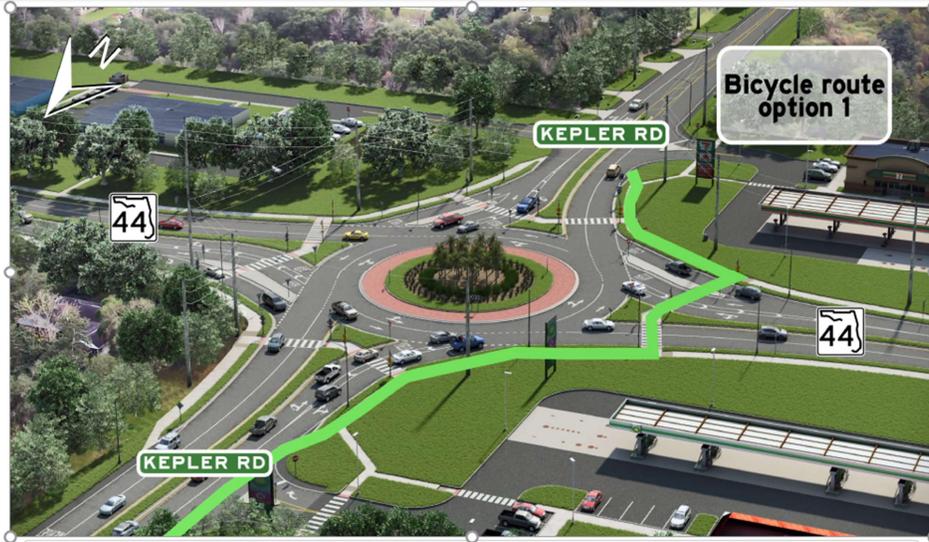


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### Animation Video

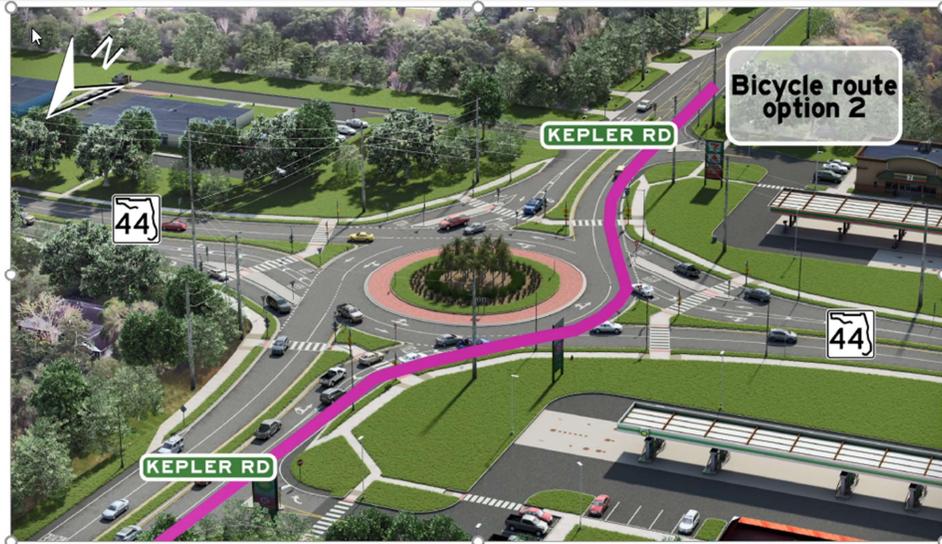
Right-turn movements for the S.R. 44 and northbound Kepler Road approaches will use right-turn bypass lanes. This traffic does not enter the roundabout but still must yield to on-coming traffic.



## Animation Video

Bicyclists have two options to navigate the roundabout.

The first option is to exit the roadway via the bicycle ramp and use the sidewalks and crosswalks to complete their maneuver.



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## Animation Video

The second option is to remain within the roadway and traverse the roundabout in the same fashion as motor vehicle traffic.

- Rectangular Rapid Flashing Beacons (RRFBs) that the pedestrian activates when ready to cross
- Pedestrians should stay on the walkways
- Pedestrians should not enter the center of the roundabout



*Crosswalk on U.S. 92 by Walmart*

To safely cross the roundabout, pedestrians should use the sidewalk and marked crosswalks and never enter the center of the roundabout. As mentioned earlier, to alert drivers that a pedestrian is present, pedestrians will activate a Rectangular Rapid Flashing Beacon, or RRFBs, in a similar fashion to a traditional signal intersection. Pedestrians should wait and allow for vehicles in both approach lanes to yield prior to crossing the street.

More information about roundabouts and how to use them is available online at:  
[www.fdot.gov/agencyresources/roundabouts](http://www.fdot.gov/agencyresources/roundabouts); [fdot.tips/roundabout](http://fdot.tips/roundabout), and  
[www.safety.fhwa.gov/intersection/innovative/roundabouts](http://www.safety.fhwa.gov/intersection/innovative/roundabouts)

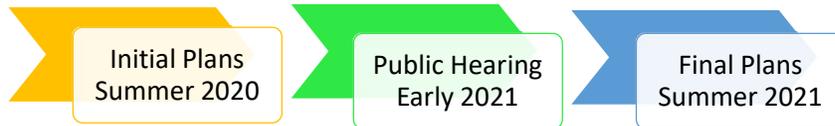


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You can find more information online about roundabouts and how to use them at:  
[www.fdot.gov](http://www.fdot.gov) and [www.safety.fhwa.gov](http://www.safety.fhwa.gov)

Tips are also available by typing [fdot.tips/roundabout](http://fdot.tips/roundabout) in your browser.



### Estimated Costs:

Right of Way = \$6 Million (partially funded)

Construction = \$4 Million (not funded)



We are still early in the design process for this project. Initial plans will be submitted this summer. A public hearing is scheduled for early 2021, with final plans submitted in summer 2021. Right of way is needed for this project, and a portion of the estimated \$6 million cost is funded. Construction is expected to cost about \$4 million and is currently not funded.



## HOW CAN YOU PARTICIPATE?

- Type a question in the question box during the virtual meeting
- Download a comment form from the handouts section of the page during the virtual meeting and return it to the address shown on the form
- Contact FDOT Project Manager Mr. Todd Helton by email at [todd.helton@dot.state.fl.us](mailto:todd.helton@dot.state.fl.us) or by phone at 386-943-5207
- Use the “Ask a Question” button on the project page of our CFL Roads website at [www.cflroads.com/431922-1](http://www.cflroads.com/431922-1)

All comments received by August 21, 2020, will become part of the record for this meeting.

Your feedback is important to us and we encourage you to share your comments using any of the following methods:

- Type a question in the question box during the virtual meeting
- Download a comment form from the handouts section of the page during the virtual meeting and return it to the address shown on the form
- Contact FDOT Project Manager Mr. Todd Helton by email at [todd.helton@dot.state.fl.us](mailto:todd.helton@dot.state.fl.us) or by phone at 386-943-5207
- Use the “Ask a Question” button on the project page of our CFL Roads website at [www.cflroads.com/431922-1](http://www.cflroads.com/431922-1)

Comments are welcomed throughout the project. Those received by August 21, 2020, will become part of the record for this meeting.



## WANT MORE INFORMATION?

More information is available online

1. Go to the project website at [www.cflroads.com](http://www.cflroads.com)
2. Enter the project number "431922-1" in the search box at the top right
2. Then click on "go"

The screenshot shows the FDOT Central Florida Roads website. At the top right, there is a search box containing the project number "431922-1" and a "Go" button. A blue arrow points from the "WANT MORE INFORMATION?" header to the search box. Below the search box, the website header includes "FDOT Central Florida Roads Florida Department of Transportation" and navigation links for "Home", "Lane Closures", "Current Construction Projects", "Future Projects", and "News". The main content area features a "Project Finder" section with a search prompt: "You can find road construction projects quickly by: Clicking a road shield below, selecting a road, city or county or by clicking a county on the map to the right." Below this are various road shields (4, 75, 95, 1, 441, 50) and a "Search" button. To the right of the search area is a "District 5 Service Area" map showing the Tampa area. At the bottom right, there is a "Links" section with various resources and the "FLORIDA 511 TRAFFIC INFO FL511.COM" logo.

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To follow the status of the project, please visit the project page on the FDOT's Central Florida website [www.cflroads.com](http://www.cflroads.com). Type the project number 431922-1 in the search box at the top of the page. Then click on "go." When the new page opens, click on the project file name.

The recording of this presentation will be posted to the website within a few days.



## CONTACT INFORMATION

If you have questions or would like more information,  
you may contact the following:

**Mr. Todd Helton, P.E.**  
**Design Project Manager**  
**Florida Department of Transportation**  
**719 South Woodland Boulevard**  
**DeLand, FL 32720**  
**386-943-5207**  
**[Todd.Helton@dot.state.fl.us](mailto:Todd.Helton@dot.state.fl.us)**

**Mr. Nick Harrison, P.E.**  
**Consultant Project Manager**  
**American StructurePoint, Inc.**  
**5405 Cypress Center Drive, Suite 325**  
**Tampa, FL 33609**  
**813-460-2622**  
**[NHarrison@structurepoint.com](mailto:NHarrison@structurepoint.com)**

Again, if you have questions or would like more information, please contact Todd Helton, FDOT Project Manager, or Nick Harrison, Consultant Project Manager.



**Thank You**  
for taking time to attend  
this virtual public meeting

**We will now begin a  
question-and-answer period**

Thank you for your interest in this project. We will now begin a question-and-answer period.