

NE Polk County US 27 Mobility Study

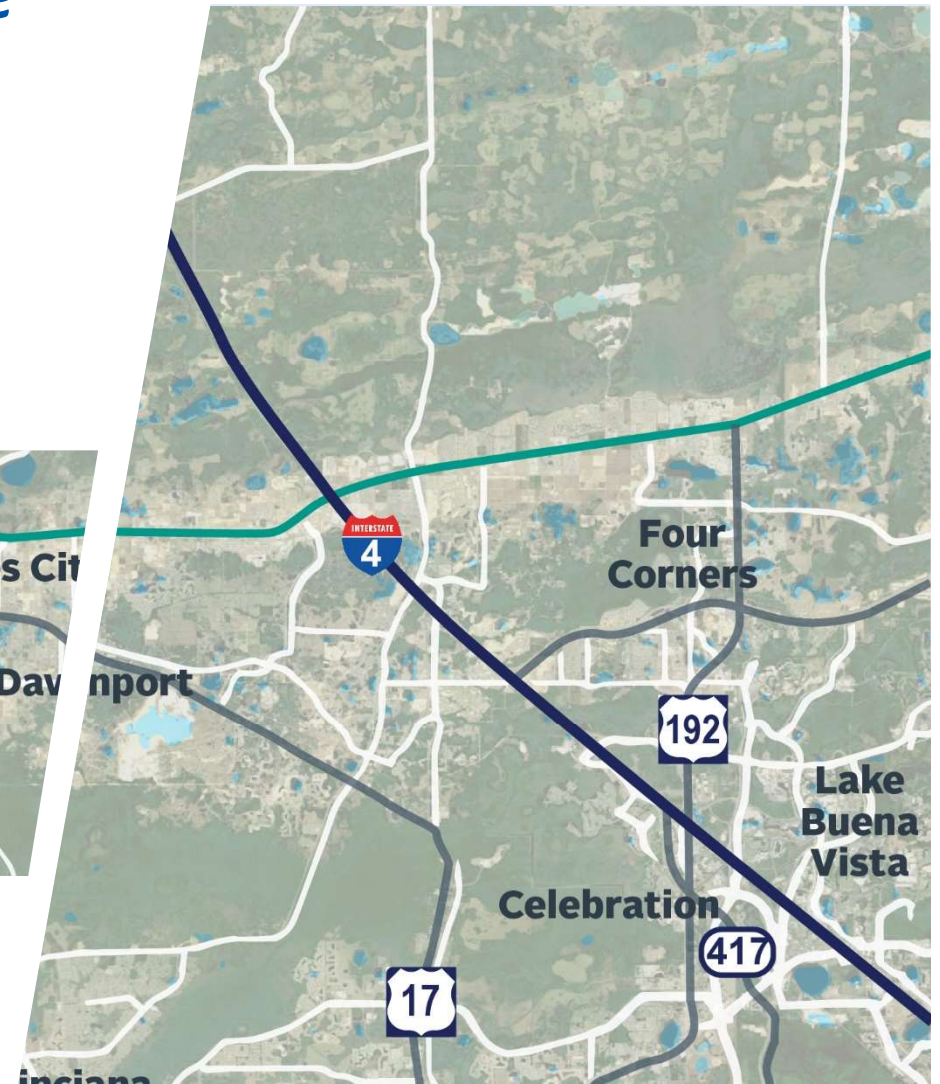
from SR 60 to Lake County Line

FPID 440320-1-22-01

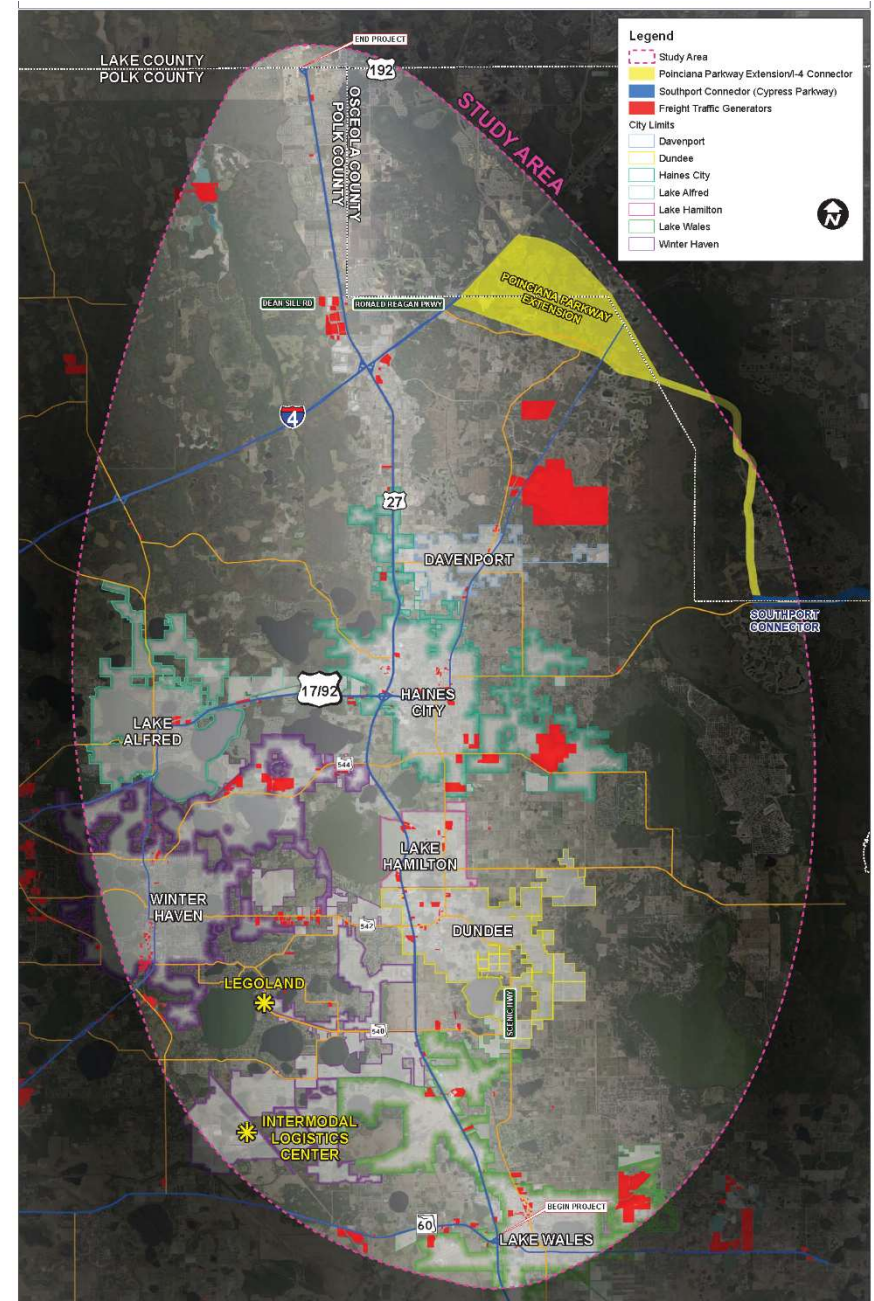
Project Advisory Group (PAG)

Meeting #2

June 13, 2019



Project Study Area



Metroquest Survey



The advertisement features a background image of a busy highway with many cars in traffic, palm trees, and a cloudy sky. In the top left corner is the "NORTHEAST POLK US 27 Mobility Study" logo. To the right of the logo, the text reads: "If you're frustrated with US 27 congestion, tell us about your transportation priorities. Your voice will be heard. Be a part of the improvement process and help us work towards getting you where you need to be without worrying about holdups." Below this, in red, is the phrase "The first step to being on time is by taking the survey!". In the bottom left, a dark blue banner contains the text "ON TIME With 27" in white and red. In the bottom right corner of the image is the "FDOT" logo.

www.ontimewith27.com

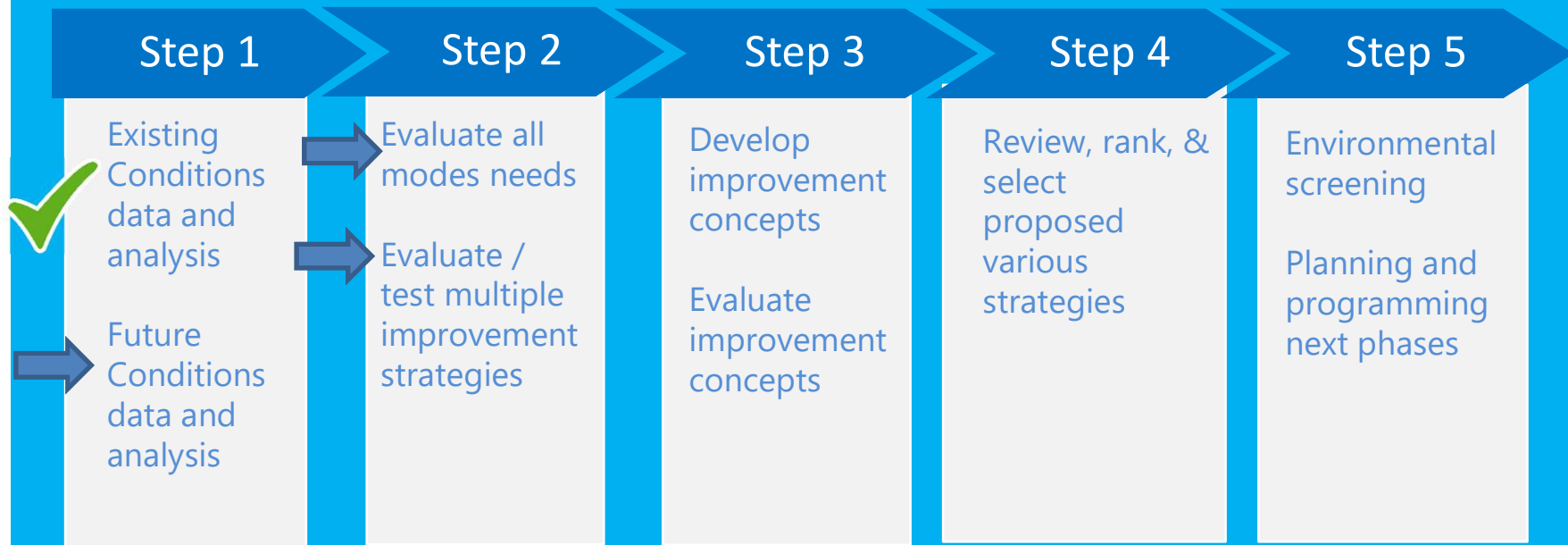
Agenda

- » Introductions
- » Status Update
- » Road Safety Audits Recommendations
- » Existing US 27 Intersection Analysis and Recommendations
- » Off US 27 Strategies Discussion
- » Phase II Performance Measures Discussion



Status Update

Alternatives Development Process



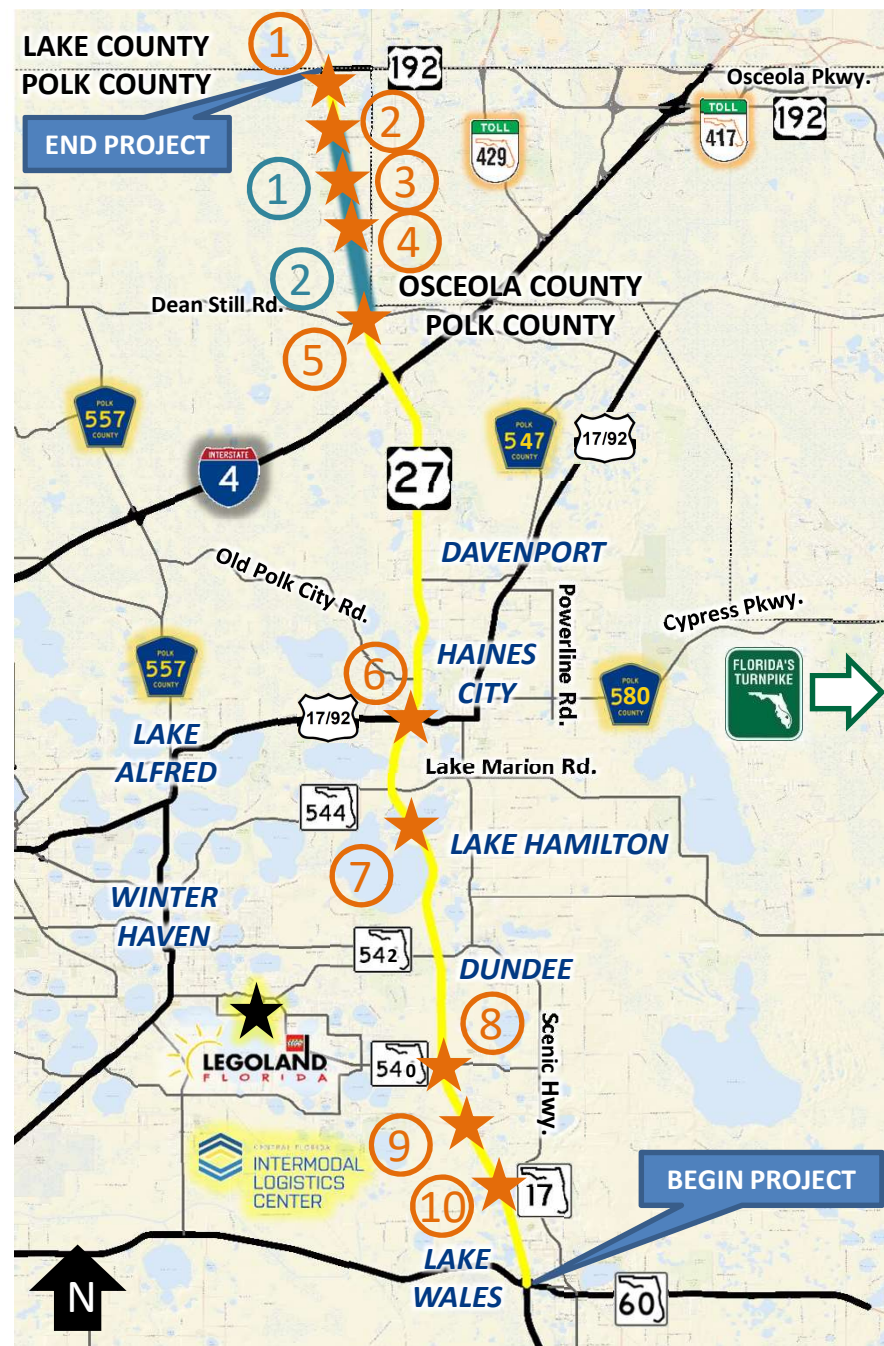
Road Safety Audit (RSA) Locations

» Ten intersections

1. Polo Park Blvd
2. Legacy Park Blvd/Florence Villa Grove Rd
3. Sand Mine Rd
4. California Blvd/McFee Dr
5. Dean Still Rd/Ronald Reagan Pkwy
6. US 17/92 Interchange
7. Sunshine Dr/Paradise Pl
8. SR 540/Waverly Rd
9. Thompson Nursery Rd
10. Tower Point Cir

» Two road segments

1. California Blvd to Legacy Park Blvd
2. Dean Still Rd to California Blvd



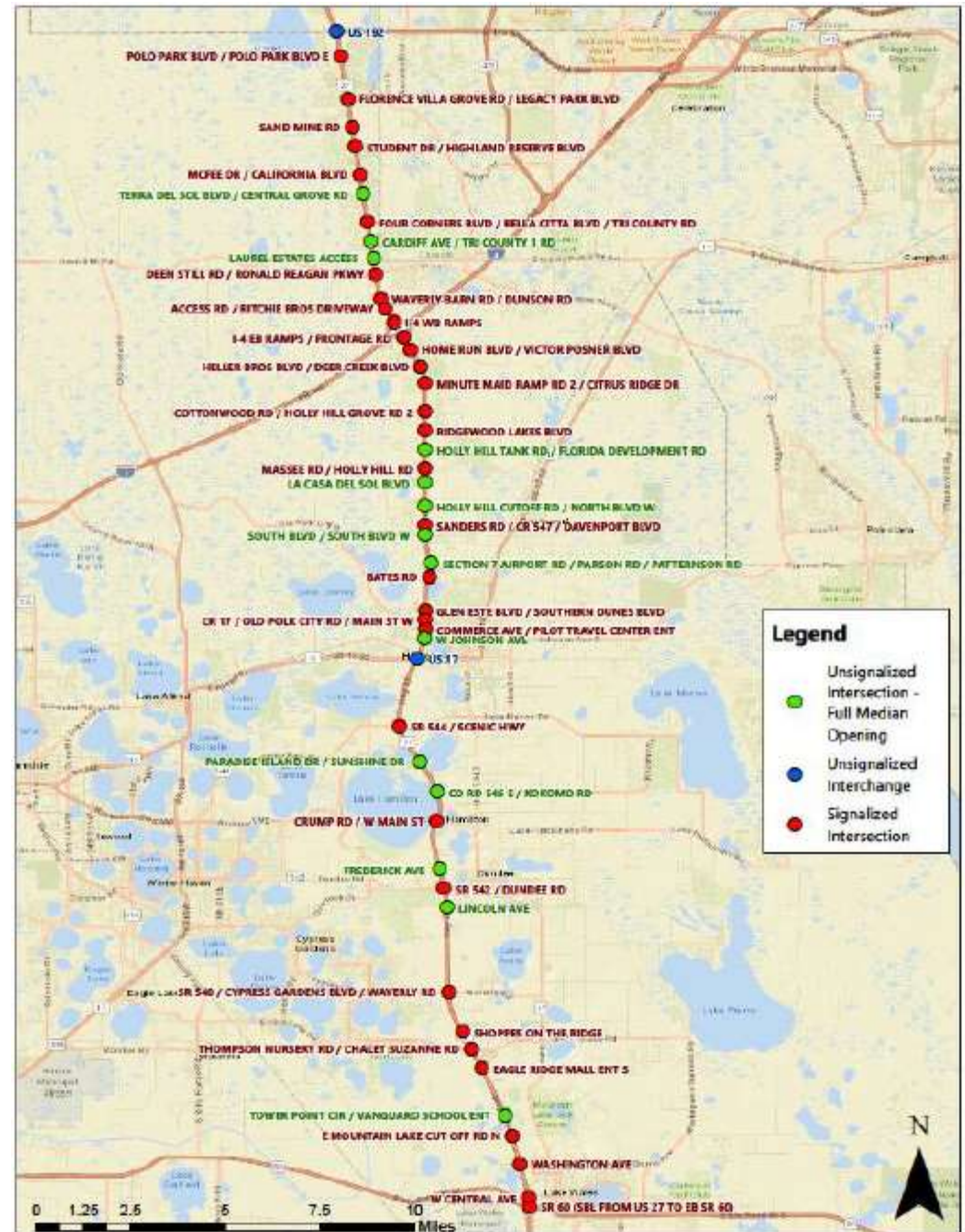
RSA Preliminary Recommendations



Intersection	RSA Preliminary Recommended Improvements					
	Add lighting	Convert to Directional Median Opening	Add sidewalk	Traffic signal changes / improvements	Improve pavement markings	Improve pedestrian connections to transit stops
Polo Park Blvd	X		X		X	
Legacy Park Blvd / Florence Villa Grove Rd	X		X		X	
Sand Mine Rd	X		X	X		X
Highlands Reserve Blvd / Student Dr				X		
California Blvd / McFee Dr	X				X	
Central Grove Rd / Terra Del Sol Blvd		X				
Four Corners Blvd / Bella Citta Blvd			X	X		
Ronald Reagan Pkwy / Dean Still Rd	X			X	X	X
US 17/92	X					
Sunshine Dr / Paradise Island Pl	X	X				
Cypress Gardens Blvd / Waverly Rd	X		X	X		
Thompson Nursery Rd / Chalet Suzanne Rd	X		X	X		
Tower Point Circle	X	X				

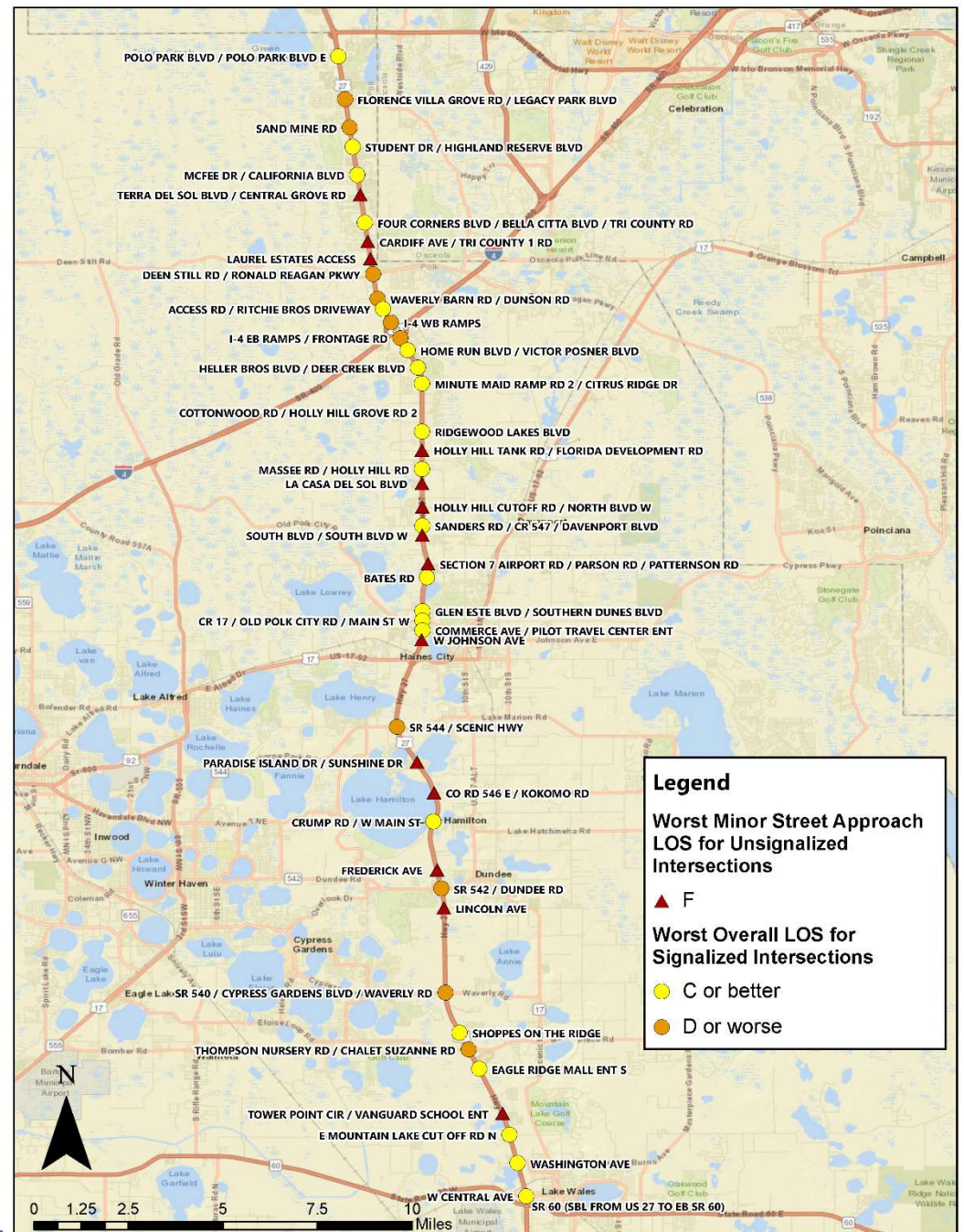
Study Intersections

- » 32 signalized intersections
- » 15 unsignalized intersections
- » Data collection complete in January
- » LOS and delay analysis of AM and PM peak hours
- » Traffic analysis complete in May



Existing Conditions Study Intersection Analysis

- » Signalized intersection LOS
- » Unsignalized intersection LOS



Existing Conditions Study Intersection Analysis



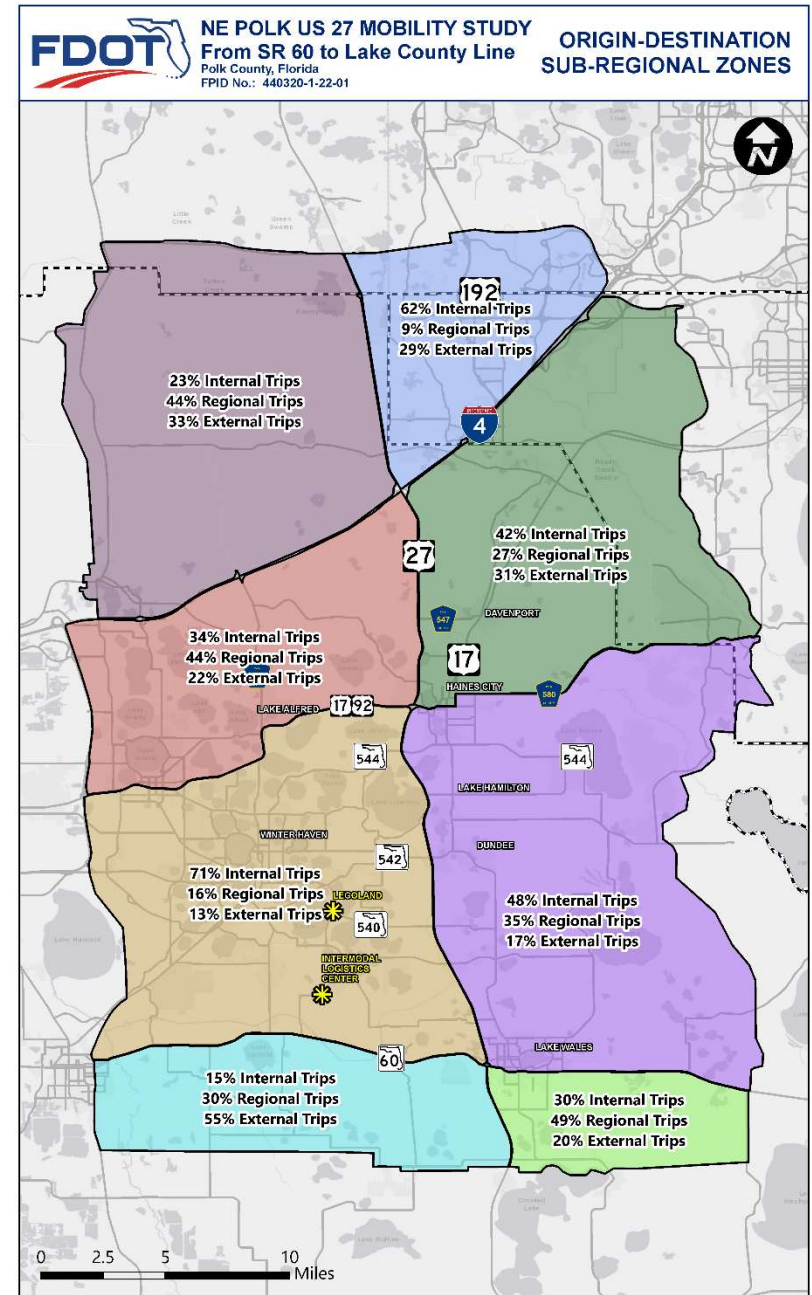
Preliminary Recommendations

- » **Pending coordination with FDOT Traffic Operations**
- » **Improvements shown to be needed for 17 of 47 study intersections to achieve Level of Service D in AM and PM peak hour**
- » **Improvements under consideration include:**
 - » **Conversion of full median openings to directional median openings at 14 locations**
 - » **Adding turn lanes at 2 locations**
 - » **Traffic signal changes/improvements at 1 location**

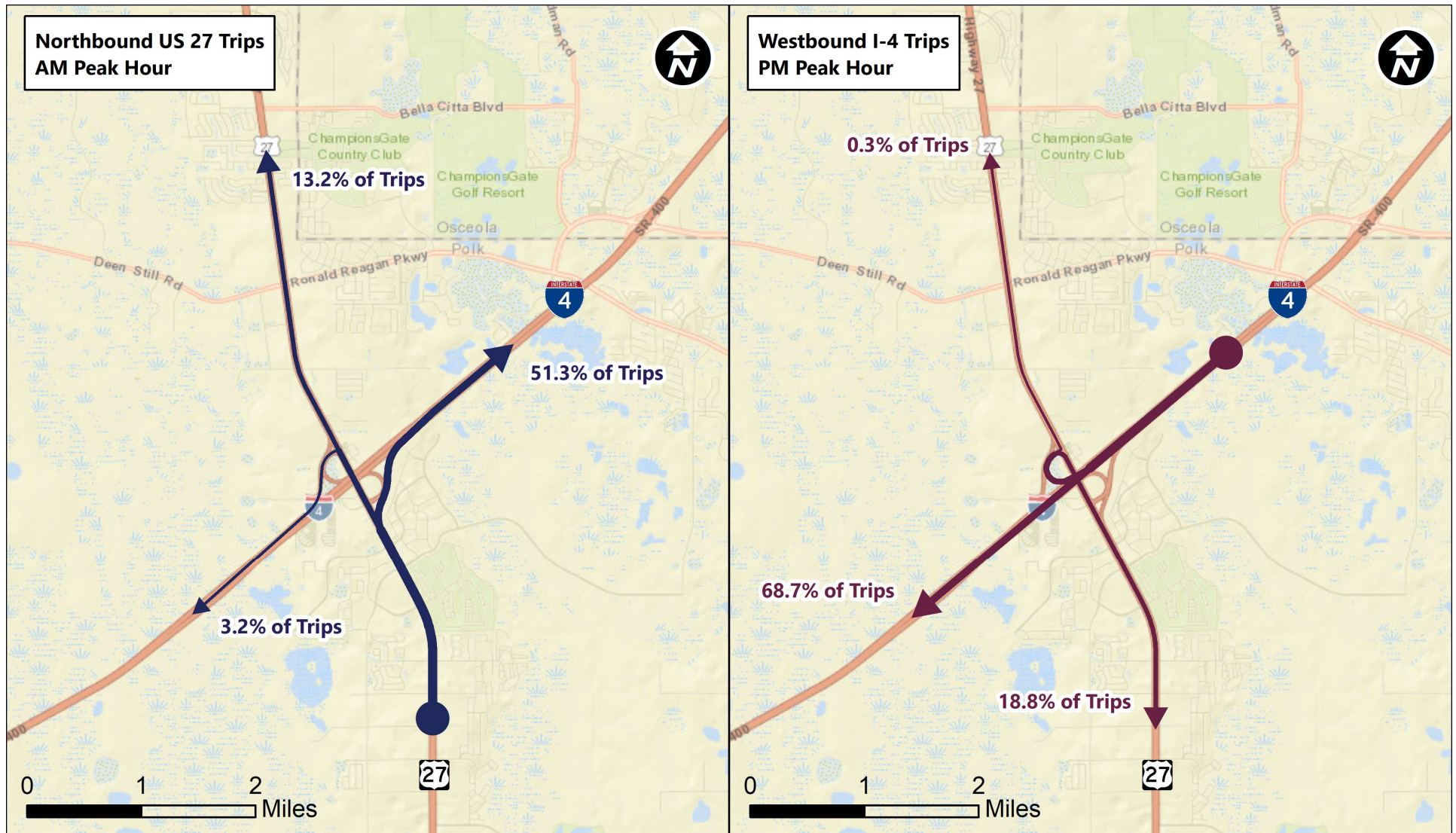
Discussion

Streetlight Origin-Destination Data

- » Used to identify significant trip making patterns within study area
- » Sub-Regional Zone Analysis
 - » Internal Trips – trips that begin and end in that zone
 - » Regional Trips – trips that begin in that zone and end in another one of the 8 zones
 - » External Trips – trips that begin in that zone and end outside of all 8 zones
- » External trips from all 8 zones range from a low of 13% of trips in Winter Haven zone (tan) to high of 55% of trips in SW corner zone (light blue)

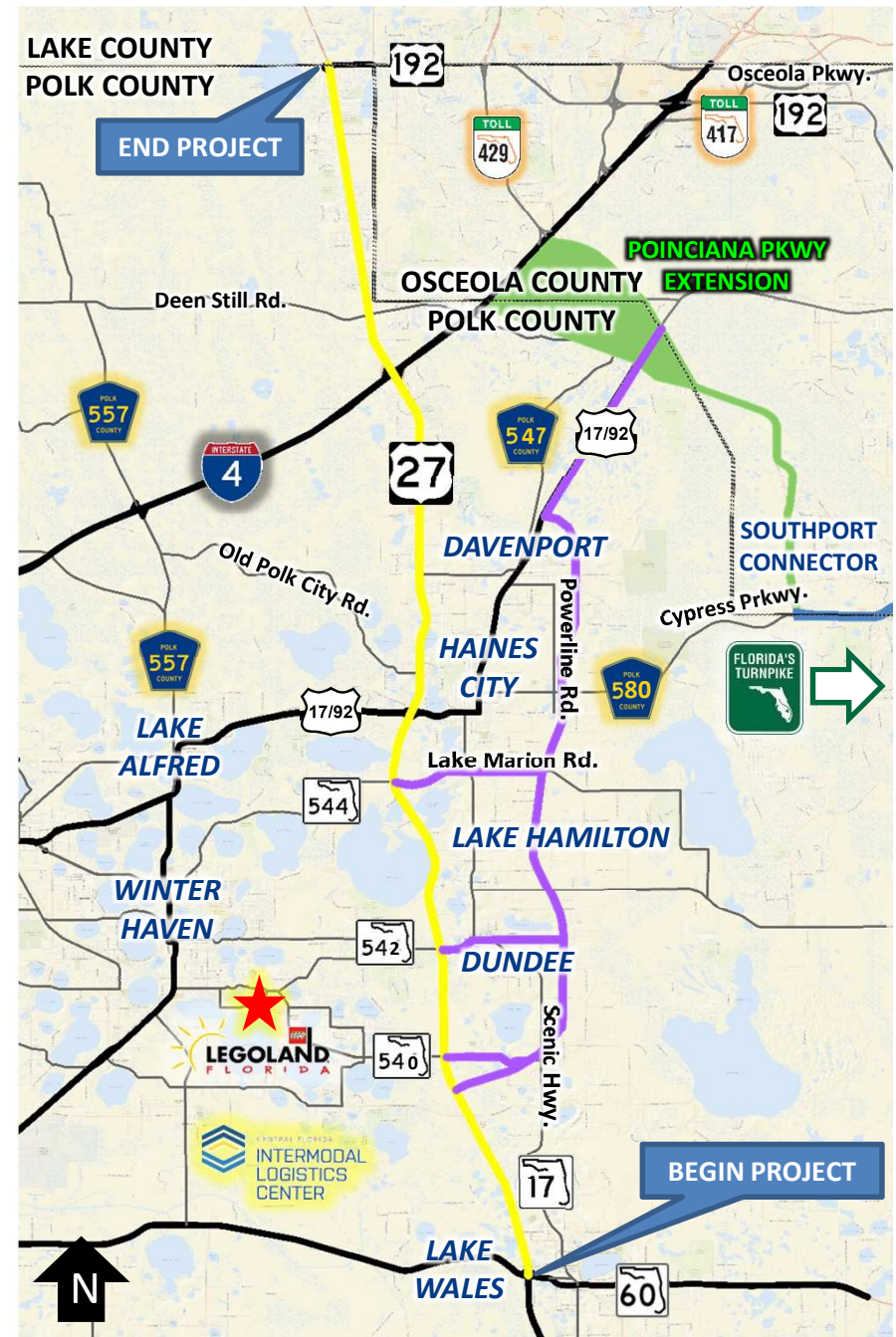


Streetlight Origin-Destination Data



Off US 27 Strategies to be Modeled

- » **Alternative A: US 27 Reliever**
- » **Alternative B: Power Line Rd Extension**
- » **Alternative C: New N/S Davenport Connector**
- » **Alternative D1: CR 580 Connection to Southport Connector - Arterial**
- » **Alternative D2: CR 580 Connection to Southport Connector – Freeway**
- » **Alternative E: Combination of Alternatives A and D2**
- » **Alternative F: US 27 Parallel Backage Roads**
- » **Alternative G: North Ridge Trail**
- » **Alternative H: Improvements to Deen Still Rd and Old Grade Rd**
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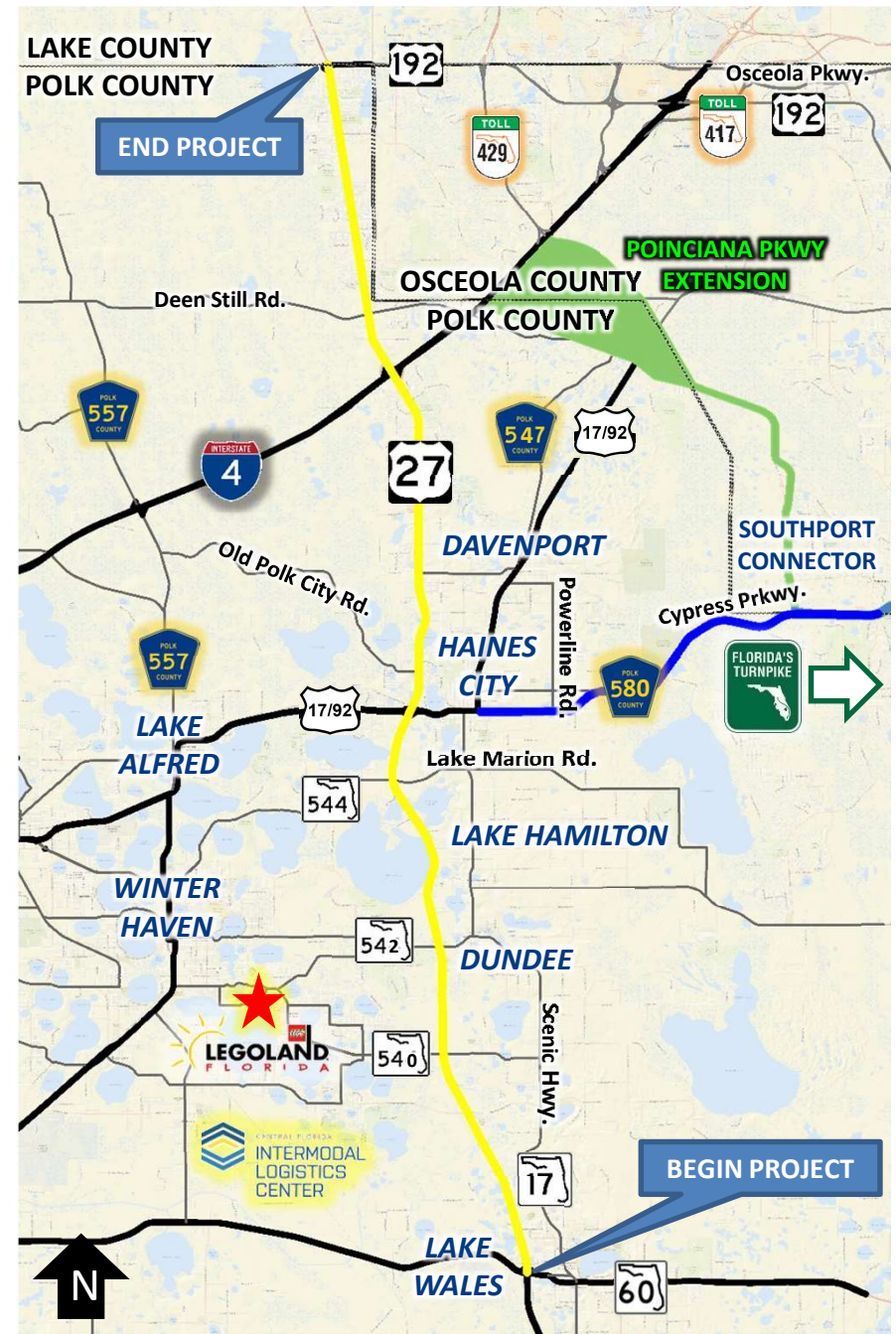
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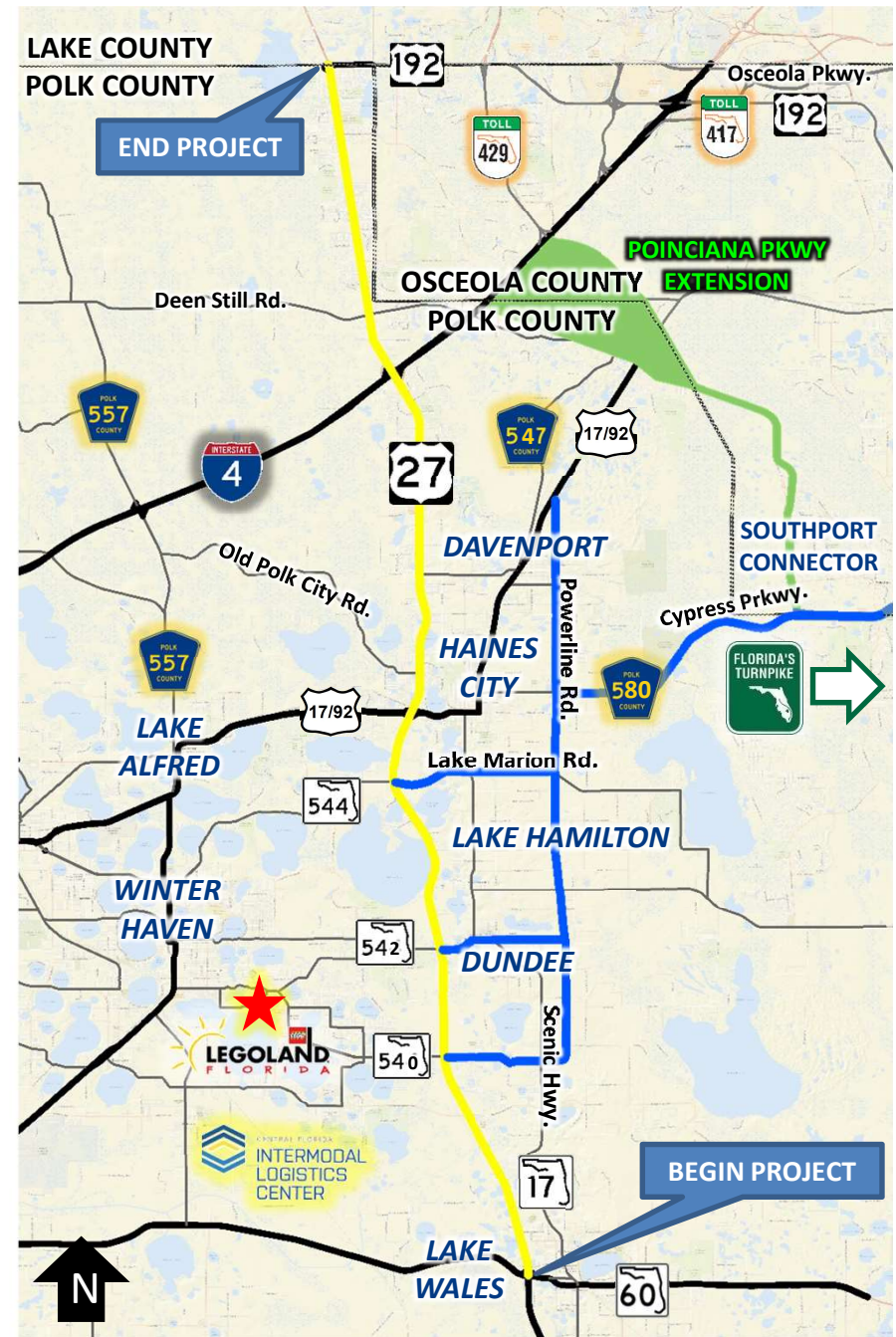
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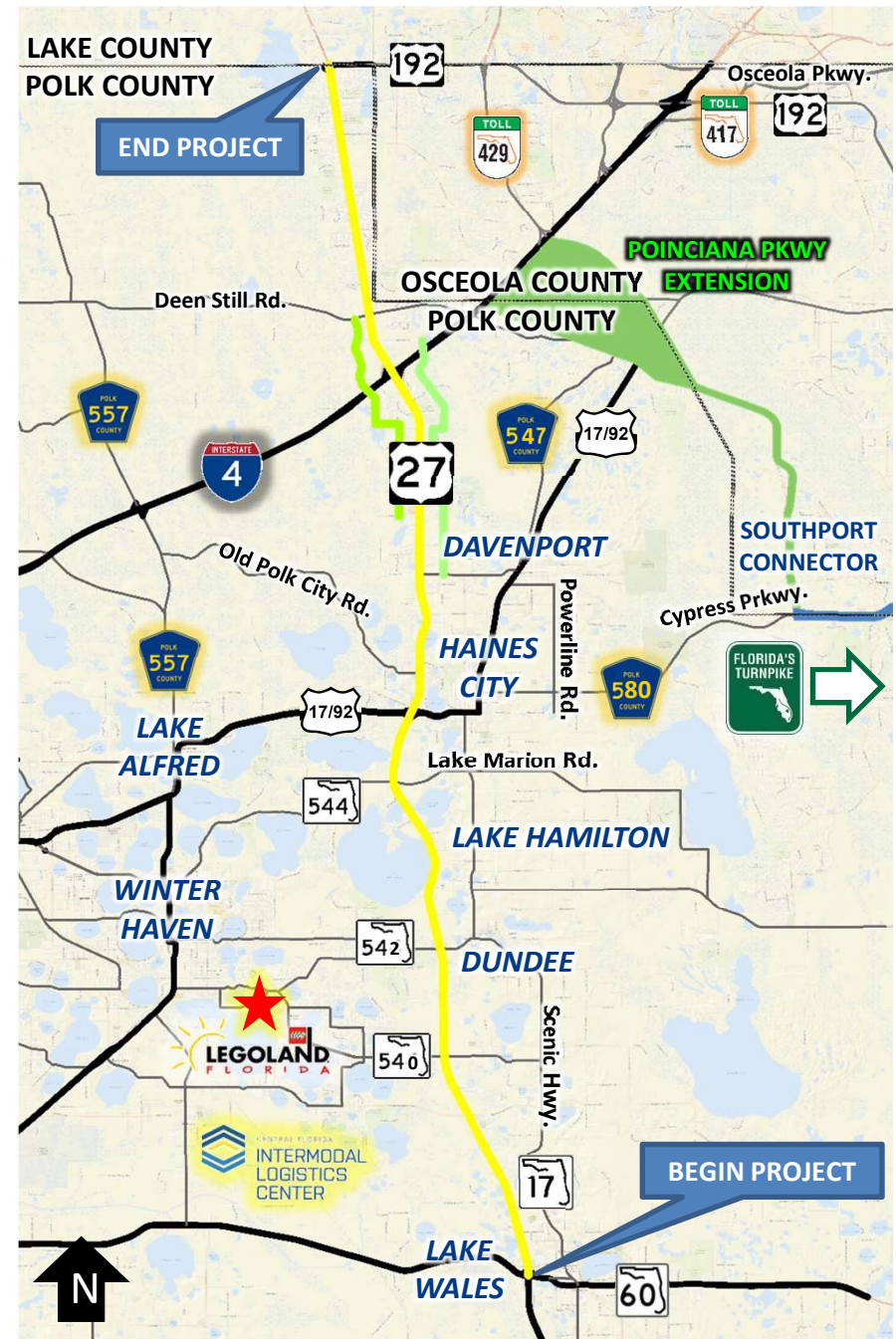
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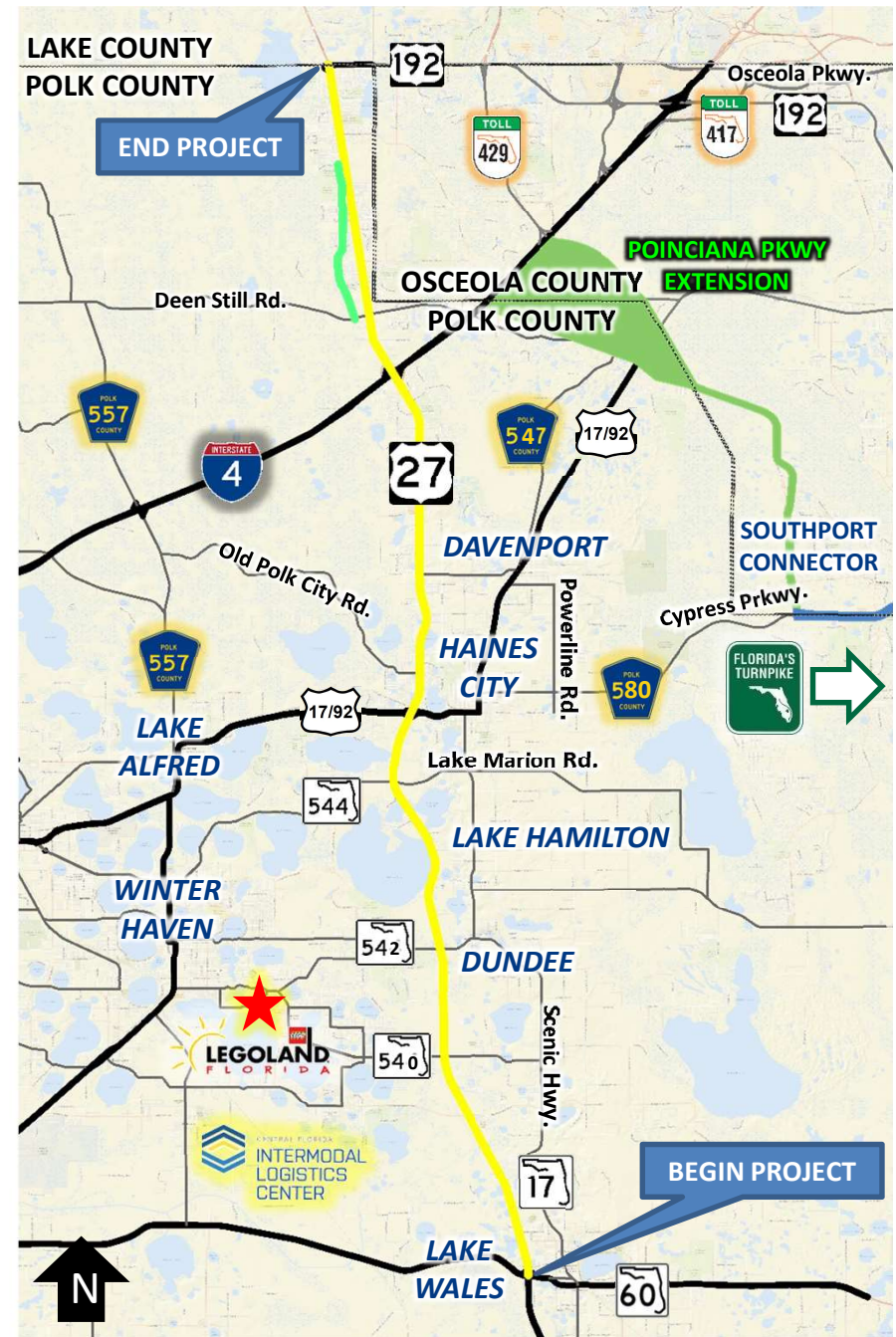
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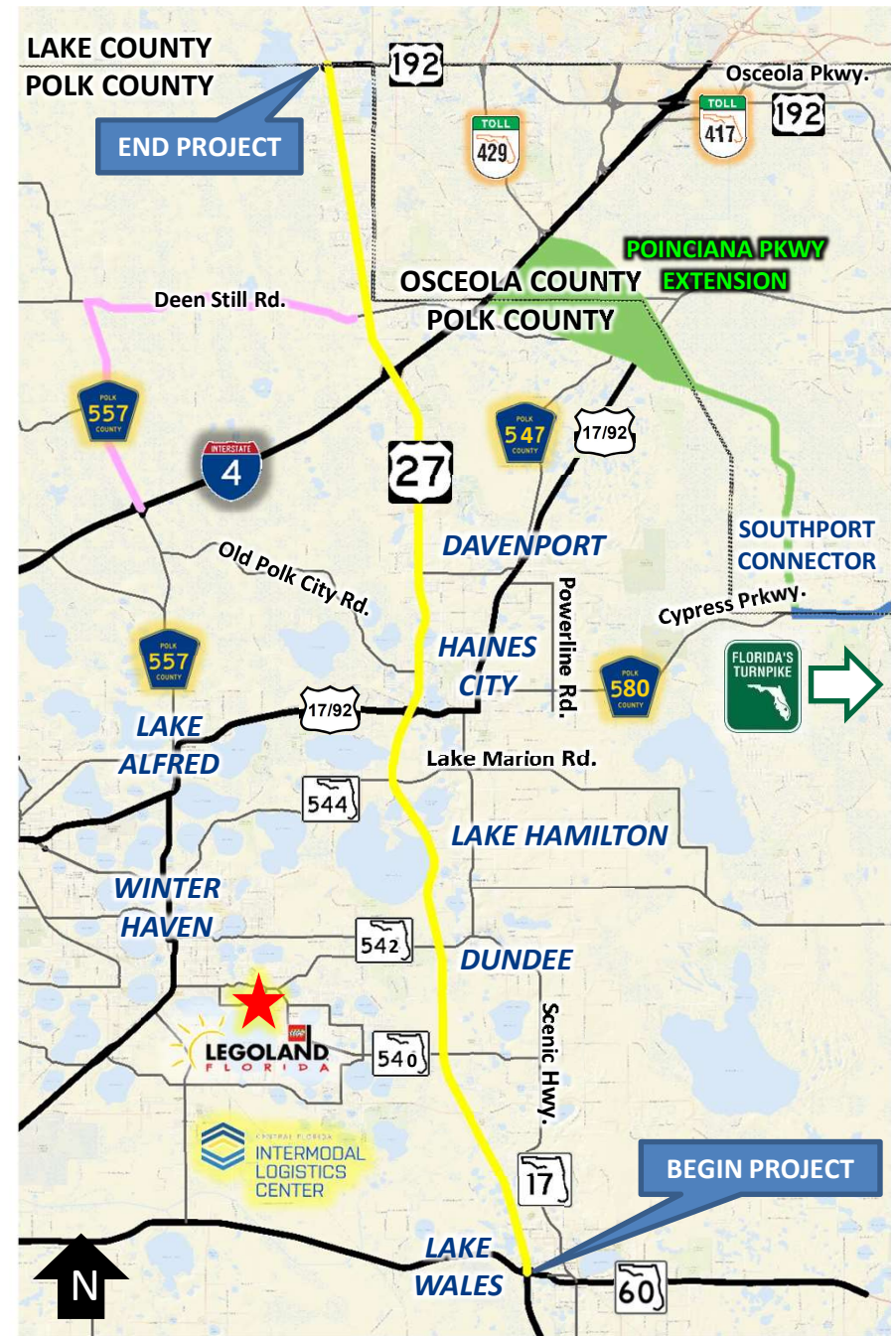
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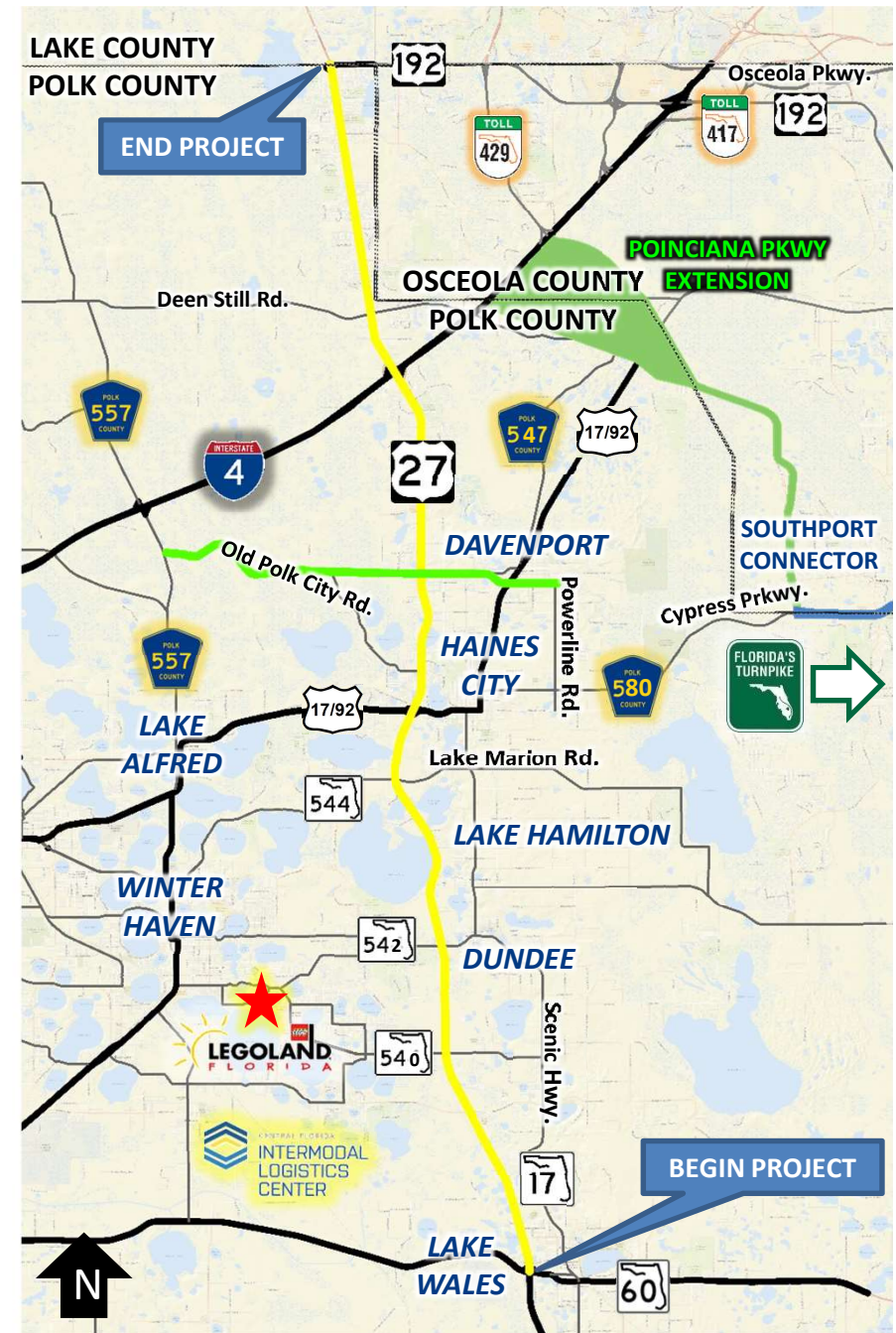
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Discussion

Study Purpose & Goal

Study Purpose

- Evaluate the study area along US 27 and the surrounding roadway network.

Overarching Purpose

- Address congestion and mobility issues within the study area using Context-Sensitive Solutions.

Goal

- Define a multimodal program of projects and strategies to improve the mobility, safety, and livability within and served by the US 27 corridor.

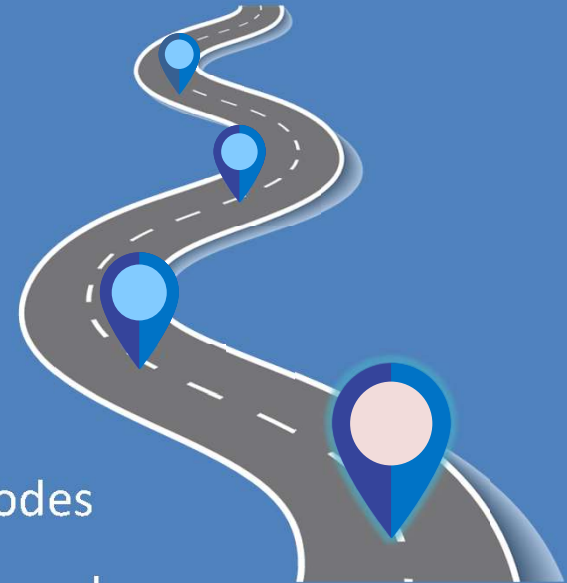


How do we get there?

Study Objectives

Proposed Objectives:

- Reduce Travel Times within study area
- Provide Options for travel within study area
- Reduce **Congestion**, Delay along US 27
- Improve Safety along US 27
- Improve Quality of travel along US 27 for all modes
- Improve Reliability of travel along US 27 for all modes
- Support expected growth (population, employment, freight traffic) through 2045



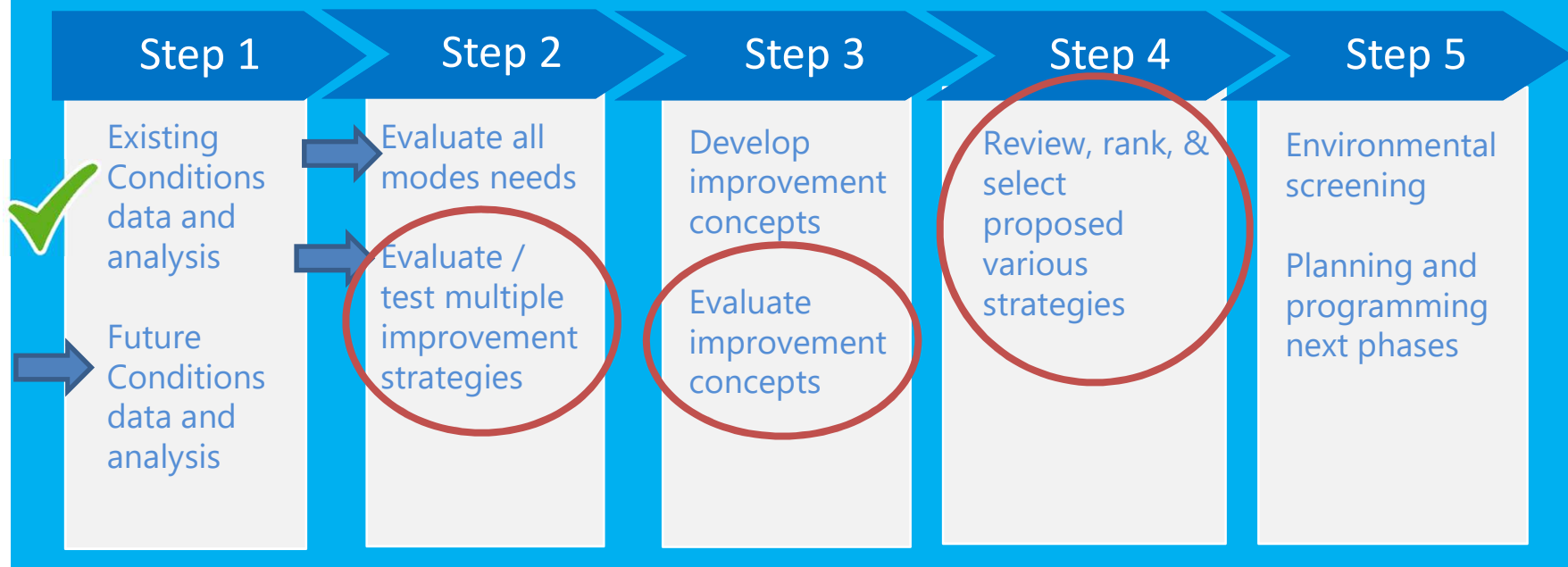
Next stop: performance measures

Alternatives Development Process

Performance measures will be used to:











- ✓ Compare alternatives
- ✓ Evaluate alternatives
- ✓ Measure success

Alternatives Development Process



Performance Measures for Off US 27 Regional Alternatives



Key Performance Measurement(s)		Expected Future No Build Conditions vs Existing Conditions	Target	Expected Future Build Conditions vs Existing Conditions
Travel on US 27	Annual Average Daily Traffic (AADT)			TBD
Travel on regional roads	% of miles of study roads that are congested (with volume-to-capacity ratio > 1.0)			TBD
Travel on regional roads	Total vehicle miles traveled on roads in study area			TBD
Travel on regional roads	Total vehicle hours traveled on roads in study area			TBD
Freight traffic	% of congested freight routes (with volume-to-capacity ratio > 1.0)			TBD

Performance Measures for Off US 27 Regional Alternatives



Other Evaluation Criteria

1. Number of new lane miles needed to construct improvement
2. Relative estimated severity of potential environmental impacts (high, medium, low)
3. Relative estimated construction cost (high, medium, low)
4. Estimated years until construction (5 years or less, 6 to 15 years, longer than 15 years)

Performance Measures for Off US 27 Regional Alternatives



- » Other performance measures can be considered if needed
- » Next:
 - » Analyze Alternatives
 - » Summarize results on Dashboard
 - » Compare results using an Evaluation Matrix

Alternative	Travel on US 27	Travel on Regional Roadways	Freight Traffic	Other Evaluation Criteria				Overall Score
				1	2	3	4	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Discussion

Next Steps



- » **Metroquest survey will continue through the summer**
- » **Finalize short-term improvements along US 27**
- » **Model Off US 27 alternatives**
- » **Develop On US 27 alternatives**

CONTACT INFORMATION



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Study Website:

<http://swflroads.com/us27/mobilitystudy/>