TRENDS IN TRANSPORTATION

L.K. Nandam,P.E., District One Secretary

FDOT

WHAT'S TRENDING? GROWING POPULATION

Florida's population is projected to grow from

20.8 MILLION
in **2018** *to*
26.5 MILLION
residents in **2040**

An increase of
27%

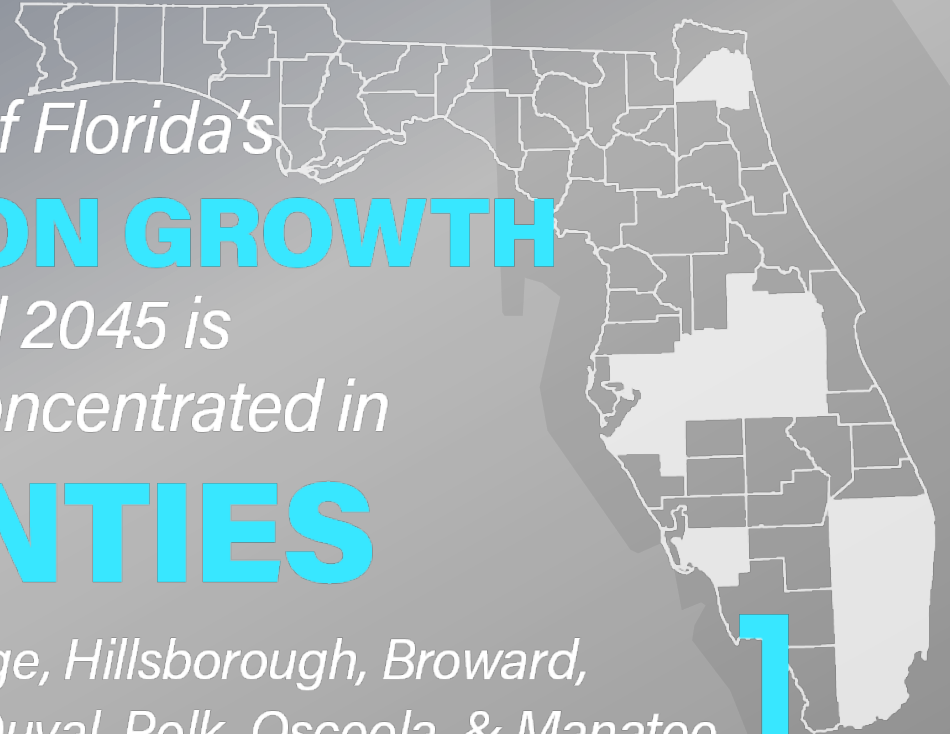Florida's
TOTAL DAILY VMT
+10.5%
since 2008

67% *of Florida's* POPULATION GROWTH
between 2018 and 2045 is projected to be concentrated in

10 COUNTIES

[Miami-Dade, Orange, Hillsborough, Broward, Palm Beach, Lee, Duval, Polk, Osceola, & Manatee]

Governor's Priorities: Enhance Safety, Improve Mobility and Leverage Technology

Our Mission:

The Department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

How do we accomplish this?

⫸ **Plan and Design for Safety**

⫸ **Mobility Enhancement through community partnerships**

⫸ **Promote Technologies to Enhance our Efforts**

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Trends Impacting Transportation

Safety   Community Success   Technology

⫸ **Florida Transportation Plan**

⫸ **Improved Mobility**

⫸ **Partnering with Communities**

⫸ **Focus on Safety – Vision Zero**

Trends Impacting Transportation

Safety   Community Success   Technology

Community Engagement

Designing and Planning for a Transportation Network that promotes Community Visions – Through Planning Studio

- ➢ Heartland 2060 Plan
- ➢ TPO Long Range Transportation Planning Process
- ➢ Multi modal master planning in partnership with local partners
- ➢ Comprehensive Plan updates
- ➢ Freight Master Plans aligned with local plans and industry trends
- ➢ Corridor/Network Master planning

Trends Impacting Transportation

Safety   Community Success   Technology

Strategic Intermodal System Planning

⫸ **SIS facilities backbone of Heartland**

⫸ **Master Planning of corridors critical to maintain mobility**
- ➤ US 17 Widening Complete
- ➤ SR 29 PD&E
- ➤ US 27 System Improvements
- ➤ SR 60 PD&E
- ➤ SR 70 Master Planning
- ➤ I-4 Ultimate Master Planning
- ➤ NE Polk Mobility study

⫸ **Need for parallel network to support and protect SIS facilities**

⫸ **MCORES**

m·cores

Purpose

- Revitalize rural communities
- Encourage job creation
- Provide regional connectivity while leveraging technology
- Enhance quality of life and public safety
- Protect the environment and natural resources

Objective

Advance construction of regional corridors intended to accommodate multiple modes of transportation and multiple types of infrastructure

m·cores

STUDY AREA FACTS

Suncoast Connector
- 8 Counties
- 21 Cities & Towns
- 5,635 Square Miles of Land Area
- 286,827 Residents
- 48,780 Jobs
- 2,217 Lane Miles of State Highway System
- 147 Miles of Active Rail
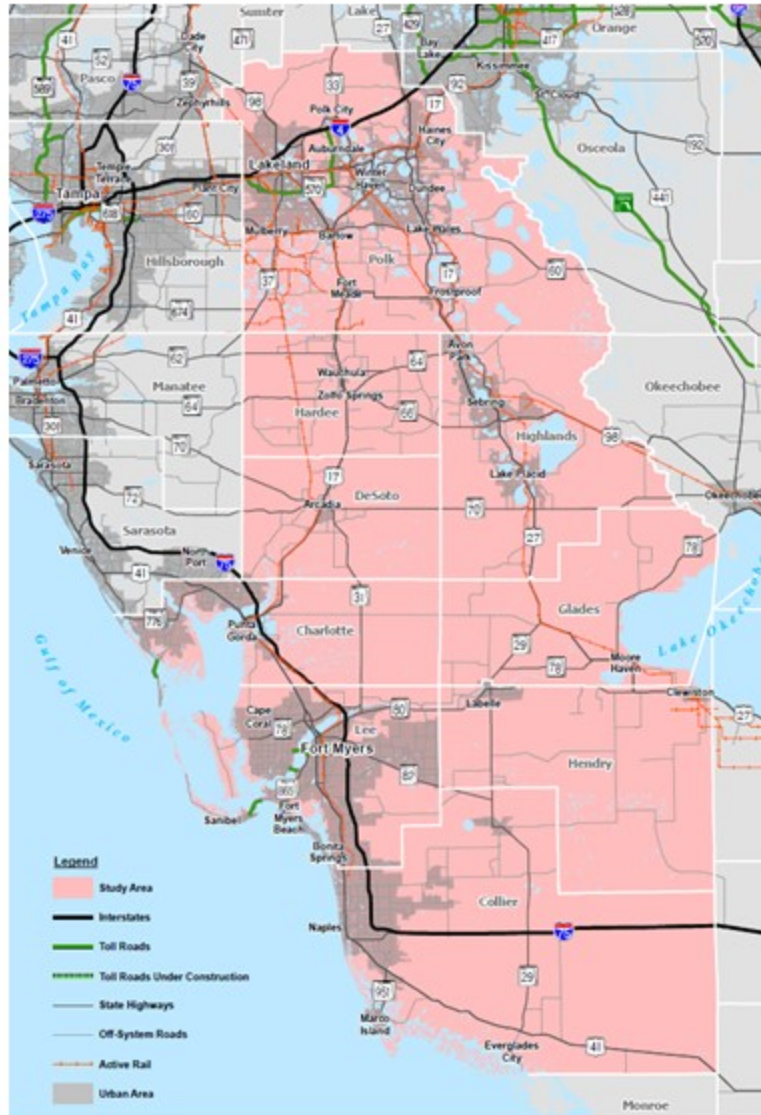- 1 Seaport

Northern Turnpike Connector
- 4 Counties
- 20 Cities & Towns
- 3,831 Square Miles of Land Area
- 677,430 Residents
- 136,305 Jobs
- 2,162 Lane Miles of State Highway System
- 158 Miles of Active Rail
- 1 Seaport

Southwest-Central Florida Connector
- 9 Counties
- 36 Cities & Towns
- 9,511 Square Miles of Land Area
- 2,251,543 Residents
- 590,999 Jobs
- 4,793 Lane Miles of State Highway System
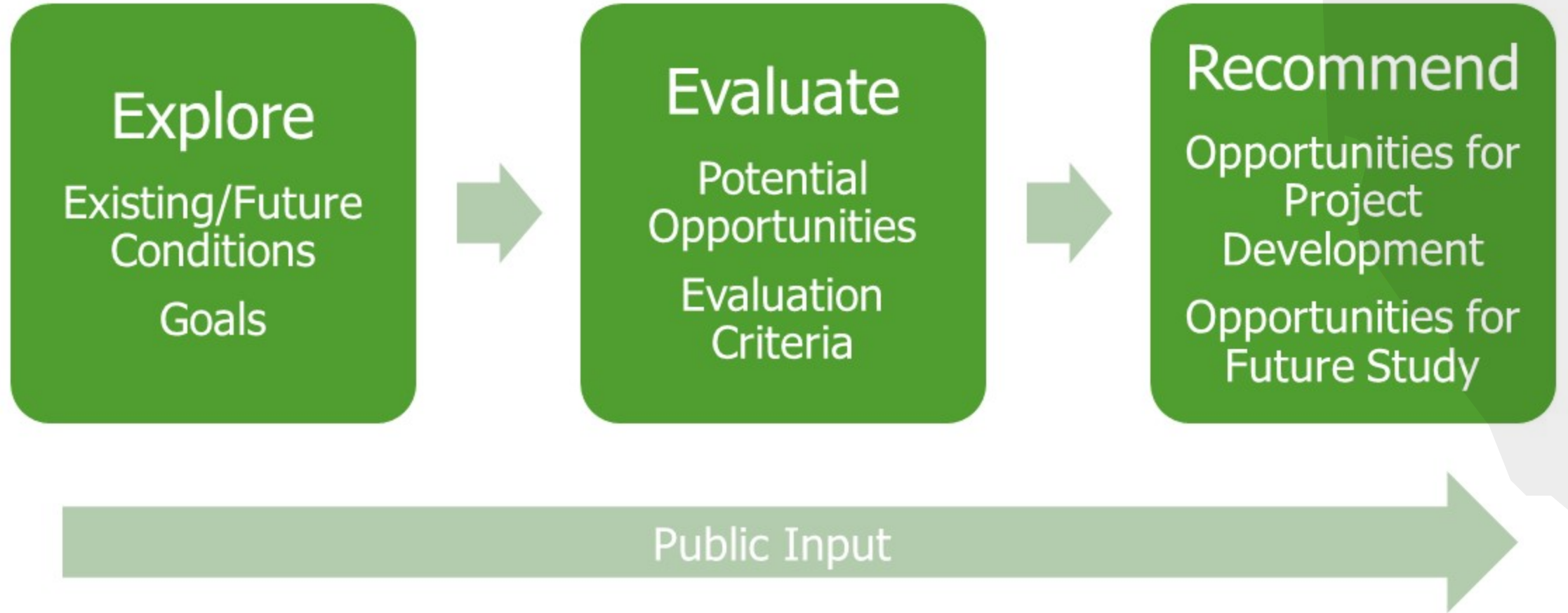- 600 Miles of Active Rail
- 2 Commercial Service Airports

Sources:
Florida Cities & Towns: https://www.fl-counties.com/florida-cities-county
Land Area: http://www.usa.com/rank/florida-state--land-area-county-rank.htm
Population & Employment: https://www.census.gov/quickfacts/fact/table/US/PST045218
Lane Miles: https://www.fdot.gov/statistics/mileage-rpts/default.shtm#HG
Rail Miles: https://www.fgdl.org/metadataexplorer/explorer.jsp
Seaports: https://www.fdot.gov/seaport/seamap.shtm
Airports: https://www.fdot.gov/aviation/FASP2035

Legend

- Suncoast Connector
- Northern Turnpike Connector
- Southwest-Central Florida Connector
- Urban Area
- Commercial Service Airports
- Seaports
- Spaceports
- Interstates
- Toll Roads
- Toll Roads Under Construction
- State Highways
- Active Rail

m·cores

Southwest-Central Florida Connector

from Collier County to Polk County
140 miles

Legend
- Study Area
- Interstates
- Toll Roads
- Toll Roads Under Construction
- State Highways
- Off-System Roads
- Active Rail
- Urban Area

Explore

Existing/Future
Conditions

Goals

Evaluate

Potential
Opportunities

Evaluation
Criteria

Recommend

Opportunities for
Project
Development

Opportunities for
Future Study

Public Input

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Suncoast Connector task force and **Northern Turnpike Connector** task force shall evaluate design features and the need for acquisition of state conservation lands that mitigate the impact of project construction on:

a. Water quality and quantity of springs, rivers, and aquifer recharge areas
b. Agricultural land uses
c. Wildlife habitat

Southwest-Central Florida Connector task force shall:

a. Address the impacts of project construction on panther and other critical wildlife habitat and evaluate the need for acquisition of lands for state conservation or as mitigation for project construction
b. Evaluate wildlife crossing design features to protect panther and other critical wildlife habitat corridor connections
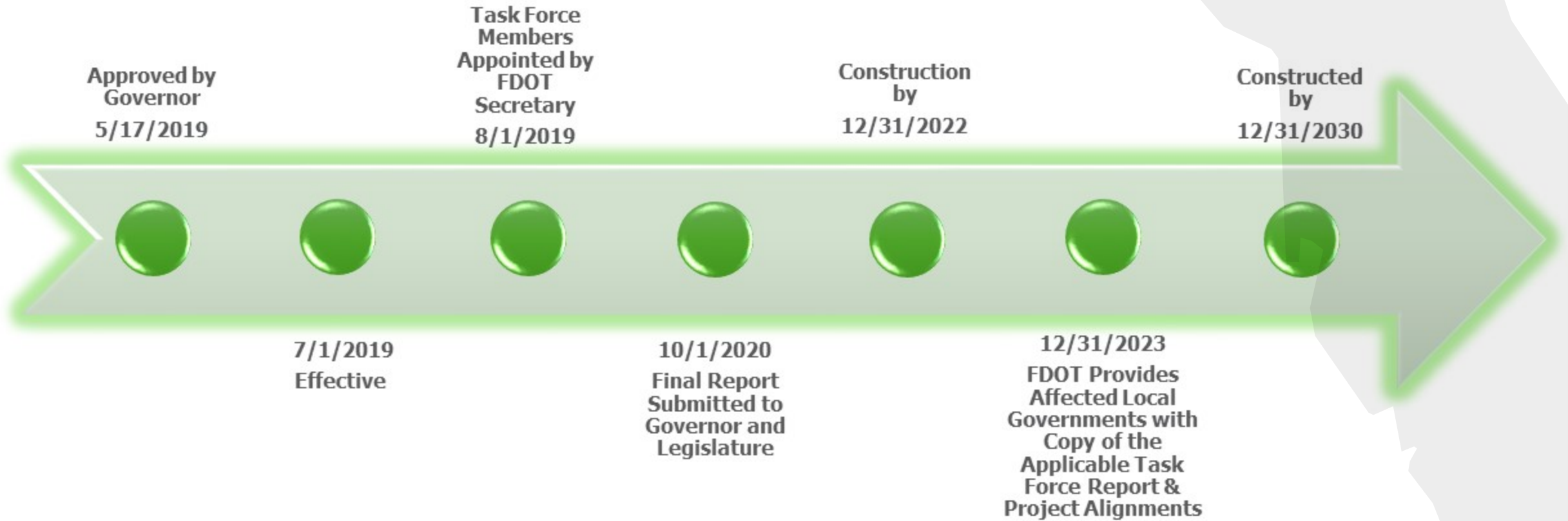
- Task Forces may consider and recommend innovative concepts to **combine right-of-way acquisition with the acquisition of lands or easements to facilitate environmental mitigation or ecosystem, wildlife habitat, or water quality protection or restoration**

- FDOT, in consultation with the Department of Environmental Protection, may incorporate those features into each corridor during the project development phase

- FDOT may accept donations of land for use as transportation rights-of-way or to secure or use transportation rights-of-way for such projects

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Program Schedule

Approved by Governor
5/17/2019

7/1/2019
Effective

Task Force Members Appointed by FDOT Secretary
8/1/2019

10/1/2020
Final Report Submitted to Governor and Legislature

Construction by
12/31/2022

12/31/2023
FDOT Provides Affected Local Governments with Copy of the Applicable Task Force Report & Project Alignments

Constructed by
12/31/2030

Project construction in any corridor is not eligible for funding until submission of the final report of the corridor task force for that corridor and completion of 30 percent of the design phase of any project within a corridor, except for project phases that are under construction or for which project alignment has been determined.

TECHNOLOGY ADVANCEMENTS AUTONOMOUS-CONNECTED-ELECTRIC- SHARED (ACES)

Nationally, **FULLY ELECTRIC VEHICLES** are projected to represent

8%

of total automobiles sold by 2025

SHARED AIR TRANSPORTATION, AIR TAXIS, or **FLYING CARS**

may launch by the year
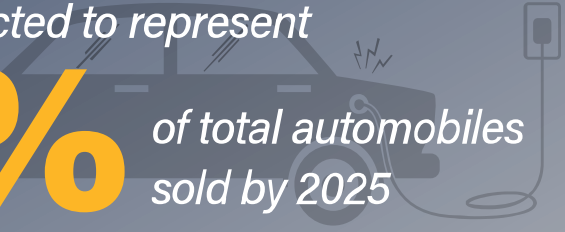
2023

The global market for **CONNECTED CARS** is expected to grow

270%
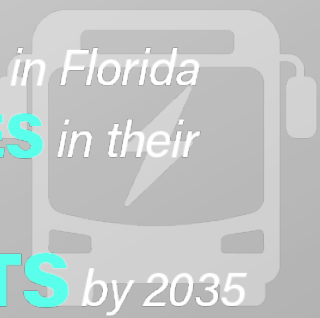
by 2022
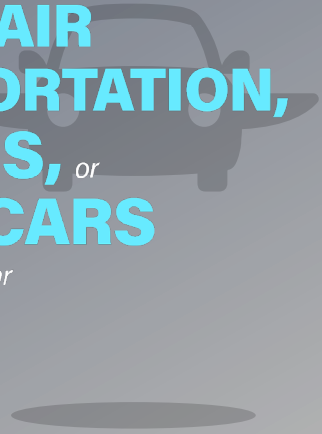
MULTIPLE URBAN AREAS in Florida already have **ELECTRIC BUSES** in their fleets and many plan to transition to **ALL-ELECTRIC FLEETS** by 2035

The cumulative number of **SHARED VEHICLE TRIPS** has **INCREASED**

10X

in the last **5 YEARS**

ACES Effects

Land Use
- Higher density requirements may be more attainable
- Reduced Parking Lot Sizes
- Remote lots to make better use of urban land

Transportation Demand
- Scenario based modeling

Infrastructure
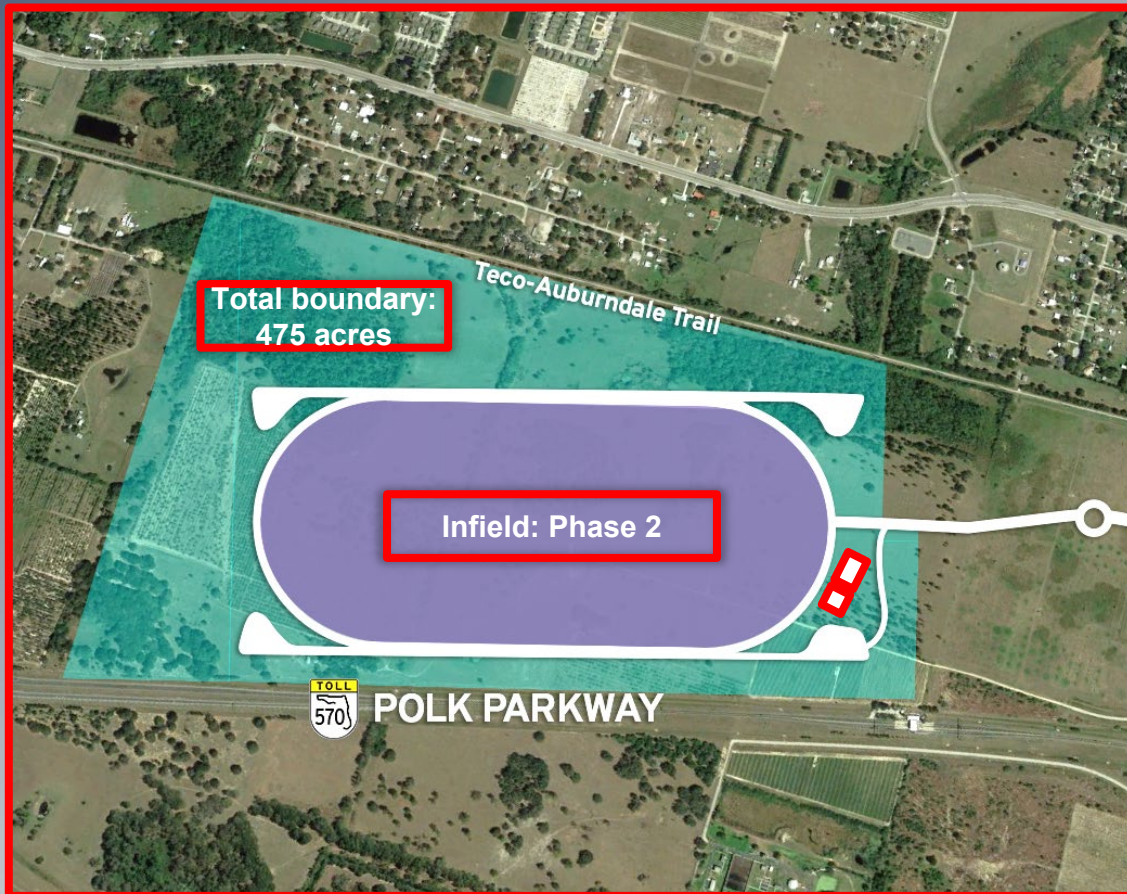- Test beds
- Industry Partnerships

Blue Polygons = Parking

Trends Impacting Transportation
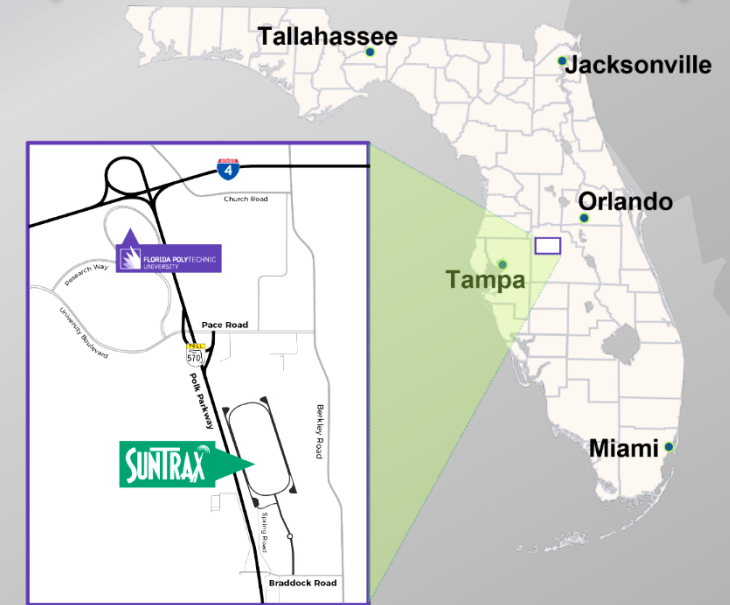
Safety   Community Success   Technology

Total boundary: 475 acres

Infield: Phase 2

TOLL 570 POLK PARKWAY

Teco-Auburndale Trail

Project Location

45 miles to Tampa   46 miles to Orlando

Trends Impacting Transportation

Safety   **Community Success**   **Technology**

Varied Environments

Diverse Scenarios

Highly Reconfigurable

1. Main Access & Building Facilities
2. Sensor Test Chamber
3. Roadway Geometry Track
4. High-Speed Oval
5. Loop Track
6. Pick-Up/Drop-Off
7. Urban
8. Complex Suburban
9. Dynamic Test Pad

THANK YOU