

District One Freight Trucking Forum 17 August 2017

Keith Robbins
District Freight Coordinator, FDOT District One



Agenda

- Purpose and Intent for the Working Group
- Welcoming Remarks - Polk County Sheriff's Office
- Remarks by Director of Operations, District One
- Access Management
- Remarks by the Florida Trucking Association
- Cargo Theft and Safety Update
- Ideas to Make Life better for Trucking
- Advances in Autonomous Vehicle Technology – A Trucking Perspective
- District 1 DFC Update
- ELD Mandate Q&A Led by the FHP
- Truck Parking Activity
- Closing

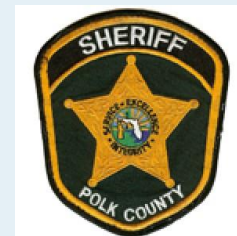


**Freight Mobility
thru the Heartland
of Florida**

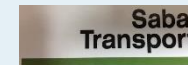
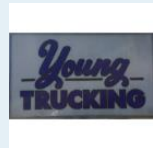
Administrative Remarks



- Restrooms
- Emergency Procedures
- Ground Rules for What is Presented
- Available Handouts for Reference
- Thank you...



Thank you to the following for making it out!



Purpose and Intent for the Working Group



Purpose: To inform the trucking industry of trending issues noted by law enforcement and FDOT personnel, provide information that may be helpful in enhancing their operations and safety programs for their companies and drivers, and respond to questions and concerns raised from the audience.

Intent: What We Hope to Accomplish

- Raise awareness of roles and authorities of state and local agencies who “touch” the trucking industry
- Generate dialogue on current issues and concerns noted by industry stakeholders to identify ways to seek resolutions
- Work with industry and law enforcement to bridge the gap of understanding how we can work better together to achieve goals
- Cultivate positive relations between public and private sector to promote a safer and more efficient operating environment for us all

Polk County Sheriff's Office



Major Joseph Williams
Special Operations Division

FDOT District One



Rick Lilyquist
Director of Operations

FDOT State and District Leadership Changes



State Secretary Mike Dew

District 1 Secretary L.K. Nandam, PE

Director of Transportation Development John Kubler, PE

Director of Transportation Operations Rick Lilyquist, PE

I-75 at US 301 Interchange (Manatee)



- Project will reconstruct the existing I-75/US-301 partial cloverleaf interchange to a tight diamond configuration interchange.
- New bridges will be constructed over the Manatee River for a northbound exit ramp and a southbound entrance ramp.
 - Placing the NB off-ramp south of the Manatee River will allow the existing six thru-lanes of NB I-75 to handle traffic much more efficiently.



I-75 at US 301 Interchange (Manatee)



- I-75 will be widened and reconstructed from north of SR 64 to the new on/off ramps for US-301 to provide for an eight-lane divided roadway.
- Construction estimated to begin: Fall 2019



I-75 at SR 64 Interchange (Manatee)



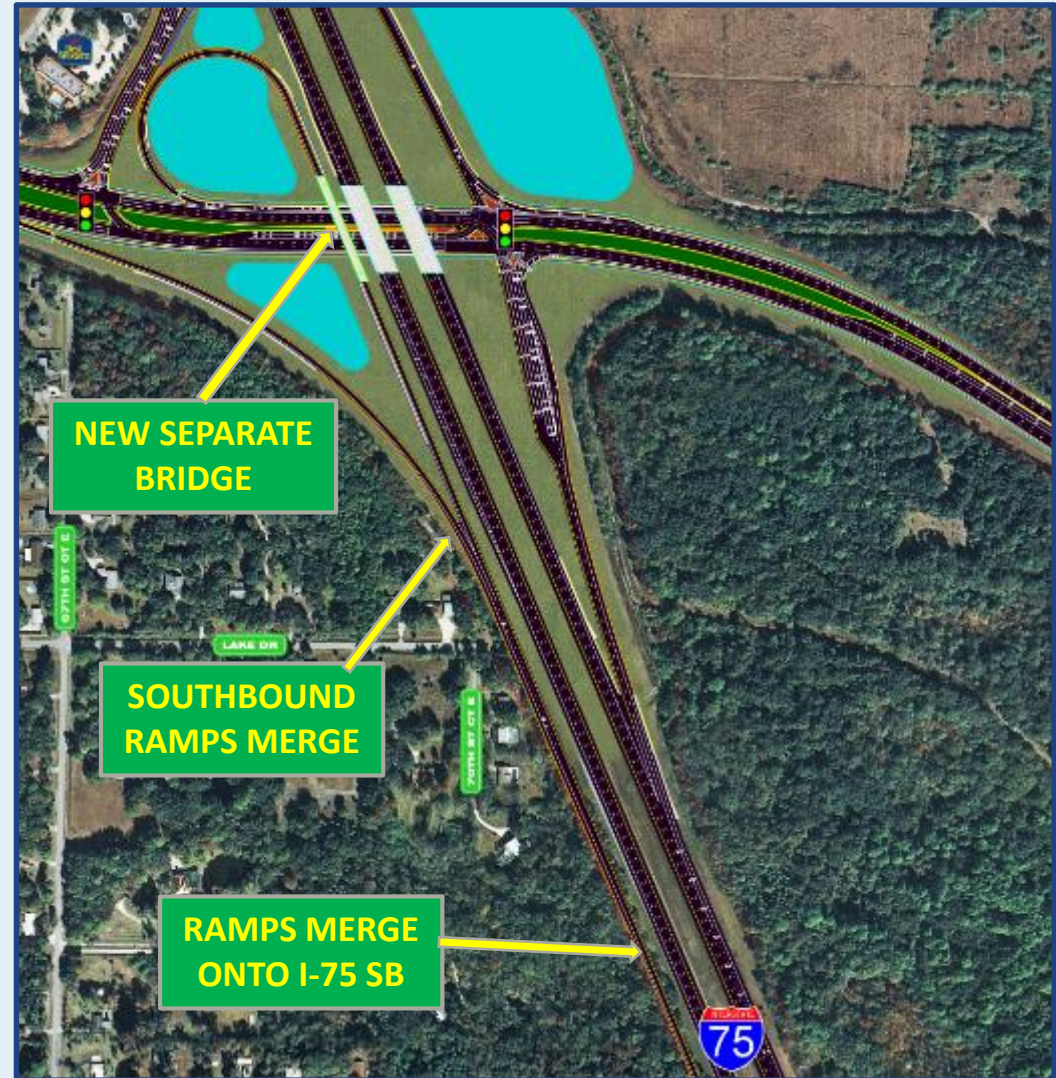
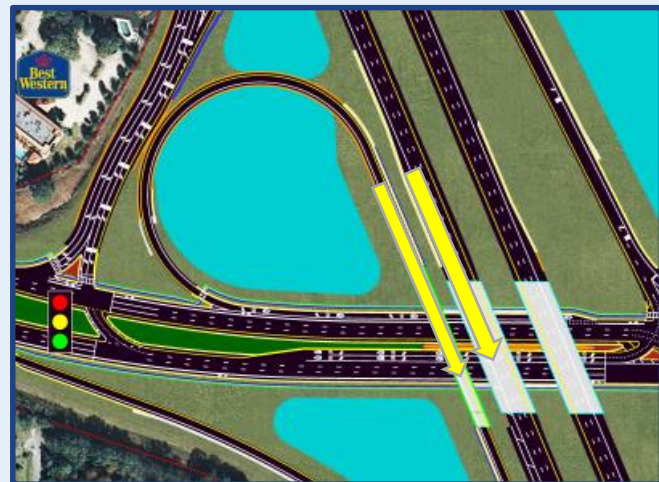
- Project will reconstruct the existing I-75/SR 64 partial cloverleaf interchange to a modified diamond configuration interchange with a single loop in the northwest quadrant.
 - Eliminates need for two separate NB SR 64 Exits (“A” and “B”).
 - Combines all I-75 NB exit traffic onto a single ramp in the southeast quadrant
- SR 64 to be reconstructed from 66th St Court E to Grand Harbour Pkwy



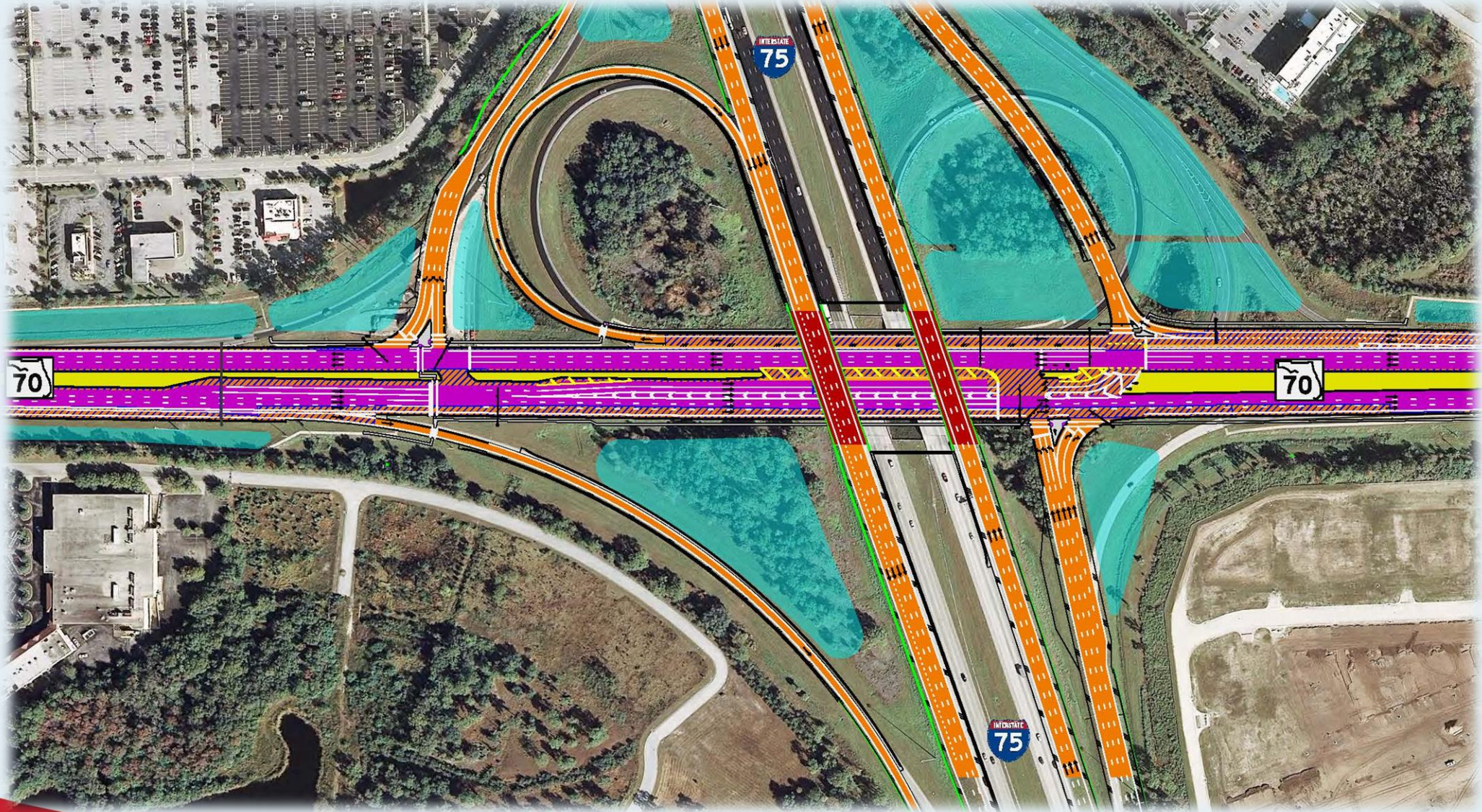
I-75 at SR 64 Interchange (Manatee)



- The loop ramp in the NW quadrant will be reconstructed with a separate bridge over SR 64 to allow for considerably more acceleration distance before merging onto I-75.
- Currently Under Construction.
- Est. Completion: May 2019



I-75 at SR 70 Interchange (Manatee)



I-75 at SR 64 Interchange (Manatee)

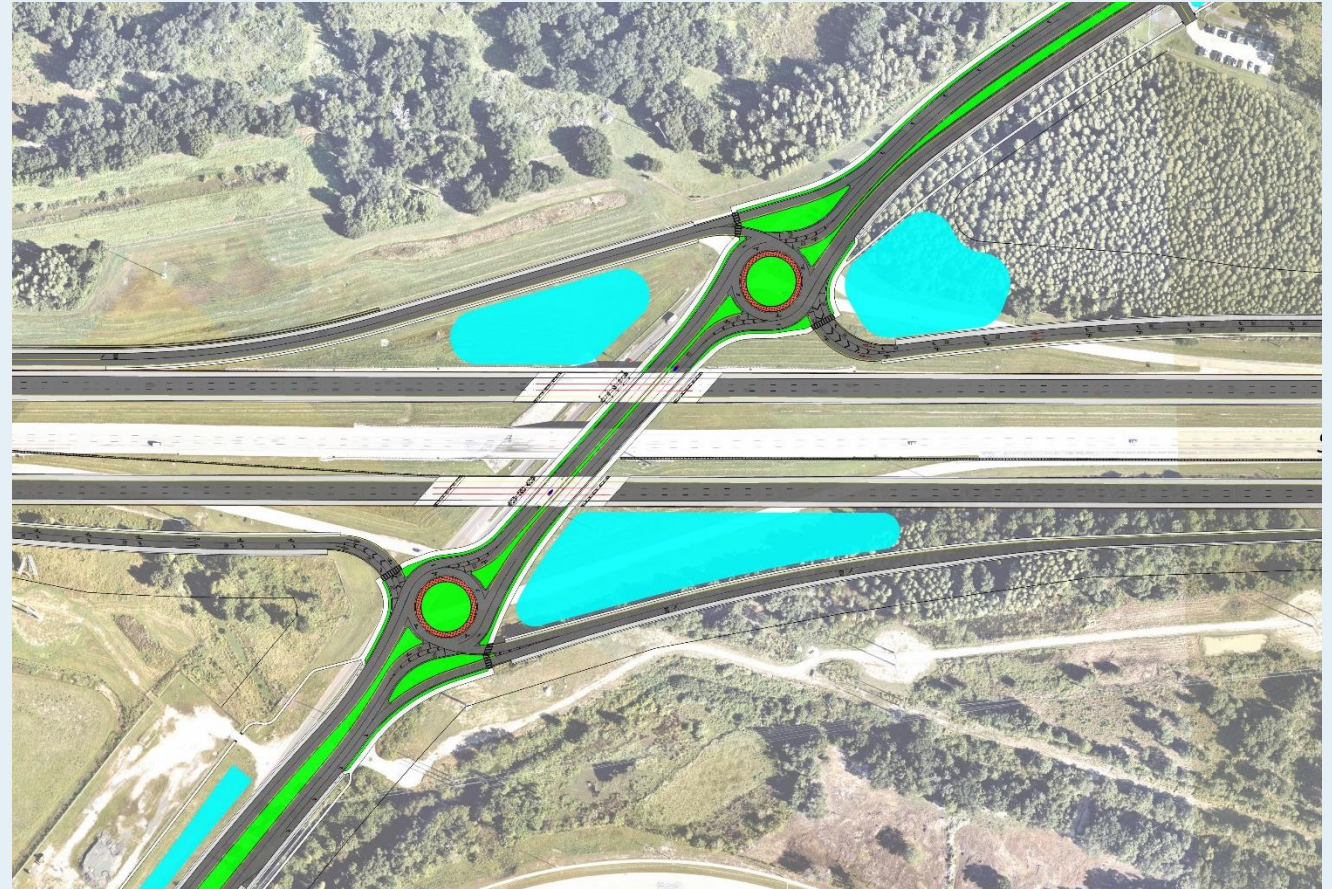


- Project will reconstruct the existing I-75/SR 70 partial cloverleaf interchange from the existing six travel lanes (three in each direction) to a modified diamond configuration interchange with a single loop in the northwest quadrant.
- The typical section consists of an eight-lane facility (three thru lanes and one auxiliary lane in each direction) from north of University Parkway to south of SR 64.
- The interchange improvements will also include the replacement of the existing I-75/SR 70 bridges and widening of the Braden River bridges to accommodate the southbound and northbound auxiliary travel lanes.
- Construction estimated to begin: Summer 2018

I-4 at SR 33 Interchange (Polk)



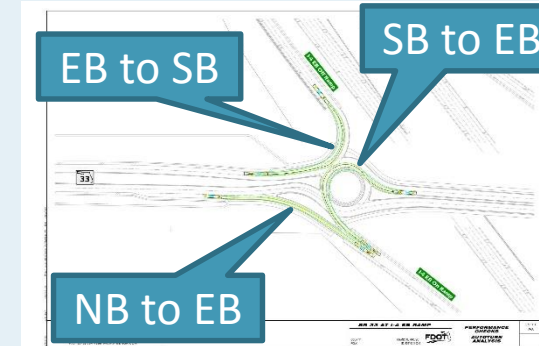
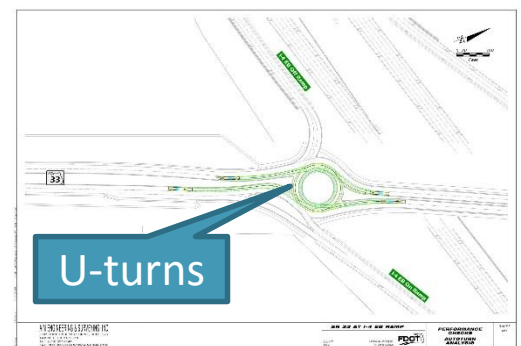
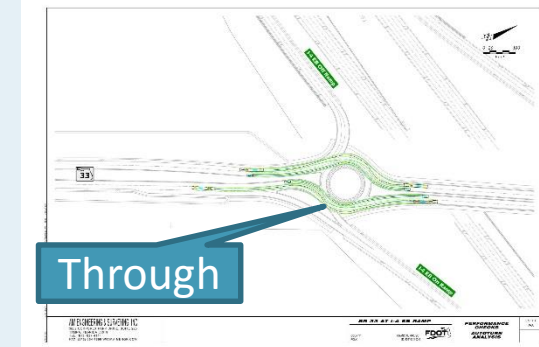
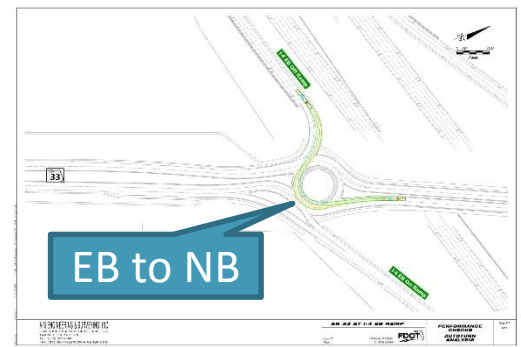
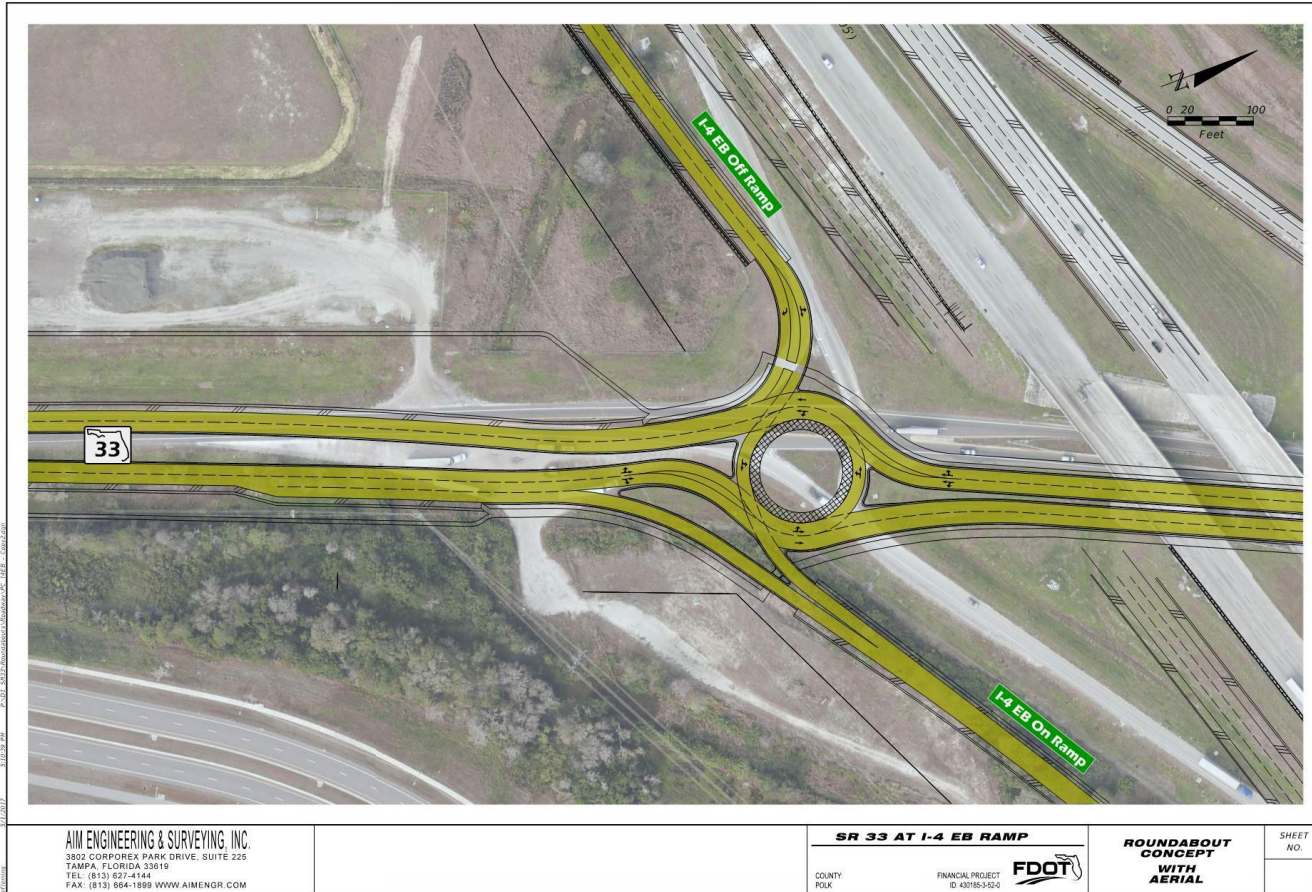
- The existing I-4 mainline in the area of the interchange will be reconstructed with new bridges and a wider median. The existing I-4 bridges over SR 33 will be replaced due to vertical clearance deficiencies.
- Based on the results of a Roundabout Feasibility Evaluation, roundabouts at the ramp termini are estimated to provide significant life-cycle safety benefits and reduce delay compared to conventional intersections at the eastbound and westbound I-4 on-/off-ramps.
- Design on-going. ROW funded in current year. Construction unfunded.



I-4 at SR 33 Interchange (Polk)



Roundabout Designed to Accommodate Truck Traffic

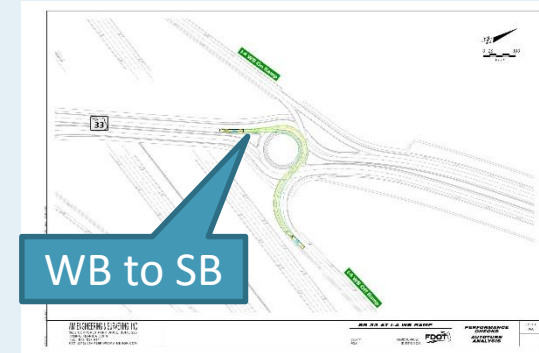
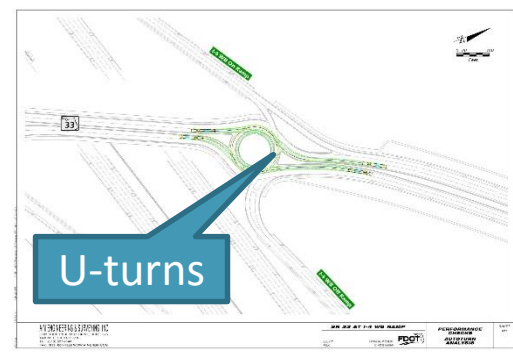
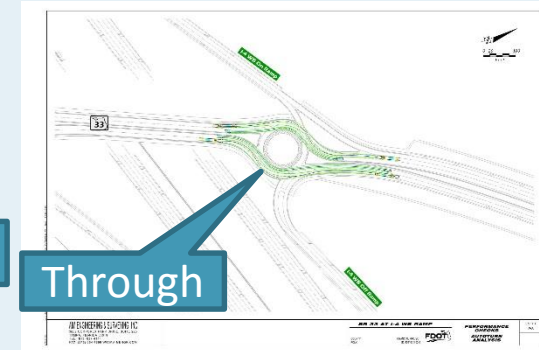
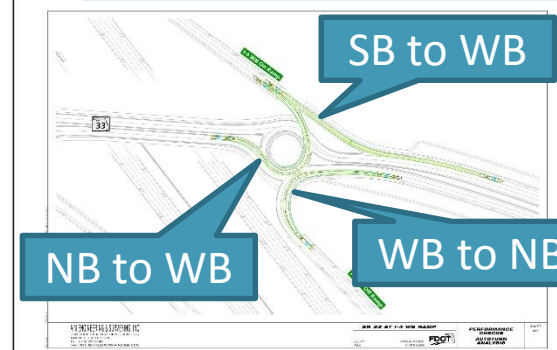
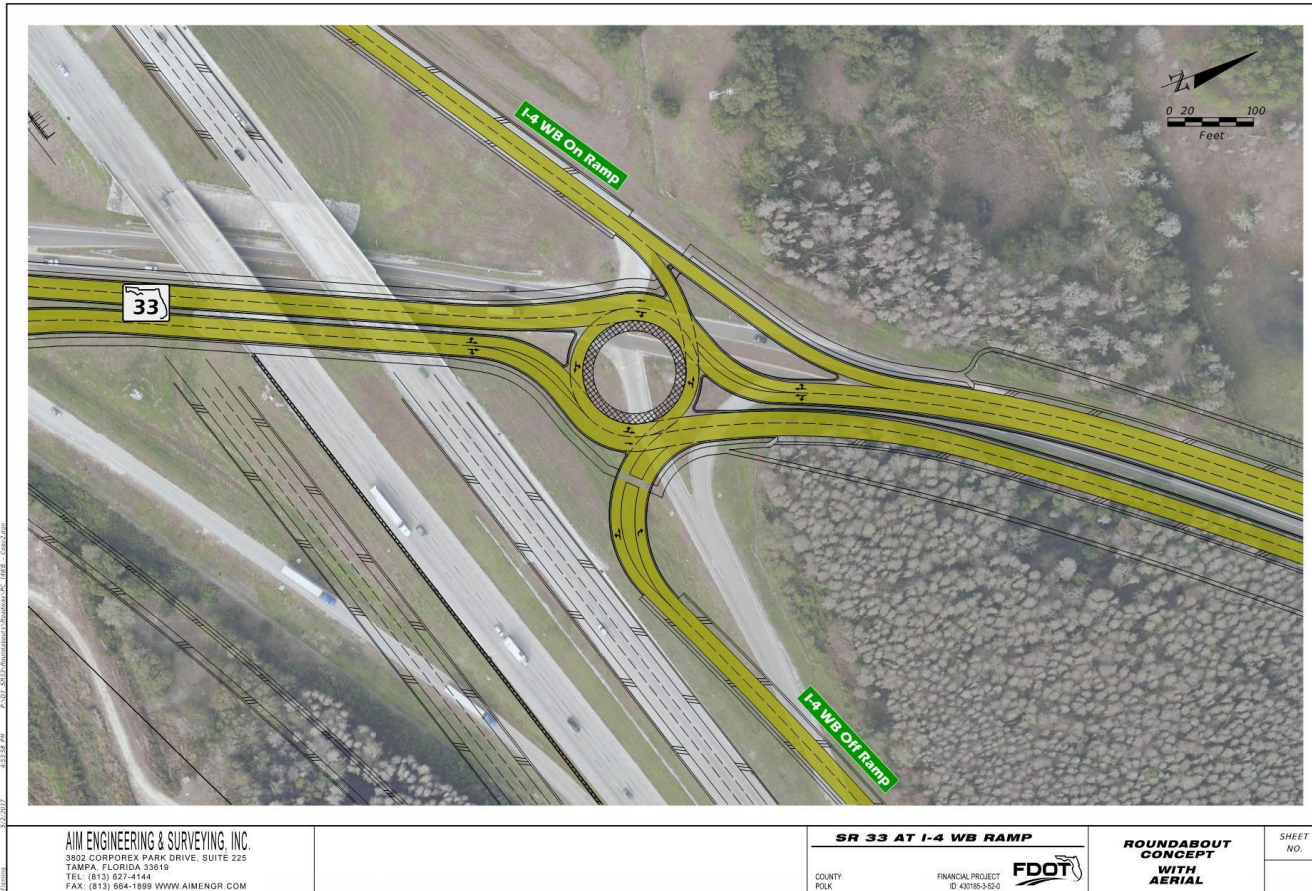


Roundabout for EB Ramps

I-4 at SR 33 Interchange (Polk)

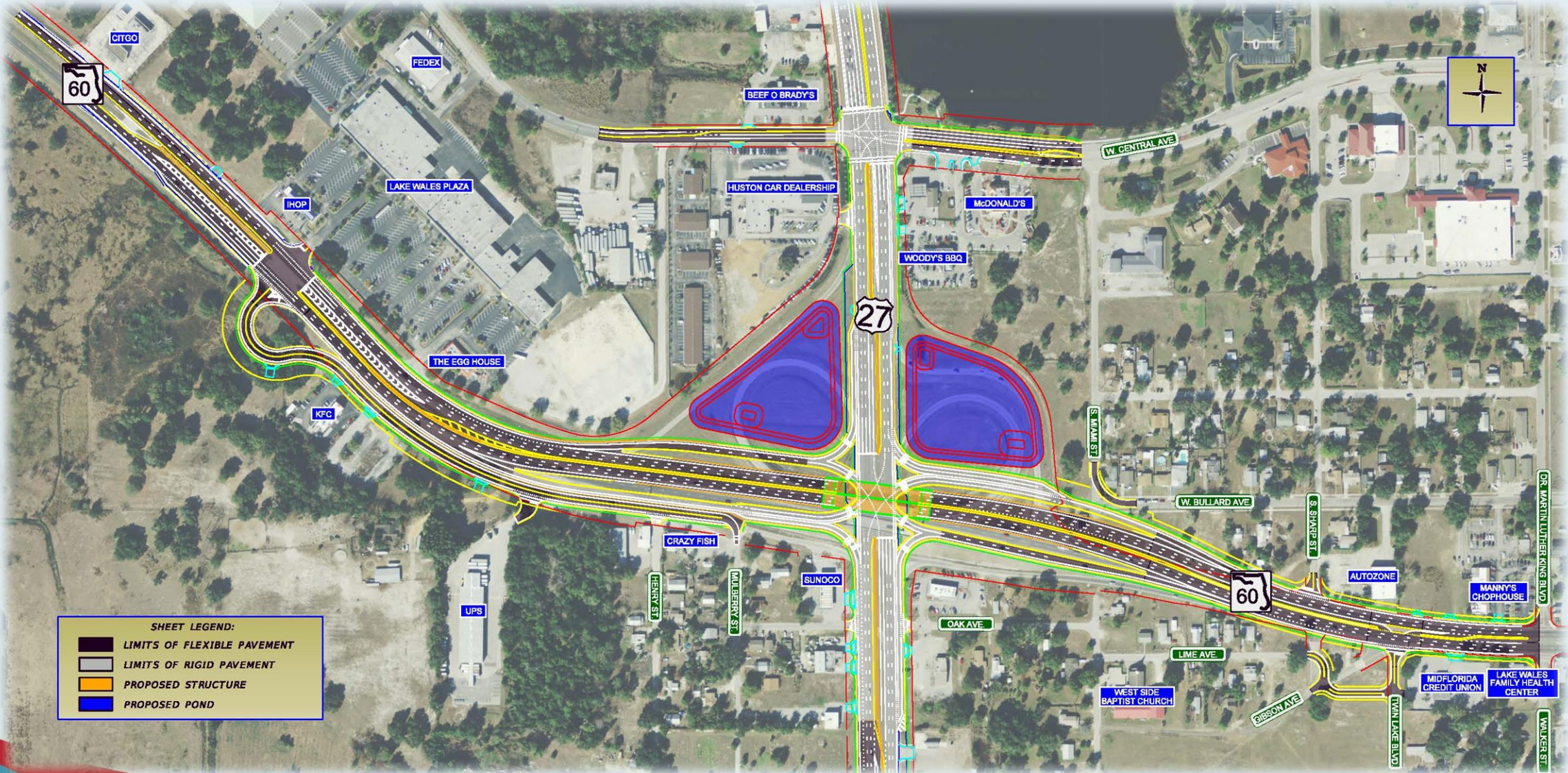


Roundabout Designed to Accommodate Truck Traffic



Roundabout for WB Ramps

US 27 at SR 60 Interchange (Polk)

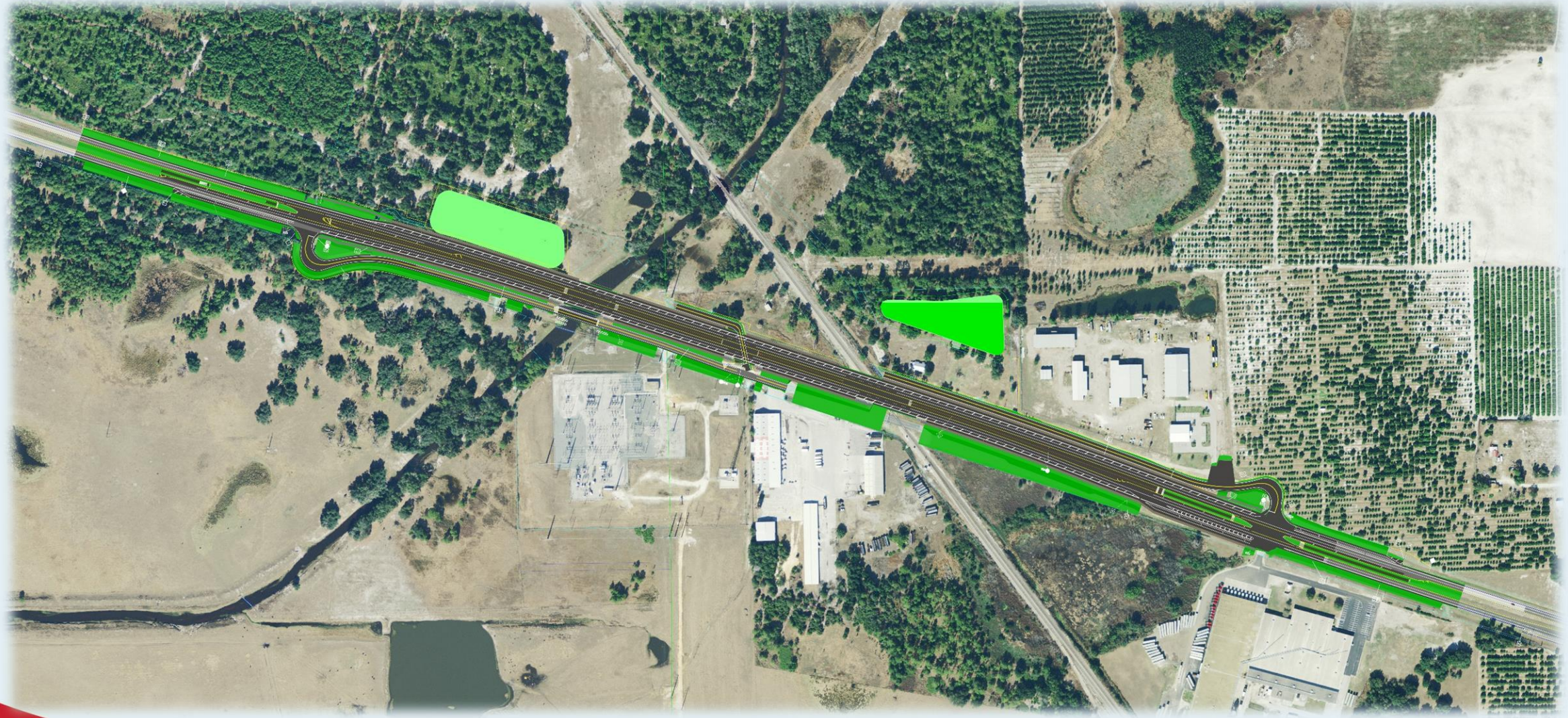


US 27 at SR 60 Interchange (Polk)



- Improvements will replace this inadequate interchange with a single point urban interchange (SPUI), similar to that at the Interstate 4 at US 98 Interchange.
 - A SPUI is similar to a diamond interchange except the two ramp terminal intersections are combined into a single intersection.
- Much of the roadwork in the interchange will be in concrete.
- Project also includes expanding from 4 to 6 lanes within the footprint of the interchange project.
- Construction estimated to begin: Spring 2020

SR 60 at CSX Railroad Crossing (Polk)



SR 60 at CSX Railroad Crossing (Polk)



- Project purpose is to improve safety by separating vehicle traffic from train traffic and reducing travel delays in removing the need to stop traffic for trains.
 - This is a designated a hurricane evacuation route and is identified as an evacuation route in the Polk County Comprehensive Plan.
- Proposed bridges will go over the CSX railroad, a frontage road, and the Peace Creek Drainage Canal.
- Frontage road west of the railroad will provide access for area businesses.
- While the project is not to add capacity, a six-lane capable facility is being planned to accommodate future widening of SR 60 and eliminate the need to reconstruct the bridges.
- Design and ROW funded. Construction Unfunded.

FDOT District One Projects



Florida Department of
TRANSPORTATION

[E-Updates](#) | [FL511](#) | [Mobile](#) | [Site Map](#)

- [Home](#)
- [About FDOT](#)
- [Contact Us](#)
- [Maps & Data](#)
- [Offices](#)
- [Performance](#)
- [Projects](#)

www.swflroads.com

Southwest Florida Roads

District Office
L.K. Nandam
District One Secretary

801 N. Broadway Ave.
Bartow, Florida 33830

Tel: 800-292-3368
Fax: 863-534-7265
[E-Mail Us](#)

Additional Contacts
[Staff Directory](#)



SWFL Resources

- [Current Projects](#)
- [Future Projects](#)
- [FAQs](#)
- [Photos](#)
- [Public Notices](#)
- [More...](#)

Travel Updates

[Weekly Project Updates](#)



Welcome

This website is maintained by Florida Department of Transportation (FDOT), District One. FDOT, District One covers the Southwest Florida region including the following 12 counties: Charlotte, Collier, DeSoto, Glades, Hardee, Hendry, Highlands, Lee, Manatee, Okeechobee, Polk and Sarasota. Information updated on this website for each project may include construction updates, current photographs, lane closure information and other interesting and/or useful project facts.

[More](#)

News

[FDOT District One Tentative Five-Year Work Programs fiscal years 2018-2022](#)

Learn more about FDOT Roundabouts

What is a roundabout? A roundabout is a one-way, circular intersection that uses signs to guide motorists around them. They do not have traffic signals. Roundabouts have safe crossings for pedestrians and bicyclists. [learn more...](#)

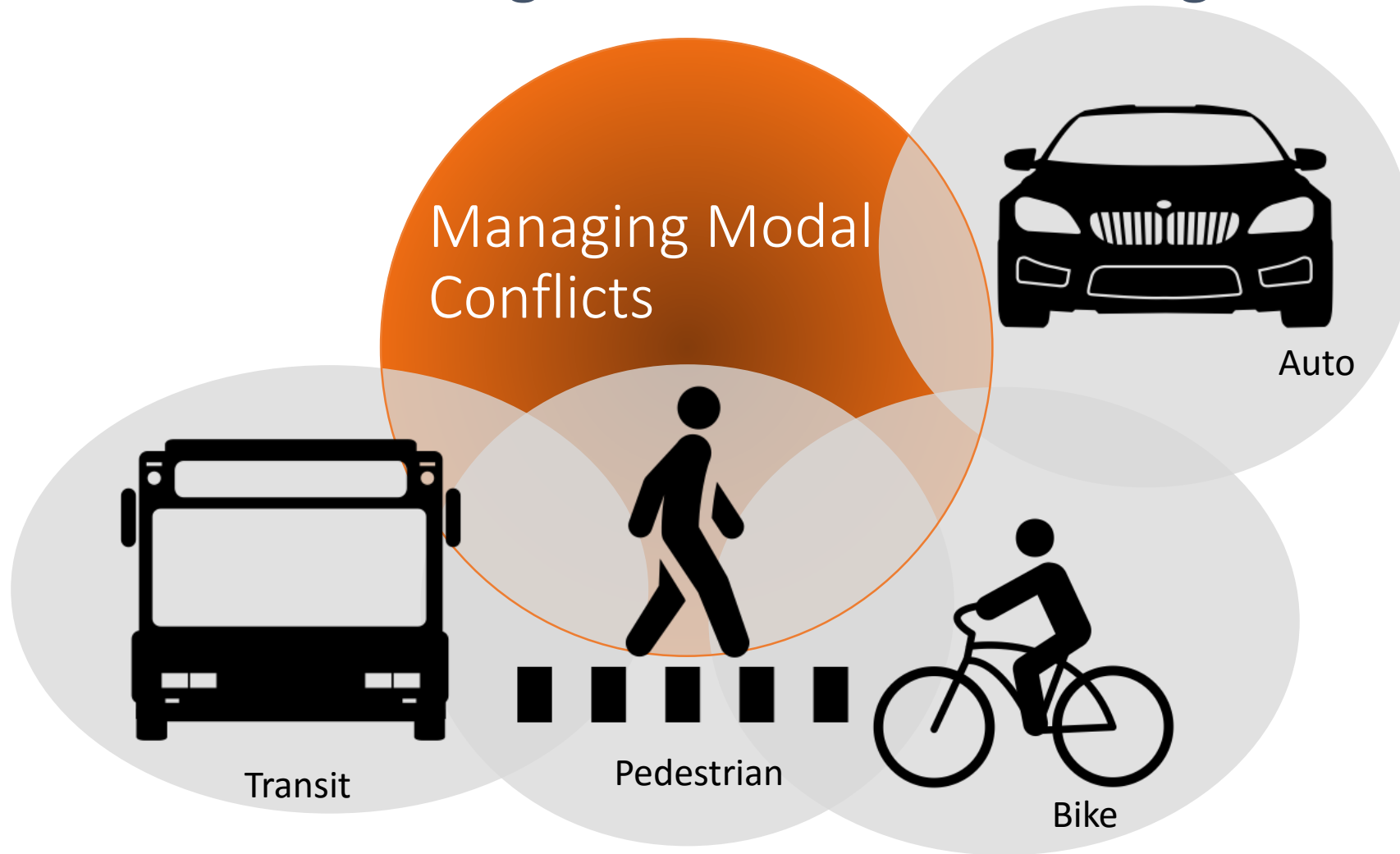
[Fastland Grant Application: Central Florida Freight Corridor Multimodal Mobility Enhancement Improvements \(US 27 and SR 60\)](#)

FDOT District One



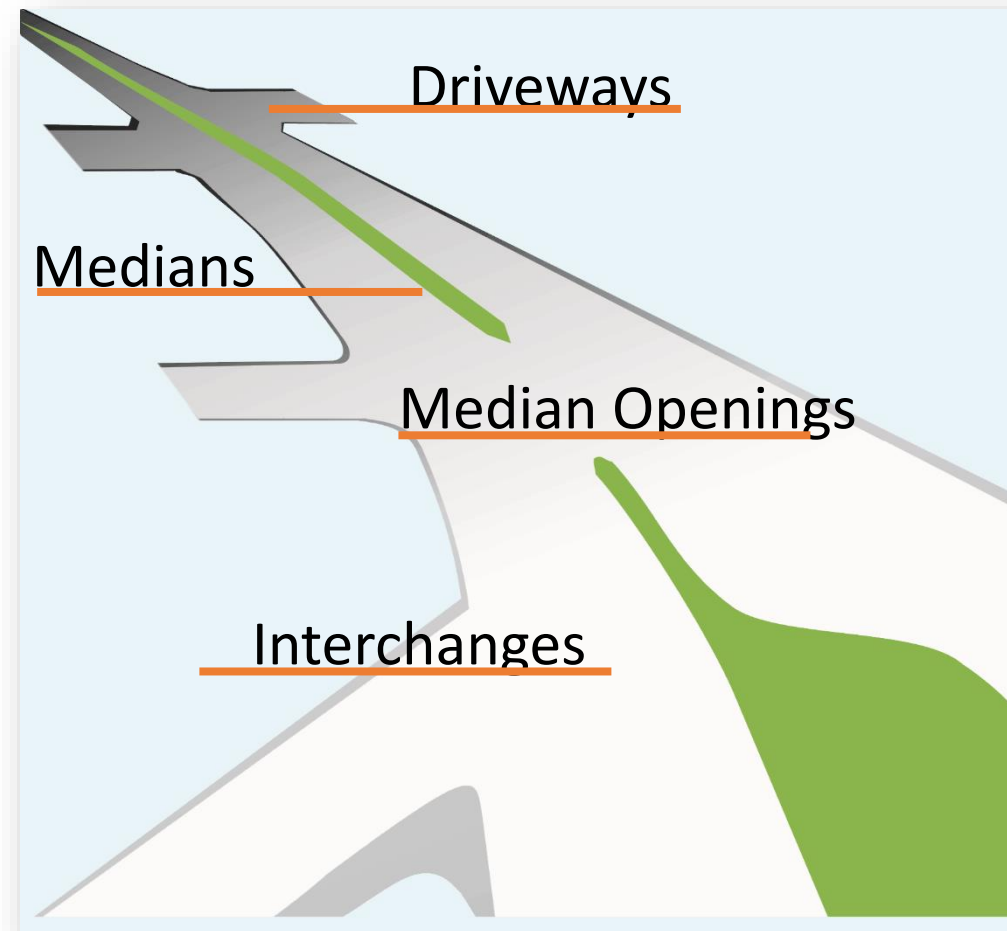
Nathan Kautz
Access Management Engineer

Access Management Is Conflict Management



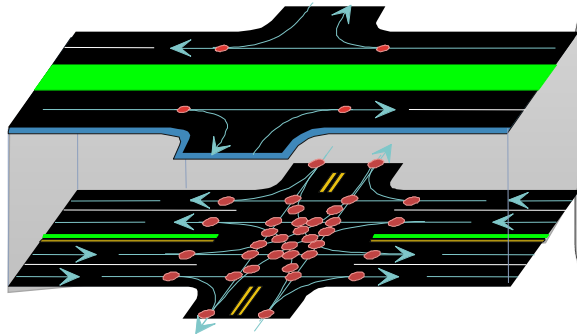
Defining Access Management

Access management is the careful planning of the location, type and design of access.

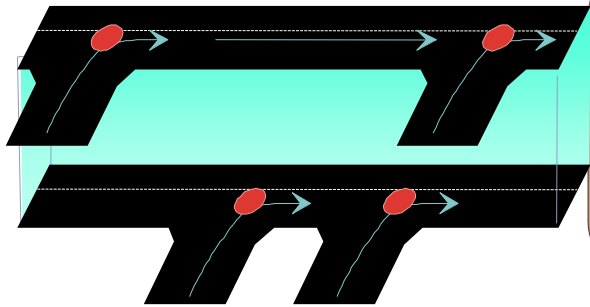


Median Handbook
Page 10

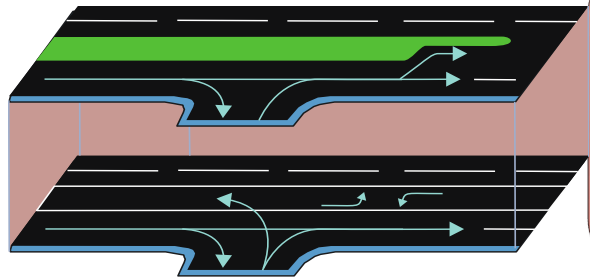
What Are The Principles of Access Management?



Limit the number of conflict points for all modes



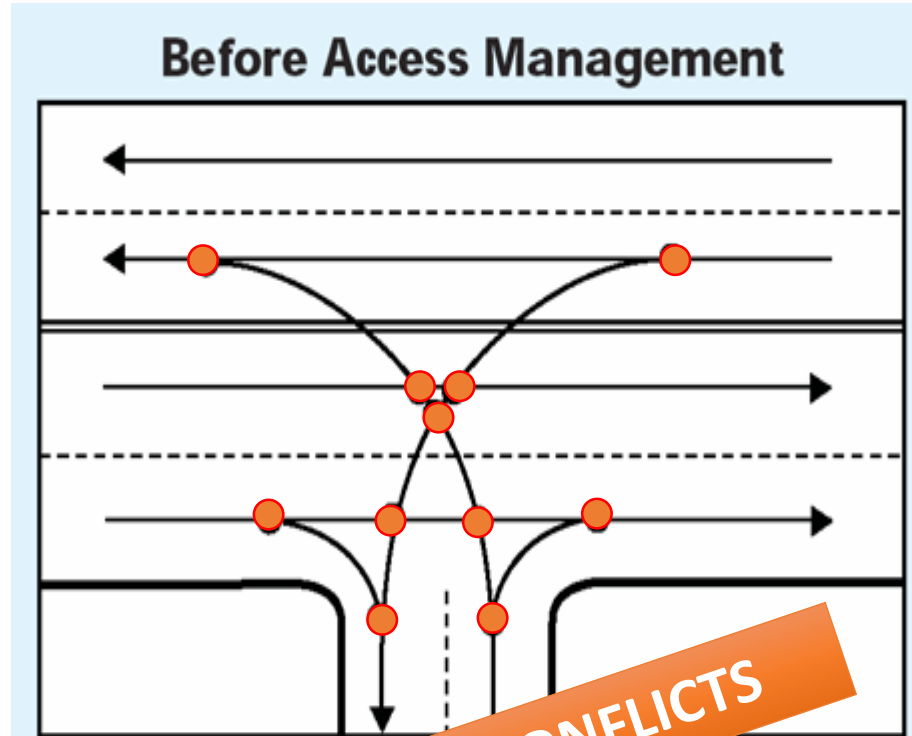
Separate the conflict points for all modes



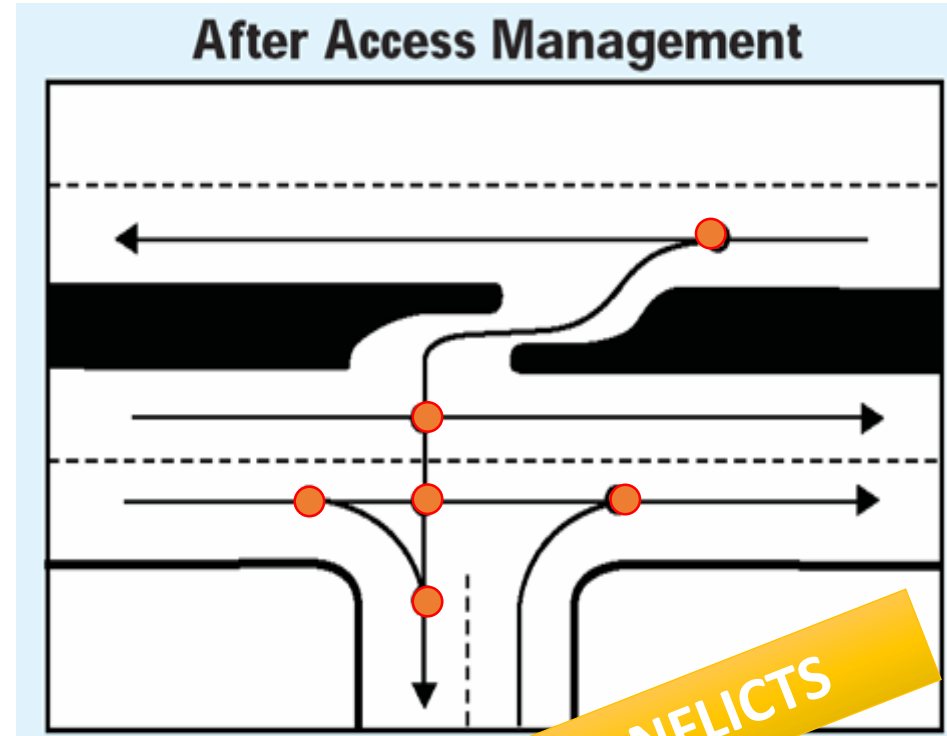
Provide reasonable access at each property

Why We Care So Much

More **conflicts** means more **crashes**



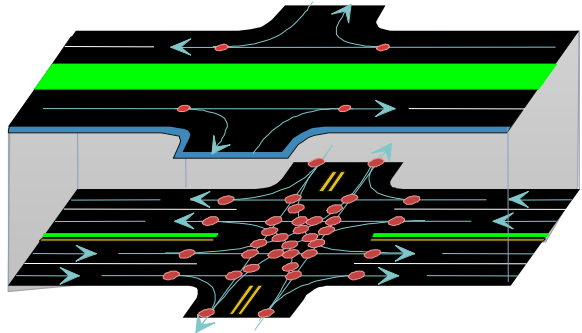
MORE CONFLICTS



LESS CONFLICTS

We didn't just make
this stuff up
*Safety is the Prime Reason for
Access Management*
David Gwynn

Limiting Conflict Points



Reducing Number of Median Openings

More Restrictive Median Openings

Directional vs Full

Reducing and Aligning Driveways

Better Driveway Design

What are the Florida Statutes on Access?



Driveway Info Guide
Page 14, 72-74, 88

Median Handbook
Page 15, 18, 20, 26

Sections 335.181-335.188
the “State Highway System
Access Management Act”

Rule 14-96

– Connection Permits

Rule 14-97

– Classification System and
Access Management Standards

Does Everyone Get a Driveway?



*Every owner of property which abuts a road on the State Highway System has a right to **reasonable access** to the abutting state highway but does not have the right of unregulated access to such highway.*

335.181 (2)(a)FS



Yes...But

FDOT Can Limit the Types of Turns

“Nothing in this subsection limits the department’s authority to restrict the operational characteristics of a particular means of access.”

335.184(3)(d)FS

Lefts are not a right

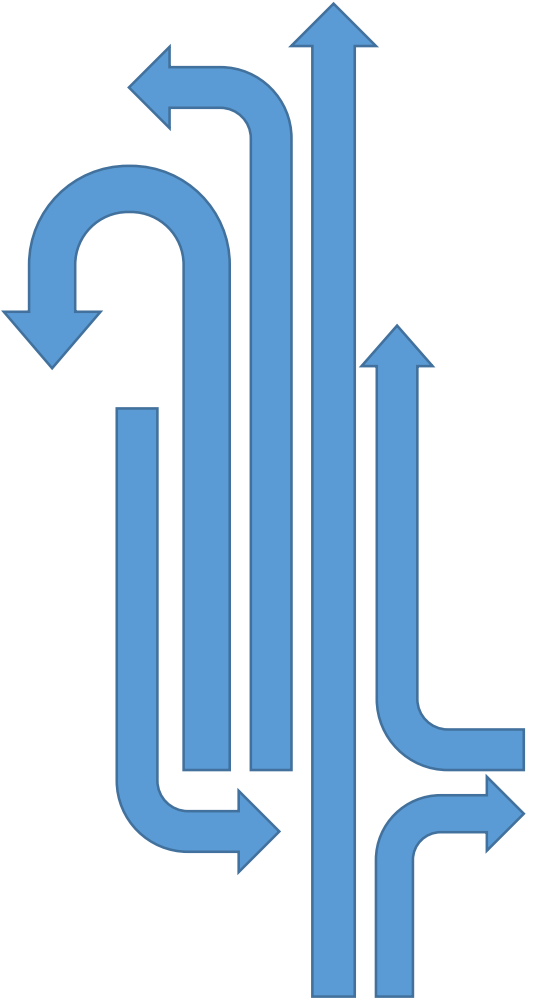
Additionally....

“Reasonable Access” means the minimum number of connections, **direct or indirect**, necessary to provide safe and efficient ingress and egress to the State Highway System based on Section 335.18, F.S., the Access Management Classification, projected connection and roadway traffic volumes, and the type and intensity of the land use.

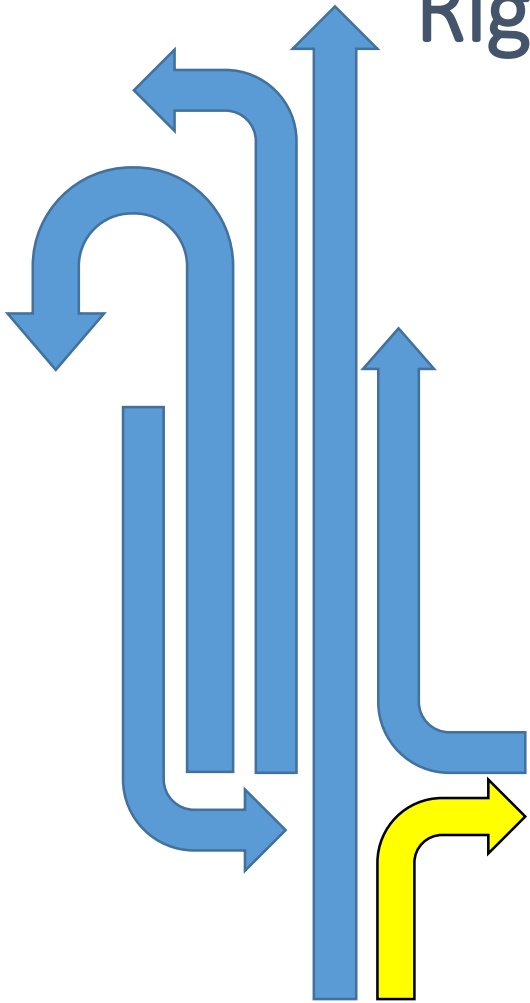
FAC 14-96

Roadway Improvements

- Right Turn Lanes
- Left Turn Lanes
- Acceleration Lanes



Right Turn Lanes



Roadway Posted Speed Limit	Number of Right Turns Per Hour
45 mph or less	80-125 ¹
Over 45 mph	35-55 ²

FACTORS:

- number of lanes on the roadway
- speed limit
- number of turning vehicles
- **TYPES** of vehicles.

Right Turn Lanes

7.3

IMPACT OF LARGE AND SLOW MOVING VEHICLES TURNING RIGHT



Speed and the volume of right turns should not be the only criteria used to determine the requirement for an exclusive right turn lane at unsignalized intersections. In order to minimize the rear-end collision potential of some situations, a right turn lane may be required where large and slow moving vehicles need to turn right such as;

- Trucking facilities (or locations that have a high volume of large vehicle traffic such as water ports, train stations, etc.)
- Recreational facilities attracting boats, trailers and other large recreation vehicles
- Transit facilities
- Schools

Left Turn Lanes

Table 1. Recommended left-turn treatment warrants for rural two-lane highways.

Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Bypass Lane	Three-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Bypass Lane	Four-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	50	200	50	150
10	50	100	< 50	50
15	< 50	100	< 50	50
20	< 50	50	< 50	< 50
25	< 50	50	< 50	< 50
30	< 50	50	< 50	< 50
35	< 50	50	< 50	< 50
40	< 50	50	< 50	< 50
45	< 50	50	< 50	< 50
50 or More	< 50	50	< 50	< 50

Table 3. Recommended left-turn lane warrants for urban and suburban arterials.

Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Urban and Suburban Arterial Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Urban and Suburban Arterial Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	450	50
10	300	50
15	250	50
20	200	50
25	200	50
30	150	50
35	150	50
40	150	50
45	150	< 50
50 or More	100	< 50

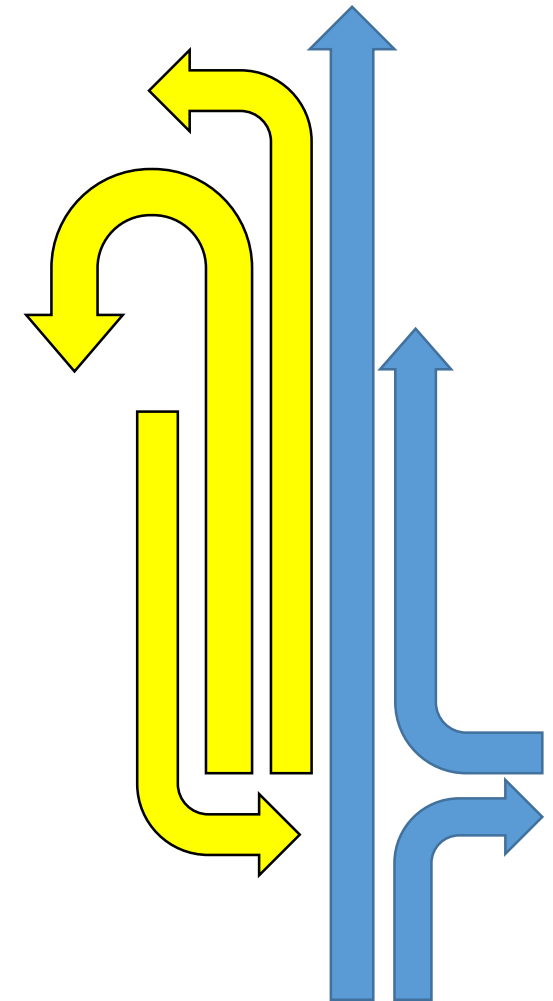
NCHRP 745

Table 2. Recommended left-turn lane warrants for rural four-lane highways.

Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Four-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Four-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	75	50
10	75	25
15	50	25
20	50	25
25	50	< 25
30	50	< 25
35	50	< 25
40	50	< 25
45	50	< 25
50 or More	50	< 25

Evaluated Using Several Criteria:

- Turning Volume
- Highway Volume
- Type of Intersection
- Type of Vehicles



Acceleration Lanes

Don't Normally Permit Acceleration Lanes... **HOWEVER**

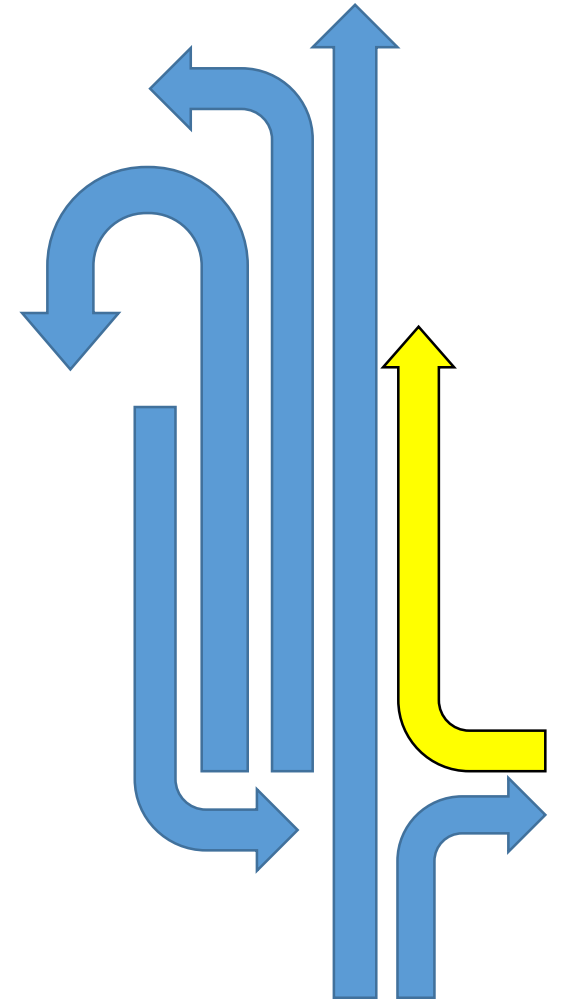
Consider for Trucking Facilities: Mines, Warehouses, Etc.



Issues:

Most Locations Do Not Have Enough Frontage

Can Cause More Issues Than They Solve – Potentially Dangerous



Acceleration Lanes – Bad Example



Acceleration Lanes – Good Example



Acceleration Lanes – What Lengths?

US Customary										
Acceleration length, L (ft) for entrance curve design speed (mph)										
Highway	Stop condition	15	20	25	30	35	40	45	50	
Design speed, V (mph)	Speed reached, V_a (mph)	and initial speed, V'_a (mph)								
	0	14	18	22	26	30	36	40	44	
30	23	180	140	—	—	—	—	—	—	—
35	27	280	220	180	—	—	—	—	—	—
40	31	360	300	270	210	120	—	—	—	—
45	35	580	490	440	380	280	160	—	—	—
50	39	720	660	610	550	450	350	130	—	—
55	43	960	900	810	760	670	550	320	150	—
60	47	1200	1140	1100	1020	910	800	550	420	180
65	50	1410	1350	1310	1220	1120	1000	770	600	370
70	53	1620	1560	1520	1420	1350	1230	1000	820	580
75	55	1790	1730	1630	1580	1510	1420	1160	1040	780

Note: Uniform 50:1 to 70:1 tapers are recommended where lengths of acceleration lanes exceed 1,300 ft.

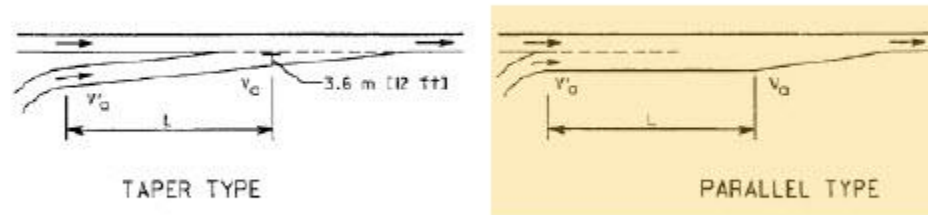


Exhibit 10-70. Minimum Acceleration Lengths for Entrance Terminals with Flat Grades of Two Percent or Less

65 MPH Roadway Requires 1410' Acceleration Lane

How to Permit Improvements

Call your local FDOT Operations Center



Request a Pre Application meeting



Bring all information to the meeting :
Conceptual Plans, Traffic Information, etc.



The request will be evaluated.



If approved, the Operations Staff will determine
what kind of permit you need and walk you
through the process!

Operations Centers

Bartow Ops	Manatee Ops	Heartland Ops	Fort Myers Ops
<ul style="list-style-type: none">• Polk	<ul style="list-style-type: none">• Manatee• Sarasota	<ul style="list-style-type: none">• Hardee• De Soto• Highlands• Okeechobee• Glades• Hendry	<ul style="list-style-type: none">• Charlotte• Lee• Collier• Hendry
(863) 519-4100	(941) 708-4400	(863) 471-4848	(239) 985-7800

Questions?

Florida Trucking Association



Ken Armstrong
CEO

FDOT Freight Forum District 1

KEN ARMSTRONG
FLORIDA TRUCKING ASSOCIATION

**FLORIDA
TRUCKING**
ASSOCIATION



**GO IT
ALONE**

**GOING IT
ALONE
Is No Longer
a Likely Path
to Success**



CONNECTIONS
RELATIONSHIPS
NETWORKS

EVEN A VERB!

**The World Is
Hopelessly and
Wonderfully
Complex.**

**“All the easy stuff is
already done.
There’s only
hard stuff left.”**

Dr. Bill Law

**If you aren't part of a
network, actually
multiple networks, you
will get left behind.**

Information Networks
Assistance Networks
Friendship Networks
Planning Networks

**So where is he going
with all this?**

Two places....

1. Keith Robbins has a network. If you aren't taking advantage of it, you are at a disadvantage.

2. FTA IS a network.
That's what an
"association" is.

**Information Network
Assistance Network
Friendship Network
Planning Network**

**All of this was on display at our
Annual Conference this month:**

**CEO CIRCLES
KEVIN KNIGHT
MIKE DEW
JIM GATTONI**

**ADAM PUTNAM
BREAKOUTS
FHP & HSMV
SOCIAL EVENTS**

**So what will make
our/your industry
network more
valuable?**

Making it larger...

Strength in Numbers

“Drive for Five”

Already at 400 members...

Annual Dues:

\$595 + \$20/Florida-Based Truck

60% discount for 2017

If already a member...help.

If not yet a member...join.

**Next Major Event:
Fall Round-Up and
Educational Institute**

Jacksonville, October 11-12

Ken@FLTrucking.org

Ken Cell: 850-459-1256

Strength in Numbers

Thank You....

YOUR TOMORROW
IS ON A TRUCK TODAY

**FLORIDA
TRUCKING**
ASSOCIATION



Polk County Sheriff's Office



Jennifer Sample
Polk County Sheriff's Office
George Seiler
Federal Bureau of Investigation

CARGO THEFT



PCSO BSI INTELLIGENCE UNIT

CARGO THEFT TRENDS IN POLK

- Decline in actual thefts of cargo
- **New trend in 2017:** Removal of tires and rims from trailers



CARGO THEFT 2017

Cargo stolen:

- 35,000 lbs of Coca-Cola products (Walmart parking lot – Lake Wales)
- Hot water heaters (Pilot Truck Stop – Haines City)
- 30,000 lbs of shrimp (Cold Storage Warehouse – Winter Haven)



UTILITY TRAILER BUSINESS – NORTH LAKELAND

- 48 wheels & tires removed from 6 refrigerated & flatbed trailers.
- Trailers were left on wooden blocks.
- Damage to trailers - \$20,000
- Property loss - \$48,000
- Incident took place outside the view of surveillance video



STORAGE LOT– HWY 60, LAKE WALES

- 4 semi-trucks and 1 flatbed trailer loaded with a forklift.
- 3 trucks were recovered nearby with tires & rims removed.
- Network of chase vehicles & counter-surveillance utilized.
- Trailer with forklift not recovered.
- Approximate property loss - \$151,000



**Peterbilt Semi-tractor with
refrigerated trailer
*Counter-surveillance***

TRUCKING COMPANY PARKING LOT— NORTH LAKELAND

- 29 semi tires removed from storage container
- No surveillance cameras
- Property loss - \$6,640



ECM THEFTS

- 7 reported incidents of ECM thefts between 2016-2017



POSSIBLE EMERGING TREND??

- Two businesses on Hwy 17-92 N, Davenport were hit August 15th.
 - 3 vacuum trucks (Kenworth & International) were stolen and later recovered on fenced property belonging to Ridgewood Lakes (Hwy 547 / Oak Haven Dr).
Suspects: 4 unknown race suspects
 - Attempted theft of a Mack concrete truck
Suspects: 4 white or Hispanic males



Warehouses/Distribution locations were hit most often during incidents reported in 2017. *This is an increase compared to previously reported stats.*

45% from warehouse/distribution locations

21% from public parking

17% from truck stops/truck parking lot

15% from secured parking areas

REPEAT THEFT LOCATIONS IN POLK

3725 N Frontage Rd in Lakeland – Moving & Storage Company

Hit 4 times between Oct 2016 -January 2017. Locks were cut on trailers and one refrigerated trailer was stolen.



REPEAT THEFT LOCATIONS IN POLK

Furniture Stores – Lakeland

- Ashley Furniture – 4025 Hwy 98 N
 - Hudson Furniture – 4955 S Florida Ave
- Locks cut on trailers. Nothing taken.



REPEAT THEFT LOCATIONS IN POLK

102 Industrial Blvd, Winter Haven – Commercial Warehouse

Hit twice – October 2016 and August 2017. Trailers stolen.



SOLUTIONS

- **Limit** where drivers are allowed to park and how long they can leave loads unattended
- Choose well lit areas that have external **Closed Circuit TV cameras**
- Encourage parking habits that minimize the potential for easy access to the **rear of the trailer**
- **Do not leave trucks unsecured.**



YOUR COMPANY SHOULD TAKE ADVANTAGE OF TECHNOLOGY:

- Install & Monitor warehouse and parking cameras
- Install hidden fleet trackers
 - Detect when trailer/truck is off-route
- GPS all loads and tractors
 - Should be hidden and not easily accessible to a thief
 - GPS Tamper Resistant – if the GPS is turned off or removed the truck will not start
- New apps such as **Canary, Nest** may be quick solutions to notify if movement is made in the truck



CONSIDER CREATING A COMPANY ANONYMOUS TIP LINE

- Gives honest employees a means for reporting dishonest employees
- Help identify shrinkage

Educate drivers on reporting suspicious activity:

- Someone making inquiries regarding the cargo
- Suspicious people in the wrong areas
- Probing CB radio questions
- Unusual encounters at road stops
- Vehicle shadowing or following too closely to others



**IF YOU SEE SOMETHING – IF YOU HEAR
SOMETHING – THEN SAY SOMETHING.**

Idea Generator



Ideas to Make Life Better for Trucking

Florida Polytechnic University



Dean Bushey
Director of Autonomous Systems Research

Automated/Connected Vehicles Potential Impacts on Trucking

Dr. Dean Bushey

Aug 17, 2017



Dr. Dean Bushey, Col(r) USAF

Director of Autonomous Systems Research, Florida Polytechnic University

- **Professor of Computer Science**
- **Research & development of self-driving cars**
 - Automated & Connected Vehicles
 - Algorithms, Sensors, Networks, Data Management, Cyber Security
- **FI Poly Rep to SunTrax/Central Florida Autonomous Proving Grounds/Orlando Smart Cities**
- **Retired USAF Colonel**
 - Commander/Director of Unmanned Systems
 - MQ1 Predator, MQ9 Reaper, RQ4 Global Hawk
 - Command Pilot,
 - 4500 Command hours (C5, C12, C20)
 - 900 Combat hours
 - Professor USAF Academy



What is your vision?



What is your vision?



What is your vision?



Advanced Technologies & Smart Cities

Technology convergence is revolutionizing transportation, dramatically improving safety & mobility while reducing costs & environmental impacts



Florida Polytechnic University

- Science, technology, engineering and mathematics (STEM)
- Project Based Education
- 1300 students, 6 Majors, CS (48%), EE, CE, ME, Adv Tech, ST
- First graduation in January 2017
- Small, elite, foster startups and entrepreneurship
- Regionally Accredited!
- **Promote academic and industry partners, Internship opportunities, research investments, startup capital**



What is a SELF DRIVING vehicle?

Levels of Vehicle Automation (NHSTA 2016)

Different Levels In a Self Driving Car



LEVEL 0



There are no autonomous features.

LEVEL 1



These cars can handle one task at a time, like automatic braking.

LEVEL 2



These cars would have at least two automated functions.

LEVEL 3



These cars handle "dynamic driving tasks" but might still need intervention.

LEVEL 4



These cars are officially driverless in certain environments.

LEVEL 5

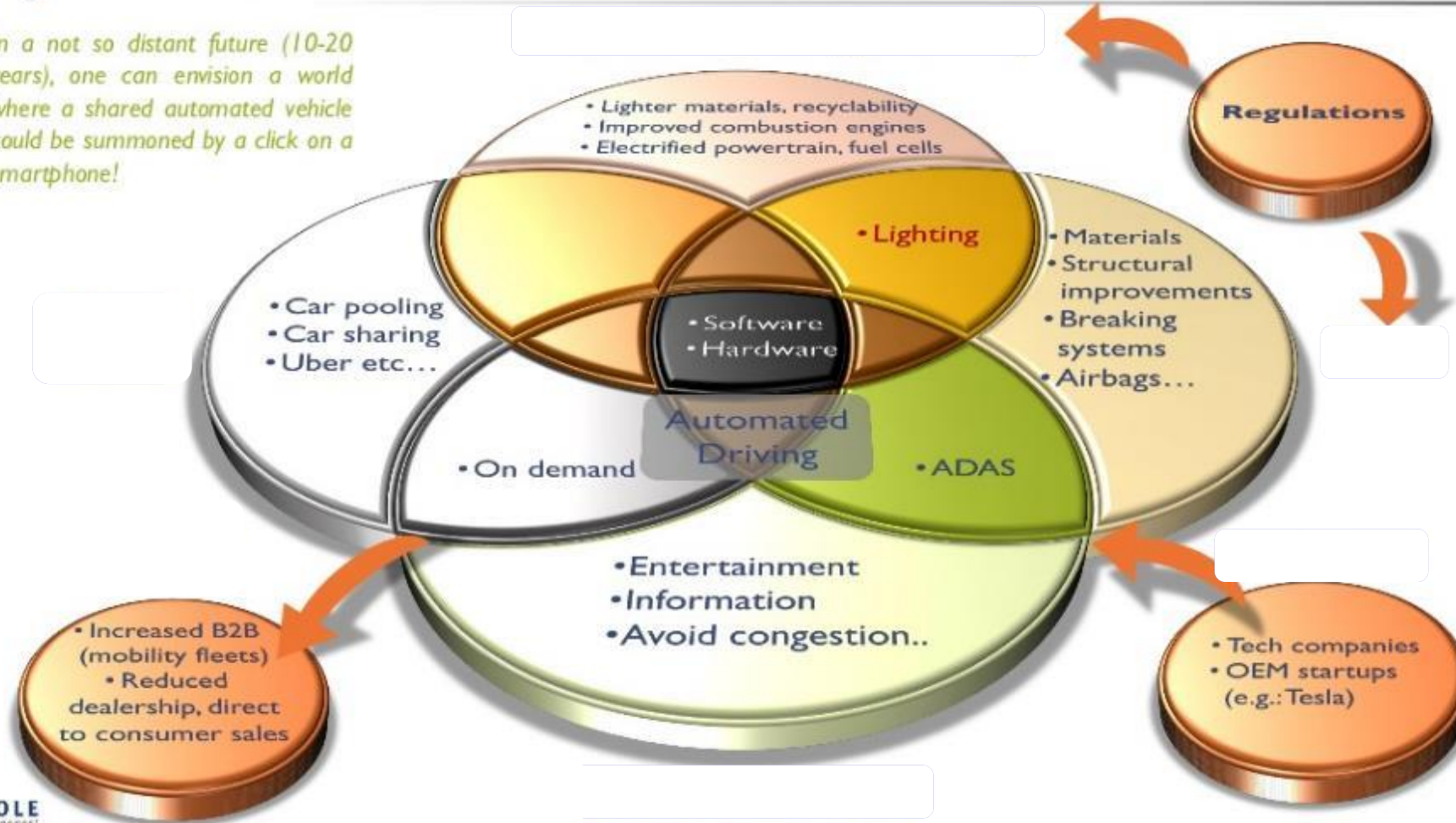


These cars can operate entirely on their own without any driver presence.

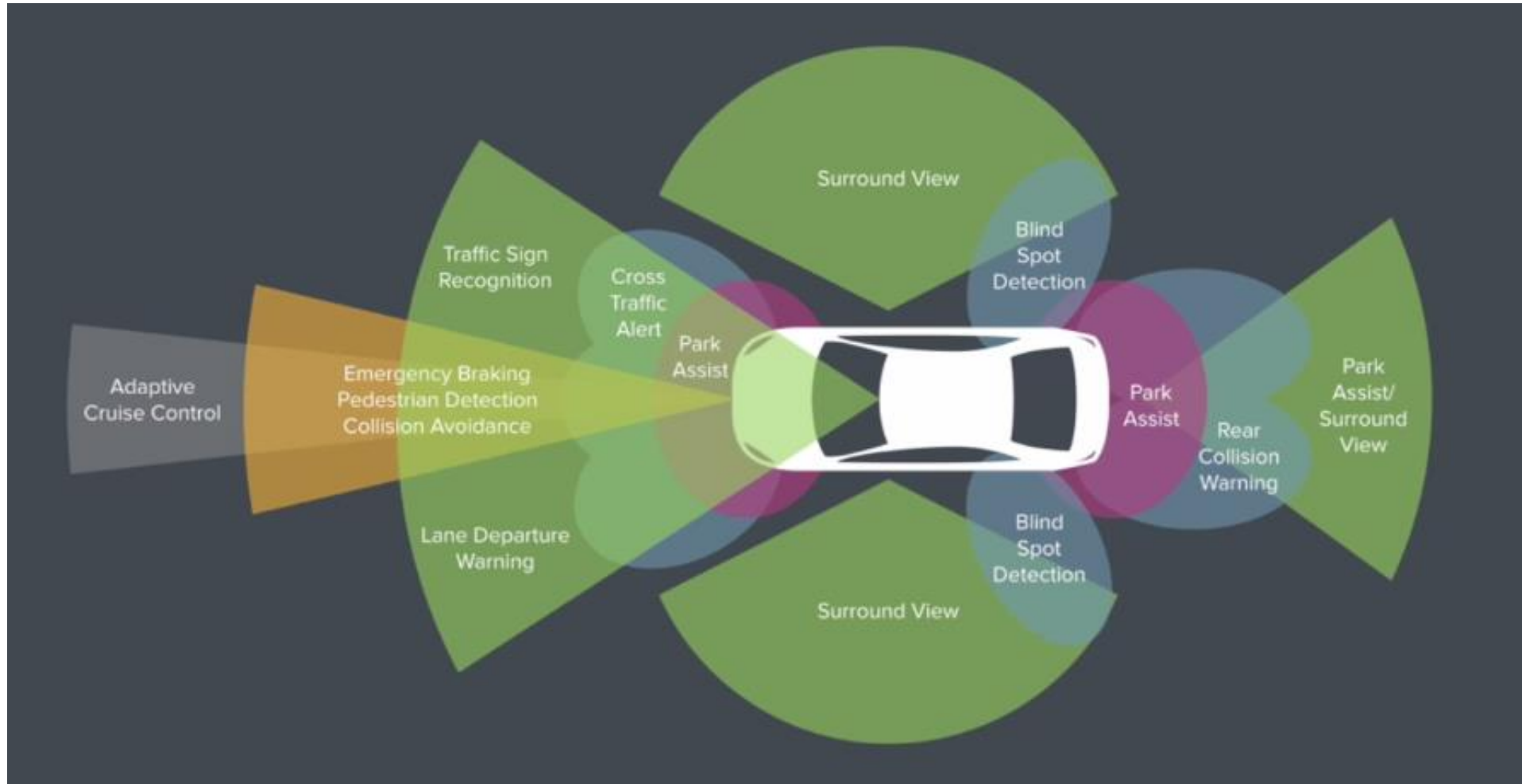
Business Trends

MAJOR TRENDS TRANSFORMING THE AUTOMOTIVE INDUSTRY

In a not so distant future (10-20 years), one can envision a world where a shared automated vehicle could be summoned by a click on a smartphone!

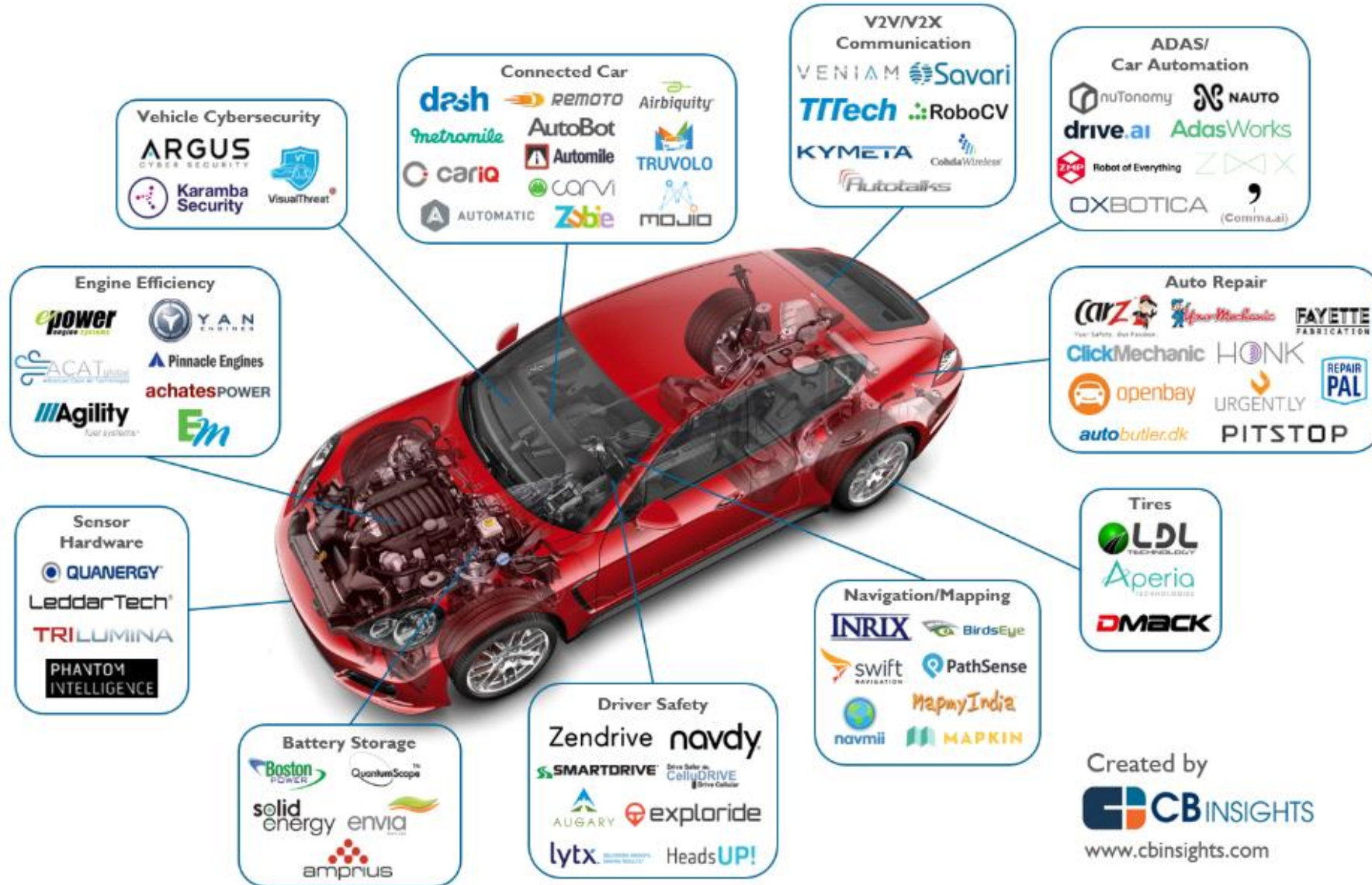


Sensors Needed for AV



Estimated to be a \$87B industry 10+years

Unbundling The Automobile




Radical Change is on the Way

Subject to Change:

- Average Time Driving Each Day: 73min. (~2.5 Days per Year)
- 1.3 Million People Die in Car Accidents Each Year Worldwide
- Average Car Spends 22 hrs. Parked Empty Each Day
- \$430 Billion Spent on Purchasing Cars in U.S. in 2013
- Over 2 Million People Drive Cars or Trucks for a Living in the U.S. (~1.5% of Workforce)




- A Google Driverless Car Spotted in Highway Traffic in California.



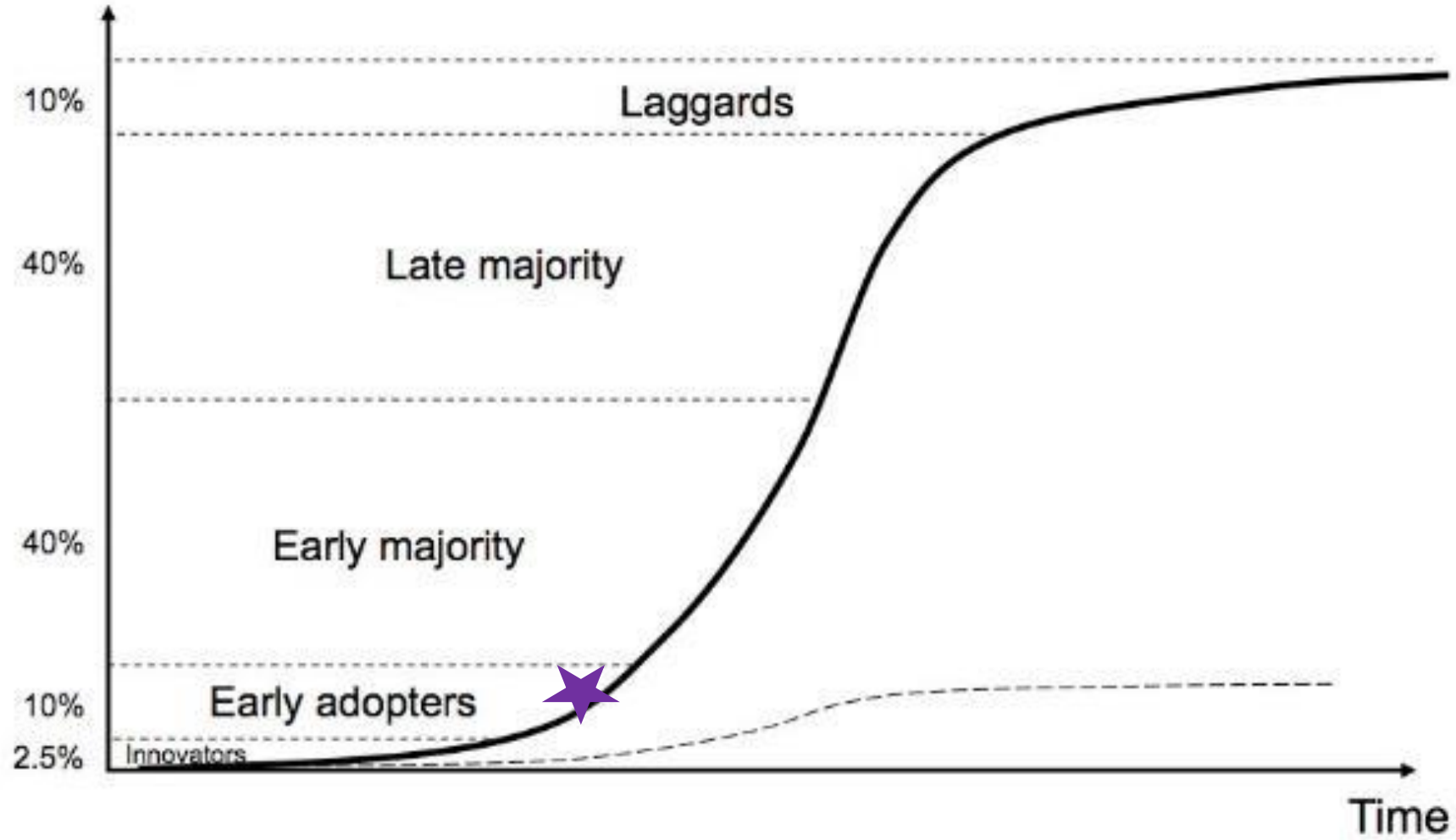
Every major technological change has come with worries about what displaced workers are going to do, and prognostications that the economy will collapse.

1930 John Maynard Keynes - current technology trends would give us only 15 hours to work every week.



So Where are you?? Adoption Curve

Penetration of
Target Market



AV Vehicles on the Road?

STAGE	Year	% Sales	% Fleet	% all travel
Available w LARGE premium \$\$\$\$	2020-2022	2-5%	1-2%	1-4%
Available w MOD premium \$\$\$	2025-2030	20-40%	10-20	10-30%
Available w MIN price premium \$	2035-2040	80-100%	40-60	50-80%
Saturation (everyone has it)	2060	?	?	?
Required on all new cars	?	100%	100%	100%

Estimated U.S. Savings

Adoption Rate	10%	50%	90%
Lives Saved (per Year)	1,100	9,600	21,700
Fewer Crashes	211,000	1,800,000	4,220,000
Annual Savings	\$17.7 B	\$158.1 B	\$355.4 B
Hours of Times Saved	756 M	1,680 M	2,772 M
Annual Savings	\$16.8 B	\$37.4 B	\$63.0 B
Gallons of Gas Saved	102 M	224 M	724 M
Decrease in Total Vehicles	4.7%	23.7%	42.6%
Annual Parking Savings	\$3.2 B	\$15.9 B	\$28.7 B
Total Annual Savings	\$37.7 B	\$211.5 B	\$447.1 B

Imagine...NYC









With the hassle of parking the car “automated,” people will now fully engage in walkable, vibrant places.



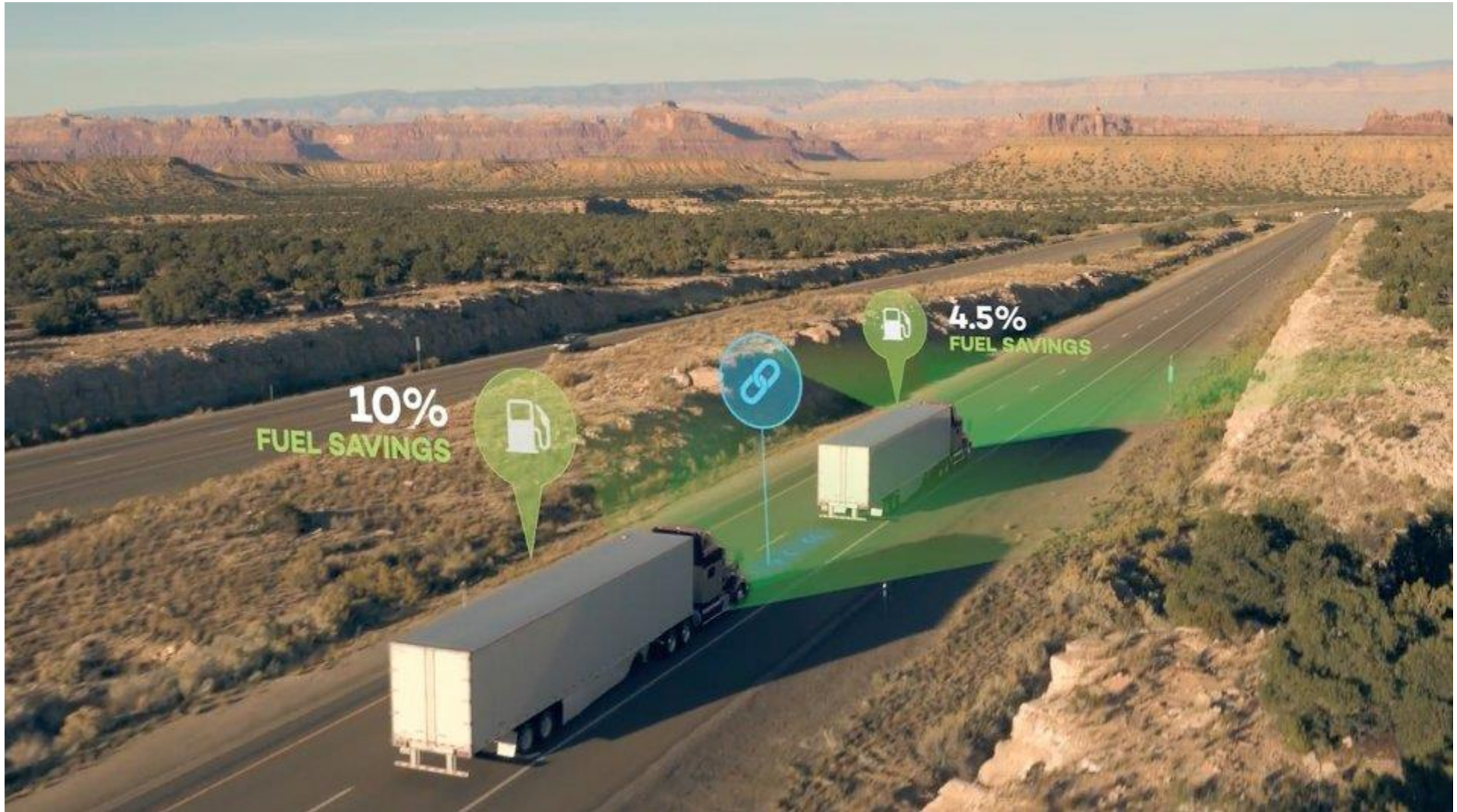
Pike & Rose

Trucking

- **Platooning**
 - 4.5% improvement in lead vehicle
 - 10% improvement in training vehicle(s)
 - Michigan, California, Florida, Utah
 - Peloton, Otto
- **Final Mile Approach**

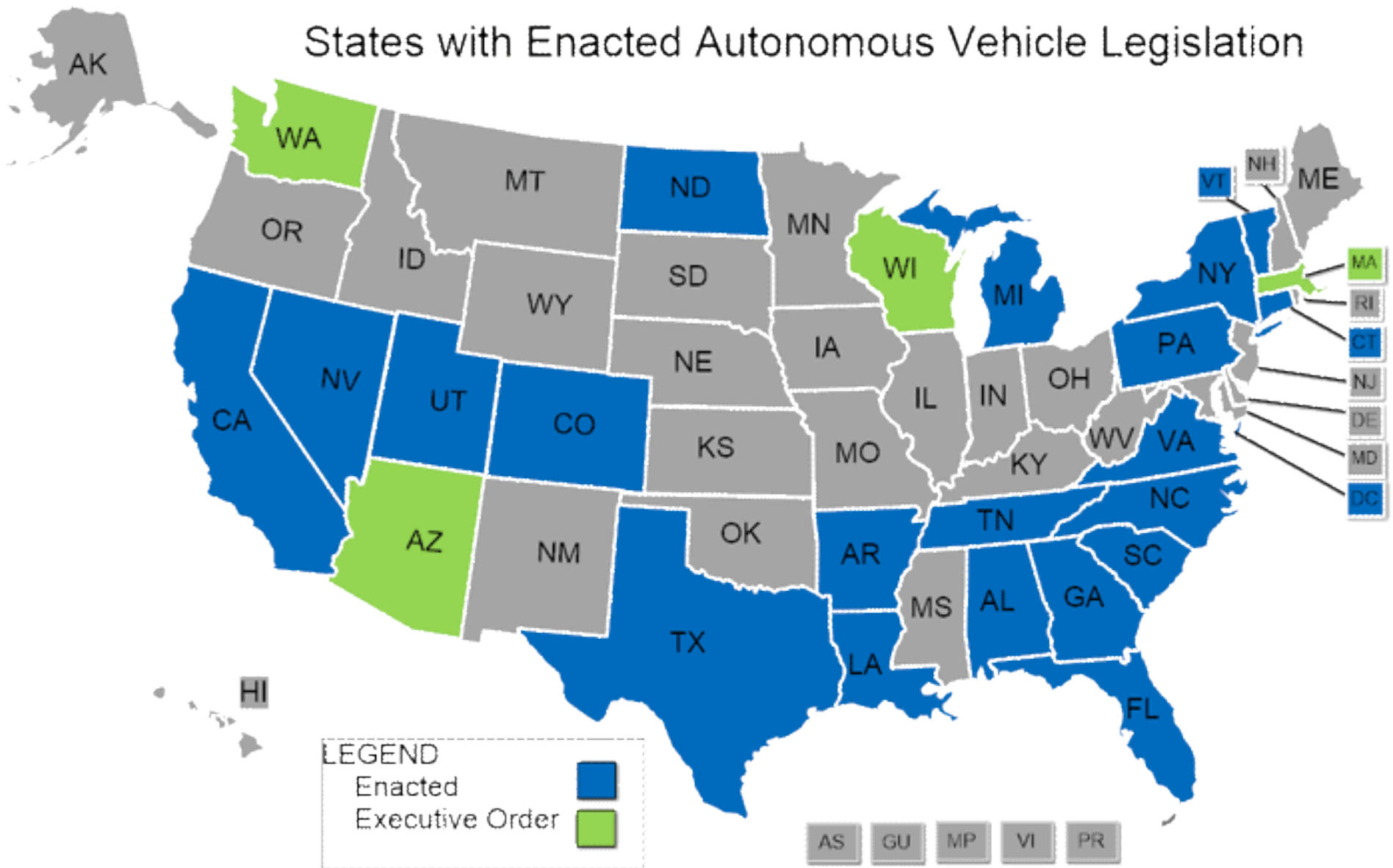


Platooning





States with Enacted Autonomous Vehicle Legislation



Challenges to Adoption

- 1. Legislative support for autonomous vehicles**
 1. Federal/State
 2. Florida Specific
- 2. Public acceptance of autonomous vehicles**
 1. How safe is safe enough
- 3. Municipality support for infrastructure improvements**
 1. Highway improvements
 2. Testing facilities
- 4. Mixed use – autonomous & non autonomous complications (2020-2035?)**
- 5. Insurance and LIABILITY**
- 6. Public Transportation? Shared Mobility? Long Haul Transport? Private Ownership – who drives adoption?**

PARKING

- Street parking removed = space reallocated for pedestrians/real estate/green space
- Parking structures relocated to remote areas - land cheaper.
- Parking requirements reduced, lower cost of construction
- Overall reduction in parking space by 61 billion square feet.

AUTONOMOUS VEHICLES & THE EVOLUTION OF THE PARKING GARAGE

PHASE 2: 2025 - 2035

As car ownership evolves to a subscription service with intelligent fleets, there will be less need for parking. Garages are transformed into other uses such as office, residential and hotels.

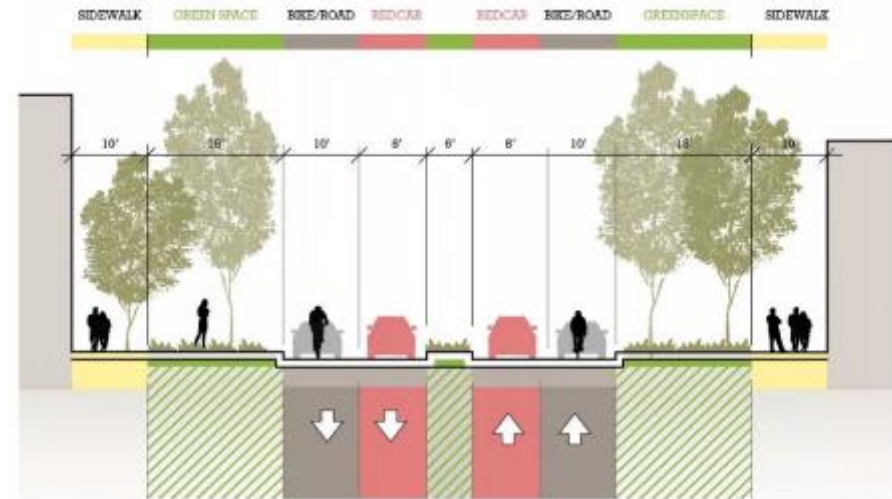
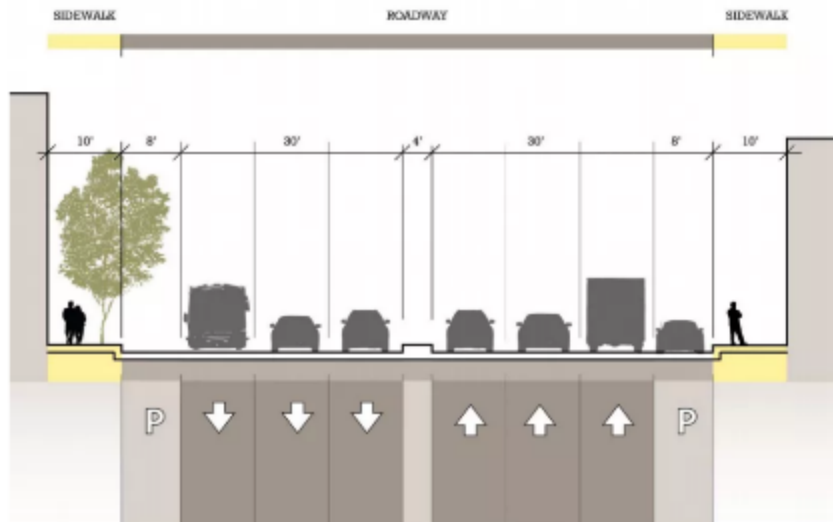
In 2035, the need for parking should decline by more than 5.7 billion square meters in the United States
(This equates to half the size of Connecticut) Source: McKinsey & Co.



Autostadt Car Towers Wolfsburg Germany



The New City Landscape



Roadway : 80%
Green Space : 0%



Roadway : 20%
Green Space : 42%

Policing

4 of every 10 police encounters (42 percent) are traffic-related

- Lane Departure and Adaptive Cruise Control
- Ambush Detection
- Autonomous License Plate Scan
- Face Recognition
- Voice alerts



Precision Agriculture



Boston – Downtown 2015



Boston – Downtown 2035?



- Final Product:
 - Office: 1,150,000 sf
 - Residential: 812 Units
 - Hotel: 196 Rooms
 - Retail: 82,500 sf
- **1,150 Fewer
Parking Spaces**



Before

After









Questions?



FDOT District One



Keith Robbins
District Freight Coordinator

FY17 FASTLANE Grant Application Overview



Submitted on 15 Dec 2016...

**Central Florida Freight Corridor
Multimodal Mobility Enhancement Improvements
(US 27 and SR 60)**
Polk County, FL

FY 2017 FASTLANE Grant Application
December 15, 2016

Applicant Name: Florida Department of Transportation - DISTRICT ONE
Project Type: Roadway
Contact Name: Keith Robbins - District One Freight Coordinator
801 N. Broadway Ave.
P.O. Box 1249
Bartow, FL 33831-1249
keith.robbins@dot.state.fl.us
863-519-2913

Award
announcements
anticipated April
2017 - ??

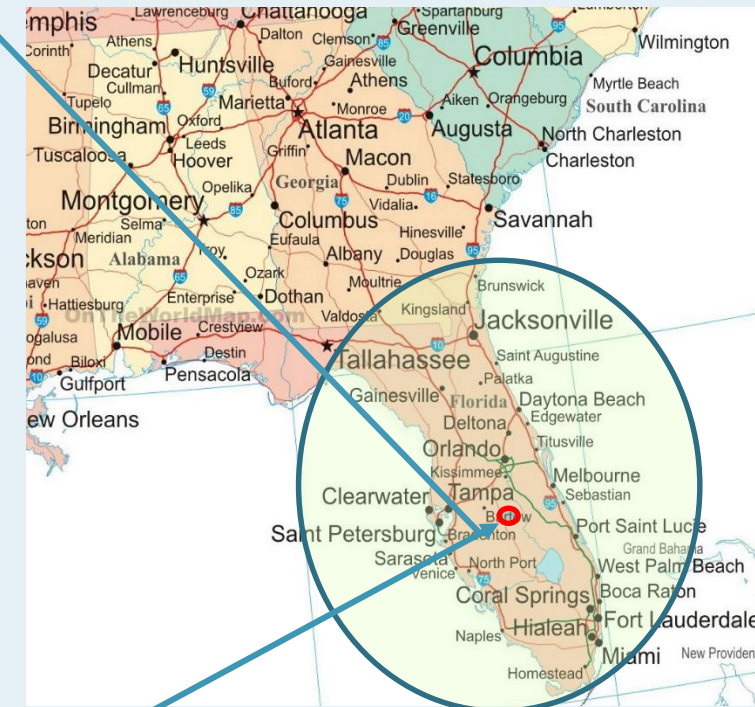
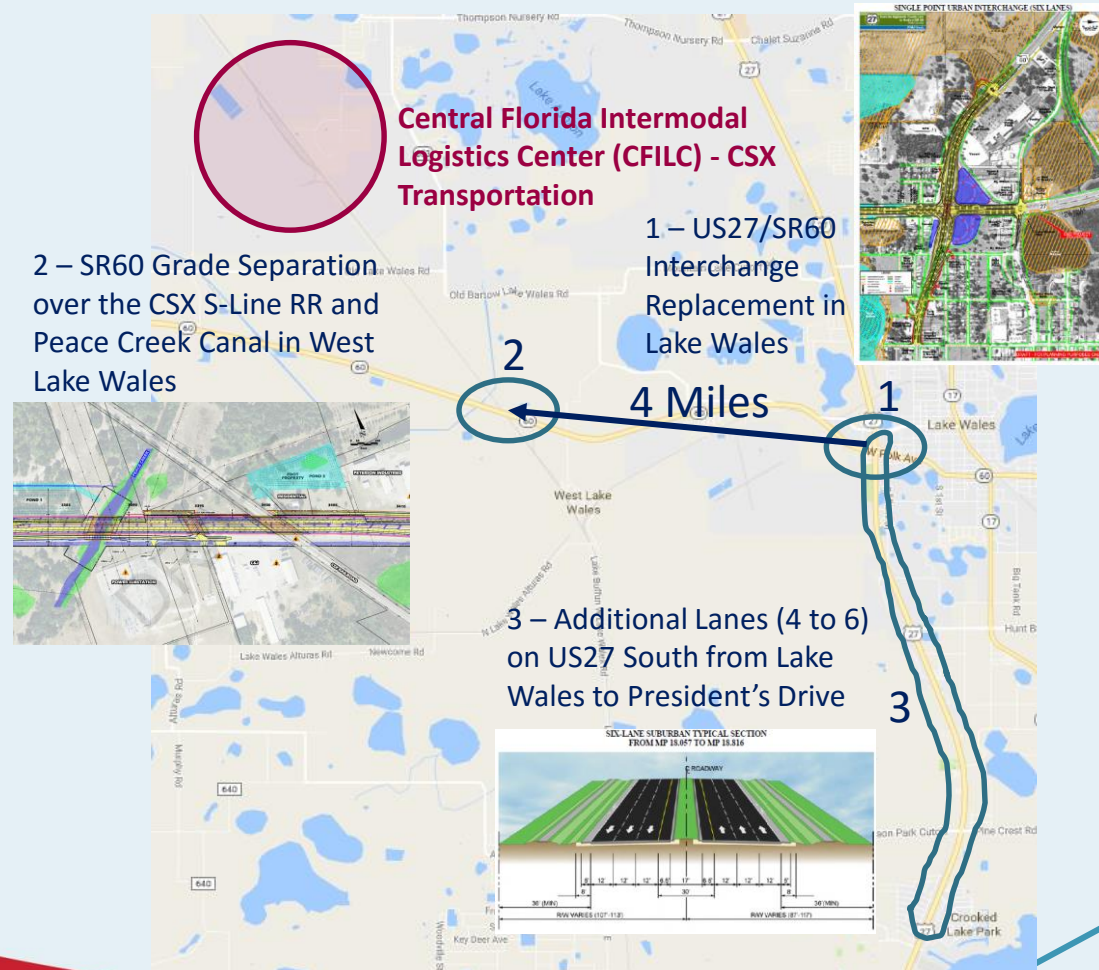


Project Name	Central Florida Freight Corridor (US 27/SR 60) Multimodal Mobility Enhancement Improvements
Was a FASTLANE application for this project submitted previously?	No
If yes, what was the name of the project in the previous application?	N/A
Previously Incurred Project Cost	\$0
Future Eligible Project Cost	\$100,597,380
Total Project Cost	\$170,504,033
FASTLANE Request	\$100,597,380
Total Federal Funding (including FASTLANE)	\$100,597,380
Are matching funds restricted to a specific project component? If so, which one?	No
Is the project or a portion of the project currently located on National Highway Freight Network?	US 27 portions of application are awaiting FHWA approval for CRFC/CUFC designation
Is the project or a portion of the project located on the NHS?	Yes
Does the project add capacity to the Interstate system?	Yes
Is the project in a national scenic area?	No
Do the project components include a railway-highway grade crossing or grade separation project? If so, please include the grade crossing ID.	Yes # 625419N
Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	No
If answered yes to either of the two component questions above, how much of requested FASTLANE funds will be spent on each of these projects components?	\$57,475,095 for grade crossing separation
State(s) in which project is located	Florida
Small or large project	Large
Urbanized Area in which project is located, if applicable	Portion of the project (less than 50%) is in Winter Haven, FL Urbanized Area
Population of Urbanized Area	201,289
Is the project currently programmed in the: TIP STIP MPO Long Range Transportation Plan State Long Range Transportation Plan State Freight Plan?	The project components are in Florida's State Transportation Improvement Program (STIP), the FDOT District One Adopted Five-Year Work Program Projects, and the Polk Transportation Planning Organization's Long-Range Transportation Plan (LRTP), the State Freight Plan (2014) and in District One Freight Needs Assessment from 2015.

Crossroads of Freight in Florida



“Area of Freight Influence” - affected by freight movements to/from this region. The combination of the CFILC, high density of major trucking companies, and the heart of the citrus industry centered around this area, and the fact that US27 and SR60 are two of the most critical freight corridors in the state make it truly the “Crossroads of Freight in Florida.”



FY18 INFRA Grant Application Overview



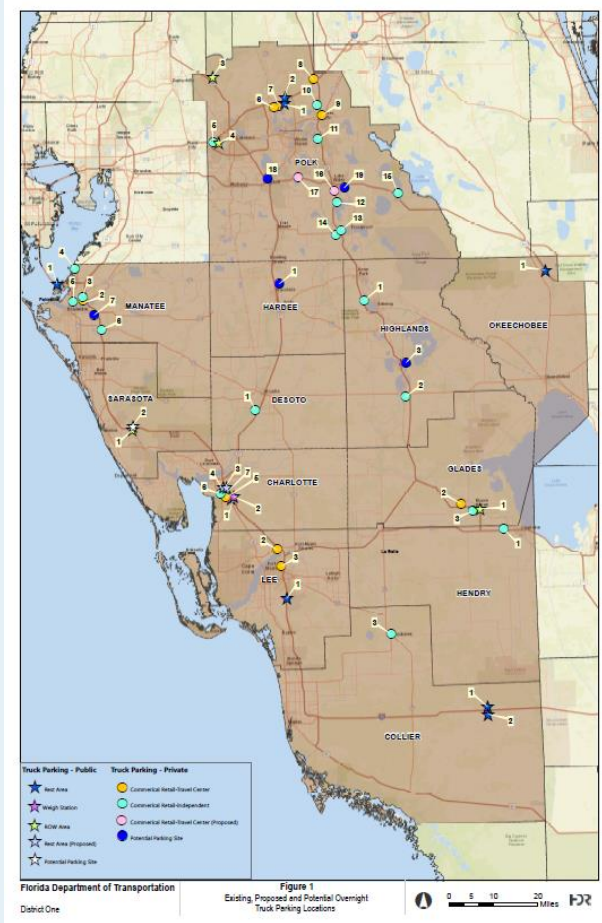
- Large projects from 2017 were NOT considered or awarded – all large project award \$ were rolled into 2018
- Large projects from 2017 are allowed to update their applications and re-submit for consideration in 2018
- Changes from 2017 to 2018 include:
 - Changes to priorities, merit criteria and benefit categories
 - Potential for innovation and leveraging of private partnership funding
 - Explicitly includes economic development as a benefit of interest under economic vitality
- More emphasis toward projects supporting rural areas
- 2017 awards under FASTLANE – 10 awards -

Districtwide Freight Truck Parking Inventory



- 1,320 available (current + proposed) spaces for truck parking primarily at rest areas, weigh stations, and private travel centers
- Truck volume on major regional routes in District One (I-75, I-4, US 27, US 17) is equivalent to approximately 27,000 truck trips per day
- Factors affecting the issue include:
 - Lack of private travel centers on major routes
 - Large gaps with no official parking available
 - No Truck Parking ordinances in several towns
- Future efforts beyond this forum to address this issue include:
 - Statewide attention on the issue to identify potential solutions from both a public and private sector outlook
 - More detailed attention within Districts on what can be done at a local level to help improve the situation

51 sites evaluated and documented:
41 existing; 4 proposed; 6 potential



Districtwide Freight Truck Parking Inventory

FDOT District One 2017

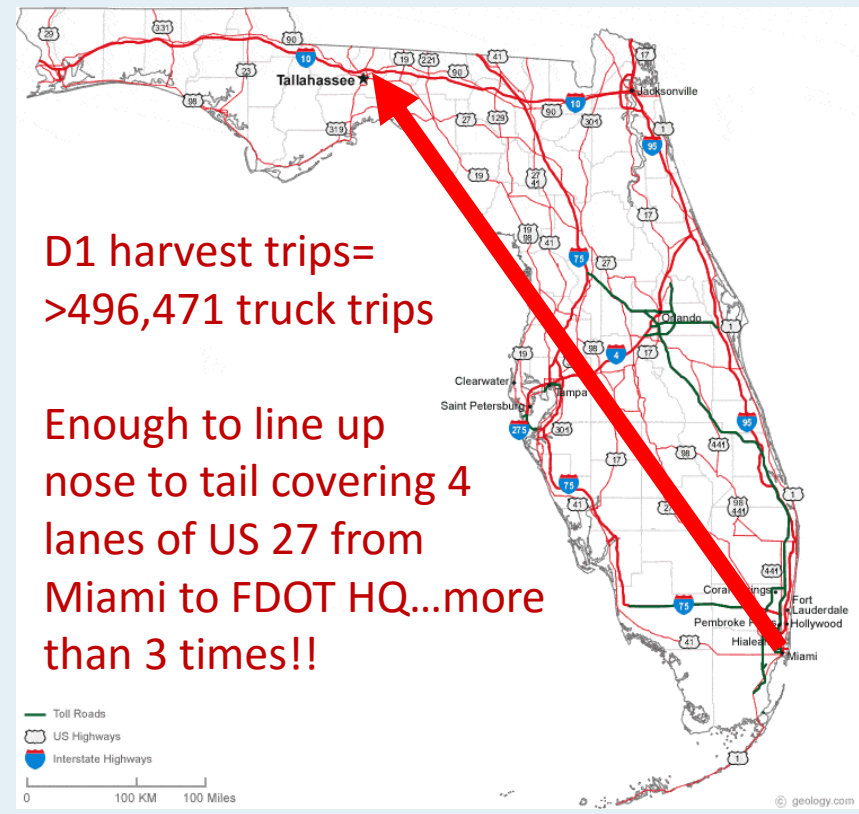
FDOT DISTRICT 1 **FLP**

Freight Mobility and Agribusiness Support Effort



Agricultural Growth and Development in District One and the Impacts to Transportation and Freight Logistics
FDOT District One
2017

FDOT DISTRICT 1 **FLP**



This report:

- Aims at identifying where the encroachment will likely occur
- Looks at where the shift to other counties in District One will occur
- Looks at how this shift will impact the transportation network
- Findings focus on regional impacts, impact on key corridors and state roads, impact on local roads, identification of areas for future hubs for freight activity, and how this information may be useful in other transportation planning efforts.



Efforts for the Coming Year



- INFRA Grant application process
- Identifying last-mile connectors to major Freight Activity Centers and determining impact based on projected growth and development
- Identifying Freight Hot Spots across the District
- Continuing effort to identify and implement, where possible, solutions to the truck parking situation
- Continuing effort within the realm of freight mobility support to agribusiness

Florida Highway Patrol



Master Sergeant Tim May
Commercial Vehicle Enforcement

Electronic Logs

Florida Highway Patrol
Commercial Vehicle Enforcement

During this presentation, we will discuss Florida Highway Patrol enforcement procedures. Legal guidance or recommendations on regulations and other business practices should be sought through your legal counsel.



"Your proposal is written with clarity and conviction. Send it up to legal for obfuscation."

Why Is This Important?

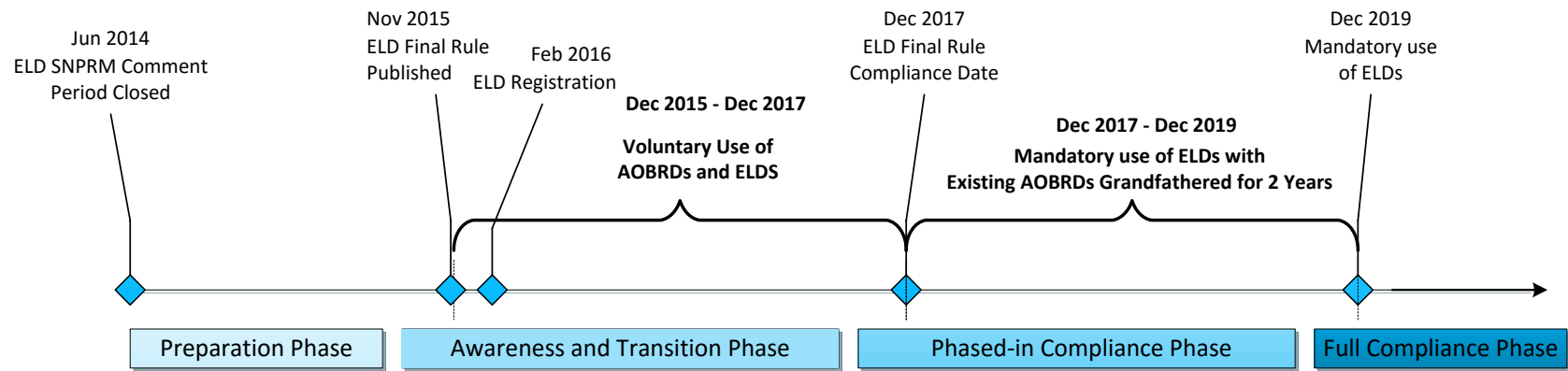
- ELD – electronic logging device
- AOB RD – automatic on board recording device
- Electronic Log – log software
- EOBR – Electronic Onboard Recorder
- FIPS – Federal Information Processing Standards
- FMCSA – Federal Motor Carrier Safety Administration

- HOS – Hours of Service
- NPRM – Notice of Proposed Rulemaking
- NIST – National Institute of Standards and Technology
- RODS – Record of Duty Status

- ELD final rule:
 - Phase I
 - From February 16, 2016 to December 18, 2017
 - Phase II
 - Compliance Date: December 18, 2017
 - Can use AOBDRDs that were installed prior to 12/18/17 and certified, registered ELDs
 - Phase III
 - Full Compliance Date: December 16, 2019
 - Must be using certified and registered ELDs

ELD Mandate

- Timeline Webpage:
 - <https://www.fmcsa.dot.gov/hours-service/elds/implementation-timeline>

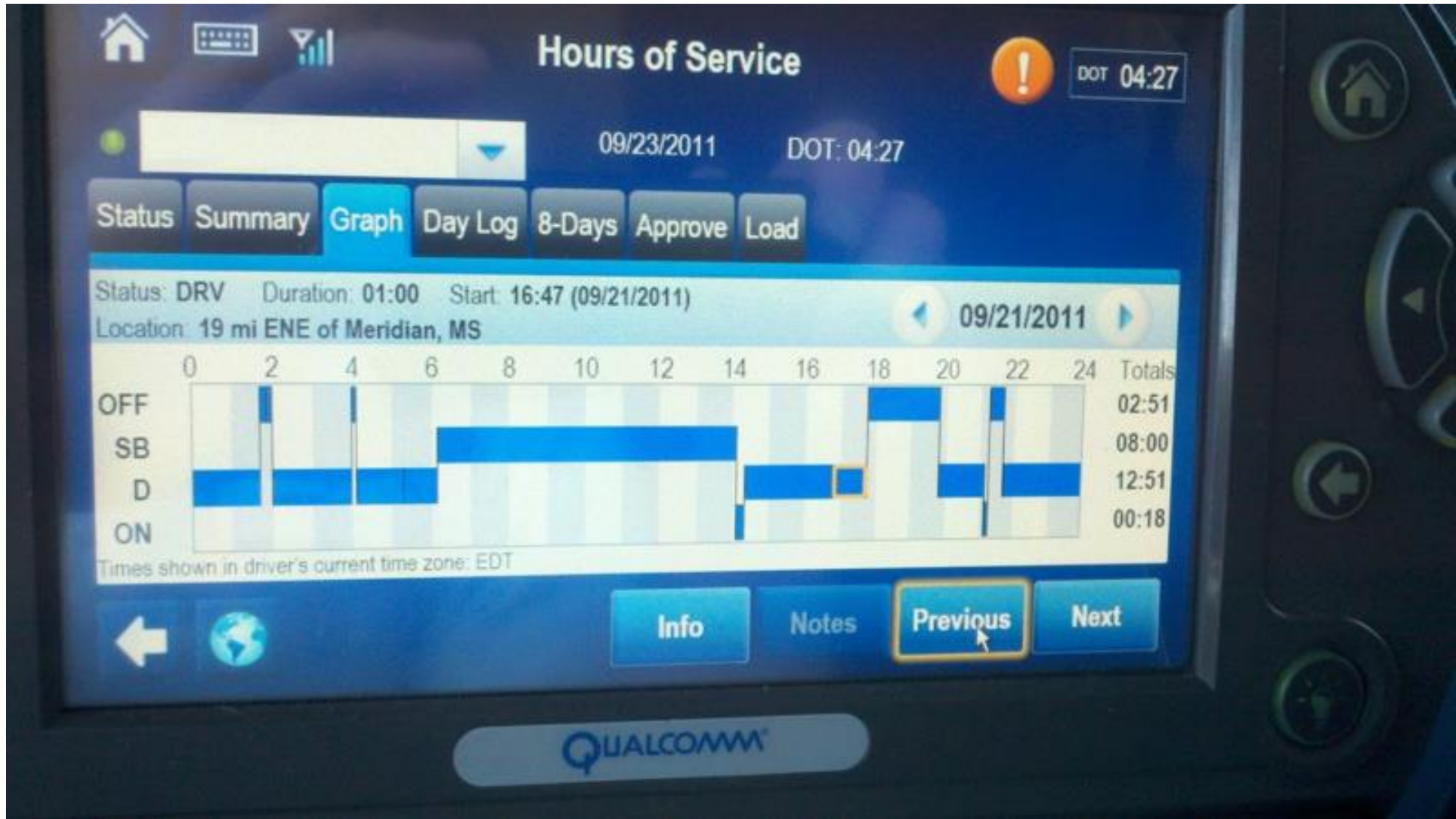


What is an ELD

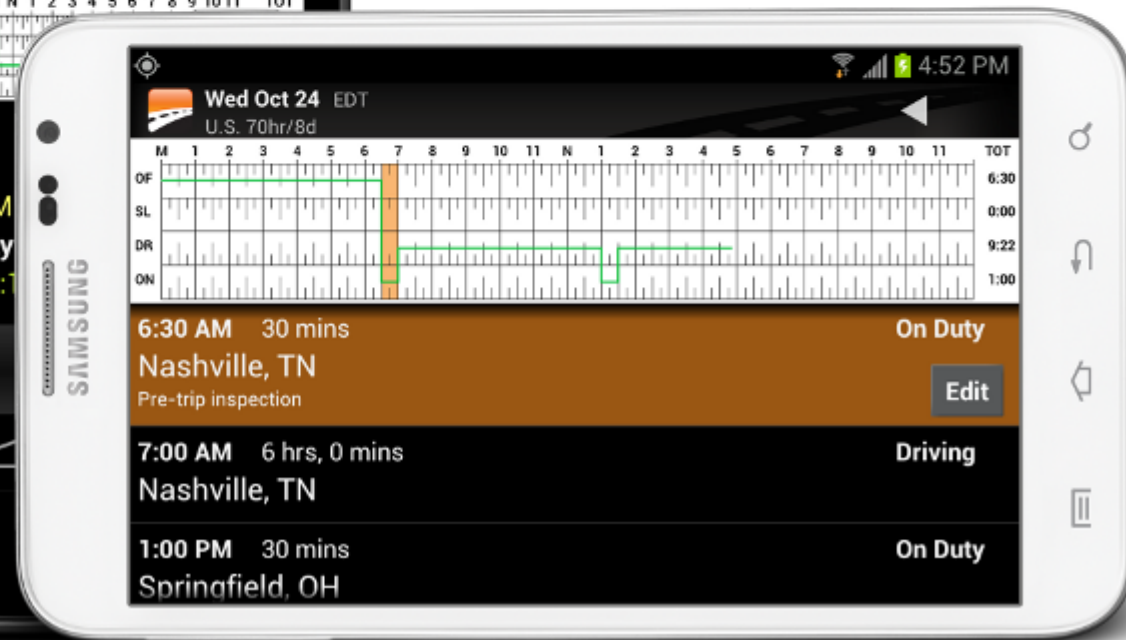
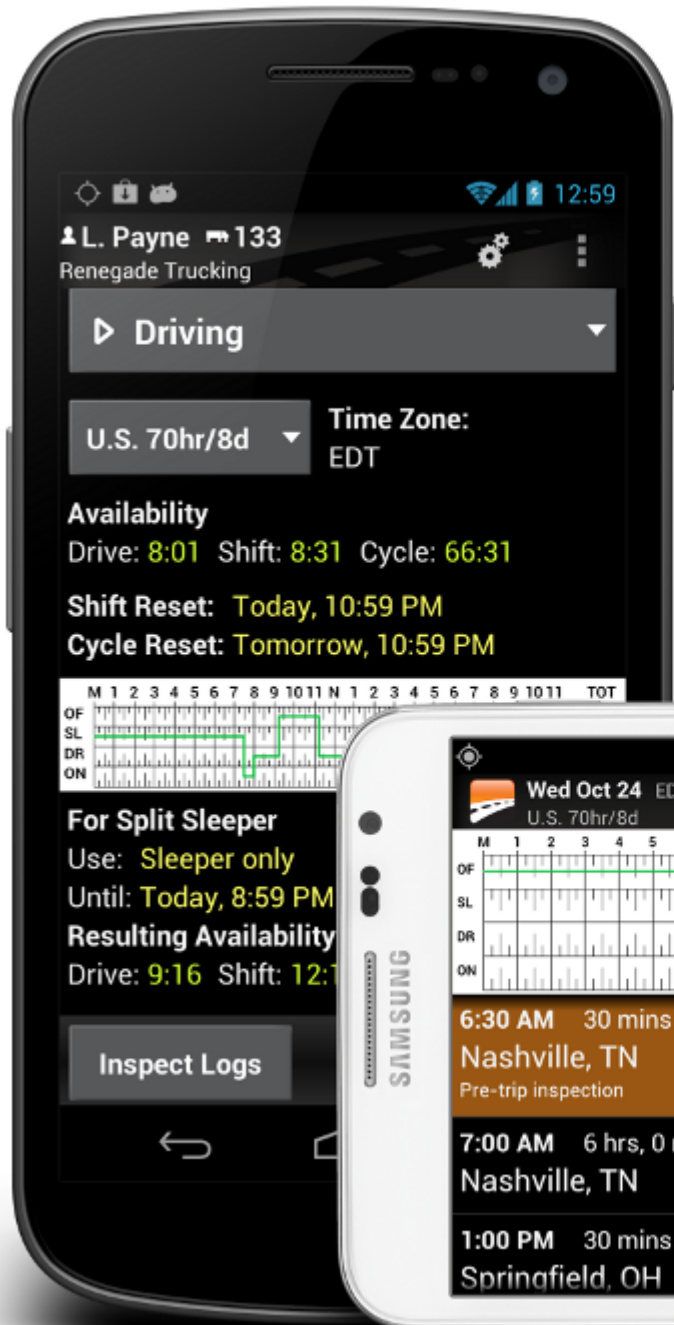
- ELD is an electronic module capable of recording the electronic records of duty status for CMV drivers using the unit in a driving environment within a CMV and meets the compliance requirements in this appendix

- Submit employer supporting documents 13 days of either the 24-hour period to which the documents pertain or the day the document comes into the driver's possession, whichever is later.
- Examples:
 - Bill of lading, Itinerary, schedule
 - Dispatch records, trip record
 - Expense receipt
 - Payroll record
- Each must contain; Driver / Tractor ID, date, location, time zone

- ELD
- AOBRD
- Device with Log Software
- Tablet
- Smartphone
- Laptop
- Bluetooth Connection
- Hardwire Connection









Comparing the 3 Devices



	AOBRDs	Devices Installed with Software	ELDs
Integrally Synchronized	Yes	No	Yes
Automatic Recording of HOS	Yes	No	Yes
Technical Specifications	Limited	No	Yes
Registered with FMCSA	No	No	Yes*

*To see the list of ELDs registered with FMCSA, go to:
<https://www.fmcsa.dot.gov/hours-service/elds/equipment-registration>

Federal Motor Carrier
 Safety Administration

- Have not changed for the most part
- ELD specific exemptions are still being worked out
 - Trucks with model year older than 2000 are exempted
 - Up to 8 days on paper logs (infrequent use)
 - <https://www.fmcsa.dot.gov/hours-service/elds/faqs>

- Important to remember that the overall hours of service have not changed.
 - 11 hour
 - 14 hour
 - 60/70 hour

ELD and AOBRD



- 395.15 AOBRD
- 395.20 to 395.38 ELD
- Some differences in the regulations but also several similarities

395.15 AOBRD

- 395.15(a)(3)
 - A motor carrier may require drivers to use an AOBRD and any driver required “shall” use it.
- 395.15(d)
 - Each duty status change, City and state shall be recorded

Device Type	Required to have printout during roadside inspection:	Guidance found in:
Automatic On-Board Recording Device	No.	Notice of Regulatory Guidance: Automatic On-Board Recording Devices (FR 79 26869)
Logging software and application device with electronic signature capabilities	Yes, at the request of an enforcement official. If the driver is unable or refuses to provide the requested printout, the driver should be cited 395.8(a) or 395.8(k)(2). Driver must be given the opportunity to print current and prior seven days RODs at roadside.	Hours of Service for Commercial Motor Vehicle Drivers; Regulatory Guidance Concerning Records of Duty Status Generated by Logging Software Programs (79 FR 39342)
Logging software and application device without electronic signature capabilities	Yes. Driver must be given the opportunity to print current day RODS at roadside.	Hours of Service for Commercial Motor Vehicle Drivers; Regulatory Guidance Concerning Records of Duty Status Generated by Logging Software Programs (79 FR 39342)

395.20 – 395.38 ELD



- 395.22(g) - ELD must be mounted in vehicle

- 395.22(h) – ELD information packet
 - user’s manual for the driver describing how to operate the ELD;
 - instruction sheet for the driver describing the data transfer mechanisms supported by the ELD and step-by-step instructions for the driver to produce and transfer the driver’s hours-of-service records to an authorized safety official;
 - instruction sheet for the driver describing ELD malfunction reporting requirements and recordkeeping procedures during ELD malfunctions; and
 - supply of blank driver’s records of duty status graph-grids sufficient to record the driver’s duty status and other related information for a minimum of 8 days.

- ELD must be integrally synchronized to vehicle

Registration of ELD



- 395.22 - ELD must be registered with FMCSA
- <https://3pdp.fmcsa.dot.gov/ELD/ELDList.aspx>

*****See Guard*****

<https://3pdp.fmcsa.dot.gov/ELD/ELDList.aspx>

FMCSA
Federal Motor Carrier Safety Administration

[LOGIN](#) |

Registered ELDs

Here you may view a list of Electronic Logging Devices registered with this site. These devices are self-certified by the manufacturer and not by the Federal Motor Carrier Safety Administration. Click [here](#) to return to the homepage.

Device Name	Model Number	Software Version	ELD Identifier	Image	User Manual	Company	Contact Company (Phone)	Contact Company (Email)	Company Website
Load Logistics TMS	LOGI-APPS	1.35 or higher	LLSAPP	LOGI-LAUNCH-20150923-500.png	LOGI-APPS-REFERENCE-MANUAL-Ver35-ELDONLY.pdf	Support Resources, Inc.	770-702-0701	contactus@load-logistics.com	www.load-logistics.com
Gorilla Safety ELD	GS0001	1.0.9.2500	GS0001	Gorilla Safety ELD Image.jpeg.jpg	Driver Manual-2.pdf	Gorilla Fleet Safety, LLC	844-636-1360	info@gorillasafety.com	www.gorillasafety.com
FleetUP	3GL	1.0	TLT3GL	FleetUP ELD.jpg	FleetUP ELD Driver User Manual V2.0.pdf	FleetUp	855-274-2886	info@fleetuptrace.com	www.fleetuptrace.com
DriverLog	BlueLink	210	WL1001	Bluelink-standalone1-black-arrows(1).png	Compliance DriverLog Manual.pdf	Wireless Links	201-531-5906	support@wlius.com	www.wlius.com
Hutch ELD	Mercury	V 1.2.3 or higher	HELD16	Image for FMCSA Registration.jpg	ELD Manual Version 1.0.pdf	Hutch Business Group Inc	360-353-4093	sales@hutchsystems.com	www.hutchsystems.com
TSO INCABIN PLUS	TSO100	2.0 or higher	TSO100	TSO100.JPG	Manual_3.0.pdf	TSO MOBILE by Tracking Solutions Corp	18774772922	sales@tsomobile.com	www.InCabinPlus.com
e-Track Certified	ATS001	1.1.0.0 or above	ATS001	e-Track Certified Screenshot.png	e-Track Certified Driver Guide.pdf	ATS Fleet Management Solutions	570-309-0060	joeb@abw.com	http://www.atsfleettracking.com/
KeepTruckin ELD	LBB-1 and higher	8.0 and higher	KTIELD	KeepTruckin - The most powerful and reliable ELD.jpg	KeepTruckin - ELD User Manual.pdf	KeepTruckin, Inc.	855-434-3564	sales@keeptruckin.com	keeptruckin.com
Geowiz Truck Tracker Edition	HG100	v 2.0 and higher	FF44EE	Geowiz_Pictures.png	Driver Instruction Guide for ELD.pdf	GeoSpace Labs	877.4.GEOWIZ	david@geowiz.biz	www.geowiz.biz
at eDash	Apollo	1.0.28 or higher	APOLLO	ApolloELD.jpg	HOSappUserGuideSW109.pdf	Assured Tracking Inc	305-971-6777	support@assuredtracking.com	www.assuredtracking.com

12

U.S. DEPARTMENT OF TRANSPORTATION
Federal Motor Carrier Safety Administration

1200 NEW JERSEY AVENUE, SE
WASHINGTON, DC 20590
855-368-4200

- [Contact Us](#)
- [Privacy Policy](#)
- [Careers](#)
- [Accessibility](#)
- [Email Subscriptions](#)
- [DOT Web Policies & Notices](#)
- [Forms](#)
- [BusinessUSA](#)
- [Resources for Carriers](#)
- [Buy America](#)
- [Resources for Consumers](#)
- [Civil Disbe...](#)

- <https://www.fmcsa.dot.gov/hours-service/elds/faqs>
- <https://www.fmcsa.dot.gov/hours-service/elds/enforcement-partners>
- <https://3pdp.fmcsa.dot.gov/ELD/RevokedELDList.aspx>

Truck Parking Activity



Ron Parasram
District Freight Intern

Closing



- US27 Mobility Stakeholder Working Group
- District One Regional Freight Summit – Polk County
- Motor Carrier System Plan Updates
- Freight Coordinator Site Visits to You
- 2018 Freight Trucking Forum

**Thank YOU for coming, and
we'll see you next year!!**