



Florida Department of
TRANSPORTATION

Statewide Non-Motorized Traffic Monitoring Program

Webinar #1

2/19/2019

Section 1 - Webinar Purpose

- Thank you for taking the survey!!!
- Share survey results
- Explain Non-Motorized Program
- Share resources and partnership opportunities
- Gain your feedback

Agenda

1. Welcome
2. Survey Results
3. Why Do We Count?
4. Non-Motorized Program Structure
5. Non-Motorized Statewide Repository - FHWA
6. Non-Motorized Data Samples
7. Next Steps / Questions

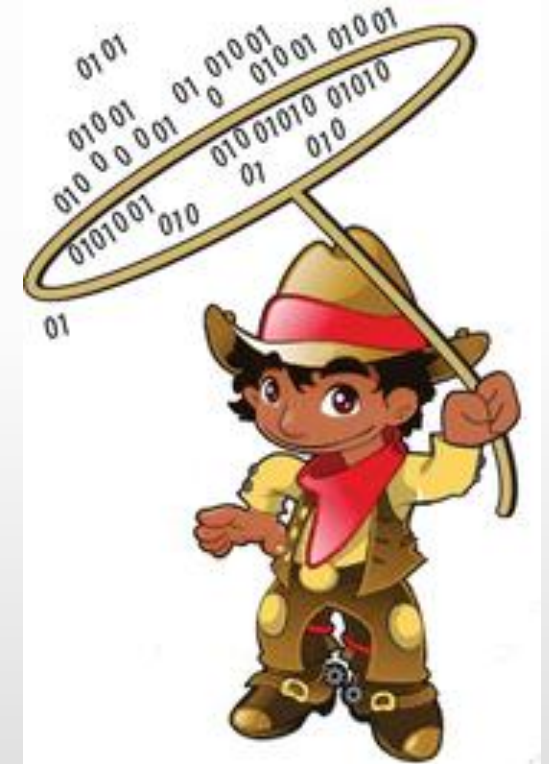
The Team

- Ed Hutchinson – Office Manager of Transportation Data and Analytics
- Steve Bentz – Manager of Traffic Monitoring Program
- Joey Gordon – QA/QC Manager
- Eric Griffin – Telemetered Traffic Management Station Manager
- Eric Katz – Non-Motorized Traffic Monitoring Program Coordinator
- Elizabeth “Liz” Stolz – National Expert



What is a Data Wrangler?

- Coordinates with FHWA HQ and Regional Office contacts, States, and supports various agency traffic counting activities in the state
- Provides assistance in scheduling periodic coordination participant meetings
- Develops Non-Motorized Traffic Monitoring Committee
- Supports Data standardization / integration/ conversion data into state and federal databases



Courtesy jacobjwalker.effectiveeducation.org



Section - 2

Statewide Non-Motorized Survey Results

Survey Request

Bicycle & Pedestrian Data Collection Survey

The Florida Department of Transportation (FDOT) is implementing a non-motorized statewide traffic count program. The first step is to conduct a stakeholder [survey](#) which includes a review of current bicycle and pedestrian count activities and recommended future locations. Understanding the baseline equipment and methods for existing bicycle and pedestrian counts occurring in the state of Florida will assist FDOT in creating a statewide database / repository of non-motorized traffic data.

The FDOT Transportation Data and Analytics Office (TDA) is coordinating this effort in partnership with City, County, MPO, District and State representatives to help in gathering, sharing, and supporting the non-motorized data collection efforts. This is a great opportunity for participating in this effort to establish standardized data collection practices, statewide training, and to foster state and local data collection partnerships.

<https://www.surveymonkey.com/r/FDOTBikePedDataCollectionSurvey>

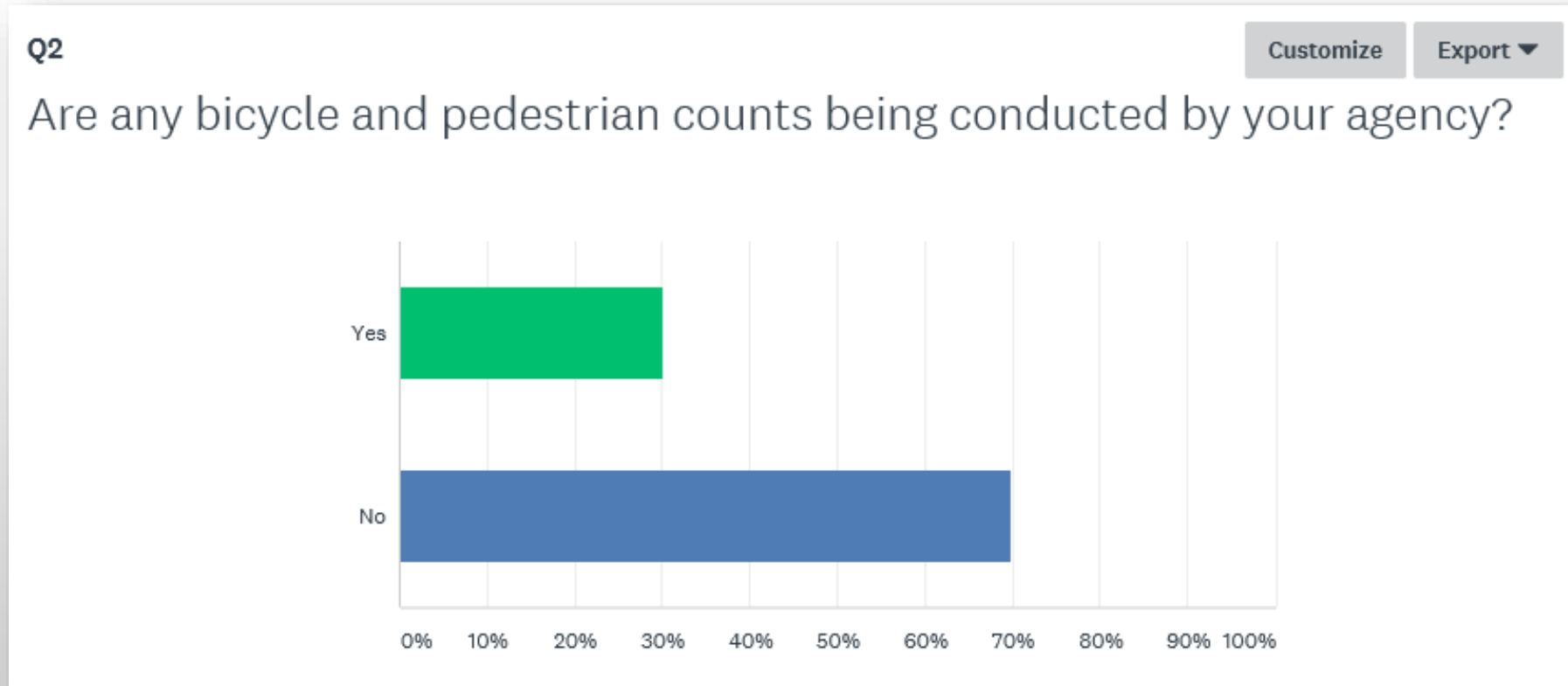
*Please respond to this survey by **June 21, 2018**. Survey results and program updates will be provided to all respondents. **Your participation and responses are extremely valuable to develop this program.** Please feel free to share this survey with others. The survey is estimated to take 15 – 20 minutes to complete.*

For more information or questions, please contact Eric Katz, Statewide Non-Motorized Data Collection Program Coordinator at phone number: 850-414-4704 or by e-mail at Eric.Katz@dot.state.fl.us.

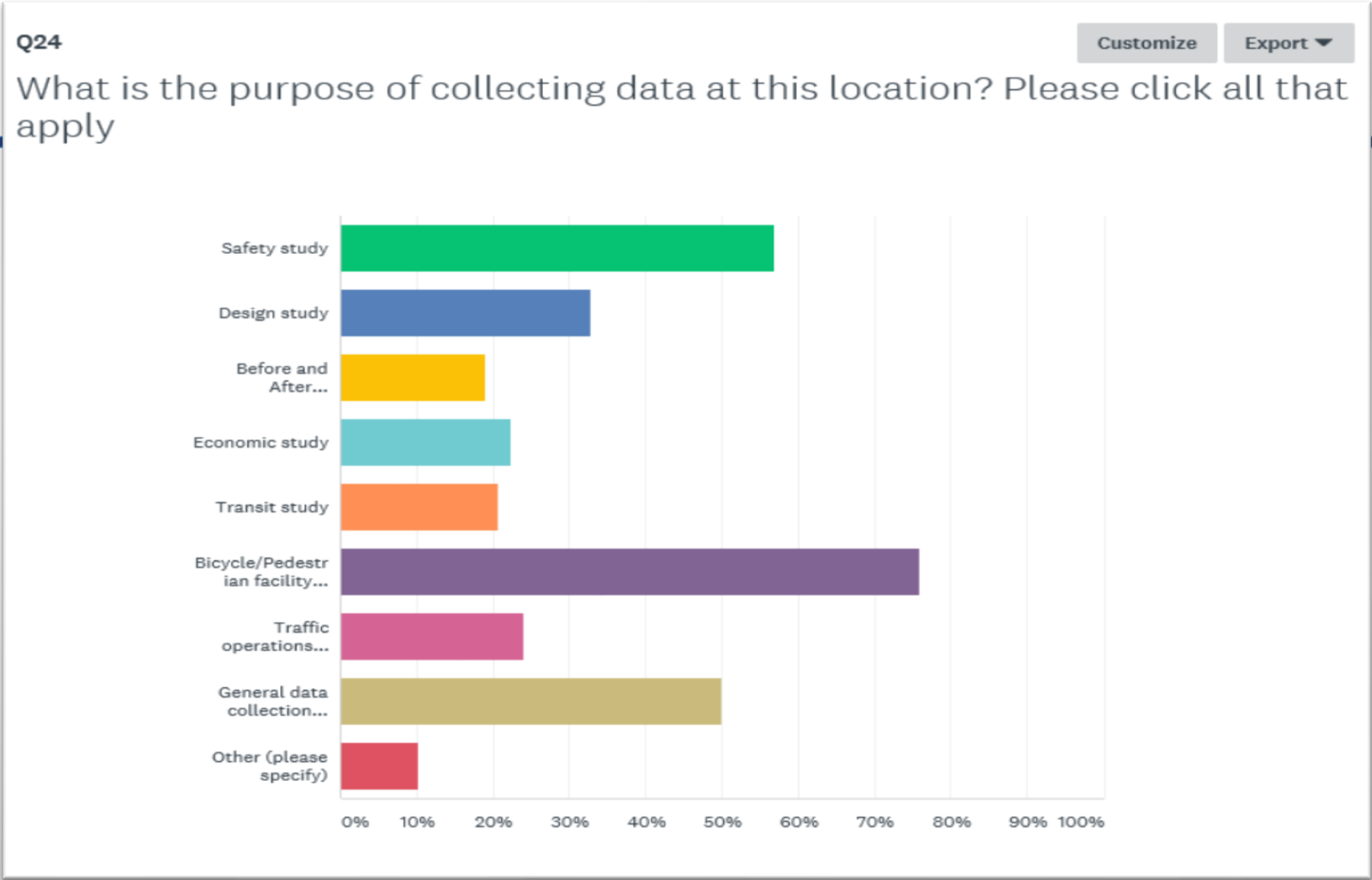


Survey Findings Module #3 - FDOT Survey Monkey

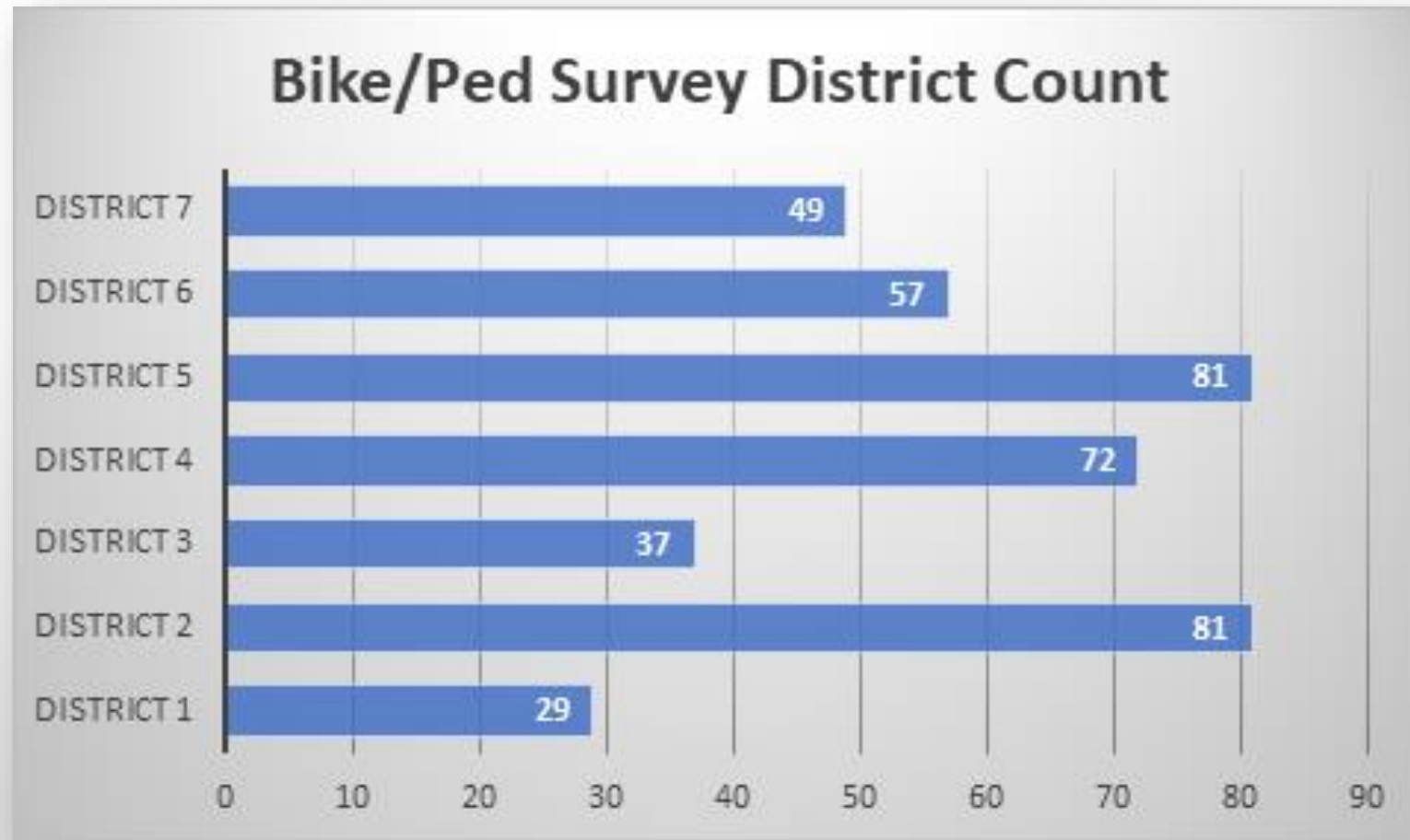
- 264 Total Survey Respondents
- 406 Locations recommended



Module #3 - FDOT Survey Monkey



406 Locations in relation to FDOT Districts



On-Site Visits



Metroplan Orlando



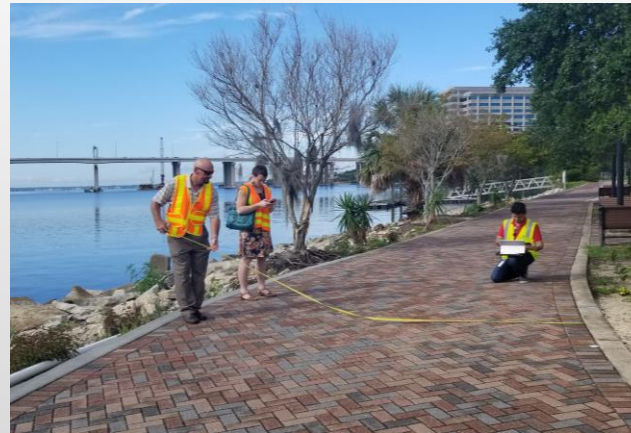
District 7, Tampa DDA



City of Gainesville



Collier County MPO, City of Naples

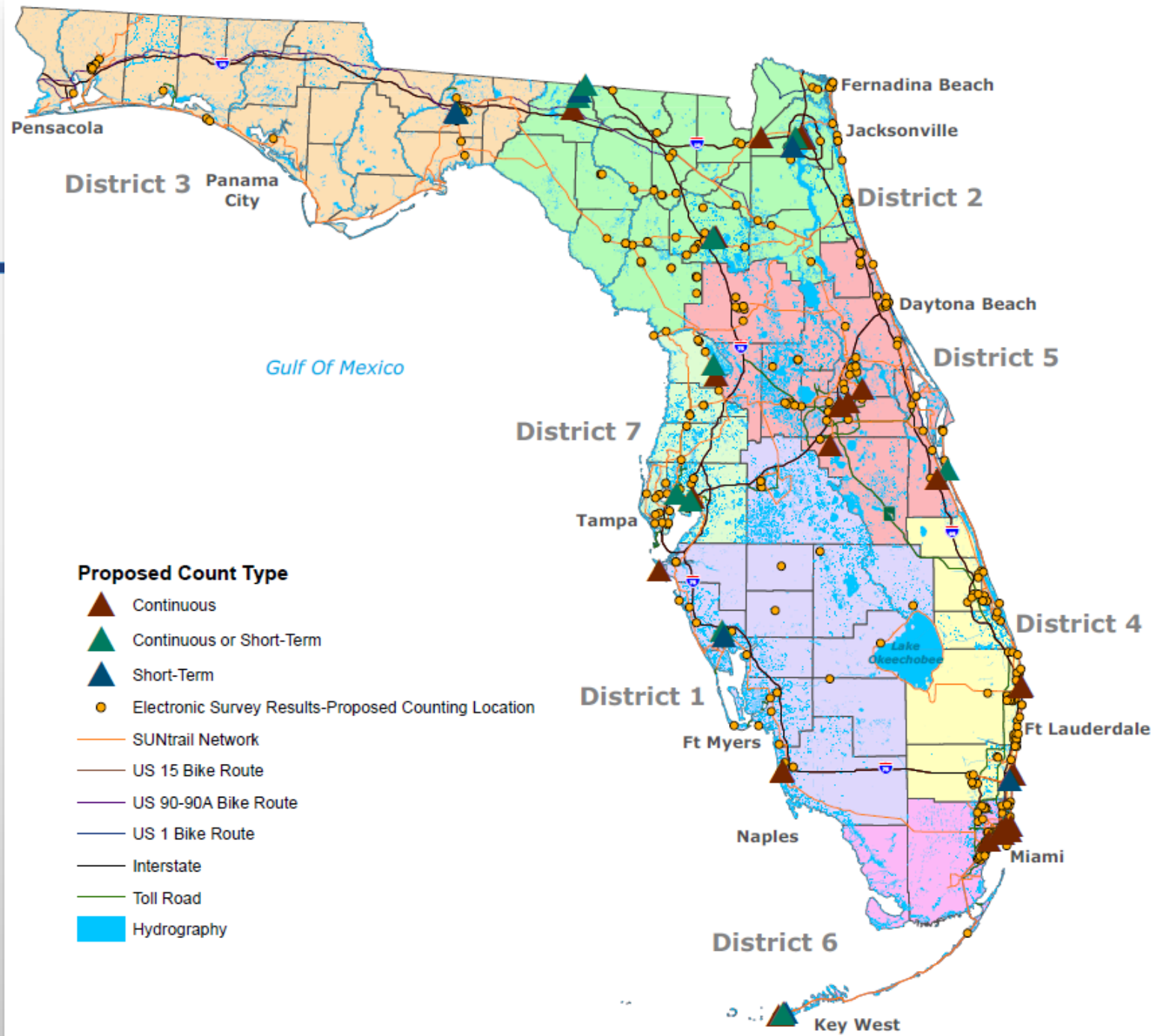


City of Jacksonville



Madison County

Survey Results





Section - 3

WHY DO WE COUNT?

“Developing Non-Motorized Data Programs”

Why do we Count? Key Reasons to Count!

1. Safety
2. Operations
3. Maintenance
4. Performance Measures
5. Funding
6. Federal Requirements and Customer Service



Image courtesy Institute for Transportation Research and Education

Why do we Count?

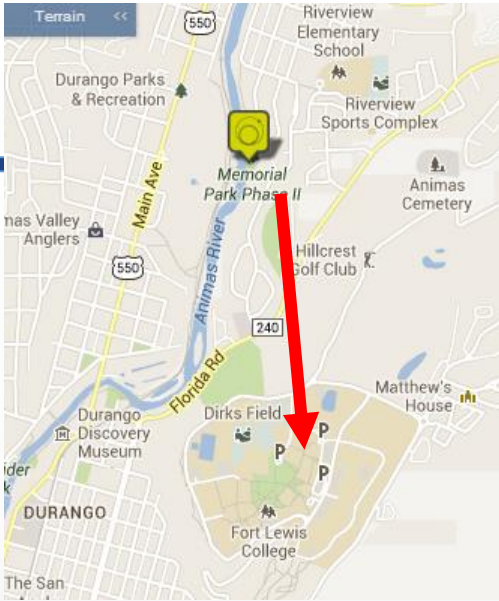
Reason #1 – Enhanced Safety

- Need the denominator for...
 - accurate statistics
 - clarity in crash impact studies
 - insight for developing mitigation strategies
- Sometimes, its dangerous not to count...

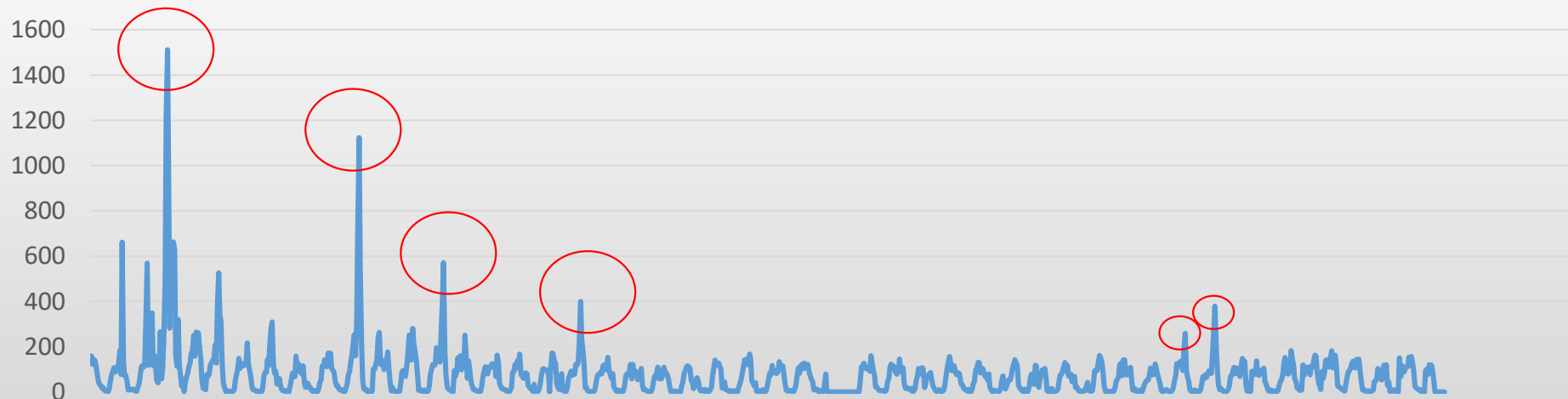


Durango, Colorado Animas River Trail

Reason #1 – Enhanced Safety



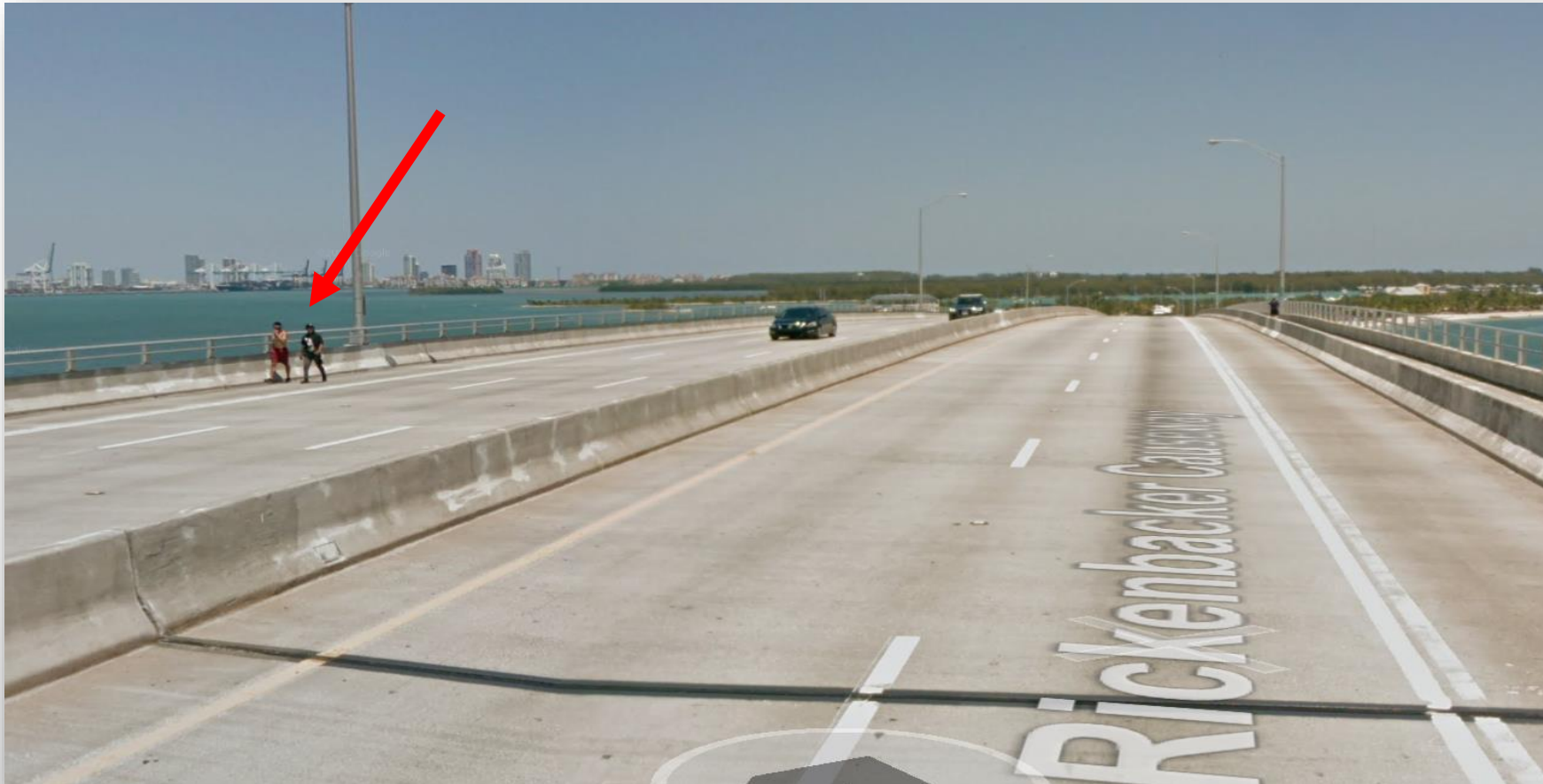
Durango Colorado
Animas River Trail – July 2, 2010 – August 18, 2010



Reason #1 – Enhanced Safety Durango, Colorado Animas River Trail



Reason #1 – Enhanced Safety Causeway...unsafe Pedestrian behaviors...



Reason #1 – Enhanced Safety Unsafe Pedestrian!



Reason #1 – Enhanced Safety Unsafe Cyclists!

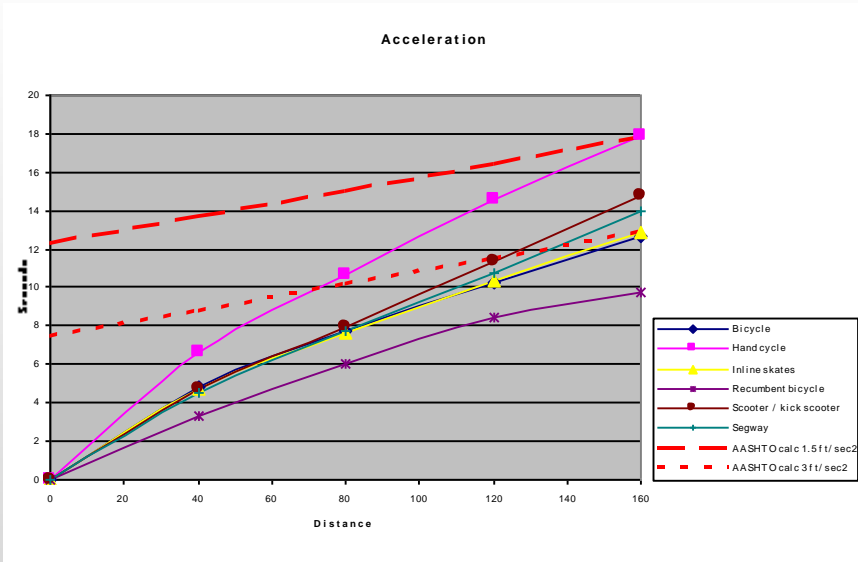


Why do we Count? Reason #2 – More Efficient Operations

- Appropriate signal timing – adequate green time for multi-use pathway crossings
- Construction re-routing
- Event planning



[Miami Beach: 5th St. @ Alton Rd.](#)



[Floral City, FL: Withlacoochee State Trail Section#3](#) 21

Reason #2 – More Efficient Operations Need bicycle volumes to set signal timing for bike lanes at Livingston Street at Magnolia Avenue, Orlando!



Reason #2 – More Efficient Operations

Remember to check on future construction...Altered lane due to construction...Signal timing needs to account for cyclists!!!



<https://www.google.com/maps/@26.4507856,-81.9488244,3a,53.4y,101.68h,72.02t/data=!3m6!1e1!3m4!1spq4AXNcMNL5TQyxDh0X9qA!2e0!7!13312!8!6656>

Reason #2 – More Efficient Operations

Need bicycle and pedestrian volumes approaching intersections for signal timing purposes!



Reason #2 – More Efficient Operations

Need bicycle and pedestrian volumes approaching intersection for signal timing purposes!



Reason #2 – More Efficient Operations

Need bicycle crossing volumes for signal timing and queuing of traffic!



Why do we Count? Reason #3 – Maintenance

- Path or Bike Lane Sweeping Schedules
- Pathways Snow Plowing Schedules in Colorado



Reason #3 – Maintenance

Bicycle and Pedestrian volumes needed for maintenance reasons!



Reason #3 – Maintenance

Bicycle volumes needed for maintenance reasons!

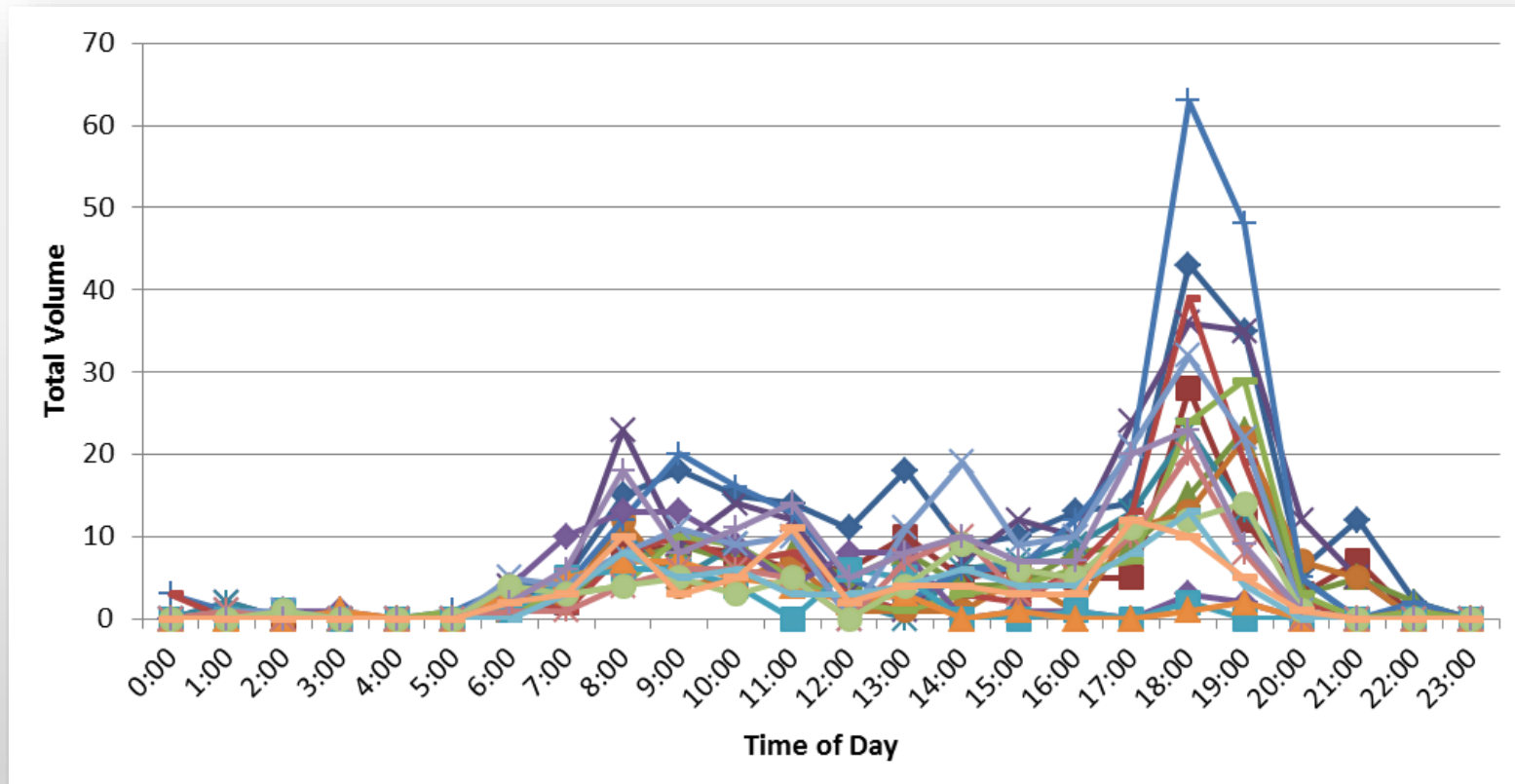


Reason #3 – Maintenance

Debris on Trail – Too much Debris keeps cyclists away...

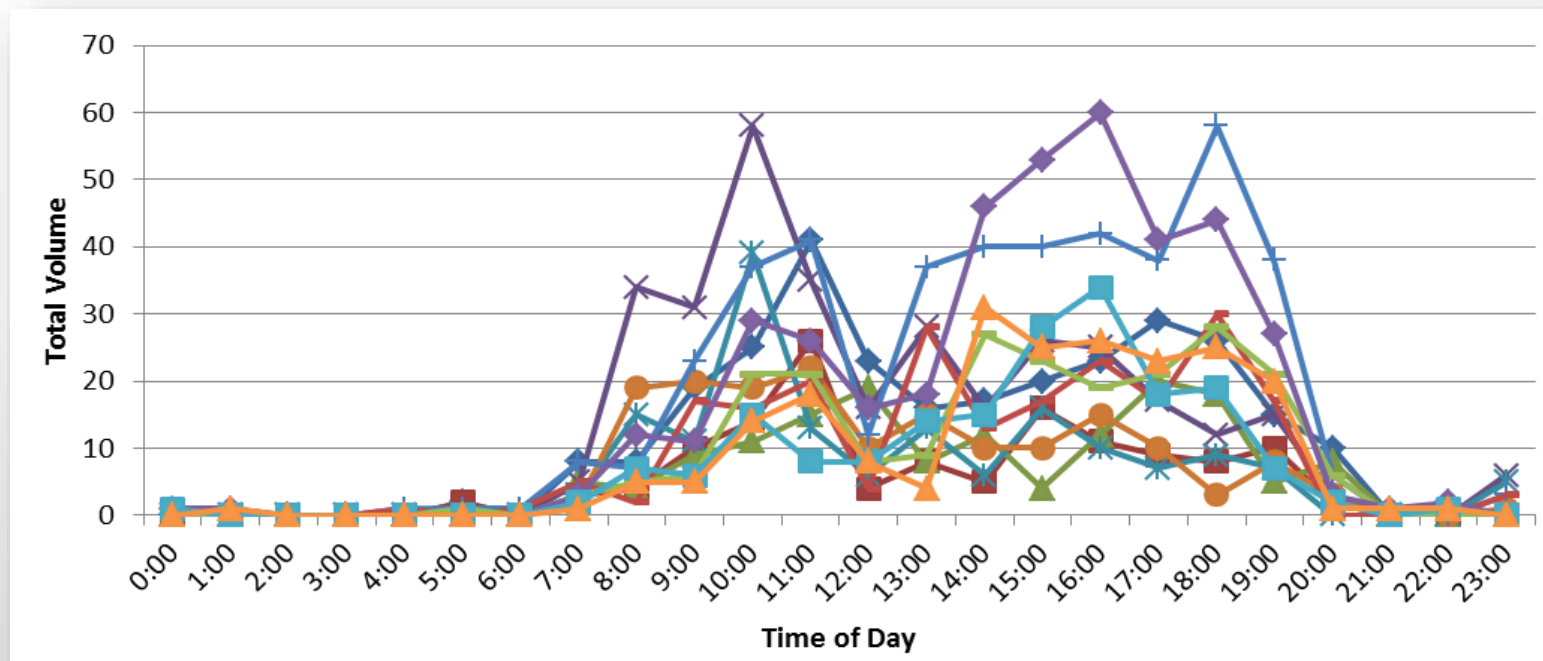


Reason #4 - Accurate data for measuring performance



Monday – Friday - Commuter Traffic Pattern

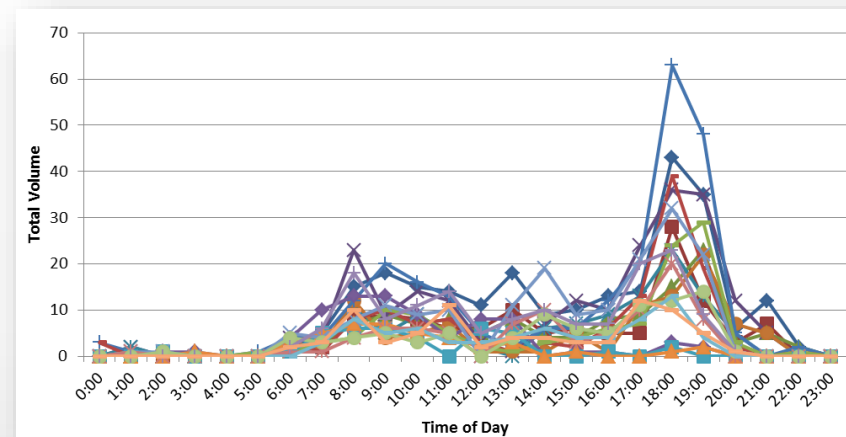
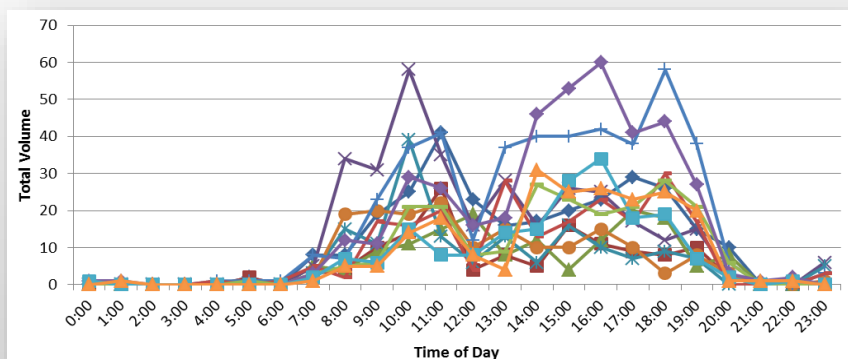
Reason #4 - Accurate data for measuring performance



Saturday – Sunday Recreational Traffic Pattern

Reason #4 - Accurate data for measuring performance Accurate data for decision making...

- Commuter travel day of the week (DOW) travel pattern
- Monday-Friday travel is much higher in the evenings
- Morning, lunchtime, and evening peaks



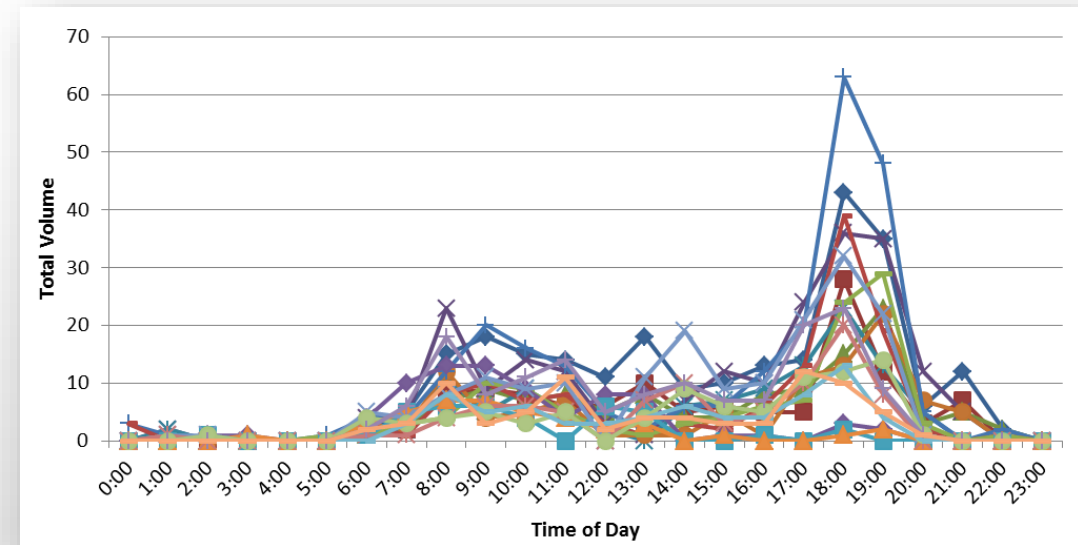
- Weekend travel patterns are recreational
- Total volume ranges are 150 to 300 any day of the week or weekend

Commuter facilities are eligible for federal transportation funding!

Why do we Count?

Reason #5 – New Funding Options

- Transportation Enhancements/Transportation Alternatives (TE/TA), Congestion Mitigation and Air Quality (CMAQ) and Federal Transit Authority (FTA) Funds
- General fund (DOT funding allocations)
- What gets counted, counts!



Commuter facilities are eligible for federal transportation funding!

Why do we Count?

Reason #6 - Future Federal Funding and Customer Service Purposes

- FHWA
 1. Chapter 4 – Traffic Monitoring Guidebook
 2. TMAS accepts bike/ped volume data! OCT, 2018
- FHWA
 1. Requesting Data
 2. Existing Software
 3. TRB's bike/ped data subcommittee

Final Thoughts...

Build a Non-Motorized Traffic Data Collection Program and reduce the Gap between Transportation Funding, Health, and Environmental Data Needs

Fund Projects with Bike/Pedestrian Counting Equipment

Transportation
Data



Health
Data



Section - 4

Statewide Non-Motorized Program Structure

FDOT Non-Motorized Traffic Monitoring Program

Statewide Continuous Count Program

FDOT's goal is to install 1-2 continuous counters per district, per year. Data will be published and publicly accessible.

Statewide Short-Term Count Loaner Program

FDOT CO is partnering with local agencies by providing short-term equipment and training. Partnering agency will share data with FDOT.

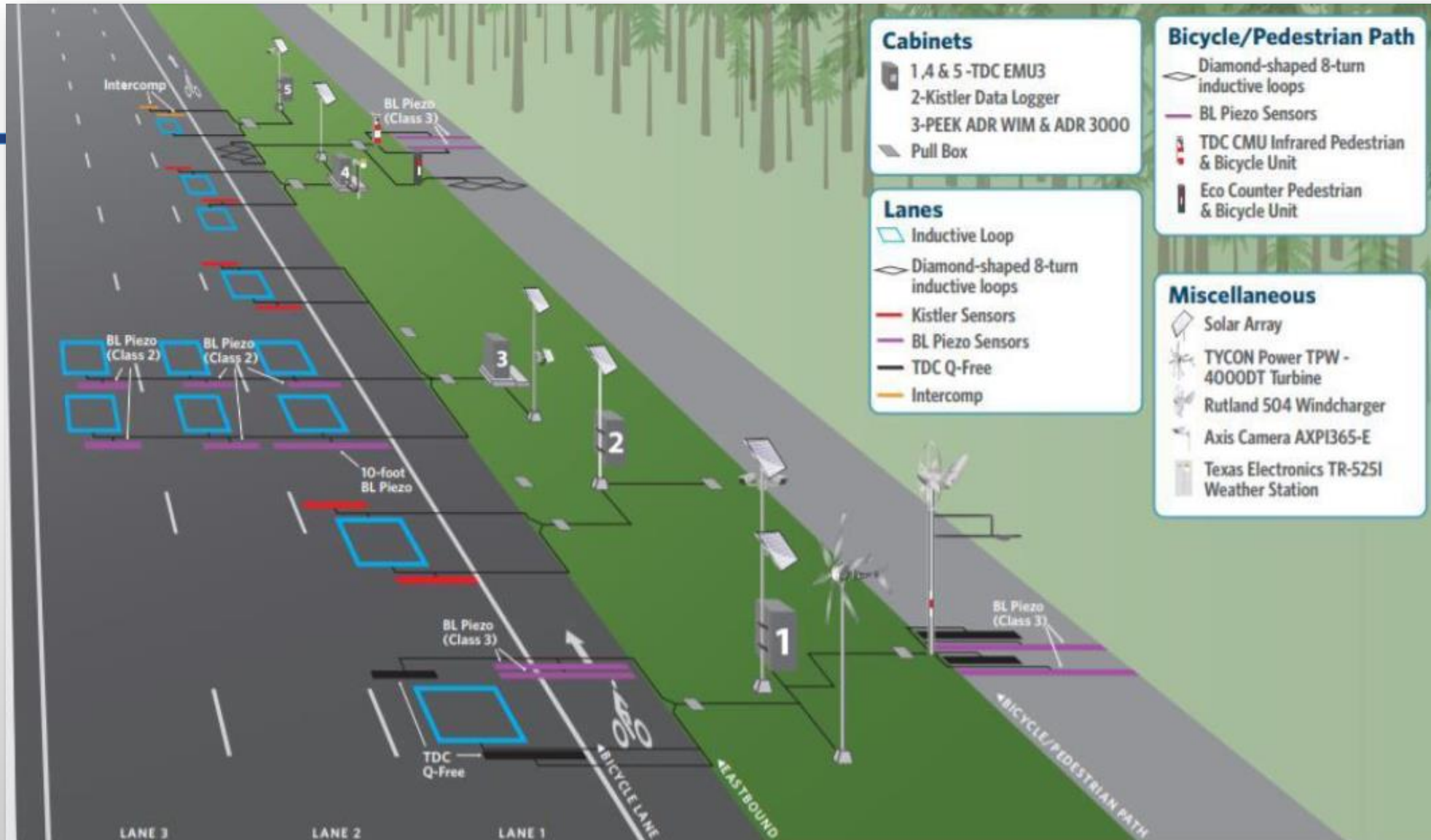
Statewide Repository

FDOT is currently accepting voluntary bicycle and pedestrian data from any agency or organization. FDOT will analyze the data, and submit valid data to FHWA.

Statewide Outreach

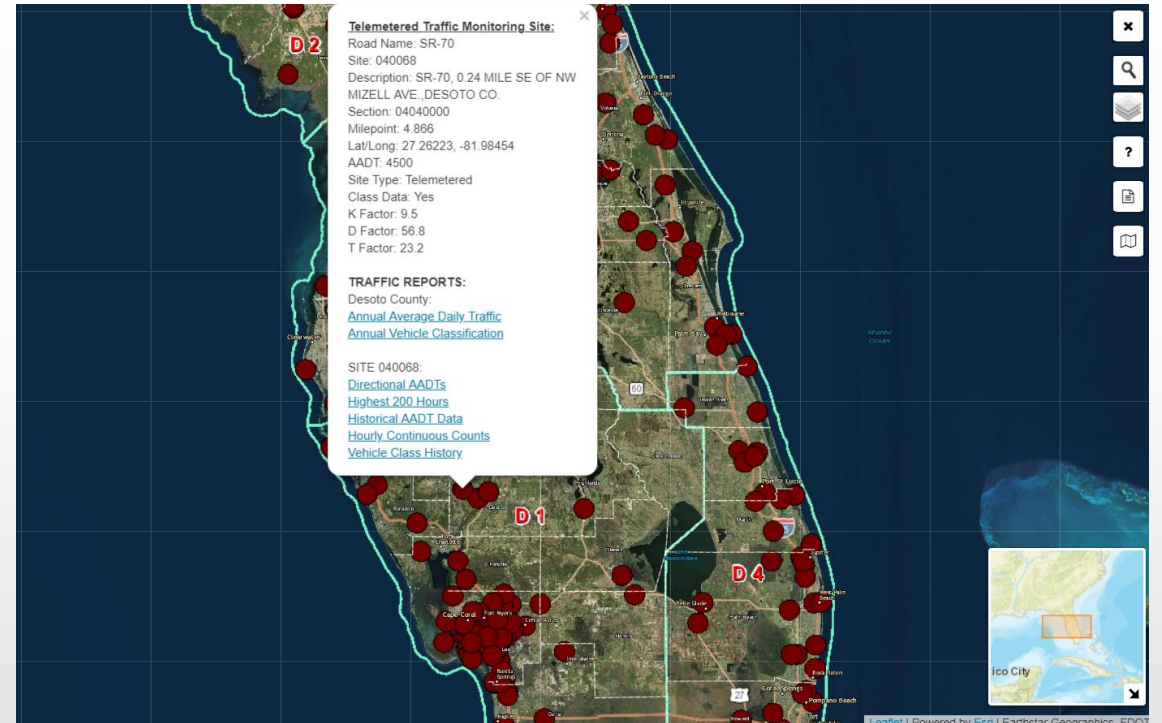
Marketing program to statewide agencies. FDOT will support agencies currently collecting or wants to collect bicycle and pedestrian data in their jurisdiction. Annual meeting and periodic webinars.

Continuous Count Program



Florida Traffic Online

- Destination of all FDOT Continuous and Short Term Counters Statewide
- Demonstration



Short Term Counter Loaner Program



Courtesy MetroCount

Short-term count program

- Devices will be placed in proposed locations for 2-week periods
- Device can be moved to other locations
- Program will start with local Tallahassee agencies
 - City of Tallahassee
 - Capital Region TPA



City of Tallahassee and Capital Region TPA

Field pics visiting potential count sites



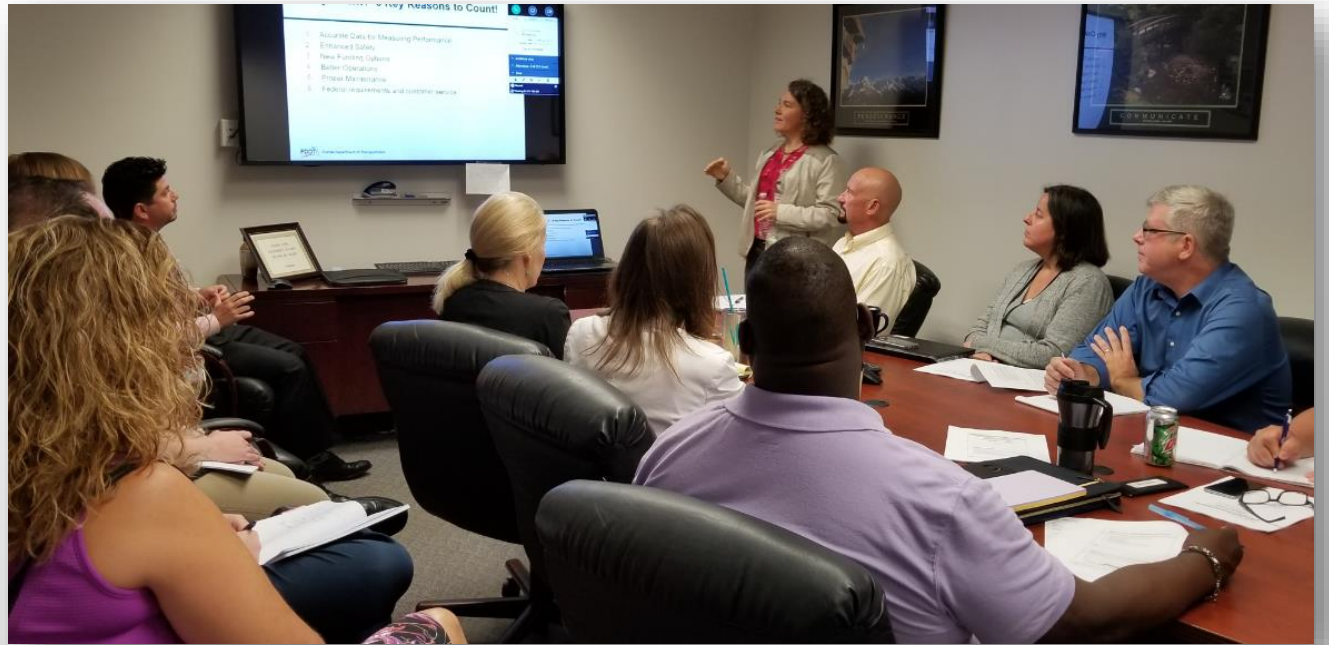
Lafayette Greenway



St. Marks Trail

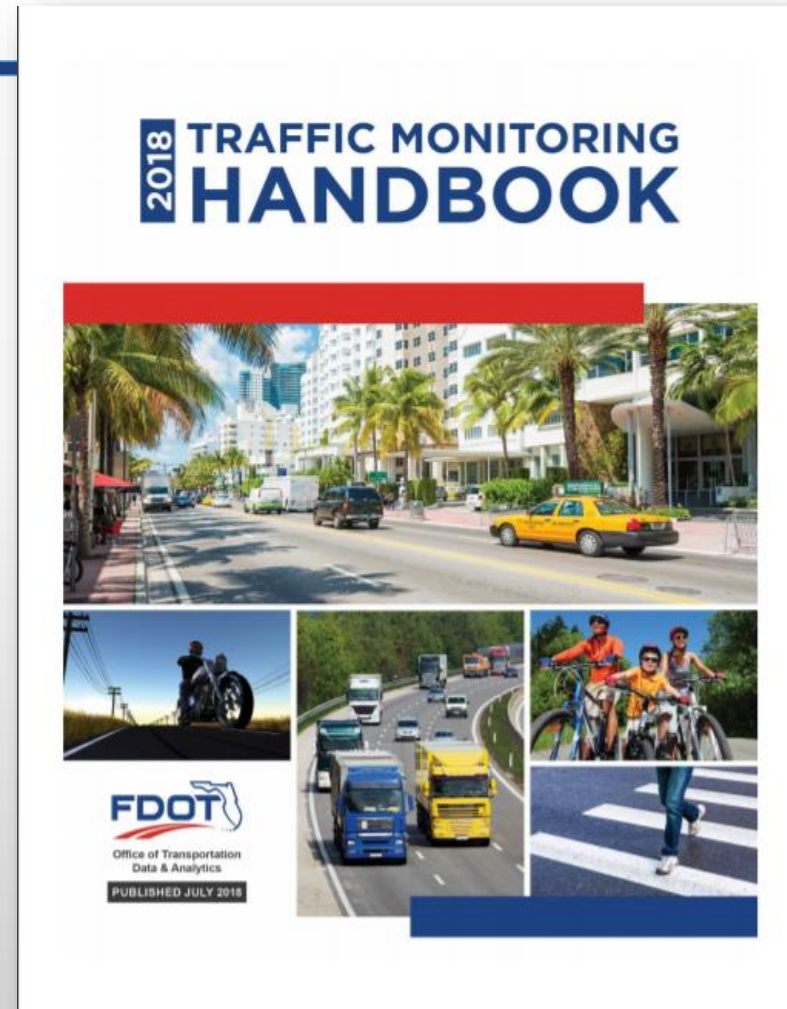
Statewide Outreach

- On-going technical assistance and support to districts and local agencies
- Updates to Florida Traffic Monitoring Handbook
- Periodic Webinars
- Annual Statewide Training focused on best practices and lessons learned



FDOT Statewide Traffic Monitoring Handbook

- Describes non-motorized data collection methodologies and technologies to consider when developing (or modifying an existing data collection program)
- Handbook will be updated as program matures and becomes more “Florida-centric”





Section - 5

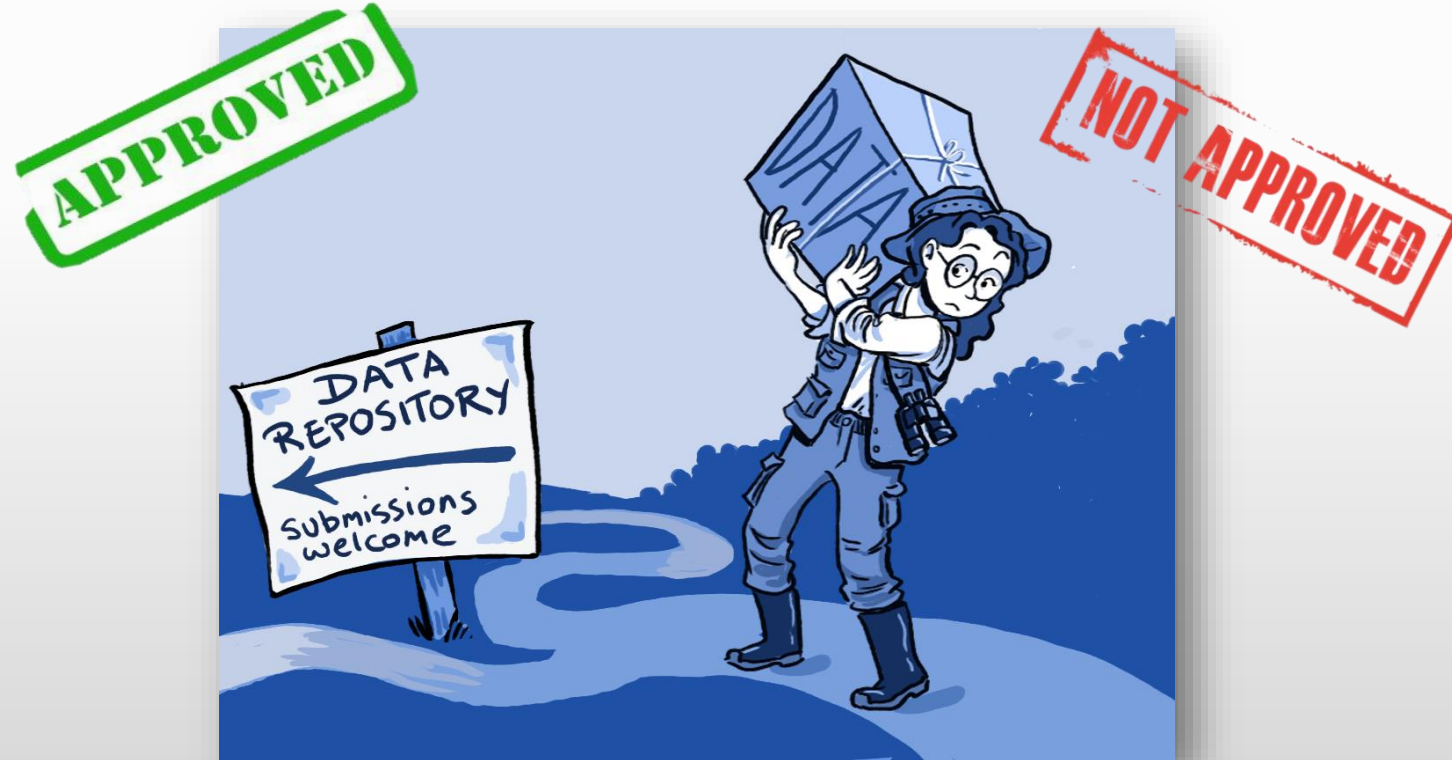
FHWA and the FDOT Statewide Data Repository

Statewide Repository - DATA ANALYZED:

- Overseas Heritage Trail, Key West, FL (13 Sites)
- St Mark's Trail, Tallahassee, FL
- Capital Circle test-site, Tallahassee, FL
- Vizcaya Metrorail Station, Miami, FL
- Flagler Drive @ Okeechobee Road Trinity Pl, Miami FL
- Atlantic Greenway, Miami Beach, FL
- Oleta River State Park, Miami, FL
- Rickenbacker and Toll Booth, Miami, FL
- Grand Avenue, SW 37th Avenue North, Miami, FL
- Broward Boulevard, Fort Lauderdale, FL
- US27 & I-75, Fort Lauderdale, FL
- Okeechobee Road and Palmetto
- Forward Pinellas, Pinellas County, FL (8 Sites)
- Flagler and A1A, West Palm Beach, FL
- More coming soon...
 - Miami-Dade TPO
 - District 5 MPOs
 - City of Tallahassee/FDOT Short-term counts

Statewide Repository

- Currently gathering data
- In the future - Loading Data into FDOT's next generation data repository



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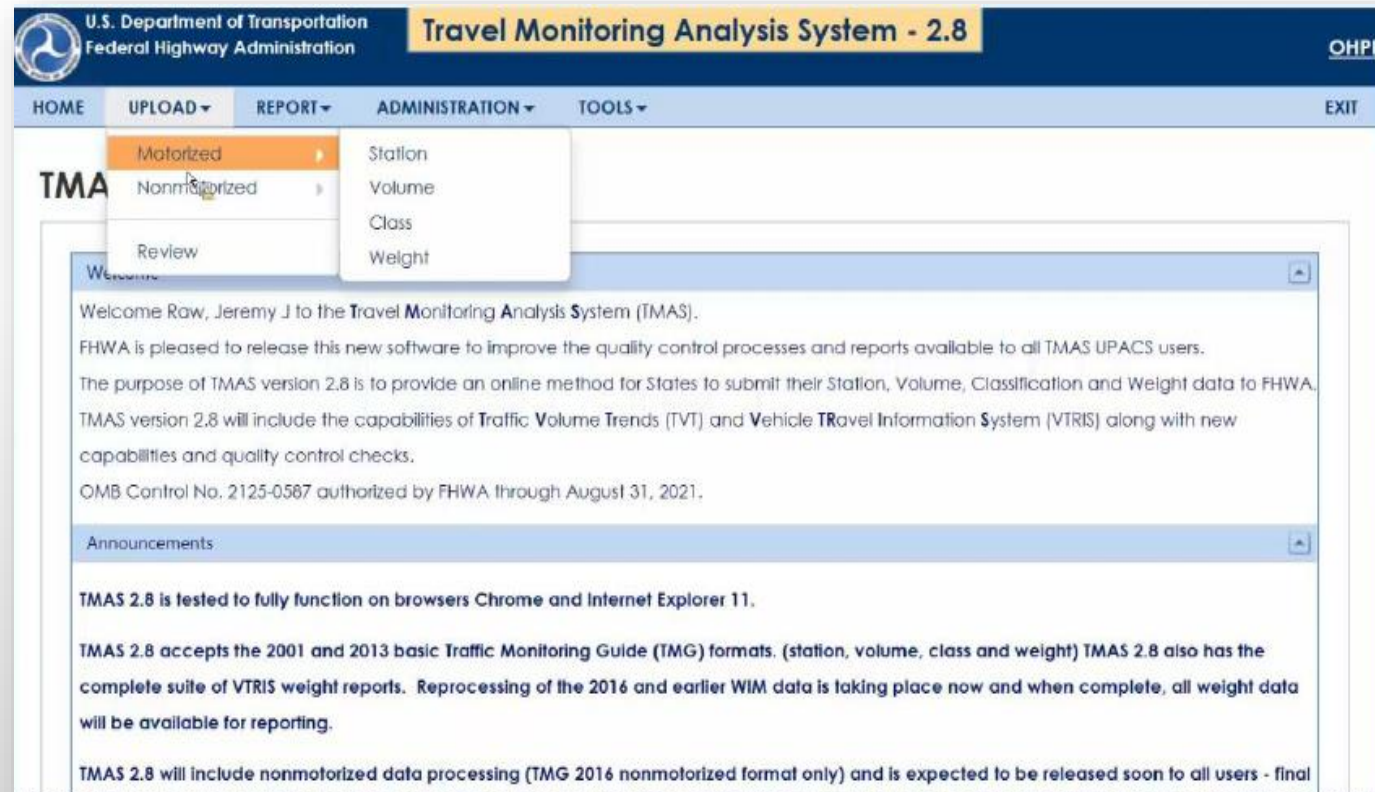
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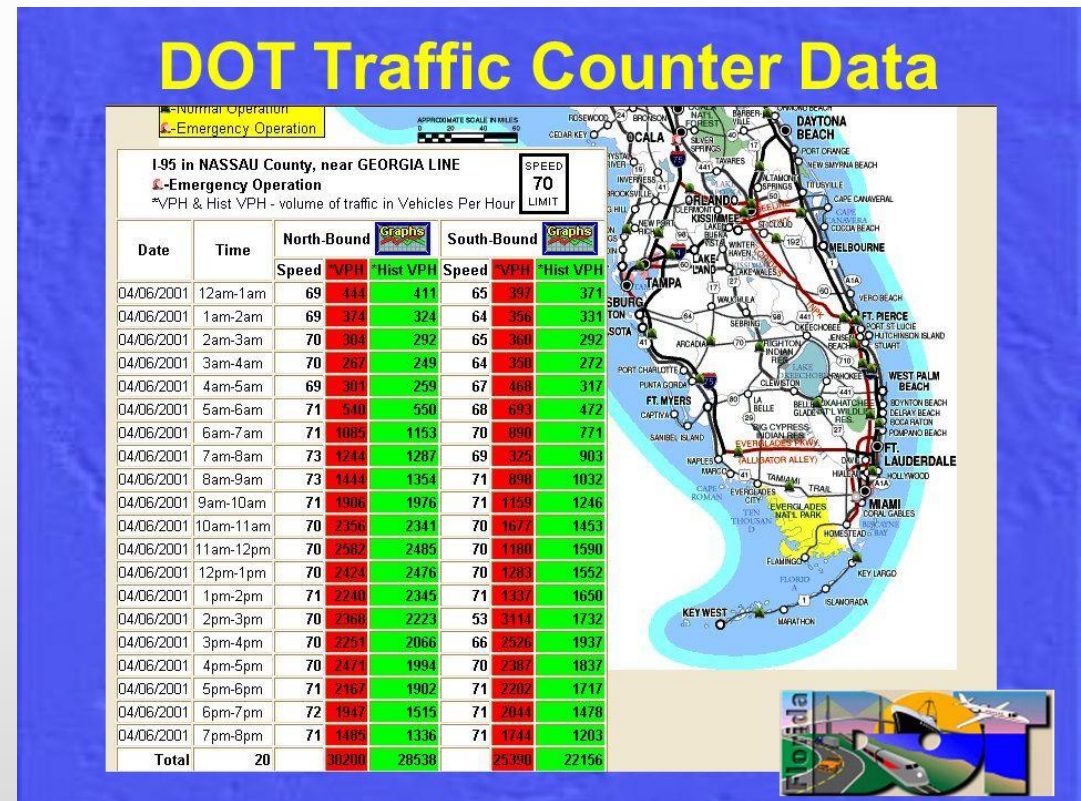
Traffic Monitoring Analysis System Version 2.8 Now includes the ability to upload Nonmotorized Data...

1. October 22, 2018 “GO LIVE” date
2. FHWA wants data
3. FDOT is the first agency to successfully have a Station Record accepted by the TMAS system

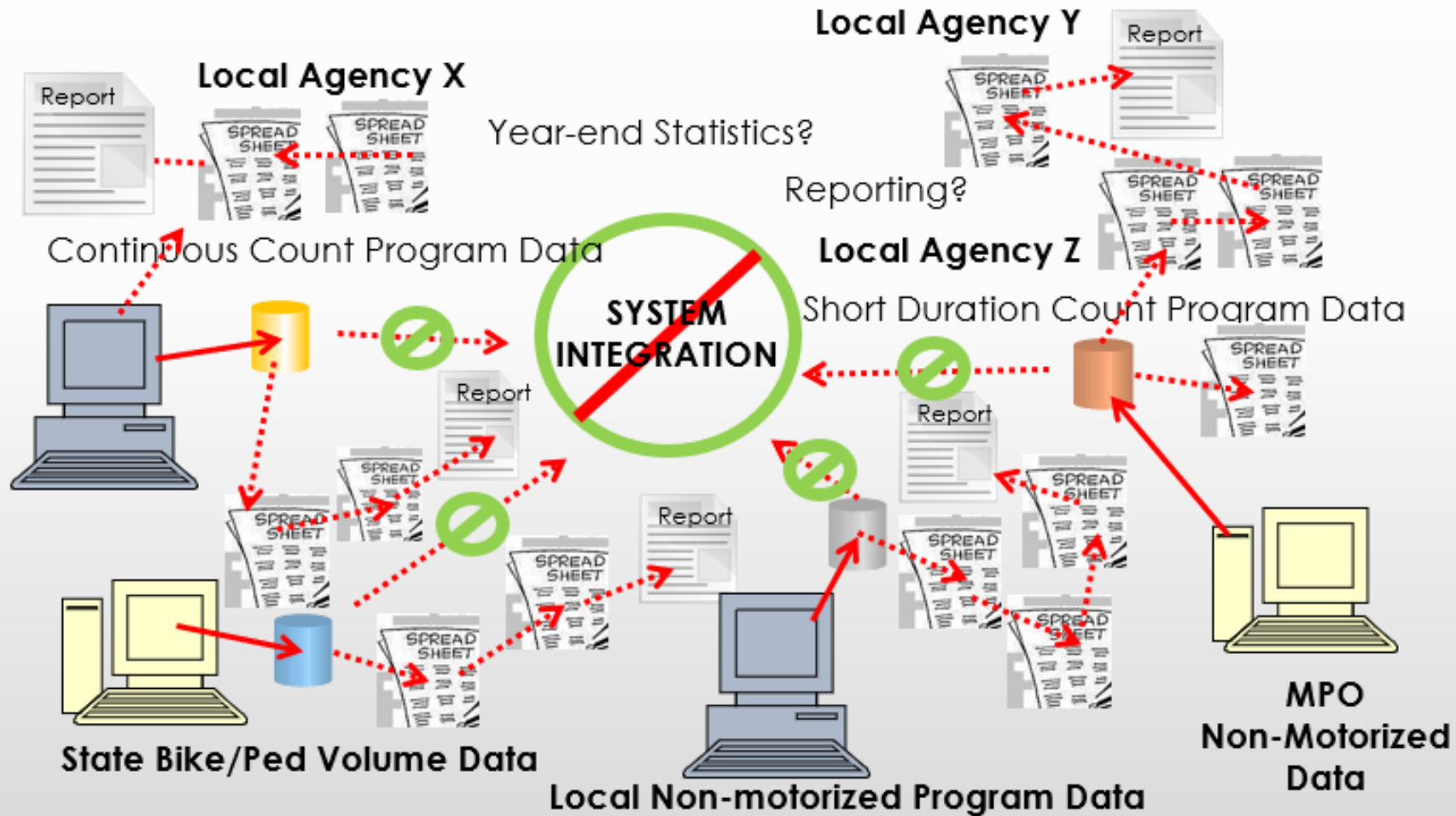


Why follow Motorized Traffic Data Existing Programs?

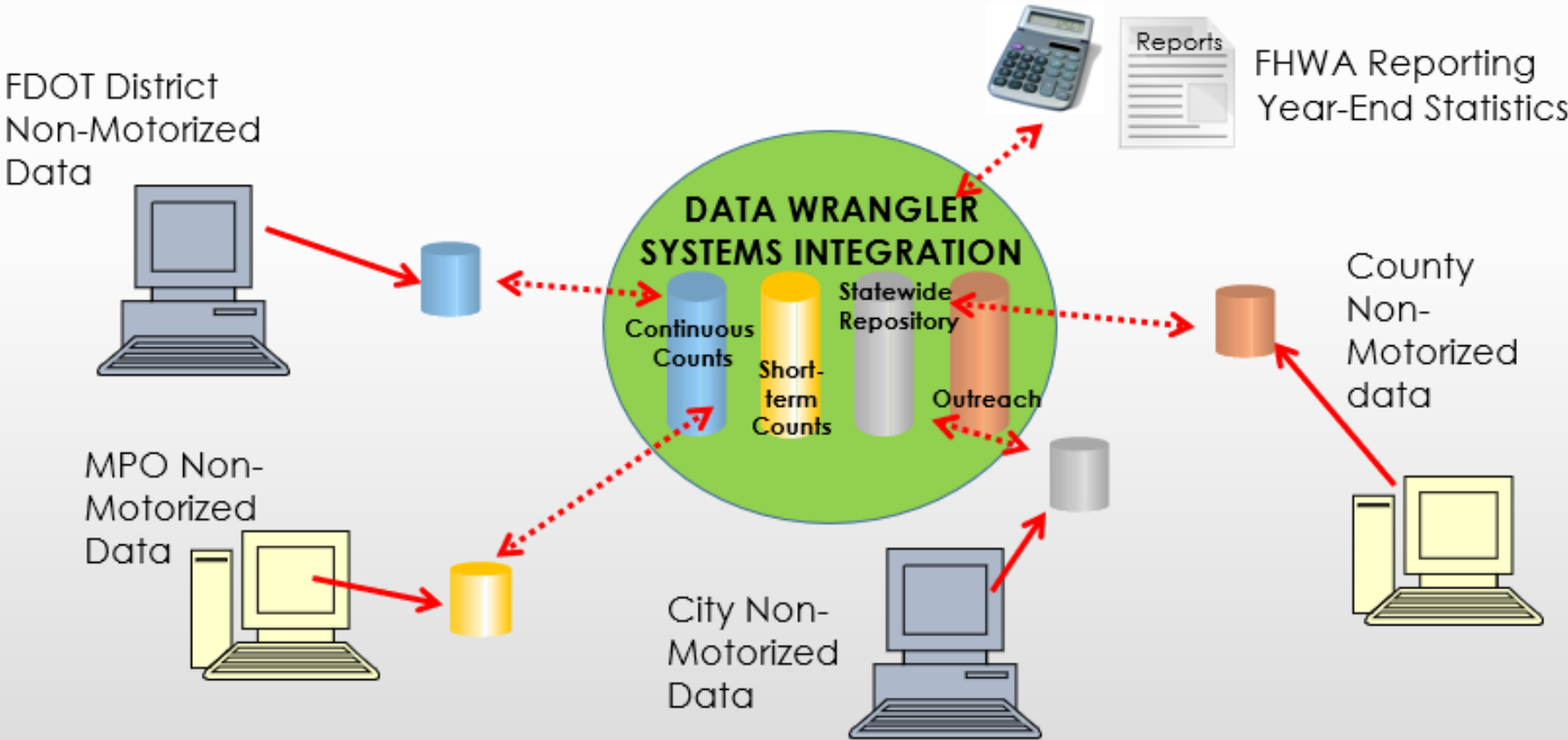
- Motorized programs are a model
- Methods are already established
- Leverage existing investments in technology
- To establish a funding stream



Current State of the Practice DATA In-Efficiency?

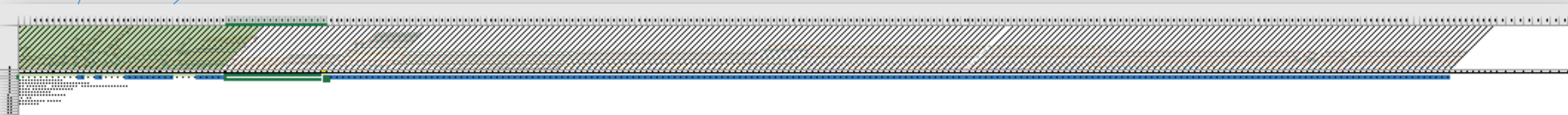


Integrated Data Collection System Efficiency packed with Functionality / Accessibility?



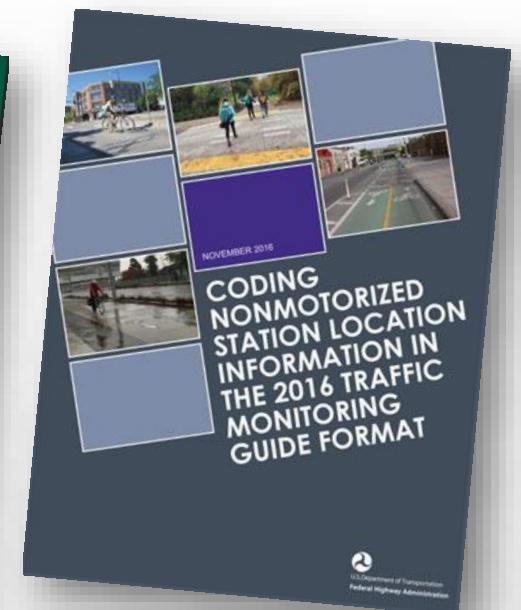
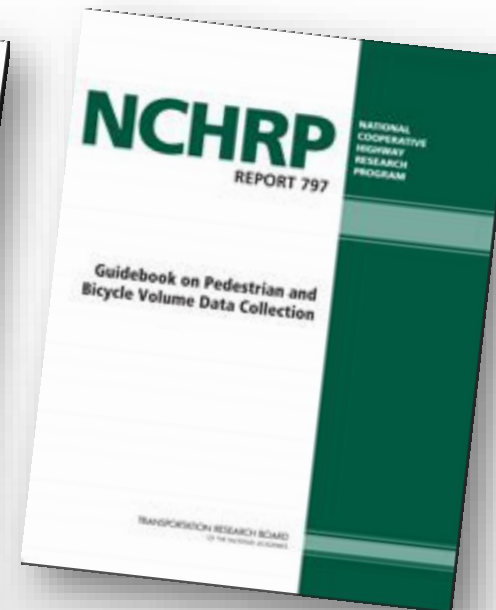
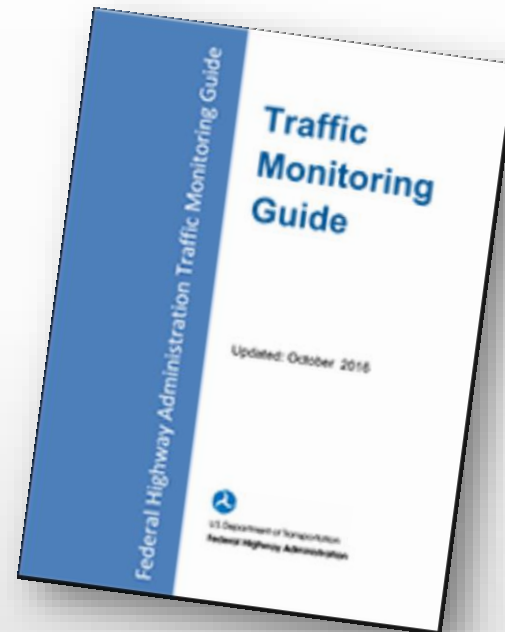
239 Total Fields...Critical Fields versus Options Fields...

METHOD (BIKE/PEDESTRIAN/BOTH)																		
METHOD OF COUNTING																		
22- TYPE OF SENSOR																		
23- YEAR OF DATA																		
24- YEAR OF DATA																		
25- YEAR OF DATA																		
26- YEAR OF DATA																		
27- FACTOR GROUP 1																		
28- FACTOR GROUP 2																		
29- FACTOR GROUP 3																		
30- FACTOR GROUP 4																		
31- FACTOR GROUP 5																		
32 - PRIMARY COUNT PURPOSE																		
33 - POSTED SPEED																		
34 - POSTED SPEED																		
35 - YEAR STATION ESTABLISHED																		
36 - YEAR STATION ESTABLISHED																		
37 - YEAR STATION ESTABLISHED																		
38 - YEAR STATION ESTABLISHED																		
39 - YEAR STATION ESTABLISHED																		
2	0	1	6	U	C					P			2	0	1	6		
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39		
C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	O		



239 Total Fields....Traffic Monitoring Guide Station Record File Format...

- FHWA TMG Coding Guidebook
- Automated TMG format
- Recommend adding TMG format to required specifications for station record and data record file formats

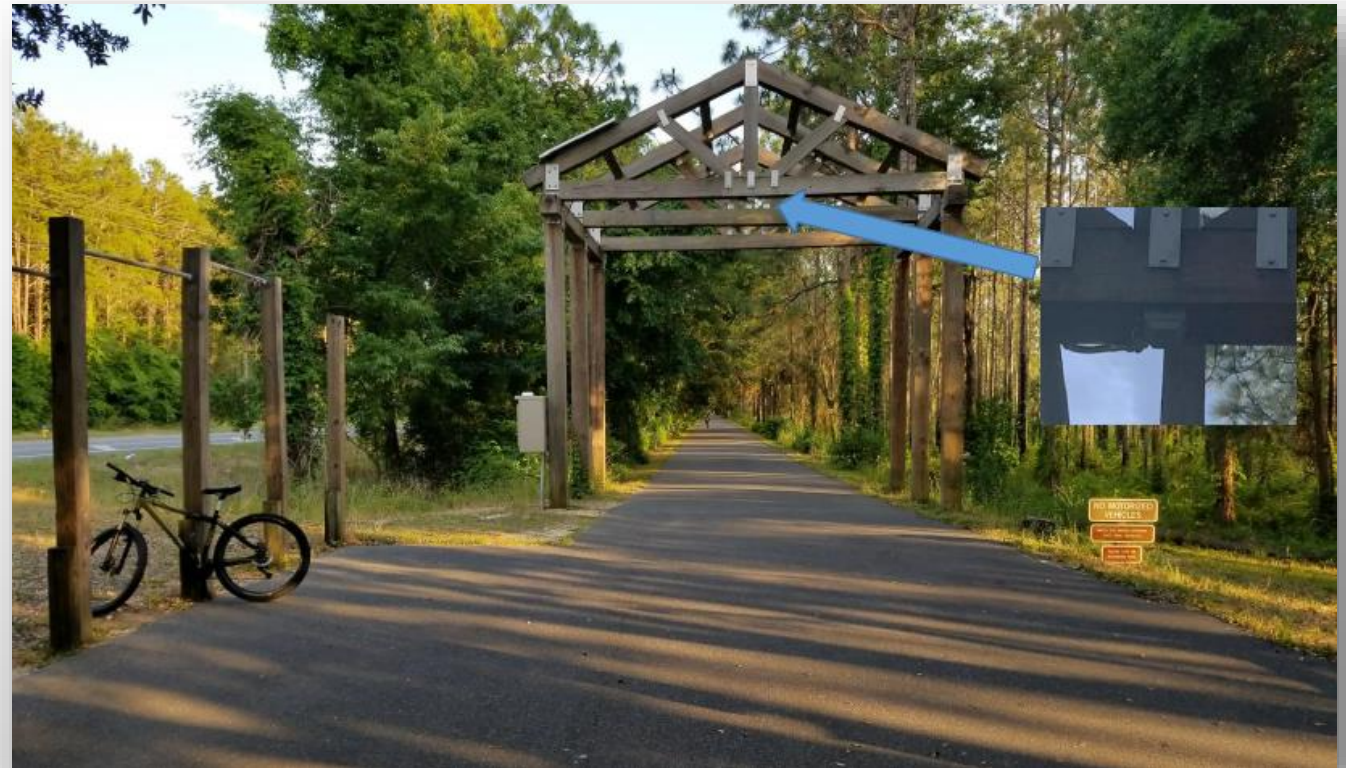
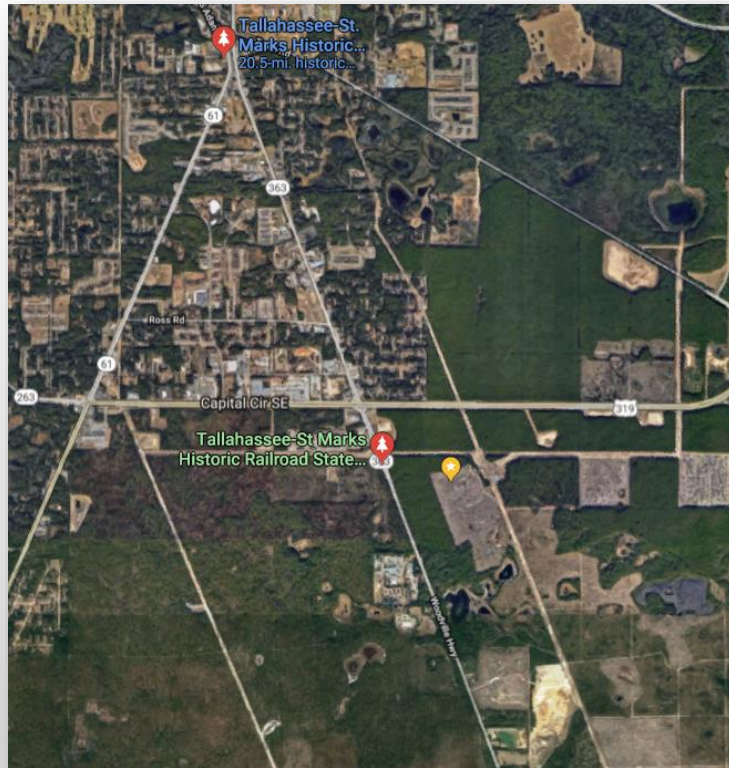




Section - 6

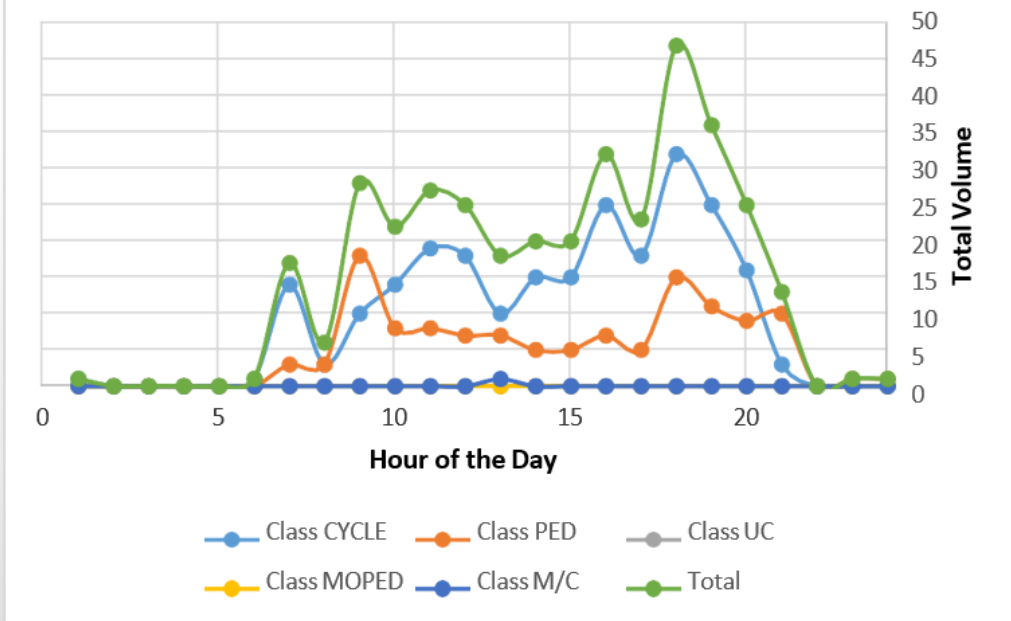
Data Samples

St. Marks Data Sample

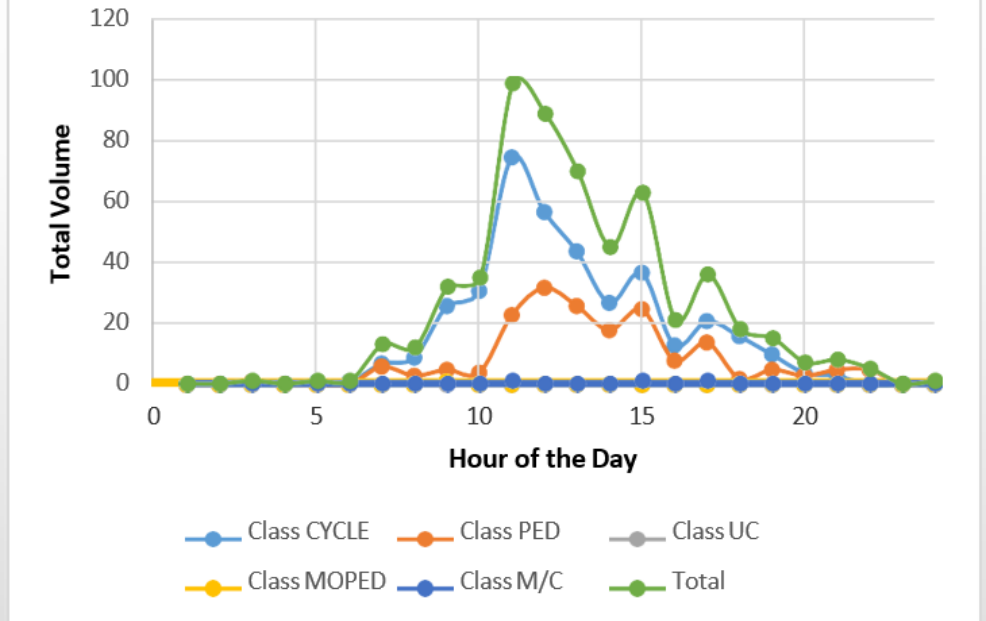


Statewide Repository – St. Marks Sample

Saint Mark's Trail
Wednesday, May 2, 2018



Saint Mark's Trail
Saturday, May 5, 2018

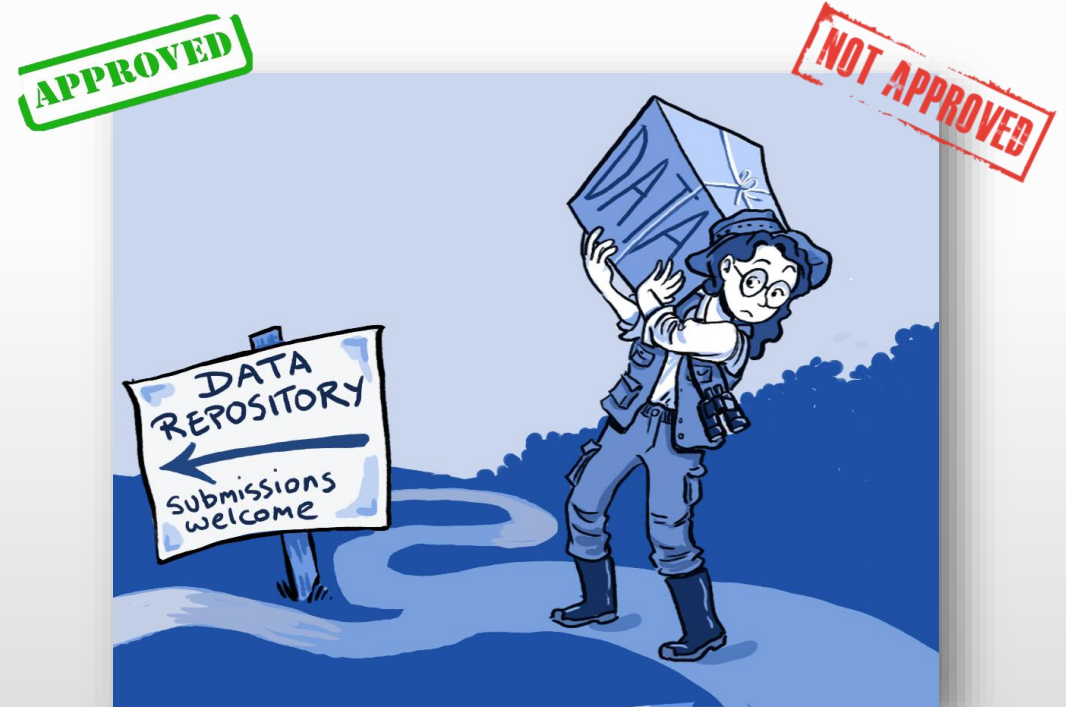


Data Findings and Review Meeting Purpose (Raw Data Analyzed)

1. To communicate with the Data Source
2. To verify validity of data set
3. To further evaluate data for uploading into statewide data repository
4. To request agency approval/acceptance of using data for statewide and national (FHWA) data uses/data dissemination

Standardizing Questions during Data Review and Findings Meeting...

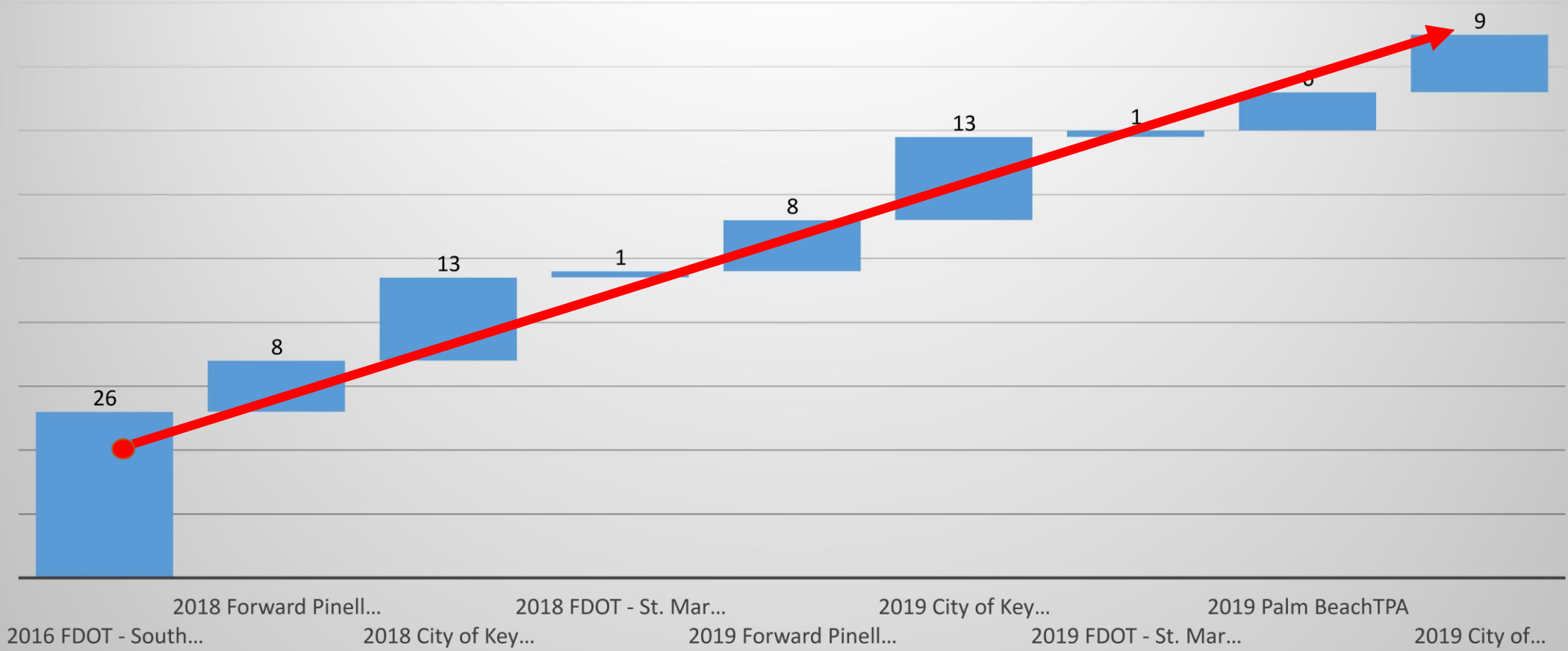
- Tell us about your Data?
- How accurate is the data?
- What is the data used for?
- Does Agency approve of data to load into the statewide repository?
- Etc...



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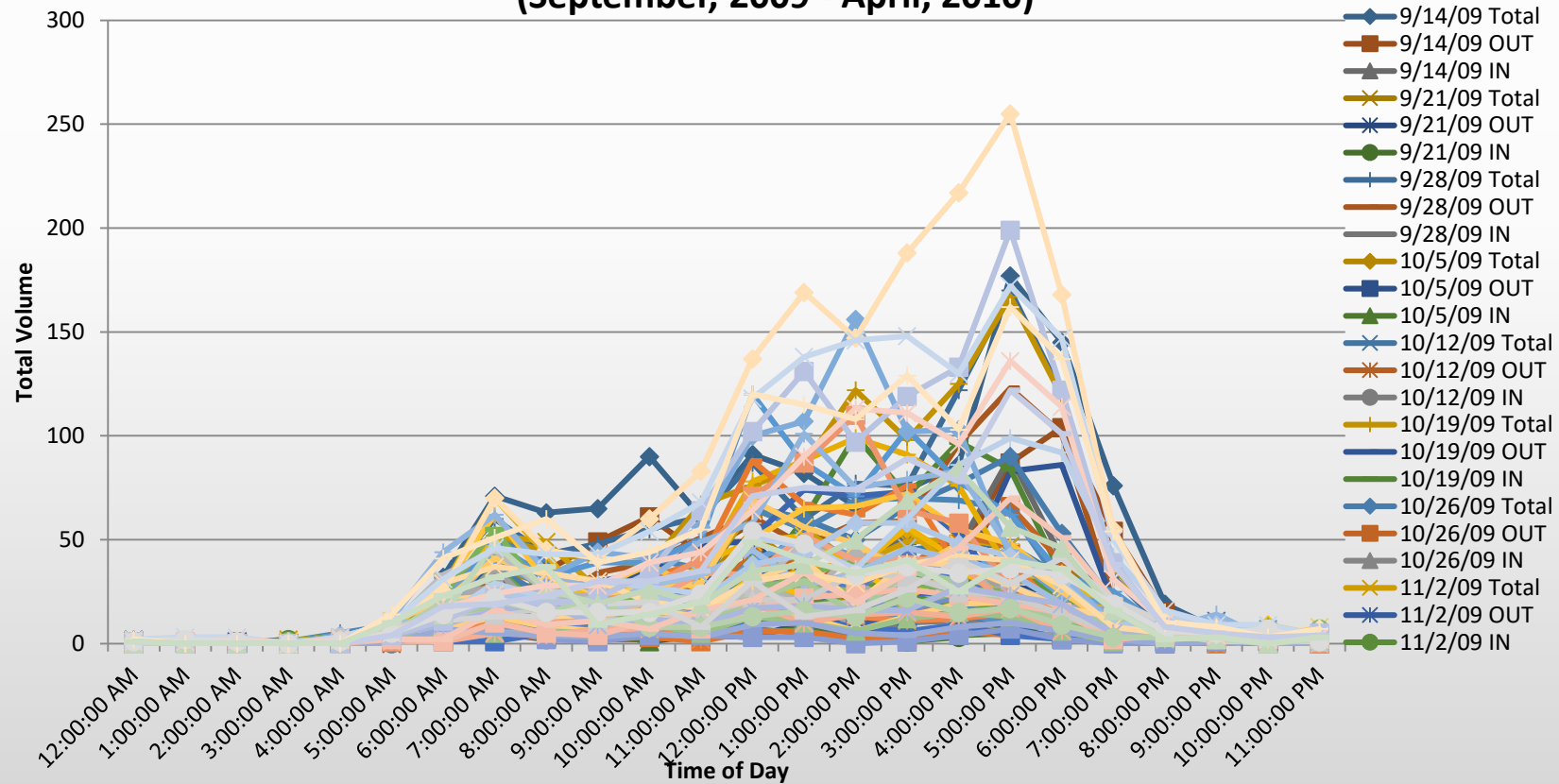
Traffic Data Repository
Total Number of Counts
(as of January, 2019)

■ Increase ■ Decrease ■ Total

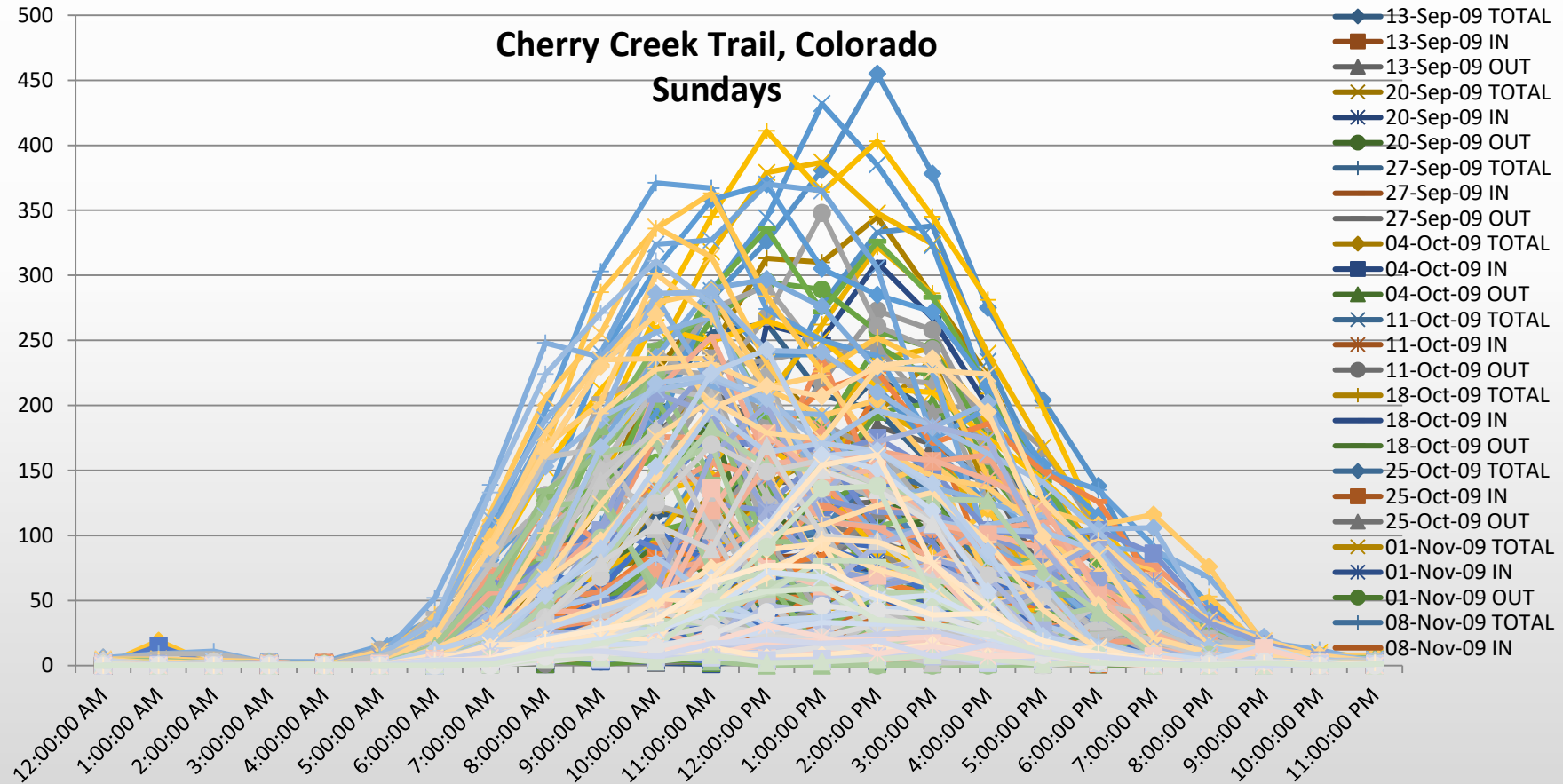


Every Monday for a Year

Cherry Creek Trail, Colorado
(September, 2009 - April, 2010)

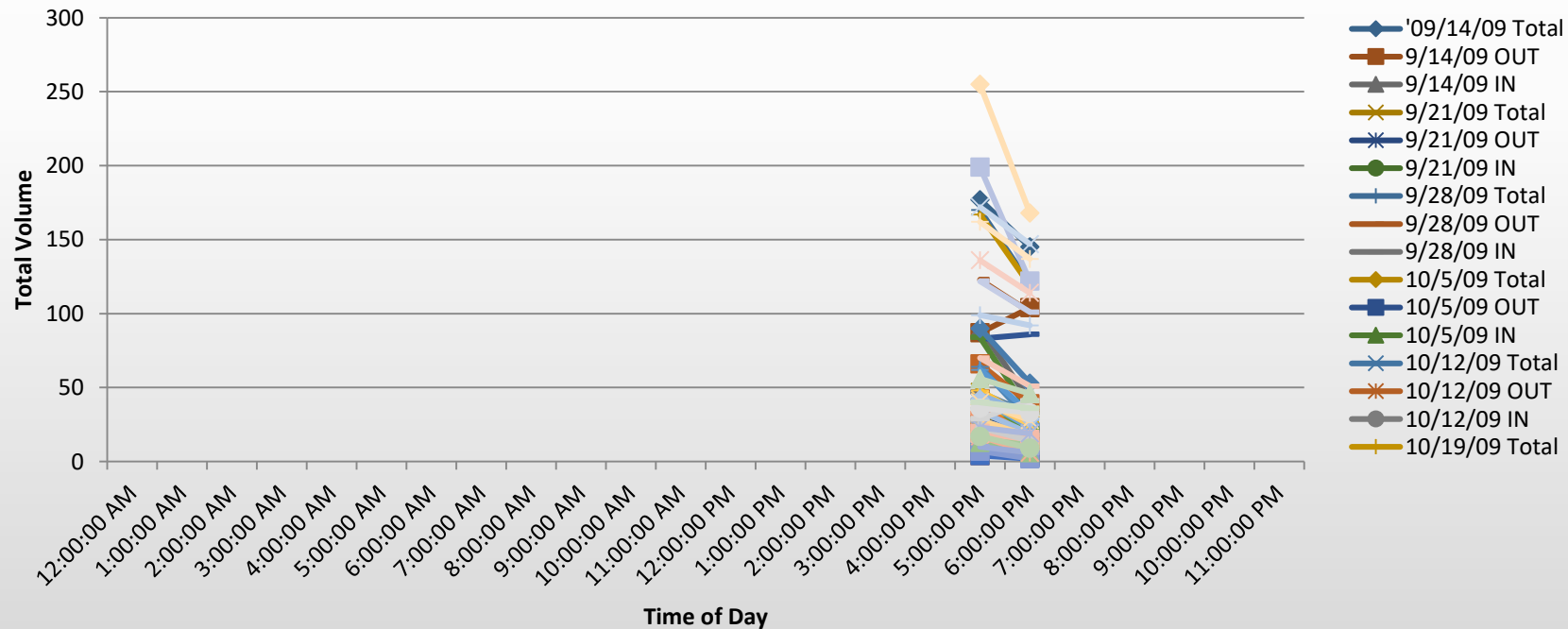


Every Sundays for a Year



Data analyses for – 2 hour counts...

Cherry Creek Trail, Colorado
2-hour Duration
(September, 2009 - April, 2010)



Review

- Continuous Counting Preferred
- 14 Day Short-term counting Recommended
- Analyze Raw Count Data
- Partner/Share data with FDOT for Analyses/Statewide Distribution



Courtesy Python Pandas



Section - 7

Next Steps / Questions

Next Steps

- Continuous Count research continues
- Short-term count loaner program will begin locally in Tallahassee, then extend statewide
- FDOT ready to accept existing non-motorized data now
- Stay tuned for future webinars
- Plan on one statewide meeting per year

Poll Questions

Questions/Comments

- Eric Katz — eric.katz@dot.state.fl.us
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(850) 414-4704
Florida Department of Transportation
605 Suwannee St.
Tallahassee, Florida 32399
- Elizabeth “Liz” Stolz — estolz@marlinengineering.com
Director of Traffic Data Programs
(303) 501-5300