

# Lessons Learned from the FHWA Bicycle and Pedestrian Count Technology Deployment Pilot Project

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NATMEC: Improving Traffic Data Collection, Analysis, and Use  
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Pedestrian and Bicycle  
Information Center



# Presentation Overview

- Program objectives
- Background
- Participants
- Program support
- Count programs
- Challenges
- Next Steps & discussion



[www.pedbikeimages.org](http://www.pedbikeimages.org)



# Program Objective

Provide assistance (financial and technical) to 10 MPOs to learn more about how to establish an effective regional bicycle and pedestrian counting program using automated counting technology



# Background

- FHWA's interest in improving data resources to support bicycle and pedestrian investments
- Pilot Project is a research and technology deployment effort to
  - Identify organizational and technical capacity needs at MPOs;
  - Develop resources for addressing these needs; and
  - Transfer lessons learned across the country
- Began May 1, 2015



# Participating MPOs

- Objective was for MPOs to conduct data collection to be used at the regional planning level
- Selected MPOs
  - Providence Metropolitan Planning Organization (Providence, Rhode Island)
  - Greater Buffalo-Niagara Regional Transportation Council (Buffalo, New York)
  - Richmond Regional Transportation Planning Organization (Richmond, Virginia)
  - Puerto Rico Metropolitan Planning Organization (San Juan, Puerto Rico)
  - Palm Beach Metropolitan Planning Organization (Palm Beach County, Florida)
  - Fresno Council of Governments (Fresno, California)
  - Indianapolis Metropolitan Planning Organization (Indianapolis, Indiana)
  - Ohio-Kentucky-Indiana Regional Council of Governments (Cincinnati, Ohio)
  - Southeastern Wisconsin Regional Planning Commission (Milwaukee, Wisconsin)
  - Memphis Metropolitan Planning Organization (Memphis, Tennessee)
- Also included informal MPO participants



# Program Support

- Technically a 1-year program (for assistance, but the funds have no near-term expiration)
- FHWA to provide \$20,000 for purchasing of new counting equipment, MPO must provide a 20% match
- All participants are to provide a final report of experience, to be incorporated into the final program report (MPO reports due in May 2016)



# Technical Assistance Team

- Organized by PBIC
  - Carl Sundstrom, PBIC
  - Daniel A. Rodriguez, UNC Chapel Hill
  - Bob Schneider, University of Wisconsin, Milwaukee
  - Frank Proulx, UC Berkeley, SafeTREC
  - Thomas Huber, Toole Design Group
  - Spencer Gardner, Toole Design Group
- Team conducted webinars, maintained a project website, and a participant listserv



# Technical Assistance Program: Webinars

- Conducted 4 webinars plus a project kick-off
- Topics intended to coincide with MPOs timeline
- Materials from these webinars will be edited and made public.





# Technical Assistance Program: Webinars

- Program Kick-off Call
  - Program logistics and overview
  - Purpose of a counting program
  - Key resources
  - Selecting locations & duration
  - Selecting equipment and vendors
  - Count technology overview
  - Vendor questions

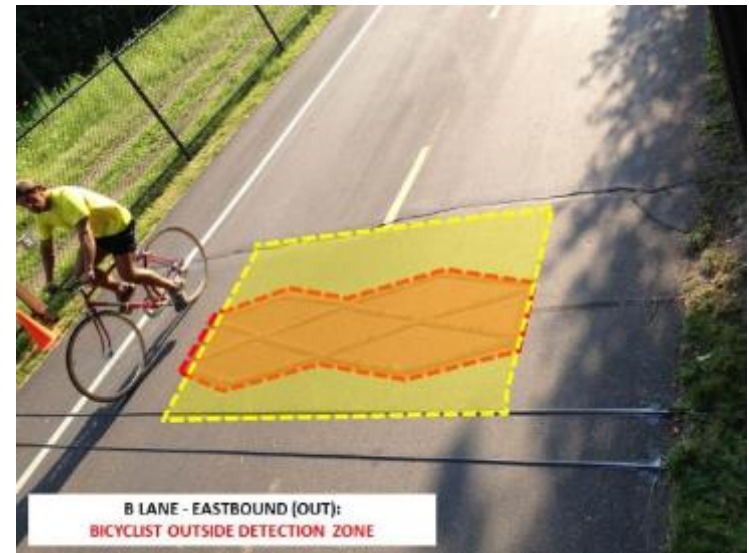
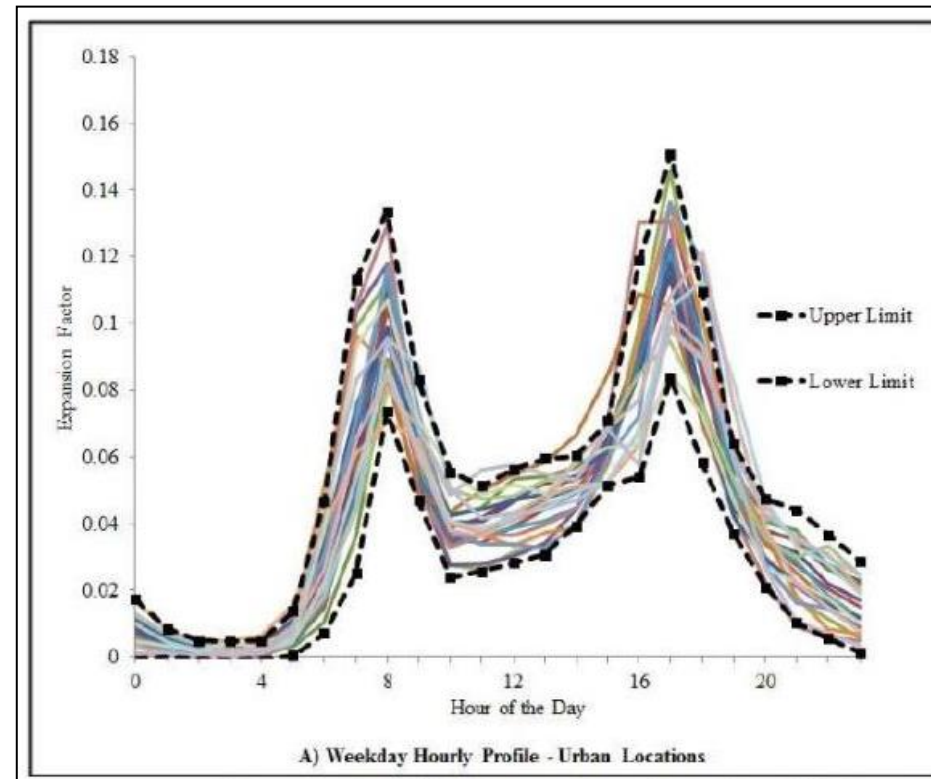


Image Credit: Tony Hull

# Technical Assistance Program: Webinars

- Webinar 1
  - Context
  - Selecting locations
  - Example of selection locations and factor groups
  - Duration and accuracy
  - Permissions and installation
  - Calibration introduction

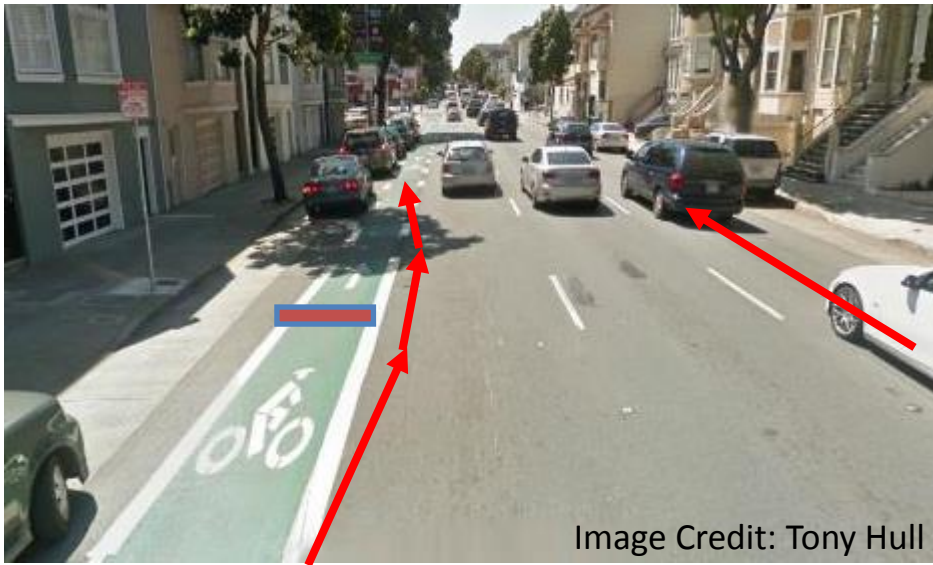


Source: Miranda-Moreno, Nosal, Schneider, & Proulx (2013)



# Technical Assistance Program: Webinars

- Webinar 2
  - Site Selection/Equipment Placement
  - Calibration and Testing of New Equipment
  - Introduction to Data Management



# Technical Assistance Program: Webinars

- Webinar 3
  - Factoring & Data Analysis
  - Download Data
  - Clean Data
  - Apply Automated Counter Correction Function
  - Analyze Data
    - Identify different types of activity patterns
    - Expand short-term counts to annual volume estimates (AADT)
  - Discussion of Progress & Challenges



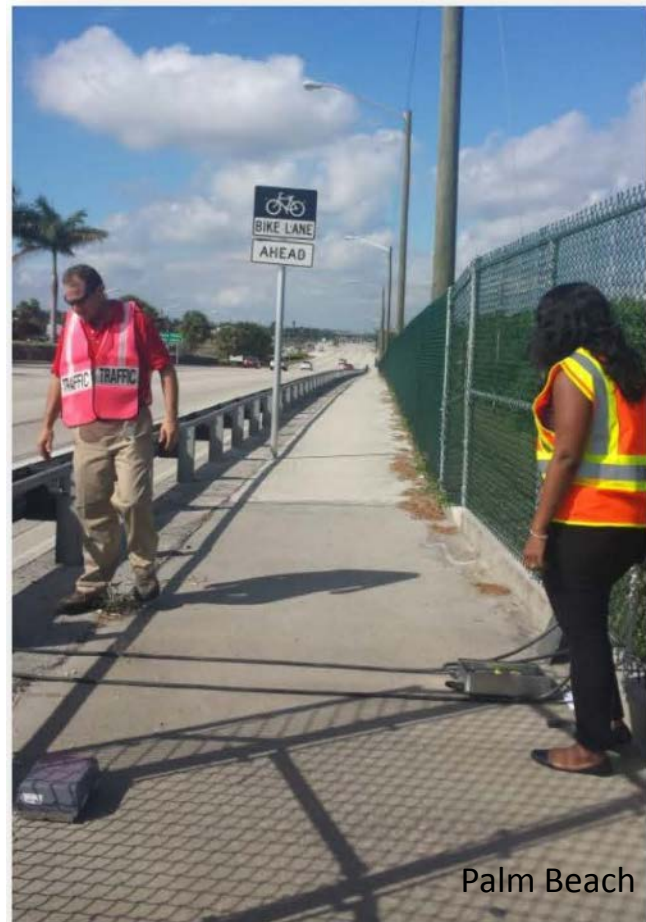
# Technical Assistance Program: Webinars

- Webinar 4
  - Using Your Data: Example Analysis Techniques
    - Using data from a statewide count program
    - Using count data to represent pedestrian exposure
    - University partnerships for leveraging count data
    - Demand estimation



# Counters Selected

- MPOs mostly purchased tube and infrared counters
- Procurement:
  - Some MPOs were able to sole source through one vendor after conducting research
  - Others had to have a competitive bid process



# MPO's Count Program Goals

- Mix of objectives, many trail locations and some before/after analysis
- Examples:
  - Richmond – Bike boulevard corridor study, lending library for jurisdictions use for regional database
  - Indianapolis, Cincinnati – Combination of trails and city facilities
  - Milwaukee - Trails, comprehensive exam of dedicated facilities



# Data Collected

- We have received sample data from Fresno and SEWRPC (Milwaukee)
- Will continue to ask MPOs for copy of data to help develop national database

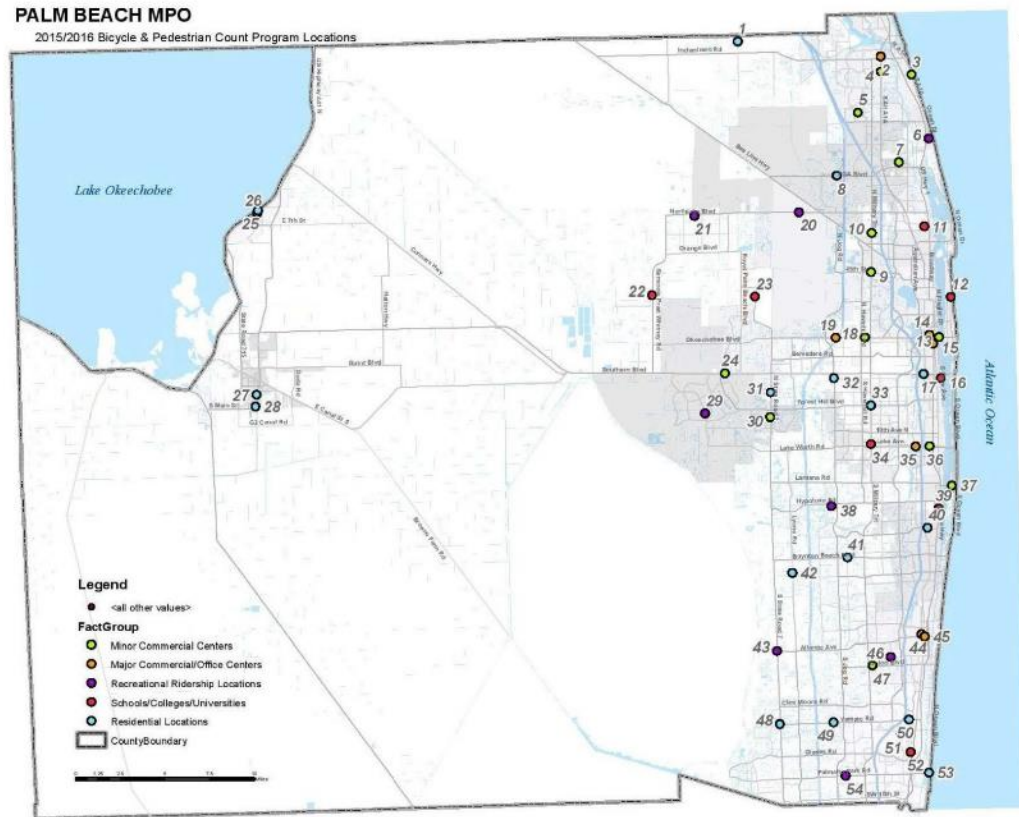


Figure 1: Palm Beach MPO 2015/2016 Bicycle and Pedestrian Count Program Map





# Challenges

- Procurement challenges
  - All MPOs did some count sites, roughly half have collected counts in the field
- Coordination with other agencies
  - Both an issue of locating on facilities with other jurisdictional control and also forming new partners and institutional relationships



# Next Steps and Discussion

- Outcomes report – developing resource and support for monitoring pedestrian and bicycle travel at the regional level
- Providing resource materials online
- DISCUSSION QUESTIONS:
  - Provide ideas about how best to promote bicycle and pedestrian counting
  - For new FHWA resource development – Want agency feedback on why you are counting, what you are doing counts
  - FHWA has strong Agency support – Provide any ideas about how to continue this momentum

