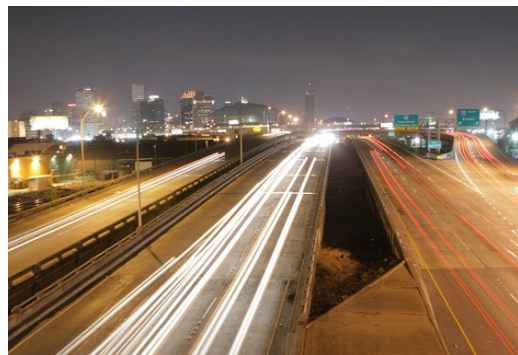


Active Living Research Annual
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Supporting Complete Streets Policy Implementation:

A Low-Cost Methodology for Evaluating Pedestrian
Safety and Prioritizing Investments

Overview:

- Introduction and Purpose of Research
- Description of Methods
- Findings
- Conclusions and Applications



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**New Orleans Regional Planning
Commission** (Project Partner)



Project Background



- Pedestrian Bicycle Resource Initiative, joint project with New Orleans MPO: bike/ped research and resources since 2006
- Significant pedestrian safety problem, **2011 FHWA Ped Safety Focus City**
- Complete Streets Policies adopted at State, MPO, and City level 2010-2012; implementation challenges frustrate advocates

Project Purpose

- **Problem:** Pedestrian crashes and fatalities represent a persistent problem nationwide. Existing safety analysis tools tend to be data-intensive and expensive
- **Research question:** How can we holistically evaluate pedestrian safety issues in a pragmatic, low-cost way to guide responsive engineering, education, and enforcement interventions?
- **Goal:** Synthesize existing tools into flexible framework for evaluating pedestrian safety, even where gaps in data persist

Description of Methodology

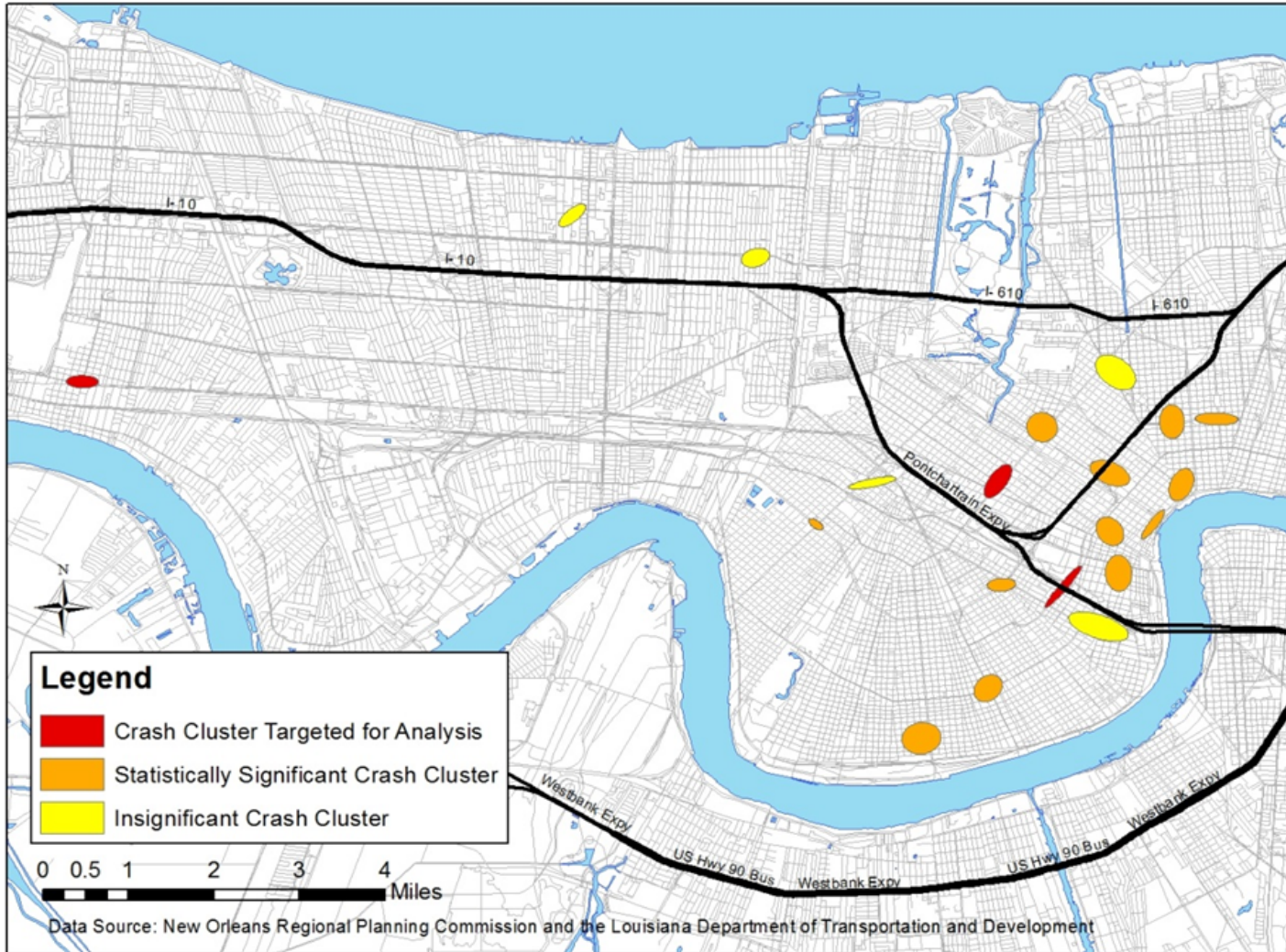
1. Identification and Analysis of Crash Clusters
2. Pedestrian Sidewalk and Intersection Audits
3. Pedestrian (and bicycle) counts
4. Evaluation of Area Context
5. Profile of Fatal and Severe Crashes
6. Identification of Recommended Interventions

Crash Data Analysis

- DOT crash data, 2006-2010
- General crash patterns: top intersections, corridors, neighborhoods
- CrimeStat “Spatial and Temporal Analysis of Crime” tool → statistically significant crash clusters

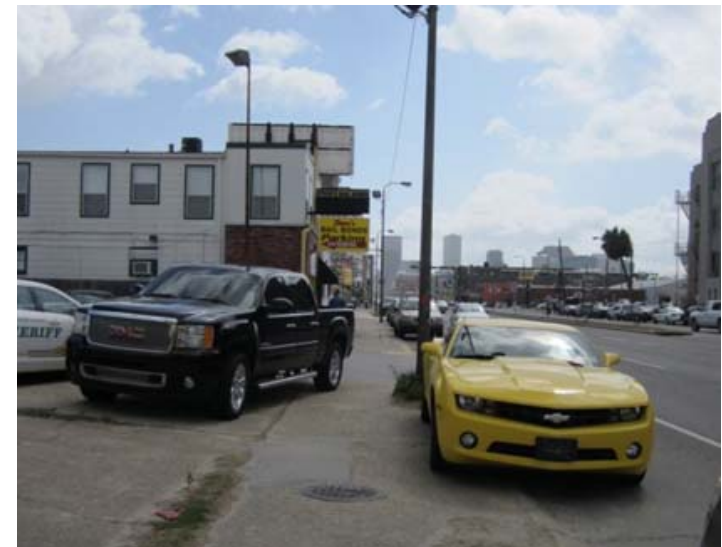


STAC Hotspot Tool



Crash Data Challenges

- Imprecise geographic data
- Lots of data missing
- Crash reporting bias
- Not a complete/fair picture of why crashes occur



Built Environment Audits

- Audit instruments for sidewalks and intersections
- Evaluates pedestrian attractors and detractors based on planning and public health best practices
- Shows systemic deficiencies as well as specific gaps/trouble spots in pedestrian environment



Built Environment Audits

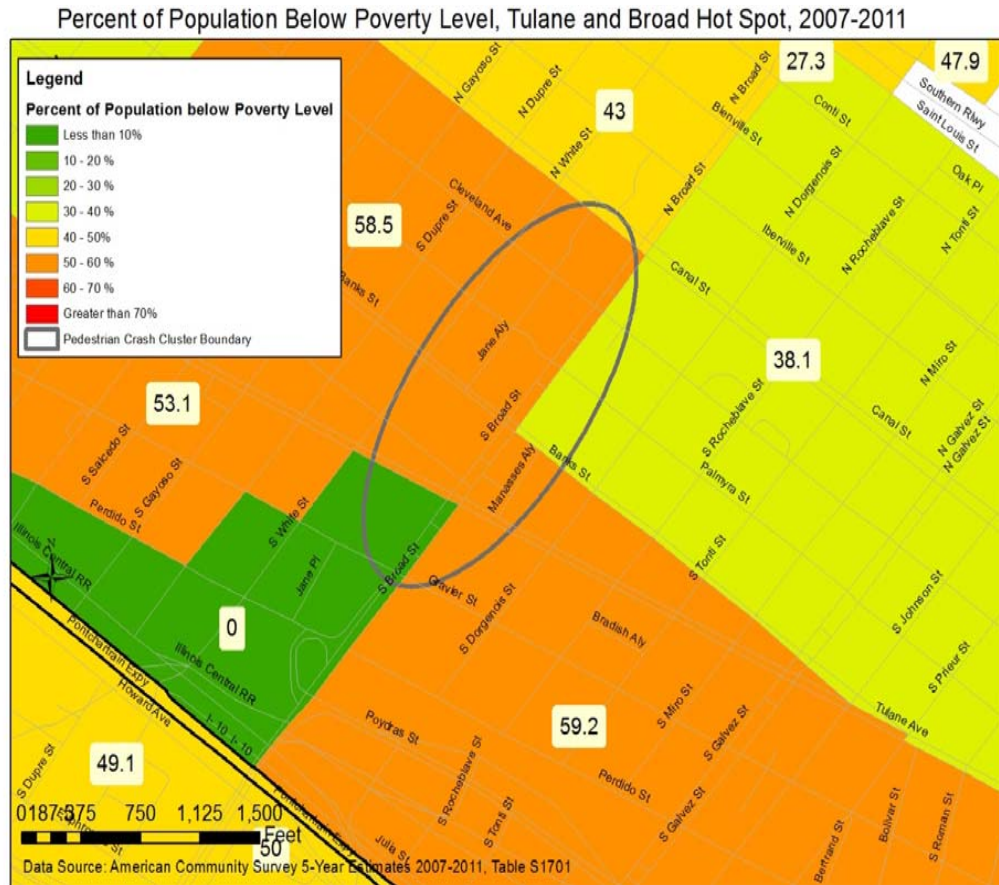


Pedestrian Counts

- Midblock Screen-line counts on two corridors per crash cluster
- National Bicycle and Pedestrian Documentation Project guidelines
- Volumes, age, race, sex, travel orientation
- Part of ongoing annual bicycle and pedestrian count program

Area Context

- Land Use
- Zoning
- Urban Design
- Transit
- Demographics



Crash Profiles

Location	Tulane Avenue & S Gayoso St
Severity	Fatal
Date	2/24/2009
Pedestrian Age	18
Pedestrian Sex	Male
Pedestrian Race	Black
Lighting Condition	Dark--Continuous Street Light
Weather	Clear
Primary Contributing Factor	Condition of Driver
Secondary Contributing Factor	Pedestrian Actions
Manner of Collision	Sideswipe--Opposite Direction
Hit and Run	No
Drugs or Alcohol	Alcohol
Violations Cited	Yes (Unspecified)
Pedestrian Actions	Crossing--Entering Road Not at Intersection
Pedestrian Condition	Unknown

Recommended Interventions

- Education, Enforcement, Engineering solutions all needed
- AASHTO and PROWAAG best practices; FHWA proven countermeasures
- Prioritization based on crash incidence, audit scores, user volumes, etc



Local Findings

- **Result:** Concise summary of identified shortcomings in the pedestrian environment, estimated user demand, and suggested countermeasures to improve safety for a given area.
- Highlights need for systemic changes in pedestrian accommodation and in crash data collection and dissemination (policy change!)

Applications for Practice

- 1. Evaluate** pedestrian conditions at the project level and identify recommended improvements
- 2. Prioritize** investments across a jurisdiction in order to ensure that resources are applied where most needed
- 3. Measure** progress toward policy implementation, capturing changes in key metrics including crash totals and severity, built environment audit scores, and user volumes over time.

Applications for Research

- Possible Topics:
 - Development of statistically valid model for investment prioritization
 - Additional/expanded built environment auditing tools
 - Tools for evaluating driver behavior and identifying countermeasures
- *Important note:* A simple, imperfect tool **that gets used** is better than an elaborate analysis package that sits on a shelf!

Conclusions

- Complete Streets approach demands simple, flexible tools that promote data-driven decision making, equitable investments, maximum impact for all users, all modes
- **Early win:** integration of framework into Ped Safety Action Plan
- **Ongoing Goal:** data-driven Complete Streets implementation processes at all levels!





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