Assessing Walkability Using Structured Observation of the Built Environment: Are Los Angeles Neighborhoods Walkable?

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Presenter Disclosures

Background

What is walkability?

The ability of the built environment to
support and encourage walking,
including the *quality* and *safety*
of the environment
from the perspective of pedestrians

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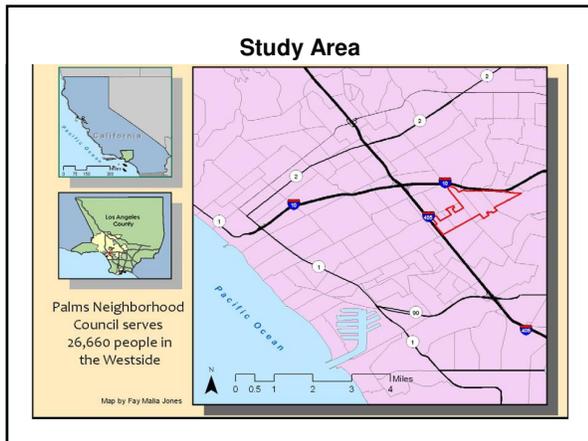How safe, easy and enjoyable is it to walk
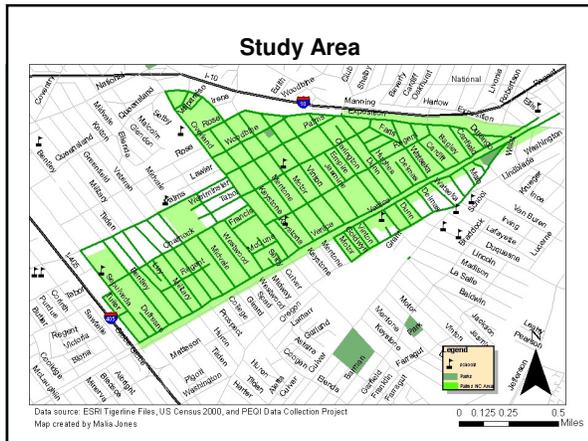around here?

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Project Goals

1. Promote community engagement and awareness on issues of walkability and city planning
2. Perform a complete walkability assessment of study area.
3. Inform local walkability planning needs at the level of City government.
4. Disseminate the methodology used in this study to other neighborhoods.

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Methods

Study Area

Palms Neighborhood Council serves 26,660 people in the Westside

Map by Fay Malia Jones

Study Area

Data source: ESRI Tigerline Files, US Census 2000, and PEQI Data Collection Project
Map created by Malia Jones

The Pedestrian Environmental Quality Index (PEQI)

- Structured observational measure of walkability
- Developed by the San Francisco Department of Public Health (SFDPH)
- Designed to produce an aggregate measure of walkability on a block-by-block basis.
- Predicts key health determinants

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PEQI domains

1. Intersection safety
   - Presence of crosswalks, visibility of crosswalks, time allowed to cross
2. Traffic
   - Number of lanes, vehicle speed
3. Built Environment Design
   - Width of sidewalk, sidewalk quality, presence of curb, etc
   - Aesthetic qualities: trees, planters, public seating, etc.
4. Land Use
   - Public art and retail use
5. Perceived safety
   - Illegal graffiti, litter, lighting, etc.

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Adaptation of PEQI

- San Francisco ≠ Los Angeles
- Significant adaptation of PEQI
  - Remove irrelevant items
    - E.g., "ladder crosswalks"
  - Add items
    - Stop signs, curb cuts at crossing, bike racks, etc.
  - Signals are not assumed to be needed at every intersection
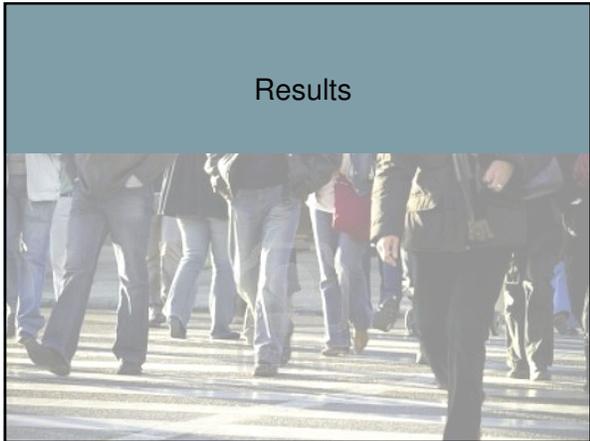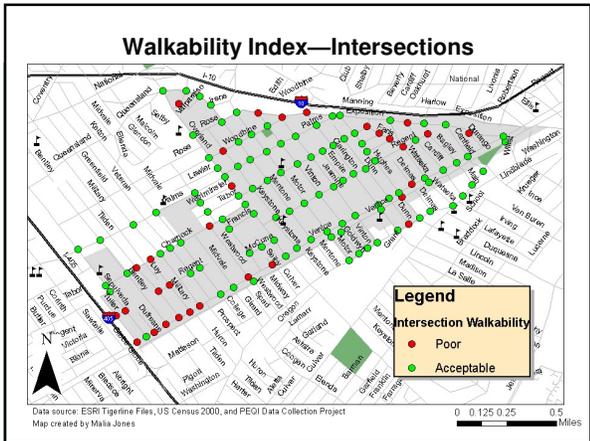 - Corresponding revisions to the Walkability Index

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Training and Data Collection
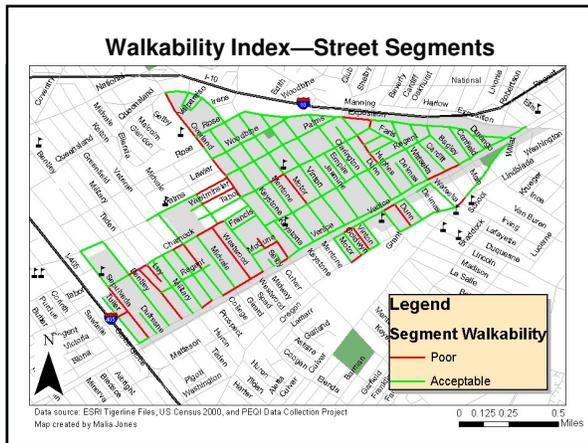
- 2 Events
- 31 Volunteers
- 2-hour training
- 4-hour data collection
- 36 items
- 133 intersections
- 214 street segments
- 22 linear miles

Results

Walkability Index—Intersections

Legend
Intersection Walkability
- Poor
- Acceptable

Data source: ESRI Tigerline Files, US Census 2000, and PEQI Data Collection Project
Map created by Malia Jones

0 0.125 0.25   0.5
Miles

Walkability Index—Street Segments

Legend

Segment Walkability
— Poor
— Acceptable

Data source: ESRI Tigerline Files, US Census 2000, and PEQI Data Collection Project
Map created by Malia Jones

0   0.125 0.25   0.5 Miles

Presence of Curb Ramps

Legend

Curb Ramps
▣ Not missing
▣ Missing

Data source: ESRI Tigerline Files, US Census 2000, and PEQI Data Collection Project
Map created by Malia Jones

0   0.125 0.25   0.5 Miles

Sidewalk Condition

Legend

Sidewalk condition
— Major problems
— Some problems
— Acceptable

Data source: ESRI Tigerline Files, US Census 2000, and PEQI Data Collection Project
Map created by Malia Jones

0   0.125 0.25   0.5 Miles

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Presence of Litter

Legend
Litter
— No Litter
— Litter

Data source: ESRI Tigerline Files, US Census 2000, and PEQI Data Collection Project
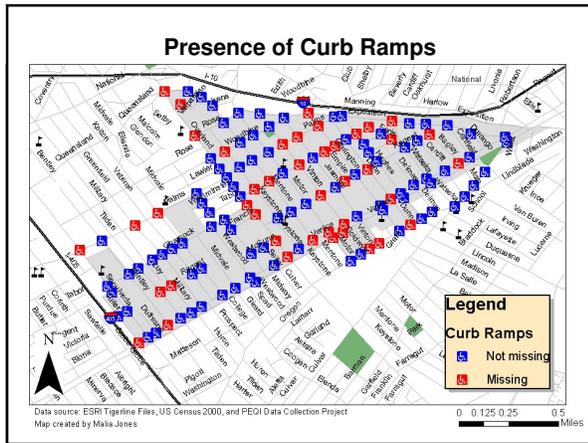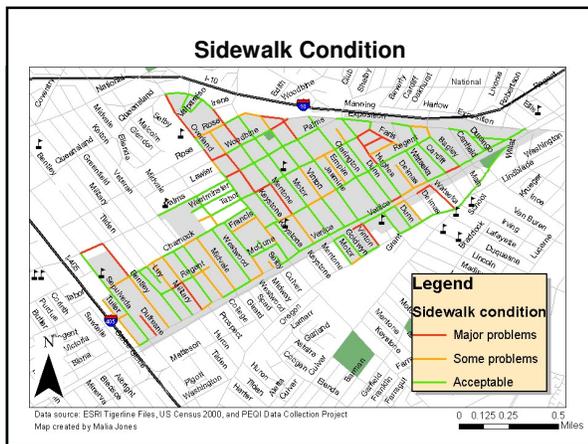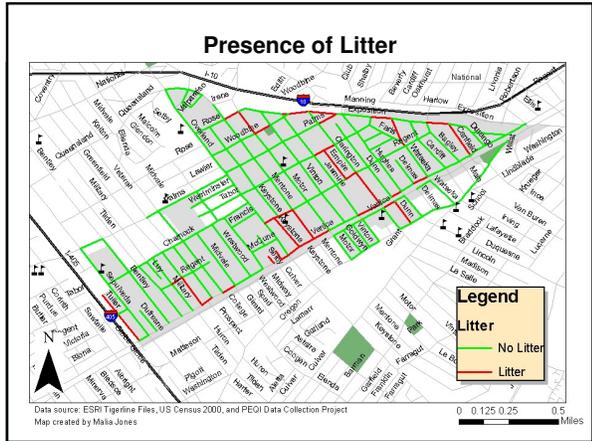Map created by Malia Jones

0   0.125 0.25   0.5
Miles

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Results presented to Community & City

- Priority List
  - Litter and graffiti widespread
  - Curb ramps missing on many corners
  - Traffic signals needed on some major street crossings
  - Sidewalk conditions are poor

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Community Engagement Results

- Volunteer responses
  - Excited, enlightened, and exhausted
  - "Educational", "… changed the way I see pedestrians", "learned so much about Palms"
  - Useful to learn terminology for future advocacy

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Outcomes

Neighborhood Improvements

- Regular community litter cleanup project

- Request for additional crosswalks/improvements
- 2 new left-turn signals
- Cleanup projects to address vacant lots

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Community Engagement

- Successful way to get community involved
- Increased awareness and engagement on issues of obesity, walkability, and city planning for health
  - Individuals
  - In Neighborhood Council

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PEQI Dissemination

- Presentation to City Dep't of Public Works
- 2 additional communities
- Publically available PEQI toolkit
  - English and Spanish versions
  - Mobile app

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Acknowledgments

- We are indebted to the San Francisco Department of Public Health for the original PEQI instrument and training guide
- This work was supported by small grants from the UCLA Students of Color for Public Health, the City of Los Angeles, and the Wilshire Foundation
- Photos by Rosa Calva

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Resources

- Publically available Los Angeles PEQI toolkit: http://www.coeh.ucla.edu/node/127
- Original PEQI and training guides: http://www.sfphes.org/HIA_Tools_PEQI.htm

Thank you!

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Extra slides

Perceived Barriers to walking exist in the built environment

- Danger from motor vehicles, crime & violence
- Lack of sidewalks or poor repair/design of sidewalks
- Aesthetic qualities of the area (shade, noise, attractiveness of paths)
- Existence and quality of facilities for exercise (e.g., parks, sports fields/courts, walking paths, etc)
- Lack of support at destinations (e.g., bike racks, showers, dress codes)
- Connectivity of streets/availability of direct routes to destinations
- Distance to destinations

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Walkability and health

- Better walkability:
- Reduces our dependence on cars
  - This reduces air pollution, noise pollution, AND traffic accidents.
- Increases physical activity
  - Regular moderate physical activity (such as walking or cycling) reduces the risk of chronic disease
- Improves social support and engagement in communities

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