FLETCHER AVENUE PEDESTRIAN AND BICYCLIST BEHAVIOR CHANGE FORMATIVE RESEARCH PROJECT

“EXTENT OF CHANGES IN PEDESTRIAN AND BICYCLIST ATTITUDES AND BEHAVIORS DIRECTLY AFTER A COMPLETE STREETS PROJECT IN FLORIDA”

PRESENTED BY

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PRESENTATION OBJECTIVES

- Understand how the “Five E” approach to make streets safer and enjoyable for all road users (Education, Enforcement, Engineering, Encouragement, Evaluation) complement each other
- Define Complete Streets
- Learn how Journey Mapping is utilized
- Understand behavior change is complex

PROJECT BACKGROUND

- **Fletcher Avenue, Tampa, FL**
  - Hillsborough County Complete Streets Project
  - Between Nebraska Avenue and Bruce B Downs Boulevard
  - One of the highest pedestrian crash rates in Hillsborough County

- County unveils Fletcher Avenue designs
COMPLETE STREETS

- **Complete Streets are streets for everyone.** They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.


FLETCHER AVENUE COMPLETE STREETS PROJECT

- Five midblock pedestrian crossings incorporating Rectangular Rapid Flashing Beacons
- One mid-block pedestrian crossing with traffic signal (by Walmart)
- Raised concrete pedestrian refuge islands
- Raised concrete traffic separators
- Bike Lanes
- Energy Efficient LED Street Lighting
- Enhanced Landscaping
- Lowered speed limit from 45 MPH to 35 MPH
FLETCHER AVENUE COMPLETE STREETS PROJECT RENDERING

FIVE “E” APPROACH

- **Engineering** - Hillsborough County Complete Streets Project
- **Education** - WalkWise Tampa Bay presentations
- **Enforcement** - Hillsborough County Sheriff
- **Encouragement** - Partnerships with local businesses
- **Evaluation** - Hillsborough County
PURPOSE OF RESEARCH

• To study perceptions, attitudes and behaviors of walking, biking and safety along Fletcher Avenue
• To see if attitudes and behaviors changed directly after the completion of the Complete Streets Project
• To determine the most effective way to educate the users of Fletcher Avenue

RESEARCH PROJECT OBJECTIVES

• Formative research with individuals who regularly cross Fletcher Avenue was used to clarify:
  (1) how individuals currently cross Fletcher Avenue (current behavior)
  (2) the willingness of individuals to properly use the crosswalks
  (3) opinions about crosswalks, including motivators and barriers to using crosswalks (cost/benefit)
  (4) barriers individuals experience related to not properly using the crosswalks (e.g. safety, time) that they would like to overcome (competition)
  (5) the marketing channels that individuals would respond to the best
RESEARCH METHODOLOGY

Observations
- Before and after Complete Streets completion (Oct 2014 & Feb 2015)
- 4 signalized intersections
- 16 hours of data collection each month
- Off-peak times of the week
- Schedule identical for both months

On-the-Spot Surveys
- Before and after Complete Streets completion (Oct 2014 & Feb 2015)
- 4 signalized intersections

Journey Mapping
- After Complete Streets completion (Jan 2015)

Intercept Interviews
- After Complete Streets completion (Mar/Apr 2015)

SAMPLE CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Mode</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian</td>
<td>606</td>
<td>899</td>
<td>123</td>
<td>142</td>
<td>83</td>
</tr>
<tr>
<td>Bicycle</td>
<td>245</td>
<td>282</td>
<td>50</td>
<td>32</td>
<td>14</td>
</tr>
<tr>
<td>Wheelchair</td>
<td>16</td>
<td>17</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean 42.4 years</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>72</td>
</tr>
<tr>
<td>Female</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>26</td>
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<tr>
<td><strong>Access to a Private Vehicle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>53</td>
<td>58</td>
<td>32</td>
</tr>
<tr>
<td>No</td>
<td>120</td>
<td>172</td>
<td>117</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td><strong>Residence Distance from Fletcher Avenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within ½ mile</td>
<td>NA</td>
<td>NA</td>
<td>81</td>
<td>59</td>
<td>58</td>
</tr>
<tr>
<td>Greater than ½ mile</td>
<td>92</td>
<td>116</td>
<td>59</td>
<td>66</td>
<td>40</td>
</tr>
<tr>
<td>Homeless</td>
<td>NA</td>
<td>NA</td>
<td>8</td>
<td>8</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### OBSERVATIONS

<table>
<thead>
<tr>
<th>Before Completion</th>
<th>After Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oct 2014</strong></td>
<td><strong>Feb 2015</strong></td>
</tr>
<tr>
<td>Pedestrians</td>
<td>Pedestrians</td>
</tr>
<tr>
<td>76.6% used crosswalk</td>
<td>72.7% used crosswalk</td>
</tr>
<tr>
<td>38.2% crossed on white</td>
<td>47.6% crossed on white</td>
</tr>
<tr>
<td>44.0% pressed signal button</td>
<td>51.2% pressed signal button</td>
</tr>
<tr>
<td>18.1% distracted</td>
<td>14.2% distracted</td>
</tr>
</tbody>
</table>

### OBSERVATIONS - PEDESTRIANS

[Images of pedestrian crossings before and after completion]
### OBSERVATIONS

<table>
<thead>
<tr>
<th>Before Completion</th>
<th>After Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oct 2014</strong></td>
<td><strong>Feb 2015</strong></td>
</tr>
<tr>
<td>• Bicyclists</td>
<td>• Bicyclists</td>
</tr>
<tr>
<td>• 97.8% not wearing helmet</td>
<td>• 95.5% not wearing helmet</td>
</tr>
<tr>
<td>• 84.8% riding on sidewalk</td>
<td>• 77.7% riding on sidewalk</td>
</tr>
<tr>
<td>• 57.1% of those riding on road riding with traffic</td>
<td>• 88.1% of those riding on road riding with traffic</td>
</tr>
</tbody>
</table>

### OBSERVATIONS - BICYCLISTS

- Image 1: Bicyclist on sidewalk
- Image 2: Bicyclist on road with traffic
ON-THE-SPOT SURVEYS

**Before Completion**
Oct 2014

- 69.2% no vehicle access
- 54.3% walks/bikes every day
- 19.1% walks/bikes a few times per week

**After Completion**
Feb 2015

- 66.9% no vehicle access
- 56.3% walks/bikes every day
- 22.4% walks/bikes a few times per week

REASON FOR TRAVELING ON FLETCHER AVENUE

**Before Completion**
Oct 2014

- Work 11.6%
- Bus Stop 7.5%
- Health Care 8.9%
- Exercise 8.8%
- Errands 15.0%
- Retail 36.4%
- Other 16.8%

**February 2015 After Completion**

- Work 13.3%
- Bus Stop 9.8%
- Health Care 10.4%
- Exercise 12.4%
- Errands 17.3%
- Retail 35.6%
- Other 14.5%
REASONS FOR NOT USING CROSSWALKS ON FLETCHER AVENUE

FEELINGS OF SAFETY CROSSING FLETCHER AVENUE
FLETCHER AVENUE JOURNEY MAPPING

- “Walk in their shoes” to gain a customer point of view

ACTUAL JOURNEY ALONG FLETCHER AVENUE

- Walked round-trip along Fletcher Ave from Walmart to Revere Landings Apartments
FIRST CROSSING - WALMART

SIDEWALK BLOCKED
CROSSWALK SIGNAGE

BUS STOP
WAITING FOR SIGNAL TO CHANGE

LIMITED VISIBILITY AT CROSSWALK
FLASHING BEACONS

SIDEWALK MESSAGE
SIGNS

drivers blocking crosswalk
# PEDESTRIANS ON FLETCHER AVENUE

- Walk to crosswalk
- Push crosswalk button
- Wait for signal to change
- Cross
- Walk to next crosswalk

## JOURNEY MAPPING EMOTIONAL EXPERIENCE

<table>
<thead>
<tr>
<th>Steps</th>
<th>Walk to crosswalk</th>
<th>Push crosswalk button</th>
<th>Wait for signal to change</th>
<th>Cross</th>
<th>Walk to next crosswalk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

## Problems or Improvement Opportunities

- Pedestrian signals at intersections could change automatically
- Not sure if traffic lights are operational; safety – driver behavior
- Some sidewalks blocked; safety
INTERCEPT INTERVIEWS

- March/April 2015 – after Complete Streets completion
- 98 participants
  - 83 walking
  - 14 bicycling
  - 1 wheelchair
- 67.3% no access to vehicle
- 85% walk daily or several times per week on Fletcher Avenue
- 59.3% live within ½ mile of Fletcher Avenue
  - 8 participants homeless

INTERVIEWEE DEMOGRAPHICS

- 73.5% male
- Average age = 42.4 years
REASONS FOR WALKING/BIKING ALONG FLETCHER AVENUE

- Shopping: 52
- Other: 39
- No vehicle: 26
- Health: 16
- Convenient: 15
- Getting places: 14
- Bus stop: 14
- Restaurants: 10
- Live close by: 7
- Leisure or pleasure: 7
- Medical: 6

PERCEPTIONS OF SAFETY ON FLETCHER AVENUE

- "No [I do not feel safe]; cars don’t want to stop. Only about forty-five percent of cars stop at the [RRFB] lights, they feel the pedestrians abuse it. They don’t want to stop and be inconvenienced."

- "I don’t feel safe, I feel cautious. You do right of way but drivers don’t care. Seventy percent of drivers don’t know [pedestrians have] right of way, are distracted, or have no signal and are turning. [Drivers] have tinted windows and you can’t make eye contact. [Drivers are] concerned that the car behind will blow the horn."
RECTANGULAR RAPID FLASHING BEACON (RRFB)

WAYS TO STAY SAFE ON FLETCHER AVENUE

- “Look before you cross. Be very careful and watch for cars because they don’t stop. Be cautious, look both ways and take a second look.”

- “Pay attention to surroundings. Be aware. Just because you are paying attention doesn’t mean others are.”
FLETCHER AVENUE SIGNALIZED INTERSECTION

PERCEPTIONS OF FLETCHER AVENUE CROSSWALK USERS

• “Elderly are more careful than young teens.”

• “Children with them, families [use crosswalks].”

• “Kids and teens and men don’t use [crosswalks] and when they do use [crosswalks], they don’t wait for the light to change.”

• “Younger don’t understand life itself, [they] take more chances which is how people get hit.”
BARRIERS TO USING CROSSWALKS ON FLETCHER AVENUE

- It is not always convenient to walk to the crosswalk. This is the only reason I can think of why someone would avoid safety.

- Lack of convenience. When trying to get to the Family Dollar and the laundry mat, there is no crosswalk nearby.
FAMILY DOLLAR/LAUNDRY MAT

MOTIVATORS TO USE CROSSWALKS ON FLETCHER AVENUE

- Police, tickets: 27
- More crosswalks: 19
- Personal experiences: 12
- Marketing & education: 12
- Change signal light color: 7
- Safer crosswalks: 7
- Change driver behavior: 6
- Decrease signal wait time: 5
- More signs: 4
- Policy changes: 4
- Social norming: 3
- More bus stops: 1
FLETCHER AVENUE MID-BLOCK CROSSING

TALKING ABOUT SAFE WALKING & BIKING

- “Outreach; public outreach by walking the streets and open promotion.”

- “What you are doing – talking, walking, by the same people every day.”

- “Do what you are doing. Give out safety items, vests, and lights.”
CONCLUSIONS

- To influence behavior change, it is important to completely understand the problem, and identify what the important barriers are that people are facing.
- Dangerous behaviors continue to exist after completion of the Fletcher Avenue Complete Streets project.
- Approximately half of users still feel unsafe.
- A Five “E” approach is critical to encourage safe driver, pedestrian and bicyclist behaviors.
- Continuing education is important after Complete Streets are in place.
QUESTIONS

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