Stepping Up for Pedestrian Safety

May 30, 2012 at Orlando Health

Best Foot Forward is a coalition of elected officials, civic leaders, public safety professionals, educators, transportation planners, officers, doctors, nurses, entrepreneurs and concerned citizens joining together to improve pedestrian safety.

Initiated by Bike/Walk Central Florida under the leadership of former Orange County Mayor Linda Chapin, the founding coalition includes MetroPlan Orlando, Orange County Government, City of Orlando, LYNX, Orange County Public Schools, Orlando Health, Winter Park Health Foundation, Florida Department of Transportation (FDOT), Florida Bicycle Association, Track Shack, Dave’s World Cycle, Orange Cycle and the cities of Winter Park, Maitland, Winter Garden, Apopka, and the towns of Eatonville and Windermere as well as police chiefs throughout Orange County led by Orlando Police Chief Paul Rooney and Orange County Sheriff Jerry Demings.

As a former Mayor of Orange County, and a concerned citizen, I think we should address this problem - today, before anyone else gets hurt. It’s time for us to come together as a community and put our Best Foot Forward for pedestrian safety.

—Linda Chapin

The Goal

Improve pedestrian safety by getting drivers to yield to pedestrians in crosswalks and getting pedestrians to be more careful crossing the street.

The Mission

Increase pedestrian safety by getting drivers to yield to pedestrians in crosswalks and getting pedestrians to be more careful crossing the street.

The Method

A “Triple E” strategy to improve pedestrian safety.

The Evaluation

Track % of drivers yielding to pedestrians at crosswalks.

50% decrease in pedestrian fatalities/injuries

5 years
The statistics are alarming.

On average, a pedestrian is killed every week in Metro Orlando, and two are injured every day. This is for doing something as simple, and necessary, as crossing the street. Metro Orlando has topped the list of the most dangerous regions for pedestrians for almost a decade. With gas prices rising, and SunRail expected to put even more pedestrians on our streets, this problem will only get worse.

Our community has joined together to address this problem: the Winter Park Health Foundation, MetroPlan Orlando, City of Orlando, Orange County Government including the Orange County Sheriff, Florida Department of Transportation, Orlando Police Department, Track Shack, Orange Cycle, and David’s World Cycle have generously combined financial resources to build a formidable pedestrian safety coalition of transportation planners, local governments, law enforcement agencies, transit authorities, school administrators, health professionals, entrepreneurs and safety advocates whose efforts have been coordinated by Bike/Walk Central Florida.

Best Foot Forward for pedestrian safety was launched on May 30, 2012, with two goals: to increase drivers’ yielding behavior to over 70% and reduce injuries and deaths by 50% over five years.

Our methods are sound – in our first year utilizing the “Triple E” approach (combining Engineering with community Education and high-visibility Enforcement) which Gainesville and St. Petersburg, among others, have found successful, we’ve seen positive driver behavior changes. Before the launch of Best Foot Forward, only 12% of drivers yielded to pedestrians on roads posted at 35 mph and less. A year later, that number has jumped to 48%. This is a great start but we still have much more work to do. The problem evolved over time and will take continuing vigilance.

Please take a few moments and read the Best Foot Forward Annual Report that details the program and progress and offers recommendations that ensure our streets can become safe for all users.
The Triple E Impact

**Long Term Goal:**
Reduce pedestrian fatalities and injuries by half in five years

**Short Term Success:**
Measured by the percentage of drivers yielding to pedestrians at crosswalks on roads posted at 35 mph and less

Studies show once 40% of drivers yield, it may create the tipping point for 80% compliance.

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**Evaluation**

**Long Term Goal:**
Reduce pedestrian fatalities and injuries by half in five years

**Short Term Success:**
Measured by the percentage of drivers yielding to pedestrians at crosswalks on roads posted at 35 mph and less

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**Year One Overview**

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**Driver Yield Rates Improve in First Year**

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**Studies show once 40% of drivers yield, it may create the tipping point for 80% compliance.**
Metro Orlando
Most Dangerous for Pedestrians

On average: Two pedestrians are injured every day in Central Florida and one is killed every week.
—Dangerous by Design

Why do we top the list as most dangerous?
Let’s start with the numbers. Walkers aren’t common in Metro Orlando, especially with only 1.2% of people walking to work, so drivers aren’t looking out for them. Sound strange? Well, New York City-Northern New Jersey-Long Island is home to the highest number of people who walk to work and is considered one of the safest cities for pedestrians.
The lack of walkers coupled with the automobile-oriented design of big wide arterials in the region, creates a challenge for pedestrians and drivers.
The Best Foot Forward coalition joined forces to do something about this – improve pedestrian safety using the “Triple E” of education, enforcement and engineering.

Metropolitan Areas Ranked as the Most Dangerous Places to Walk by Transportation for America
1. Orlando-Kissimmee
2. Tampa-St. Petersburg-Clearwater
3. Jacksonville
4. Miami-Fort Lauderdale-Pompano Beach

Dangerous by Design, Transportation for America 2011
http://bit.ly/k9P1Lk

ORLANDO, Fla. – As any pedestrian in Florida knows, walking in this car-obsessed state can be as tranquil as golfing in a lightning storm. Sidewalks are viewed as perks, not necessities. Crosswalks are disliked and dishonored. And many drivers maniacally speed up when they see someone crossing the street.

“The Orlando-Kissimmee region was first out of 52 in the rankings of most dangerous pedestrian regions, with more than 550 pedestrians killed from 2000 to 2009. This translates to an annual fatality rate of 3 per 100,000 people. Second was Tampa-St. Petersburg-Clearwater, followed by Jacksonville and Miami-Fort Lauderdale-Pompano Beach.”
— Ms. Cindy Berdeguez comments about dashing across Semoran Boulevard, a six-lane state road where some cars and trucks whiz by at 60 miles per hour (the speed limit is 45), to get to Catholic Charities, which sits squarely across the wide road from the bus stop.

On Wide Florida Roads, Running for Dear Life

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Best Foot Forward launched the "Triple E" initiative in Orange County, Florida and the largest city in the county, the City of Orlando. To put the crash statistics in perspective, please take a moment and read about Orange County and the City of Orlando.

**Orange County**
Orange County is an estimated 908 square miles, equivalent to the state of Rhode Island, with ten cities and three towns. In 2010, the census estimated the population at 1.1 million residents where an estimated 64% of residents live in unincorporated areas of Orange County. There are over 2,600 miles of county roads in Orange County.

Of the 154 total traffic fatalities in Orange County in 2011-2012, 24% are pedestrian fatalities whereas only 5% are bicyclists fatalities.

**City of Orlando**
The City of Orlando is the largest city in Orange County with a population of 238,300 residents according to the 2010 census. There are 115 neighborhoods within the city limits of Orlando and many unincorporated communities. The city's famous attractions form the backbone of Orlando's tourism industry, attracting over 50 million tourists a year. With SunRail opening in 2014, city and county planners, LYNX officials, schools and businesses are expecting more pedestrians and bikers in the downtown corridor.

21% of fatalities occur in a marked crosswalk.

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A closer look at Fatalities & Injuries

Orlando Health is proud to be home to Central Florida’s only Level One Trauma Center. The pedestrian injury and fatality data provides an overview of the ages, locations and types of injuries of patients admitted to the Level One Trauma Center.

### Fatalities & Injuries

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#### Age
- **Average age of driver who killed a pedestrian:** 36
- **Average age of pedestrians who are killed:** 45
- **Average age of pedestrians who are injured:** 35

#### Gender
- **70%** Males injured
- **70%** Males killed

#### Residence
- **80%** Injured reside in Central Florida*
- **53%** Killed reside outside of Central Florida*

*Includes Brevard, Lake, Orange, Osceola, Polk, Seminole, and Sumter counties

#### Injury Type
- **59%** Fracture
- **41%** Head injury

#### Length of Stay at ORMC
- **40%** Less than one day
- **44%** One to four days
- **16%** More than five days
From Findings to Taking Action

Defining the Problem
Two pedestrians are injured each day in Metro Orlando, and one is killed every week, garnering the tourist mecca the dubious distinction of “Most Dangerous” region in the country for pedestrians during the past decade. This, for doing something as simple, and necessary, as crossing the street. With gas prices rising, and SunRail expected to put even more pedestrians on our streets, this problem is likely to only get worse.

Localizing the Solution
MetroPlan Orlando, along with Winter Park Health Foundation and Bike/Walk Central Florida sought a long term behavior change initiative with an overreaching goal of reducing pedestrian fatalities and injuries by 50% during the next five years. They spent a year conducting market research and studying other municipalities to localize an actionable plan to improve pedestrian safety.

Setting the Stage
MetroPlan Orlando Pedestrian Safety Action Plan identifies the most pressing pedestrian crash problems and solutions.

Civility Research Report
Examines prevailing beliefs and attitudes of drivers, bicyclists and pedestrians in Orlando (Salter Mitchell, 2009).

Dangerous by Design

Best Practices
Researched proven protocols and measurable outcomes. Invited the Center for Education and Research in Safety (CERS) to help launch Triple E program.

Location Selection
Best Foot Forward team worked with local law enforcement, traffic engineers, transportation staff and consultants to pick locations within Orange County and the City of Orlando for intervention.

Field Data Collection
Observed and recorded driver yield rates for crossings over time at select locations.

Taking Action
The Best Foot Forward initiative was launched in May 2012 and initiated by Bike/Walk Central Florida and under the leadership of former Orange County Mayor Linda Chapin.

Coalition funding partners include MetroPlan Orlando, Winter Park Health Foundation, City of Orlando, Orlando Police Department, Orange County Government, Orange Cycle, Track Shack, and David’s Cycle with support from Orange County Public Schools, Orlando Health, LYNX, Florida Department of Transportation (FDOT), Florida Bicycle Association, with Resolution support from the City of Orlando, Winter Park, Maitland, Winter Garden, the town of Eatonville, as well as the police chiefs throughout Orange County led by Orlando Police Chief Paul Rooney and Orange County Sheriff Jerry Demings.

Nowhere else in the state has a formidable coalition formed to tackle a safety issue of this scale.

Long Term Goal: Reduce pedestrian fatalities and injuries by half in five years

Short Term Success: Measured by the percentage of drivers yielding to pedestrians at crosswalks on roads posted at 35 mph and less.
Objectives Defined

1. Build a powerful coalition of community leaders

2. Elevate pedestrian safety to a top community concern

3. Get more drivers to yield at marked but uncontrolled crosswalks

4. Bring the message “home” via presentations to neighborhood safety organizations, community workshops, and events.

5. Leverage traditional and nontraditional media to establish dialogue and build community.

“Orlando happens to have the dubious honor of having one of the highest pedestrian vs. auto incident accident rates in the country. Best Foot Forward, and our team, are here to help stop that.”

John Promes, MD
Trauma Medical Director
Orlando Regional Medical Center

Strategic Approach

1. Develop a branded, grassroots pedestrian safety initiative focusing on Orange County drivers in year one.
2. Recruit safety champions: elected officials, traffic planners, law enforcement, public transit, tourism, trauma, education, non-profit, business and advocacy leaders.
3. Implement proven “Triple E” method of high visibility enforcement, low-cost engineering and educational outreach to foster long term behavioral change.
4. Bring the message “home” via presentations to neighborhood safety organizations, community workshops, and events.

Results:

- 100% active support at the highest levels of the community and in local government
- 7 official resolutions of support from Orange County and most of its incorporated cities and towns
- City of Orlando proclaimed May 30, 2012 as Best Foot Forward Day
- Top-level engineering support from MetroPlan Orlando, FDOT, City of Orlando, Orange County and most of its incorporated cities and towns
- Personal commitments from Orlando Police Chief and Orange County Sheriff
- Orange County Public School (OCPS) board approved WalkSafe pedestrian curriculum.
Objective 2: Elevate pedestrian safety to a top community concern

**Results:**
- MetroPlan Orlando made pedestrian safety its top priority and approved a pedestrian safety action plan.
- Florida Department of Transportation (FDOT) launched state-wide pedestrian safety campaign: Alert Today. Alive Tomorrow.
- Orlando Mayor Buddy Dyer included the issue in his annual State of the City address.
- Orlando Sentinel identified pedestrian safety as a top editorial priority with “No More Frogger.”
- Sentinel reader poll: 80% in favor of ticketing drivers for failure to yield to pedestrians.
- I-Drive District now includes ‘I Yield’ messaging in the I-Drive Official Visitors Guide and I-Ride Trolley Maps with a printed distribution exceeding 900,000.
- Orlando Health Level One Trauma Center included BFF in its One Night Event.
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- Operation Best Foot Forward has received more than $100,000 in media value coverage.
- GOAA and City of Orlando variable message board rotating messages reminding visitors and residents to “Yield to Peds.”
- Walksafe pedestrian safety curriculum now a resource for OCPS elementary schools.
- DMV received 5,000 pedestrian safety flyers in Spanish, English and Creole at eight offices.
- Haitian consulate received 4,000 flyers to distribute.
- Track Shack included iYield4Peds bumper stickers in race packets.

Objective 3: Get more drivers to yield

**Results:**
- Percentage of drivers yielding to pedestrians increased from baseline of 12% to 43% on streets posted 35 mph or less and from 1.2% to 5% on roads 40 mph and higher.
- OPD and OCSO conducted 212 enforcement operations for drivers failing to yield to pedestrians.
- 40 pedestrian safety presentations given to organizations or homeowner associations, averaging 3 per month.
- Operation Best Foot Forward has received more than $100,000 in media value coverage.

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**Sheriff Jerry Demings**
Orange County Sheriff’s Office

“‘What I want to do is put a face on the issues. At Orange County Sheriff’s Office we have over 300 School Crossing Guards who have the responsibility each day of ensuring that our children are safe as they walk or cycle to school. In October of 2009, one of our School Crossing Guards, Joseph D. Lowndes, passed away after being hit by a vehicle. Sadly, it was a tragedy that did not have to occur.’

Best Foot Forward Annual Report: June 2013

Taking Action
Putting Our Best Foot Forward

The Launch

Best Foot Forward launched on May 30, 2012 at a standing-room-only press conference hosted by Orlando Health, timed to coincide with National Trauma Awareness Month. Over 150 attendees were present and the launch was advanced in print and video by the Orlando Sentinel, leading that day’s paper and was followed up the next day with an article, plus a column and editorial. It was covered by all local television stations, all news radio, in English and Spanish, and picked up by the national NPR blog “Transportation Nation.”

The kickoff coincided with the launch of the campaign website (www.iyield4peds.org), as well as a Facebook page, YouTube channel and Twitter feed, followed by a bi-weekly eNewsletter.

“The three Es of traffic safety are enforcement, enforcement and publicity about enforcement.”

Dr. Elizabeth Baker, NHTSA Mid-Atlantic Regional Administrator
Leaders Speak Out for Pedestrian Safety

“We may be known as the number one tourist destination, now we want to be known as the safest place in the country for pedestrians.”
Mayor Buddy Dyer
City of Orlando

“Today I call upon all of our citizens and visitors and all of our residents to walk also with extraordinary care.”
Mayor Kenneth W. Bradley
City of Winter Park

“The key is not only to educate the bicyclists and pedestrians, but the motoring public as well.”
Mayor Howard Schieferdecker
City of Maitland

“Our goal is to cut these tragic and unnecessary deaths in half in the next five years. No matter what form of transportation we use on a daily basis, we are all pedestrians at some point in our day.”
Linda Chapin
Co-Chair Bike/Walk Central Florida and former Mayor of Orange County

“On behalf of Mayor Teresa Jacobs and Orange County Board of County Commissioners we are pleased to be a partner in this unprecedented consortium of public and private organizations rallying around the central cause of pedestrian safety which impacts our entire community.”
Graciela Noriega-Jacoby
Chief of Staff
Orange County Government

“You know when you’ve got something as complex as pedestrian safety, it does take a comprehensive solution to address the problem. And we are taking that step today with Best Foot Forward, to make walking conditions better for the entire community.”
Harold Barley
Executive Director
MetroPlan Orlando
“As one of the original sponsors of Best Foot Forward, our hope is this organization and its campaign will ignite a wave of community-wide change; so the health and safety of pedestrians and cyclists are ongoing priorities, not only when tragedies occur.”

Patty Maddox
CEO/President
Winter Park Health Foundation

“We have to do everything we can to promote pedestrian safety and bicycle safety throughout every aspect of the commute. Lynx is pleased to be a partner in this effort.”

John Lewis
CEO of LYNX, the Central Florida Regional Transportation Authority

“Every year across the country approximately 800 school-aged children are fatally injured during school transportation hours. And, we don’t want to contribute to that number. Orange County Public Schools will do all that we can to ensure that Best Foot Forward is a success.”

Ronald Blocker
Retired Orange County Public Schools Superintendent

“I hope I never have to tell another mother that her son or daughter has died because someone wasn’t paying attention when crossing the street.”

John Promes, MD
Trauma Medical Director
Orlando Regional Medical Center

“The best way that we can change behavior of pedestrians and drivers is to ensure that we have appropriate enforcement. I just hope it is not one of you who receives one of these citations.”

Sheriff Jerry Demings
Orange County Sheriff’s Office

“‘It’s about the safety of the pedestrians and the drivers. Life is too valuable, we’ve got to change the mindsets.’

Chief Paul Rooney
Orlando Police Department
Key Milestones

Q1 2012
- Best Foot Forward coalition was built
- Resolution received support from seven cities and Orange County Government
- Received support from Orange County Police Chief Association
- Center for Education Research Study (CERS) trained OPD and OCSO law enforcement
- Finalized the selection of the data collection crosswalks and enforcement sites
- Partnered with the University of Miami to bring proven WalkSafe curriculum to Orange County Public Schools

Q2 2012
- Best Foot Forward launched on May 30, 2012
- Orange County, City of Orlando engineers and CERS selected intersections to track and measure
- Baseline yield data was collected: 12% on roads posted at 35 mph and less and 1.2% on 40 mph and higher
- Enforcement warning phase began
- Orange County School Board approved WalkSafe curriculum as teacher resource
- Speakers’ bureau targeting neighborhood safety organizations and home owner associations was launched

Q3 2012
- High visibility enforcement conducted in time for back to school season
- MetroPlan Orlando adopts pedestrian safety plan
- City of Orlando Train the Trainer
- WalkSafe launches in OCPS elementary schools
- Outreach with Orange County Children’s Safety Village
- Data collection probes
- Pedestrian safety presentations

Q4 2012
- Second round of high visibility enforcement to coincide with Halloween
- International Walk to School Day
- 300 bumper stickers on LYNX buses
- Pine Hills and Silver Star event with Orange County
- OCPS student comes in first place statewide in WalkSafe poster contest
- Data collection probes
- Workshop trainings and community outreach

Q1 2013
- Ongoing enforcement efforts
- Expanded partnership with FDOT – Alert Today & Alive Tomorrow
- Mayor Dyer’s Neighborhood Summit
- MetroPlan Orlando High Speed Arterial Meeting
- CF News 13 week long pedestrian safety series
- Haitian Consulate outreach
- Low-cost engineering improvements
- Orlando Sentinel My Word by Dr. Promes of Orlando Health

Q2 2013
- High visibility enforcement to coincide with summer
- OCPS seeks to integrate WalkSafe into PE curriculum
- Presentation at Trauma Conference
- Orlando Health recognized Best Foot Forward at One Night event
- Low-cost engineering improvements
- Data collection probes
- Yield rates jump to 48% on roads posted at 35 mph and less
Taking Action the “E” Way

The Best Foot Forward action plan consists of inexpensive engineering enhancements, an education component consisting of earned media attention, signage, community presentations, online engagement and school participation to be implemented in tandem with targeted high visibility enforcement interventions to maximize the overall efficacy of the program.

**Enforcement**

**High Visibility Enforcement (HVE) of Pedestrian Right of Way Laws**

1. Orange County Sheriff’s Office and Orlando Police Department endorsed Best Foot Forward for pedestrian safety
2. Centers for Education and Research in Safety (CERS) provided two Train-the-Trainer Workshops for officers on how to conduct effective crosswalk law enforcement operations
3. Dual enforcement schedule and developed methods to alert drivers to expect more pedestrian crosswalk enforcement
4. OPD and OCSO enforcement schedules created to share with media, HOA’s, to warn drivers to expect yielding enforcement in their area

5. Used special signs to help identify operations
6. Used special signs to help drivers identify crosswalk law enforcement operations

**Engineering**

CERS and its senior consultants, Dr. J.E. Louis Malenfant and Dr. Ron Van Houten worked in cooperation with Orange County engineers, City of Orlando engineers and Best Foot Forward staff to conduct a crosswalk audit to identify the most problematic crosswalks and those to be upgraded with low cost engineering improvements. Below are their general recommendations of low-cost engineering enhancements.

1. Use advance yield or stop markings at selected crosswalks
2. Paint solid lane lines starting at the beginning of the dilemma zone and ending at the advance yield or stop markings
3. Install in-street “Yield to Pedestrian” signs at selected crosswalks
4. Use “Crosswalk Law Enforcement” portable signs reminding drivers of the presence of enforcement and the penalty for violating pedestrian right-of-way
5. Optional – Install RRFB devices at high traffic midblock crosswalk with low driver yielding compliance
6. Install small 8”x10” prompting signs at crosswalks to instruct pedestrians on how to cross safely

**Education**

Education included the community outreach efforts where the “Yield4Peds” messages were brought to where residents lived, worked and played. Below are just some of the tactics used.

1. Educational flyers with driver yield law in Spanish, English and Creole
2. Bumper stickers, oversized corrugated boards and variable message boards
3. Speakers’ bureaus focusing on neighborhood safety organizations, home owner associations, elderly organizations and health events/fairs
4. Volunteering at school events and health fairs
5. Website, eNewsletters, Facebook, Twitter, YouTube and social media messaging
6. Earned media, editorial submissions and press engagement

Because we’re all pedestrians first.

Chief Paul Rooney
Orlando Police Department
A total of 22 Orlando Police Officers and 27 Orange County Sheriff’s Department deputies were trained to carry out the high visibility enforcement operations. Since police agencies in Florida do not have a history of vigorous enforcement of crosswalk laws it was strongly recommended that a “warning” phase of approximately one to three months precede the introduction of the first wave of enforcement, alerting drivers that failure to yield right of way to pedestrians at crosswalks would no longer be tolerated. Best Foot Forward agreed to a three-month warning period, starting June 2012 and ending just in time for back to school in August, to sensitize residents before citations for $164 and 3 points on their license were issued.

The City of Orlando and Orange County Engineering Department, with input from the local law enforcement and CERS consultants, selected 14 intersections to track for yield rate improvements. They were chosen based on posted speed limits, ped injuries/fatalities, planned engineering improvements, pedestrian complaints, location (e.g. schools and tourist corridor), high pedestrian crossing areas and greatest opportunity for yield rate improvements combining the “Triple E’s” engineering, education and enforcement.

**High Visibility Enforcement Operations**

**Orlando Police Department and Orange County Sheriff’s Office**

June 1, 2012 to June 30, 2013

Drivers issued warnings during non-ticketing operation 2,383

Received only a warning during ticketing operation 880

**Total Warnings** 3,263

Drivers issued citations during ticketing operations 1,349

**Total citations & warnings** 4,612

**Enforcement**

**Orange County Sheriff’s Office**

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**TOTALS:** 1,675 1,005

**Orlando Police Department**

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<td>24</td>
</tr>
<tr>
<td>1</td>
<td>S Turkey Young Pkwy &amp; Orange Creek Blvd</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>W Mound Ave &amp; Rock Lake Dr</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>Rose Ber Dr &amp; Rose of Tra вой</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>E Robinson St &amp; Hillman Ave</td>
<td>48</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTALS:** 1,588 344

*Includes warnings and citations

Delinquent intersections selected to be tracked for driver yield rate improvements:

Intersections chosen based on speed limits, ped accidents along corridor, planned engineering improvements, pedestrian complaints, location (e.g. schools and tourist corridor), high pedestrian crossing areas and greatest opportunity for yield rate improvements combining the “Triple E’s” engineering, education and enforcement.
The installation of this “prompting” sign for pedestrians, which has been successfully used in the province of New Brunswick, Canada for the past 30 years, was not implemented as a part of BFF because the city engineers requested that CERS obtain a permission to experiment from state and federal authorities. CERS is in the process of requesting permission from the National Committee on Uniform Traffic Control Devices, and if approved, will recommend these signs in Orange County and City of Orlando.

The CERS team recommended installing small 8”x12” signs at crosswalks to prompt proper crossing behavior and to make crosswalks work for pedestrians. The

**Recommendations**

1. In-street sign on center line or refuge island
2. In-street yield sign in gutter pan or curb
3. Yield sign at advance stop line or yield marking
4. Advance stop line or yield marking
5. Prompting sign telling ped to extend arm to cross

**Intersections/Crosswalks Location**

<table>
<thead>
<tr>
<th>Intersection/Crosswalk Location</th>
<th>Speed Limit</th>
<th>Lane Observed</th>
<th>Location Type</th>
<th>Engineering Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Central Blvd. &amp; Lake Ave.</td>
<td>25 mph</td>
<td>2</td>
<td>Residential, Commercial</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>S. Michigan St. &amp; Cym턴 Way</td>
<td>35 mph</td>
<td>4 + Center turn lane</td>
<td>Residential</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>S. Rollins St. &amp; Candover Rd.</td>
<td>40 mph</td>
<td>2 + left turn lane</td>
<td>Hospital</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>Lake Baldwin Ln. &amp; Almond Ave.</td>
<td>25 mph</td>
<td>2</td>
<td>Residential, Park</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>N. Summerlin Rd. &amp; 8th St.</td>
<td>25 mph</td>
<td>2 + left turn lane</td>
<td>Residential, School</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>S. Kirkman Rd. &amp; International Dr.</td>
<td>30 mph</td>
<td>1</td>
<td>Commercial, Signalized</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>T. Ros Grant Ave. &amp; Carter St.</td>
<td>35 mph</td>
<td>4 + School</td>
<td>Unsignalized</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>S. Seminole Blvd. &amp; Curry Ford Rd.</td>
<td>40 mph</td>
<td>1 + stop line</td>
<td>Commercial, Signalized</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>W. Church St. &amp; Gilchrist Ln.</td>
<td>30 mph</td>
<td>2 + left turn lane</td>
<td>Commercial</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>W. Oak Ridge Rd. &amp; S. Texas Ave. (E. Corner)</td>
<td>40 mph</td>
<td>4 + Stop line</td>
<td>Residential, Commercial, Near Bus Stop</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>W. Oak Ridge Rd. &amp; Millenia Blvd</td>
<td>40 mph</td>
<td>4 + Stop line</td>
<td>Commercial, Residential, Near Bus Stop</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>Old Winter Garden Rd. &amp; S. Shadelin St.</td>
<td>40 mph</td>
<td>4 + Center turn lane</td>
<td>Residential</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>Pine Hills Rd. &amp; Turkey Lake Rd.</td>
<td>40 mph</td>
<td>4 + Center turn lane</td>
<td>Residential</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>Woodbury Rd. &amp; Alaboy Ct.</td>
<td>30 mph</td>
<td>2 + left turn lane</td>
<td>Residential, Commercial</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>Vinings Lakes Pkwy &amp; Copeena Rock St.</td>
<td>35 mph</td>
<td>2</td>
<td>Residential, Elementary School</td>
<td>Unsignalized</td>
</tr>
<tr>
<td>Pine Hills Rd. &amp; TX 380 Trace Rd.</td>
<td>40 mph</td>
<td>4 + left turn lane</td>
<td>Residential, Commercial</td>
<td>Unsignalized</td>
</tr>
</tbody>
</table>

Brown cells indicate proposed engineering enhancements and are currently under review by Orange County and City of Orlando as of June 2013

*Rectangular Rapid Flashing Beacon (RRFB) also recommended*
Accidents are preventable, particularly pedestrian accidents. That's why education is critical to get drivers to yield to pedestrians in crosswalks, especially unmarked ones, and to get pedestrians to obey more traffic laws and be more careful crossing the street. To accomplish this, we're taking a long-term commitment to a behavior change process that seeks to create lasting social good. For Best Foot Forward, education is about going grassroots, starting with the drivers, the students and neighborhood groups.

### I Yield 4 Peds: The Driver Message

I Yield 4 Peds is an affirmation message reminding drivers that they do stop for pedestrians. It's akin to taking a yield pledge to improve pedestrian safety where bumper stickers remind drivers they are committed to yielding and walkers see courtesy does promote safety.

### Bumper Stickers & Yield Law Flyers
- 100,000 flyers printed by Orlando Health
- 42,000 distributed to OCSO
- 6,200 distributed to OPD
- 12,400 to I-Drive Improvement District
- 18,200 to Track Shack for event distribution
- 23,200 distributed by mail or in person to HOAs and at events
- 6,000 bumper stickers distributed at events, HOAs, presentations
- 5,000 Creole flyers distributed to Haitian Consulate and business groups
- 5,000 Spanish flyers distributed among OPD, OCSO, HOAs and at events
- 300 bumper stickers on LYNX Buses

### Going Grassroots

Best Foot Forward works closely with the City of Orlando's Office of Communications & Neighborhood Relations and Orange County Government's Office of Public Engagement and Citizen Advocacy teams to reach out to neighborhood association organizations to present the pedestrian safety message and distribute educational materials. In one year, much progress has been made.

### Neighborhood & Community Outreach
- 65,380 households in Orange County and 23,114 in the City of Orlando reached via outbound call campaign targeting neighborhood associations and community organizations
- 217 neighborhood associations agreed to distribute materials or host a presentation
- 40 presentations conducted, averaging three per month

**Community Outreach Presentations**
- Apopka Safe Neighborhood Meeting
- Audubon Walk in Roll with OCSO
- Azalea Park Safe Neighborhood Meeting
- Bridge Orlando Bike & Ped Safety Talk
- Central Drive Condo Association
- Central Orange Improvement HOA
- Citizen Advisory Committee at MetroPlan
- City of Orlando: To Promote a Teenage Pedestrian Safety Flyer
- Going Grassroots Flyer
- Highland Park Safe Neighborhood
- First Presbyterian Church Health Fair
- Haitian Consulate Materials
- Healthy Central Florida Pedestrian Safety Workshop
- International Walk to School Day Event
- Lake Eola Heights Neighborhood Association
- Lake Overlook Safety Fair
- Lake Whitney Health and Safety Fair
- Maitland City Council Presentation
- Mayor Dyer's Neighborhood Summit

**Annual Report June 2013**
Engagement Using Traditional & Nontraditional Media

Media Coverage since Launch
- Over $100,000 estimated in earned media coverage
- 30 local TV news stories
- 10 articles or columns in the Orlando Sentinel
- Stories on WMFE, WDBO, Real Radio and NPR’s Transportation Nation
- Online blogs and coverage

“People can argue about the data all day long, but as Secretary Ananth Prasad put it: We know we have a problem, and we need to deal with it.”

Billy Hattaway
District 1 Secretary for the Florida Department of Transportation as quoted in the Orlando Sentinel on 7.3.13.

Social Media
Website: iYield4peds.org
(launched May 28, 2012)
- 5,416 unique visitors, 13,162 page views
- 28% of unique visitors used mobile devices
- Peaks in visits seen during:
  - First round of enforcement with publicity (June 8, 2012)
  - Back to School (August 13, 2012)
  - Second round of enforcement with publicity (February 26, 2013)
  - Third round of enforcement with publicity (June 12, 2013)
- Top three sources of traffic:
  1. Google searches including “Best Foot Forward Orlando,” “Florida pedestrian laws” and “iyield4peds”
  2. Direct web address entry
  3. Links from Facebook (web and mobile)

Facebook: facebook.com/BestFootOrlando
- 198 likes
Twitter: @BestFootOrlando
- 529 tweets
- 123 followers
eNewsletter:
- 854 subscribers
- 33 e-newsletters sent since May 17, 2012 with 19,299 successful deliveries and a unique open rate of 27%
Teaching Kids Today for Long Term Change Tomorrow

In the summer of 2012, the Orange County School Board adopted the WalkSafe program. The educational component of the program, the WalkSafe curriculum, is a child pedestrian safety curriculum that engages students in active learning to develop lifelong safe pedestrian behavior. The evidence-based in-school curriculum is intended for all students in grades K-5. Teachers find the curriculum is simple, easy to incorporate into their lesson plans and builds upon each previous set of skills learned.

OCPS schools are participating in WalkSafe:
- 51 OCPS schools have created a login to access the materials online
- 12 schools completed WalkSafe curriculum
- Orange County students took top honors in state and county-wide poster contest
- To qualify, students must have completed the WalkSafe curriculum at their school, demonstrate a working knowledge of pedestrian safety, and submit original artwork.

WalkSafe Poster Contest
The WalkSafe curriculum has been implemented at 12 elementary schools in the Orange County Public Schools system. It is a three-day curriculum with the final day consisting of a creative activity also known as the WalkSafe Statewide Poster Contest. Each school selected three winners, which were entered into county-level, then state-level competition. Students from the Orange County Public Schools showed a great deal of enthusiasm for this contest, and we are happy to share that a student from Orange County was this year’s state level winner in the 4th-5th grade level category and two winners came in first in the county level awards.

Participating Schools
- Castle Creek Elementary
- Cheney Elementary
- Forest Woods Elementary
- Millenia Elementary
- Palmetto Elementary
- Pinecrest Elementary
- Ridgewood Park Elementary
- Sand Lake Elementary
- Southwood Elementary
- Spring Lake Elementary
- Waterbridge Elementary
- Windy Ridge School
<table>
<thead>
<tr>
<th>Intersection/Crosswalk</th>
<th>Posted Speed</th>
<th>Lanes Observed</th>
<th>Baseline¹</th>
<th>Warnings²</th>
<th>Enforcement³</th>
<th>Enforcement⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Orlando</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S Kirkman Rd. &amp; International Dr.</td>
<td>30 mph</td>
<td>1 (slip lane)</td>
<td>35%</td>
<td>N/A</td>
<td>31%</td>
<td>13%</td>
</tr>
<tr>
<td>E Michigan St. &amp; Cybrar Way</td>
<td>35 mph</td>
<td>4 + turn lane</td>
<td>1%</td>
<td>2%</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>S Roe Grand Ave. &amp; Carter St.</td>
<td>35 mph</td>
<td>4</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>14%</td>
</tr>
<tr>
<td>W Church St. &amp; Glenn Ln.</td>
<td>30 mph</td>
<td>2</td>
<td>4%</td>
<td>16%</td>
<td>13%</td>
<td>23%</td>
</tr>
<tr>
<td>E Rollins St. &amp; Camden Rd.</td>
<td>30 mph</td>
<td>2 + turn lane</td>
<td>19%</td>
<td>47%</td>
<td>50%</td>
<td>65%</td>
</tr>
<tr>
<td>N Summit Ave. &amp; Nw Vernon St.</td>
<td>35 mph</td>
<td>11%</td>
<td>12%</td>
<td>17%</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>S Semoran Blvd. &amp; Curry Ford Rd.</td>
<td>45 mph</td>
<td>1 (slip lane)</td>
<td>7%</td>
<td>14%</td>
<td>40%</td>
<td>69%</td>
</tr>
<tr>
<td>Lake Baldwin Ln. &amp; Almond Ave.</td>
<td>25 mph</td>
<td>2</td>
<td>9%</td>
<td>52%</td>
<td>62%</td>
<td>73%</td>
</tr>
<tr>
<td>E Central Blvd. &amp; Lake Ave.⁵</td>
<td>25 mph</td>
<td>2</td>
<td>72%</td>
<td>N/A</td>
<td>72%</td>
<td>91%</td>
</tr>
<tr>
<td>MEAN PERCENT YIELDING</td>
<td>12%</td>
<td>21%</td>
<td>33%</td>
<td>48%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange County</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W Oak Ridge Rd. &amp; S. Texas Ave. (E Corner)</td>
<td>40 mph</td>
<td>4</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Old Winter Garden Rd. &amp; S. Hudson St.</td>
<td>40 mph</td>
<td>4 + center turn lane</td>
<td>1%</td>
<td>0</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>W Oak Ridge Rd. &amp; Millenia Blvd.</td>
<td>40 mph</td>
<td>4</td>
<td>0</td>
<td>1%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>S Holden Mills Rd. &amp; O the Glen Way</td>
<td>40 mph</td>
<td>4</td>
<td>1%</td>
<td>0</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Woodbury Rd. &amp; Mallory Cir</td>
<td>35 mph</td>
<td>3</td>
<td>3%</td>
<td>8%</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Waterford Lakes Pkwy. &amp; Copusna Rock St.</td>
<td>25 mph</td>
<td>2</td>
<td>4%</td>
<td>3%</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>MEAN PERCENT YIELDING</td>
<td>1.2%</td>
<td>2%</td>
<td>5%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Baseline Yield Rate
²Education & Warning Phase Jun. ’12 - Aug. ’12
³Average Yield Rates from Enforcement Actions Aug. ’12 - Jan. ’13
⁴Enforcement with Engineering Improvements at Select Intersections Feb. ’13
⁵Yield baseline measurements were taken after first wave of enforcement. Because of this, Central Blvd. and Lake Ave. intersection was not included in the average baseline rate measurement.

Evaluation

Short term success is measured in driver yield rates on roads 35 mph and less.

Baseline data on driver yielding were collected between December 20, 2011 and June 1, 2012. Baseline yielding for staged crossings at the measured sites in the City of Orlando on roads posted at than 35 mph or less increased from an average of 12% during baseline to 21% after the first enforcement warning wave where no citations were given from June until August 2012. The average level of yielding for staged crossings increased further to 33% following the first waves of enforcement in August to November 2012. When in-street signs were introduced in March and April of 2013, yielding behavior increased to 48%, which is nearly half of drivers yielding.

In Orange County, intersections posted 40 mph and higher were tracked and measured. The baseline rate was 1.2% and jumped to 5% during the waves of enforcement when citations were issued.

This increase in yield rates on streets posted at 35 mph and less represents a change from 1 in 6 drivers yielding right-of-way to 1 in 3 drivers yielding right-of-way to pedestrians.

---

**Triple E Impact Yields Results**

**City of Orlando**

- E Rollins St. & Camden Rd.
- S Semoran Blvd.
- E Boeing St. & Fernwood Rd.
- S Kirkman Rd. & International Dr.
- W Church St. & Glenn Ln.
- E Rollins St. & Camden Rd.
- N Summit Ave. & Nw Vernon St.
- S Semoran Blvd. & Curry Ford Rd.
- Lake Baldwin Ln. & Almond Ave.
- E Central Blvd. & Lake Ave.

**Orange County**

- W Oak Ridge Rd. & S. Texas Ave. (E Corner)
- Old Winter Garden Rd. & S. Hudson St.
- W Oak Ridge Rd. & Millenia Blvd.
- S Holden Mills Rd. & O the Glen Way
- Woodbury Rd. & Mallory Cir
- Waterford Lakes Pkwy. & Copusna Rock St.

---

**Engineering Enhancements + Enforcement**

- Public Information + Enforcement Warnings
- Enforcement Operations
- Engineering Enhancements + Enforcement

---

**Orange County**

- W Oak Ridge Rd. & S. Texas Ave. (E Corner) 40 mph 4 1% 1% 2%
- Old Winter Garden Rd. & S. Hudson St. 40 mph 4 + center turn lane 1% 0 2%
- W Oak Ridge Rd. & Millenia Blvd. 40 mph 4 0 1% 3%
- S Holden Mills Rd. & O the Glen Way 40 mph 4 1% 0 14%
- Woodbury Rd. & Mallory Cir 35 mph 3 3% 8% n/a
- Waterford Lakes Pkwy. & Copusna Rock St. 25 mph 2 4% 3% n/a

**MEAN PERCENT YIELDING** 1.2% 2% 5%

---

**Evaluation**

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Baseline data on driver yielding were collected between December 20, 2011 and June 1, 2012. Baseline yielding for staged crossings at the measured sites in the City of Orlando on roads posted at than 35 mph or less increased from an average of 12% during baseline to 21% after the first enforcement warning wave where no citations were given from June until August 2012. The average level of yielding for staged crossings increased further to 33% following the first waves of enforcement in August to November 2012. When in-street signs were introduced in March and April of 2013, yielding behavior increased to 48%, which is nearly half of drivers yielding.

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This increase in yield rates on streets posted at 35 mph and less represents a change from 1 in 6 drivers yielding right-of-way to 1 in 3 drivers yielding right-of-way to pedestrians.
Researchers used staged crossings to measure the number of motorists who did not yield to pedestrians in crosswalks.

Driver yielding behavior was measured in reference to an objective dilemma zone. The research team employed the formula used by traffic engineers to determine whether a driver can safely stop at a traffic signal to determine the distance at which a driver can safely yield to a pedestrian standing with one foot in the crosswalk. This formula (from the Institute of Traffic Engineers) takes into account driver reaction time, safe deceleration rate, the posted speed, and the grade of the road. The formula was used to determine the distance to the dilemma zone boundary by multiplying the time by the speed limit in feet per second.

To aid observers in identifying the dilemma zone, the location of the zone was marked by a sprinkler flag or bright tape that could be seen from the crosswalk. Motorists who had not entered the dilemma zone when a pedestrian entered the crosswalk were scored as yielding or not yielding because they had sufficient time and space to stop safely for the pedestrian. Motorists who entered the dilemma zone before the pedestrian or researcher placed a foot in the crosswalk could be scored as yielding but could not be scored as failing to yield. The formula is relatively lenient and hence many vehicles that passed the dilemma zone are able to safely yield.

Conducting Evaluation

Evaluating the Data

The period of June 2012 to June 2013 saw a 12.4% increase over the previous five year average for all traffic injury crashes in Orange County. MetroPlan Orlando’s current data shows a 15.9% increase for all pedestrian crashes for this same time period compared to the previous five year average.

At this point it is premature to come to any conclusion on the effect of our program on the crash rates because of recent changes in reporting by law enforcement and technology have resulted in increased reporting of ALL injury crashes, including pedestrians. The Best Foot Forward coalition agrees we will need another two years before we can make a statistically confident conclusion of the efficacy of the program. The good news is we are all committed and won’t stop until we reach our goal. Let’s keep putting our best foot forward.

Pedestrian Crashes Within a One-Mile Radius of Observed BFF Intersections

<table>
<thead>
<tr>
<th>Location</th>
<th>10-11</th>
<th>11-12</th>
<th>12-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Summerlin Ave &amp; Mt. Vernon</td>
<td>25</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>W. Church St &amp; Glenn Ln</td>
<td>18</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>E. Rollins and Camden Rd</td>
<td>9</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Lake Baldwin and Almond</td>
<td>10</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>S. Kirkman and International Drive</td>
<td>12</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>S. Semoran Blvd and Curry Ford</td>
<td>18</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>E. Michigan and Caymar Way</td>
<td>15</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>S. Rio Grande and Carrier St</td>
<td>11</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>W. Oakridge Rd and Milleda Blvd</td>
<td>5</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>W. Oakridge Rd and S. Texas Ave</td>
<td>16</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Old Winter Garden Rd and S. Hudson St</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Waterford Lakes Pkwy and Coquina Rock</td>
<td>4</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Woodbury Rd and Millkery Cir</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total Crashes*</td>
<td>148</td>
<td>136</td>
<td>182</td>
</tr>
</tbody>
</table>

*Crashes include all injuries + fatalities

Only Fatalities | 6 | 5 | 6 |
### Observed Intersections

#### Assessments & Recommendations

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Crosswalk Features</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>Ship lane observed</td>
<td>Signalized</td>
<td>Continental</td>
<td>Refuge island</td>
<td>Yes</td>
<td>None</td>
</tr>
</tbody>
</table>

### Engineering

**Recommendation:** Add advance stop lines or yield markings and prompting sign.

**Progress:** City has construction project slated to begin in this area and seeks another study site.

### Enforcement

**Recommendation:**

**Enforcement:**
- June 2012 to June 2013
- 166 total warnings
- 33 total citations

- Heavy pedestrian and vehicular traffic.
- Pedestrian refuge islands to aid crossing.

---

**Driver Yield Rate Progress**

- **S. Kirkman Rd. & International Dr.**
- **Best Foot Forward Annual Report:** June 2013

<table>
<thead>
<tr>
<th>Period</th>
<th>Yield Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>35%</td>
</tr>
<tr>
<td>Warning Period</td>
<td>30%</td>
</tr>
<tr>
<td>High Visibility</td>
<td>31%</td>
</tr>
<tr>
<td>Engineering &amp; Enforcement</td>
<td>13%</td>
</tr>
</tbody>
</table>

---

**Engineering + Enforcement**

- **High Visibility**
- **Warning Period**
- **Baseline**
- **Engineering & Enforcement**
E. Michigan St. & Cayman Way
City of Orlando

Speed | Location Type | Number of Lanes | Intersection Type | Type of Crosswalk | Advanced yield signs present | In Street & Gutter Pan Signs
--- | --- | --- | --- | --- | --- | ---
35 mph | Residential | 4 + left turn lane | Unsignalized | Special High Emphasis | Crosswalk, bike lanes | Yes | None

**Engineering**

**Recommendation:** Add advance yield marking bars on both sides of the street, yield signs at advance stop lines, in-street sign near curb or gutter pan, pedestrian prompting signs, and in-street signs.

**Progress:** Added yield signs at stop lines in both directions. City plans to study demand of this crossing with ped counts to determine need.

**Enforcement**

**June 2012 to June 2013**
- Total warnings: 278
- Total citations: 76

City plans to conduct a ped count study.

---

S. Rio Grand Ave. & Carter St.
City of Orlando

Speed | Location Type | Number of Lanes | Intersection Type | Type of Crosswalk | Advanced yield signs present | In Street & Gutter Pan Signs
--- | --- | --- | --- | --- | --- | ---
35 mph | Commercial | 4 | Unsignalized | Continental | Lacks signs | None

**Engineering**

**Recommendation:** Add in-street signs, in-street sign in gutter pan or curb, advance sign at advance stop line, advance yield markings, prompting sign.

**Progress:** City is pursuing ADA improvements before making additional upgrades.

**Enforcement**

**June 2012 to June 2013**
- Total warnings: 331
- Total citations: 55

Yield Rate 13%
W. Church St. & Glenn Ln.

City of Orlando

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutters Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mph</td>
<td>Commercial Parramore Heritage Park</td>
<td>2</td>
<td>Unsignalized</td>
<td>Special High Emphasis</td>
<td>Under construction</td>
<td>No During baseline, 2 in-street signs present</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add in-street yield sign in gutter pan or curve, yield sign at advance stop line or yield markings, advance stop lines, prompting signs.

**Progress:** Heavy reconstruction to improve pedestrian features and streetscape.

**Enforcement**

**June 2012 to June 2013**

| 77 | Total warnings |
| 39 | Total citations |

---

S. Semoran Blvd. & Curry Ford Rd.

City of Orlando

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Crosswalk Features</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutters Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 mph</td>
<td>Commercial Slip lane observed</td>
<td>2</td>
<td>Unsignalized at Slip Lane</td>
<td>Special High Emphasis</td>
<td>ADA access</td>
<td>Yes</td>
<td>None</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** FDOT and City are looking at ways to improve pedestrian crossings with an additional reconstruction project set in the future by FDOT Safety Office.

**Progress:** Under review with City and FDOT.

**Enforcement**

**June 2012 to June 2013**

| 93 | Total warnings |
| 12 | Total citations |

---

**Driver Yield Rate Progress**

**W. Church St. & Glenn Ln.**

Baseline: 4%
Warning Period: 16%
High Visibility Enforcement: 13%
Engineering + Enforcement: 23%

**S. Semoran Blvd. & Curry Ford Rd.**

Baseline: 7%
Warning Period: 36%
High Visibility Enforcement: 40%
Engineering + Enforcement: 69%

*No pedestrian signal on the slip lane; Constant, heavy vehicular traffic.*
### E. Rollins St. & Camden Rd.

**City of Orlando**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Crosswalk Features</th>
<th>Advanced yield signs present</th>
<th>In-Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mph</td>
<td>Hospital</td>
<td>2 + turn lanes</td>
<td>Unsignalized</td>
<td>Special High Emphasis</td>
<td>Advance stop lines, Yield signs at yield markings</td>
<td>Yes</td>
<td>In-street signs present at times</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add in-street sign on center line or refuge island, in-street sign in gutter pan or curb, prompting sign.

**Progress:** In-street signs are knocked down and costly to implement; City looking at other options.

**Enforcement**

**Recommendation:** Add in-street signs on center line.

**Progress:** Added in-street signs on center line.

**Total warnings:** 101

**Total citations:** 14

**Numerous pedestrian complaints; Pedestrian traffic ranging from light to moderate all day.**

---

### N. Summerlin Ave. & Mt. Vernon St.

**City of Orlando**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Crosswalk Features</th>
<th>Advanced yield signs present</th>
<th>In-Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mph</td>
<td>Residential Elementary School</td>
<td>2</td>
<td>Unsignalized</td>
<td>High Emphasis</td>
<td>School Crossing Signs</td>
<td>No</td>
<td>In-street signs</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add in-street signs on center line, in-street yield sign on curb, advance stop lines, prompting sign.

**Progress:** Added in-street signs on center line.

**Total warnings:** 33

**Total citations:** 24

**High pedestrian traffic. 20 mph for school zone at posted times.**
### Lake Baldwin Ln. & Almond Ave.

**City of Orlando**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mph</td>
<td>Residential Park</td>
<td>2</td>
<td>Unsignalized</td>
<td>Special High Emphasis</td>
<td>Pedestrian signs, Curb cut</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add in-street signs on refuge island, in-street yield sign at curb, yield sign at advance stop line, advance yield markets, prompting signs.  

**Enforcement**

June 2012 to June 2013  
- Total warnings: 50  
- Total citations: 10

**Progress:**  
- Added two in-street signs to gutter pan, in-street sign on refuge island, yield sign at advance stop line, advance yield markings, and used digital speed feedback sign to alert drivers of speed.

Numerous pedestrian complaints despite slow moving traffic.

### E. Central Blvd. & Lake Ave.

**City of Orlando**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mph</td>
<td>Lake Eola, Publix, Residential, Restaurants and Businesses</td>
<td>2</td>
<td>Unsignalized</td>
<td>Three in-street signs installed at this site</td>
<td>Yes</td>
<td>1 in-street sign on center line, 2 in-street signs in gutter pan</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add in-street sign on center line, in-street yield sign in gutter pan, yield sign at advance yield markings, prompting sign.  

**Enforcement**

June 2012 to June 2013  
- Total warnings: 100  
- Total citations: 18

**Progress:**  
- Added two in-street signs to gutter pans, in-street sign on center line, yield sign at advance yield markings; City continues to adjust in-street signs.

Numerous pedestrian complaints; pedestrian traffic ranging from light to moderate all day.
### W. Oak Ridge Rd. & S. Texas Ave.

**Orange County**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 mph</td>
<td>Commercial, Residential, Near bus stop</td>
<td>4</td>
<td>Signalized</td>
<td>High intensity</td>
<td>3 pedestrian signs</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add advance yield marking bars on both sides of the street, yield signs at advance stop lines, in-street sign in gutter pan, pedestrian prompting signs, and in-street signs.

**Progress:** Added advance yield marketing bars on both sides of the street, yield signs at stop lines in both directions.

**Enforcement**

- **Driver Yield Rate Progress**
  - **Baseline:** 1%
  - **Warning Period:** 1%
  - **High Visibility Enforcement:** 2%

- **Total Warnings:** 222
- **Total Citations:** 183

### W. Oak Ridge Rd. & Millenia Blvd.

**Orange County**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Intersection Type</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 mph</td>
<td>Commercial, Residential, Near bus stop</td>
<td>4</td>
<td>Unsignalized</td>
<td>High intensity</td>
<td>Pedestrian signs</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Engineering**

**Recommendation:** Add advance yield marking bars on both sides of the street, yield signs at advance stop lines, in-street sign near curb or gutter pan, pedestrian prompting signs, and in-lane signs.

**Progress:** Added advance yield marketing bars on both sides of the street, yield signs at stop lines in both directions.

**Enforcement**

- **Driver Yield Rate Progress**
  - **Baseline:** 0%
  - **Warning Period:** 1%
  - **High Visibility Enforcement:** 3%

- **Total Warnings:** 292
- **Total Citations:** 211

**High pedestrian and vehicular travel.**

Pre-existing refuge island; One pedestrian injury at this site.
Old Winter Garden Rd. and S. Hudson St.

Orange County

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Type of Location</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 mph</td>
<td>Residential</td>
<td>4 + center turn lane</td>
<td>Unsignalized</td>
<td>High intensity</td>
<td>3 pedestrian signs</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Engineering**

Recommendation: Add yield signs at advance stop lines, pavement marking bars, in-lane signs, prompting signs.

Progress: Added yield signs at advance stop lines and stop line pavement marking bars.

**Enforcement**

June 2012 to June 2013

- 111 Total warnings
- 39 Total citations

**Yield Rate Data**

- Driver Yield Rate Progress
- Old Winter Garden Rd. and S. Hudson St.

Woodbury Rd. & Mallory Cir.

Orange County

<table>
<thead>
<tr>
<th>Speed</th>
<th>Location Type</th>
<th>Number of Lanes</th>
<th>Type of Location</th>
<th>Type of Crosswalk</th>
<th>Advanced yield signs present</th>
<th>In Street &amp; Gutter Pan Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 mph</td>
<td>Residential</td>
<td>2 + left turn lane</td>
<td>Unsignalized</td>
<td>High intensity</td>
<td>3 pedestrian signs</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Engineering**

Recommendation: Add yield signs at advance stop lines, advance yield marketing, in-street sign on gutter pan, in-street sign on center line, prompting signs.

Progress: Added yield signs at advance stop lines and advance yield marking.

**Enforcement**

June 2012 to June 2013

- 115 Total warnings
- 67 Total citations

**Yield Rate Data**

- Driver Yield Rate Progress
- Woodbury Rd. & Mallory Cir.

Yield rate data was inconclusive. BFF seeks to continuing monitoring and enforcing intersection in FY 14.
What’s Next in FY14

**Engineering**
- Work with the city and county engineers on supporting engineering enhancements from in-street signage to Rapid Rectangular Flashing Beacons
- FDOT has settled on the “Stop Here for Pedestrian” signage with associated stop bars. BFF will be involved in city and county conversations about the standardization of crosswalk styles as outlined by FDOT.
- If Tiger Grant is awarded, BFF will work with Orange County and City of Orlando to share pedestrian enhancements with the public such as audible pedestrian signals.

**Enforcement**
- Conducted a minimum of four high visibility enforcement actions at the observed intersections
- Work with OCPS and OPD on pedestrian education and warning materials in multiple languages

**Evaluation**
- Increase yield rates to 70% on roads posted at 35 mph and less
- Increase yield rates to 25% on roads posted at 45 mph and higher
- Decrease crash rates in a one-mile radius of intersections observed by 15% in FY14

**Education**
- Work with OCPS to expand the WalkSafe pedestrian safety curriculum in elementary schools
- Continue grassroots outreach efforts with home owner association groups, non-profits, businesses and non-profits to spread the pedestrian message
- Launch a county-wide pedestrian focused message, similar to IYield4Peds
- Expand online presence for Best Foot Forward and continue disseminating newsletters
- Partner with media on educating the community on the importance of pedestrians using crosswalks and drivers yielding to pedestrians
- Expand outreach initiatives into Hispanic communities

While strong conclusions about the overall effectiveness of the Triple E program cannot be drawn in its first year, results do provide direction for future actions to improve pedestrian safety in Orange County and the City of Orlando. For FY14, Best Foot Forward recommends:

**Intersection in front of Camelot Elementary School**

**What's Next in FY14**

**Driver Yield Rate Progress**

**Speed**
- 25 mph

**Location Type**
- Residential Elementary school

**Number of Lanes**
- 2

**Intersection Type**
- Unsignalized

**Type of Crosswalk**
- High Intensity

**Crosswalk Features**
- 3 pedestrian signs
- Yes
- Not available

**In Street & Gutter Pan Signs**
- Advanced yield signs present

**Intersection in front of Camelot Elementary School**

**Enforcement**

- June 2012 to June 2013
- 103 Total warnings
- 88 Total citations

**What’s Next in FY14**

- Add yield signs at advance stop lines, pavement marking bars, in-lane signs, prompting signs.

**Progress**
- Added yield signs at advance stop lines and advance stop lines.

**Engineering**

- Add yield signs at advance stop lines, pavement marking bars, in-lane signs, prompting signs.

**Recommendation**
- Engineering

- Add yield signs at advance stop lines, pavement marking bars, in-lane signs, prompting signs.

- Progress
- Added yield signs at advance stop lines and advance stop lines.
Pedestrian Signage

**Advance Signs and Markings**

- **Advance Yield**
  - Regulatory
  - Indicates where a driver should yield to a pedestrian in a crosswalk

- **Advance Stop**
  - Regulatory
  - Indicates where a driver must stop while yielding and before proceeding across the crosswalk or through the intersection

**Crosswalk Signs**

- **Crosswalk Warning**
  - Warning
  - Draws additional attention to the crosswalk

- **In-street Sign**
  - Regulatory
  - Draws additional attention to the crosswalk and reminds drivers of the state law requiring them to yield

- **Median Refuge Sign**
  - Regulatory
  - Draws additional attention to the crosswalk and reminds drivers of the state law requiring them to yield

**Pedestrian Signage**

- **Advance Signs and Markings**
- **Crosswalk Signs**
- **In-street Sign**
- **Median Refuge Sign**

**Signs for Turning Traffic**

- **Turning Yield Sign**
  - Regulatory
  - Reminds drivers of the requirement to yield to pedestrians before turning

- **Slip Lane Crosswalk**
  - Warning
  - Draws additional attention to the crosswalk

- **Rectangular Rapid Flashing Beacon (RRFB)**
  - Warning
  - Draws attention to the crosswalk from a greater distance on higher-speed roadways

**High Intensity**

**Common Crosswalk Types**

- **1. Continental**
- **2. Standard** (sometimes decorative, with colored paint between the lines)
- **3. High Intensity Ladder**
- **4. Unmarked**

Legal crosswalks extend from the sidewalk (paved or unpaved) at every intersection, regardless of whether or not they are marked with paint. The duty to yield to pedestrians is the same, regardless of any paint or signage present.

These are common crosswalk types found in Central Florida.
A special recognition needs to be extended to the team of workers who spent countless hours researching, building, launching and operationalizing the Best Foot Forward program with the goal to save lives and make our streets safe for all road users. Every single one of them has expert talents ranging from research, safety, and communications, to creative, promotions, and business management. Collectively, they were able to achieve great results in just one year by working alongside the coalition partners in supporting the Triple E efforts.

Florida Bicycle Association
FloridaBicycle.org
Brad Kuhn & Associates
bradkuhnandassociates.com
CERS
cers-safety.com
Day Communications
daycommunications.com
Fry Hammond Barr
fbhbt.com
Keri Caffrey, Inc.
kbird.com
Funding provided by the
Florida Department of Transportation