





STREET SMART PEDESTRIAN & BICYCLE SAFETY PROGRAM:

Guide to Conduct Education & Enforcement Outreach in Local Areas



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NHTSA INTEGRATED CAMPAIGNS

According to the National
Highway Traffic Safety
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behavior.

Introduction

Nationally in 2009, 4,092 pedestrians and 630 bicyclists were killed in traffic crashes accounting for nearly 12 percent of total traffic fatalities.

According to the Transportation for America's 2011 Dangerous By Design report, the Washington region ranked 20th out of the 52 largest metropolitan areas in pedestrian deaths per capita. On average, over 2,600 pedestrians and cyclists are injured and 89 are killed in the region. While motorized fatalities declined by more than a third between 2006 and 2010, the number of pedestrian and bicyclist fatalities remained essentially flat. As a result, these fatalities now account for 30% of the region's traffic fatalities.

The metropolitan Washington region faces specific challenges when it comes to pedestrian and bicyclist safety. High levels of traffic congestion, a growing and diverse population, new immigrants, and unfamiliar tourists all combine to create risky situations on roads throughout the area. Additionally, pedestrians and cyclists use roadways (multi-lanes, higher speeds, no sidewalks, no bike lanes, etc) that were not designed for this type of travel. Unfortunately, in a motor vehicle/pedestrian or cyclist crash, it's always a physical mismatch, and the pedestrian or cyclist will always receive the worst of the consequences.

While this is a regional problem, The District of Columbia, Montgomery County and Arlington have found that there are specific two to five block areas



made up of intersections and streets that have the highest incidence of pedestrian crashes. DC and Montgomery County have developed programs that target these High Incidence Areas (HIA) with promising results in reducing crashes.

The purpose of this guide is to provide local jurisdictions the tools needed to implement effective education and enforcement outreach promoting pedestrian and/or bicycle safety in HIAs. According to the National Highway Traffic Safety Administration (NHTSA), integrated campaigns that have combined strong targeted advertising with High Visibility Enforcement (HVE) and some publicity about enforcement have proven to be most effective in creating measurable change in public behavior.



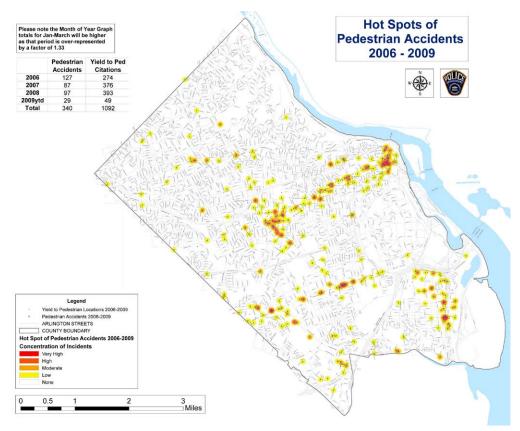
HIGH INCIDENCE AREAS (HIAS)

High Incidence Areas
(HIAs) are located mostly
in commercial areas,
along transit corridors,
and near high-density
residential neighborhoods
with a significant number of
pedestrians, cyclists and high
traffic volumes.

Identifying Targeted Areas for Outreach

In order to utilize available resources such as government personnel or law enforcement effectively and efficiently, potential areas for outreach need to be carefully selected based on existing data such as police reports or crash data. If you do not have access to this type of information, it's possible that your counterpart at the next level of government (County or State) will be able to help you. The District of Columbia, Maryland and Virginia all have traffic safety programs that include a focus on pedestrian and bicycle safety. Additionally, the Metropolitan Washington Council of Governments has access to regional resources and data that may be of assistance.

In order to clearly understand the impact of this issue in your area, it is important to know where crashes are occurring and, if possible, what the circumstances were and who was involved. While collisions between pedestrians/bicyclists/ vehicles may occur throughout your particular area, in general, crash data will typically indicate that the majority are clustered in a relatively few "High Incidence Areas." High Incidence Areas (HIAs) are located mostly in commercial areas, along transit corridors, and near high-density residential neighborhoods with a significant number of pedestrians, cyclists and high traffic volumes. Once the HIAs are identified, they can be prioritized based on available resources.



Sample map from Arlington County. Pedestrian accidents were plotted over a 4-year period to identify geographic areas where a significant number of incidents are clustered.



Partners

This guide supports the NHTSA social marketing model of combining education with enforcement. Therefore it is necessary to have law enforcement as your partner in your outreach efforts. In approaching law enforcement whether it is local, county or state, it is important to identify the person(s) in charge of traffic safety. Not only are they responsible for scheduling enforcement efforts, but they are also a valuable resource for data and experience with the issue.

Another valuable partner in your outreach efforts is the Metropolitan Washington Council of Governments (COG). Not only does COG work with your regional counterparts to execute the Street Smart campaign but they are also a great source for data and best practices. In the fall of 2011, COG conducted a seminar on best practices in pedestrian and bicyclist safety enforcement. Fatality trends, common crash types, and enforcement tactics were discussed with speakers from the District Department of Transportation, Montgomery County Police and Arlington County Police (see the appendix for seminar materials). They plan to conduct additional seminars on this same subject so make sure to watch for information from COG.

Lastly, as this is a local outreach program, it is important to engage the community. Reach out to local citizen's groups, neighborhood associations,



school systems, community colleges, businesses or activists located in the High Incidence Area(s). Let them know that you are planning to conduct pedestrian and bicycle safety education and enforcement in the area and ask them to become involved. These partners can facilitate access to many of the target audiences and can aid in posting/distributing materials. Large employers may be able to provide brand leverage through their connection to this campaign and the campaign being identified on their materials. Lastly, consider approaching a select group to be sponsors. Their logo could be placed on materials in return for activities that offset the cost of the campaign.



STREET SMART PROGRAM

Street Smart is a public awareness and enforcement program that is raising awareness of pedestrian and bicycle safety issues throughout the District of Columbia, suburban Maryland and Northern Virginia. Goals include reducing the number of pedestrian and cyclist injuries and deaths in the area; educating drivers, pedestrians and cyclists about safe usage of roadways; and increasing law enforcement efforts in this area.

Enforcement & Education Outreach Activities

The regional Street Smart Pedestrian and Bicycle Safety Program conducts biannual campaigns in the metropolitan Washington area – spring and fall. Media such as radio, outdoor, television and Internet are used to reach specific audiences (drivers, pedestrians, bicyclists) throughout the region at specific times. Coordinating local enforcement and education outreach efforts with the regional campaign will allow you to capitalize on increased regional awareness of the campaign.

Target Audience(s):

Once you identify the HIAs in your area, evaluate the surrounding areas to get a sense of the types of activities that contribute to the situation. In order to reach the largest number of people traveling through an HIA you may need to target multiple audiences:

- Residents Single family homes, condos and apartment buildings.
- Commuters Congested commuter routes can elevate traffic levels in your area – both on foot via public transportation or with drivers passing through.
- Drivers Speed and distraction are key driver factors in regards to pedestrian safety.
- Law Enforcement Local police are an integral part of the solution. We've learned from other safety campaigns that keeping them informed contributes to greater involvement.
 - nent.
- Employers/ Employees Large and small businesses can contribute both driver and pedestrian traffic.
- Restaurant, Retail and Entertainment Customers Foot traffic to and from restaurants, retail and entertainment also contribute to safety issues.



KEY POINTS FOR ENFORCEMENT

- Enforce laws fairly among drivers, pedestrians and bicyclists.
- Concentrate on high-crash intersections or corridors.
- Look for the most egregious violators.
- Verbal warnings are OK in appropriate situations.

Enforcement Activities:

The regional Street Smart Program highly encourages law enforcement activities during both campaigns and is actively seeking for increased participation throughout the region. Enforcement is a big incentive for behavior change. If people know they will receive a ticket for certain types of activities, they will be less inclined to do them. As mentioned previously, COG conducts a seminar on best practice for enforcement of pedestrian and bicycle safety laws. It is an educational forum where you can see what other areas are doing and learn what has worked in previous efforts. The following is a list of the types of enforcement activities that can be done:

- Speed Enforcement: The chance of a pedestrian dying as a result of being hit by a vehicle goes up dramatically as the speed of the vehicle increases. According to Federal Highway data, a person hit at 40mph has a 90% chance of dying, while a person struck at 30mph (only 10mph slower) has an 80% chance of survival. Additionally, the severity of all traffic crashes is reduced when speed is kept in check.
- Jaywalking Enforcement: Just as with seat belt enforcement, law enforcement officers must sometimes protect people from their own risky behavior. The most efficient way to enforce jaywalking laws is to focus on pedestrians who cross without regard for traffic that has the right-of-way (i.e. stepping out into the path of vehicles that have the right-of-way whether at a signal or mid-block). This will address the most hazardous behaviors and result in fewer challenges to enforcement action than ticketing pedestrians for actions that are technically illegal but which present no immediate hazard.





- o For pedestrians who begin crossing on a flashing "Don't Walk" signal, as long as they are out of the crosswalk when the opposing traffic gets a green signal, no action need be taken.
- o For pedestrians who cross mid-block between parked cars, etc, as long as the crossing pedestrian yields to vehicles legally on the street, no action need be taken.
- For pedestrians who cross against a signal with no vehicles approaching, officer discretion is advised.
 A verbal warning may be sufficient if the crossing pedestrian does not impede the flow of traffic.
 However, if the crossing pedestrian demonstrates hazardous behavior (i.e. darting out into traffic), enforcement action is appropriate.





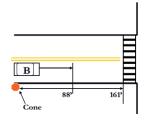
Enforcement at Signalized Intersections: Crash data typically shows that more people are hit while in a crosswalk with a signal. Enforcement should be targeted at drivers turning on a circular green signal, at signalized intersections, who do not yield to pedestrians in the crosswalk crossing with the signal. This is best accomplished by locating foot officers downstream of the crosswalk of interest, adjacent to the exit lane of the intersection. This way, both left- and right-hand turn conflicts with pedestrians can be viewed and enforcement action taken. In determining if a violation has occurred, a pedestrian with the right-of-way must halt or change their path of travel because of a vehicle or if a vehicle has passed so closely as to create a hazard to the pedestrian.

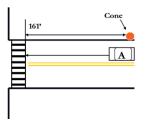


- Enforcement at Uncontrolled Crosswalks: At crosswalks without signals, two enforcement techniques can be
 used.
 - o If a crosswalk is sufficiently busy with pedestrian traffic, foot officers can be located 100-200 feet downstream of the crosswalk conflict zone. When drivers fail to yield or stop for pedestrians, they can be pulled over. It is important that there be a travel lane or parking lane where vehicles can be stopped without blocking through traffic or causing a hazard for officers.



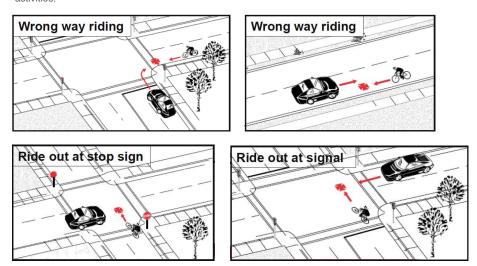
o Setting up a targeted crosswalk enforcement operation ("crosswalk sting") is second method for enforcement at uncontrolled crosswalks. This is useful when there is light pedestrian traffic or it is desirable to control all variables so that if a ticket is challenged, there is no doubt about the movements and position of the pedestrian and driver cited. To set it up, place a traffic cone along the edge of the roadway or parking lane 161 feet from the crosswalk for a 25mph posted speed limit. The pedestrian, or plain-clothes "decoy" officer, enters the crosswalk as the vehicle approaches the traffic cone but before the vehicle has passed the cone. If the vehicle does not stop or passes so close as to pose a hazard to the officer and the officer must abort his/her crossing or take evasive action, the pullover team downstream stops the vehicle and cites the driver.



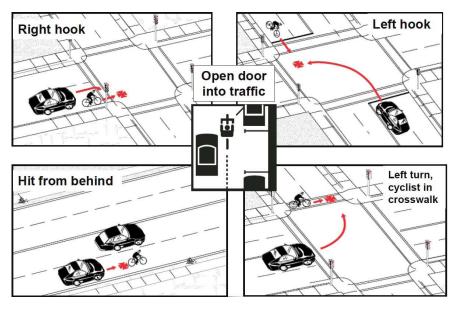




Enforcement of Bicyclist Behaviors: Wrong-way riding is a particularly dangerous activity as it causes the
cyclist to approach drivers at intersections, alleys or driveways from a direction the driver does not expect, often
at speeds that make it difficult to avoid a collision. Running stop signs and traffic signals are other dangerous
activities.



• Enforcement of Motorist Behaviors around Bicycles: The number of right hook collisions is rising as more bike lanes are included on area roadways. Right hook crashes occur when the driver of a vehicle fails to observe the presence of a cyclist to the right of a vehicle and makes a right-hand turn. The left hook crash occurs when a driver turns in front of a cyclist with the right-of-way. Left hook crashes can occur with higher speeds and often result in more severe injuries for the bicyclist.





EDUCATIONAL ACTIVITIES

- Pursue PSA opportunities with local media.
- Work with your local public information officer to develop an earned media strategy.
- Enlist local law enforcement to conduct outreach and enforcement.
- Organize a street team to interact one-on-one with the community.
- Develop a pedestrian safety seminar to be given throughout the community including schools and civic organizations.
- Coordinate with local government agencies to place street signage in the HIA.
- Engage your community through a combination of social media tactics and blast emails.

Educational Activities:

In order to capitalize on the regional paid media campaign, the Street Smart Program is encouraging local areas to conduct additional educational activities during the campaigns. Your message will resonate more when it is backed-up by the regional paid media. The regional campaign also makes print-ready handouts and posters, produced radio and/or television spots and produced artwork for outdoor advertising easily available for use in your area. Some additional local outreach strategies can include:

- PSA Opportunities Local media may be obligated to provide a certain amount of free ads for your jurisdiction.

 Radio, newspapers, local cable or local transit agencies should be approached in advance of the regional campaign so you can coordinate placement at the same time. All materials produced for the Street Smart Program are available for local use (you would be responsible for any manufacturing costs). Please note that radio and out-of-home advertising is produced in Spanish as well.
 - Out-of-Home Advertising Many locales have agreements in place with Clear Channel, CBS Outdoor and Direct Media regarding advertising in bus shelters and buses. Per these agreements, the media vendors are required to provide a certain amount of advertising space at no cost. Check with your transit agency to see if one of these agreements exists in your area.



- Earned Media/Public Relations Efforts Work with your local public information officer (either local government or local law enforcement) to maximize earned media efforts. This will include activities such as brainstorming with the local team to develop unique hooks for media events in your area; promoting your efforts through social media outlets; and coordinating with the regional Street Smart Program.
 - Develop a series of press releases that can be issued at regular intervals to keep the public aware of HIA activities and issues.
 - o In HIAs where another language besides English is prevalent, work with your public information officer to develop an earned media plan that reaches them in their language. Seek out alternative language media (i.e. Spanish-language newspapers or cable TV) to promote your efforts, particularly as they relate to their community.



• Law Enforcement/Community Outreach — Work with your local law enforcement to identify an officer (or a small group of officers) who feels strongly about traffic safety. Ideally this officer has a story about a pedestrian crash, either as a first responder or notifying a victim's family of a pedestrian crash or fatality. The purpose of the officer is to eloquently explain why his/her law enforcement agency takes pedestrian safety so seriously. The officer should be present at the HIA enforcement activities and could serve as the "spokesperson" for all law enforcement officers issuing citations on



that particular day. The point is to raise awareness regarding the enforcement activities and explain law enforcement's approach to pedestrian safety and concern for the welfare of pedestrians. As a spokesperson the officer should be sensitive to the local citizen's concerns regarding ticketing pedestrians for what might appear on the surface as a "minor" infraction, while being adamant and unapologetic about the fact that what law enforcement is doing is actually stopping killer pedestrian crashes.

NOTE: If desired and requested within a timely manner, COG's marketing/media contractor, McAndrew Company will photograph the law enforcement "spokesperson" and incorporate the officer's image into the local outreach materials. These materials will be made available to the local jurisdictions. The local jurisdictions will be responsible for the costs of printing the materials.



• Street Teams – Organize a Street Team to go out and speak to pedestrians in the area about Street Smart.

Street teams can be made up of coworkers, concerned citizens, or, if budget allows, trained professionals. The teams then go out and approach pedestrians in the HIA, especially during enforcement periods, and talk to

them about the issues in that area. One-on-one interaction is a great way to engage the public on this issue. In

HIAs where another language besides English is prevalent, be sure to include members that are fluent in that language.

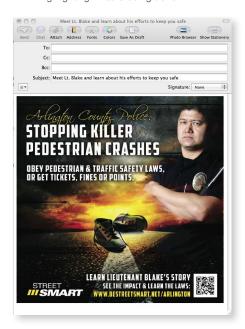


- o In Baltimore, street teams had hand-held billboards and canvassed mixeduse neighborhoods adjacent to high-intensity pedestrian and bicycle crash locations. They were easily identifiable by bright green t-shirts with safety messaging and distributed specific information about the number of fatalities and injuries in that area.
- Pedestrian Safety Education Seminar Work with your local law enforcement agency to develop a pedestrian
 safety education seminar. Then arrange for an officer (or group of officers) to give this presentation to large
 employers, civic groups, school systems, community colleges or associations in your HIA during the regional
 campaign.
- Street Signage Street signage allows you to reach both pedestrians and drivers in high traffic areas and can be executed in the following formats:
 - Portable Variable Message Signs (VMS) VMS signage is often used to identify work zones, however it is becoming more common in the region to use these signs to promote safety messages as well. VMS signs allow you to tailor the message to the needs in your area. Check with local law enforcement agency or government departments (i.e. Department of Public Works) about access to these signs.



- o Street Banners Many areas are already set up with wiring to hang large banners over streets. Another option for street messaging are the signs on traffic poles –either as banners or double-stapled signs (as used in political campaigns). Consider adapting an outdoor advertising execution to your banner specifications that will make an impact in your HIA.
- Blast Emails Many government agencies maintain an email database of residents who have contacted them for information. Develop a series of blast emails that are timed with your local enforcement and education activities highlighting what is being done.





- o List Serves Many communities and employers use list serves as a method to communicate with residents or employees and are an ideal way to reach numerous target audiences directly. Approach homeowners associations, civic groups, associations and businesses in the HIA and ask if they will circulate the Street Smart safety message during the regional campaign.
- Social Media Many government agencies have a
 presence on Facebook and Twitter. Develop a series
 of pedestrian and bicycle safety messages as well as
 updates on the activities being conducted in your area and
 post them regularly during the regional campaign.



Reporting

Tell us what you're doing in your community to support the regional Street Smart Program! Mike Farrell serves as the program coordinator at the Metropolitan Washington Council of Governments (COG) and is responsible for reporting on the program's activities to COG's membership. Additionally, the program compiles an annual report detailing the regional paid and earned media efforts and highlighting local efforts. This report is distributed among the COG membership and is an excellent venue for others in the region to see the work you've been doing in your area.

Please contact Mike Farrell (202-962-3760 or mfarrell@mwcog.org) with questions.



Appendix

DDOT/MPD Enforcement Training Manual DDOT Bicycle and Pedestrian Enforcement Presentation

Montgomery County Pedestrian Program Presentation

Arlington County Pedestrian Program Presentation

University of Maryland: Police Role in Bicycle Safety Presentation







STREET SMART PEDESTRIAN & BICYCLE SAFETY ENFORCEMENT

TRAINING MANUAL

2011 TRAINING & ENFORCEMENT WAVES

DISTRICT DEPARTMENT OF TRANSPORTATION METROPOLITAN POLICE DEPARTMENT

WASHINGTON, DC



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Key Points for Street Smart Enforcement

- The campaign is aimed at all three groups: motorists, bicyclists, and pedestrians. Enforce <u>fairly</u> among the three groups.
- Concentrate on High-Crash Intersections and Corridors (page 12)
- Look for the most egregious violators.
- Citations show we are serious, but verbal warnings are OK too in appropriate situations.
- Hand out Crosswalk Law Card and Street Smart brochure to drivers/peds/cyclist with citations and warnings.
- Be diplomatic; explain the program.

The violations to target include:

Motorists:

- Failing to yield the right-of-way to pedestrians
 - At crosswalks without signals
 - When turning left or right at intersections on a circular green signal
 - When turning right on red after stop
- Speeding, particularly in neighborhoods, near schools or other areas of high pedestrian activity
- Red light running
- Blocking crosswalk (failure to clear intersection)
- Driving while impaired by drugs or alcohol
- Opening door into cyclist
- Passing a bicycle too closely (less than 3 feet)

Pedestrians:

- Pedestrians who walk into the stream of traffic and disrupt the flow, against the signal or midblock.
- Pedestrians who "dash out" into the path of oncoming cars.
- Pedestrians who are drunk (take to a place of safety).

Bicyclists:

- Riding the wrong way in a traffic lane or on the wrong side of the road
- Riding at night without lights or required reflectors
- Running a stop sign or red light
- Failing to yield the right-of-way
 - Riding out mid-block
 - While turning right or left
 - o Abruptly entering a crosswalk, too fast for the approaching motorist
- Failing to signal an abrupt turn.

These and other relevant traffic citations are included in the table on page 8. For questions call Officer Arlinda A. Page, cell- (202) 437-8030

Effective Pedestrian-Bicyclist Safety Enforcement Techniques

(John Moffat, former commander, Seattle Police Department, currently Northwest Regional Administrator, National Highway Traffic Safety Administration,)

Overview:

Drivers have a duty to yield right-of-way to pedestrians crossing streets in marked or unmarked crosswalks. Many drivers seldom or never do so. Often this is because drivers are speeding.

Frequently, the failure to yield right-of-way occurs when the driver is turning onto another street and a pedestrian is in their path. This is a particular threat to older adults.

A particularly deadly situation occurs when a driver on a multiple lane roadway stops for a pedestrian. Other vehicles overtake and pass the stopped car. Again law abiding pedestrians are victimized by careless drivers.

A crucial point is that drivers have a near absolute duty to avoid running down persons in the street, regardless of whether they are there legally or not. The uniform vehicle code, used as a model in most states, requires drivers to look out for and avoid striking pedestrians. We should also remember the common law rule that a person is expected to see what is there to be seen!

Pedestrians also have duties. They must stay off of certain roads and out of specified areas. They can cross most other streets in crosswalks. Outside crosswalks, they can cross if they yield right-of-way to cars. Pedestrians must not leave the curb so abruptly that drivers find it impossible to yield the right-of-way to them, even in a crosswalk. They must comply with traffic signals.

Marked crosswalks are an important traffic control device and serious study is needed to find a way to make them work better. Work is needed to increase the effectiveness of crosswalks, rather than eliminating them.

Crosswalks are needed to guide the pedestrian to a safer place to cross. They should be close enough that it is reasonable to expect a person to walk over to it, perceiving some value in going there. Most important, drivers should behave properly at a crosswalk so pedestrians find value in going there.

Police administrators need the support of public health injury prevention programs and traffic safety organizations in carrying out these enforcement programs. Members of the public are often more receptive to advice coming from these respected sources.

Targeting the Pedestrian:

When people talk about pedestrian violations, they immediately think of "jaywalking". This popular term usually describes a person dashing across a street in the "wrong" place. Though "jaywalking" is disorderly in appearance, in most locations crossing outside a crosswalk is legal.

DC Law states "Between <u>adjacent intersections controlled</u> <u>by traffic control signal devices</u> or by police officers, pedestrians shall not cross at any place except in a crosswalk."

If, however, one of the adjacent intersections is not signalized, then pedestrians are allowed to cross any place between them. Pedestrians do not have the right of way when doing so, and crossing might be unsafe. However, it does not violate the law.

Jaywalking is not a big factor in pedestrian death and injury either. The Seattle Police Department vigorously enforced the anti-jaywalking laws in that city for 50 years, issuing more than 500,000 citations. Seattle's pedestrian crash experience was little different from the rest of the USA where little or no attention was paid to this problem.

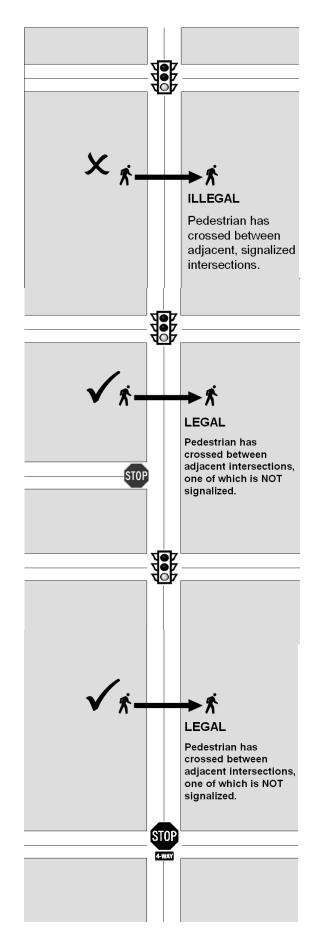
Jaywalking enforcement may have a place in eliminating disorder in a city. New York City is working on jaywalking as a public order issue. It is not an effective safety strategy. Jaywalking enforcement is often episodic and inconsistent but is always widely seen as a waste of police manpower. Many police administrators start jaywalk enforcement programs to their later regret!

Police officers should ask themselves "Why do I expect pedestrians to go to a crosswalk? Do drivers behave differently there by stopping for pedestrians?" Officers should make the crosswalk attractive. Pedestrians might then find value in going to them.

There are reasonable enforcement targets:

- Pedestrians who push through a crowd of people waiting for a "walk" light and cross illegally.
- Pedestrians who enter a stream of traffic and disrupt the flow
- Pedestrians who "dash out" into the path of oncoming cars
- Pedestrians who are drunk (take to a place of safety).
- Enforcement action can be a verbal warning, written warning, or a citation.

<u>Dealing with a pedestrian's identification:</u> Pedestrians are not required to carry any identification. This can create problems. The pedestrian may give a fictitious or altered name. The officer may have identity questions under any circumstance.



Pedestrian Signals- What do they mean?

Pedestrians can sometimes be confused because the flashing DON'T WALK display appears before people finish crossing the street. Usually, there is nothing wrong with the traffic signal timing, there is just a misunderstanding of what the pedestrian signal means.

- WALK SIGNAL: The WALKING PERSON symbol or "WALK" signal means that it is
 the pedestrians' turn to start crossing. However, pedestrians may encounter
 conflicts from motorists who are turning right or left across their crosswalk, or who
 may run the red light.
- FLASHING DON'T WALK SIGNAL: The flashing orange UPRAISED HAND symbol or "DON'T WALK" signal, really means "Don't Start," and if a pedestrian has already begun crossing the street during the WALK interval, there should be enough time to finish your crossing before the steady DON'T WALK appears. In practice, it is generally acceptable to allow pedestrians to start crossing during the flashing DON'T WALK signal as long as they are out of the crosswalk when the opposing traffic gets a green signal.



- COUNTDOWN PEDESTRIANS SIGNALS: Nearly all intersections in DC have countdown signals. These countdown numbers indicate the time remaining to cross the street during the pedestrian phase. At most signals, the countdown numbers start at the beginning of the WALK signal. At others, the numbers start when the FLASHING DON'T WALK signal appears.
- <u>STEADY DON'T WALK SIGNAL:</u> When the steady DON'T WALK appears you should not begin crossing, and should not be in the street.



Targeting the Bicyclist:

Bicycle riders are usually the focus when police think of enforcing bicycle laws. We've all seen riders running red lights, riding on the sidewalk, or riding at night without lights and wanted them to be stopped and ticketed. However, many bicycle crashes are caused by the bad behavior of motorists, and drivers may not realize the impact of riding too close to a cyclist or speeding past a rider just to cut in front of them and make a right turn. Good law enforcement strategies will target both cyclist and motorist and will focus on behaviors that cause the greatest fear or danger.

Bicycle riders sometimes contribute to their being involved in a crash. Some ride at night without lights. They may make themselves more difficult to see by wearing dark garments. They may ride the wrong direction in the traffic lanes. Even if they ride on the sidewalk, traveling counter to the traffic lane on the adjacent street might result in them surprising a motorist who is often looking only for slow moving pedestrians and searching for cars.

They may drive through stop signs and red lights. Sometimes they may be dealing with a signal that won't detect a bicycle, or a stop sign placed at the bottom of a long hill that the cyclist would just as soon attack without losing momentum they've built up. Regardless, the sudden appearance of the bicyclist can surprise motorists. Some bicyclists make sudden or unpredictable turns. Others may not yield the right-of-way when required.

Problems with Enforcement Aimed at the Bicycle Rider:

Stopping bicyclists and taking enforcement actions against the rider can be a problem for a police officer who has not thought through the process.

<u>Highly mobile:</u> Bicyclists are highly mobile and can be difficult to overtake, signal and actually stop. The best tool for doing this is another bicycle and voice or whistle commands. Pursuing a bicyclist by chasing with a motor vehicle can appear heavy-handed and out of proportion. Once stopped, bicycle riders feel exposed and can't shrink down in their seat and "disappear" like a motorist might.

<u>Dealing with a bicyclist's identification:</u> Bicycle riders are not required to carry any identification, much less a formal driver's license. This creates serious problems. The bicyclist may give a fictitious or altered name. The

officer may have identity questions under any circumstance.

<u>Dealing with children:</u> Many bicycle riders are young children. In DC, as in most states, children under age eight are considered incapable of committing an offense and cannot be cited. Under these circumstances the officer should call the attention of the parent to the problem.

<u>Dealing with an anti-automobile or anti-authoritarian bicyclist:</u> An occasional bicyclist will take strong exception to the police challenge their behavior. They may verbally abuse the officer. Some of these riders will be strong advocates of cycling and have strong emotional attachment to their way of doing things, legal or not. Some will have anti-automobile and anti-authoritarian ways. A cop in a car will represent both evils. Officers should not debate such issues but should focus on the specifics of the violation observed.

<u>Pulling the bicyclist over:</u> More than half of bicycle crashes are caused by falls where the cyclist is riding too fast for conditions and goes down. Bicyclists also run into dogs, other cyclists and pedestrians as well as automobiles.

The best approach is a soft one. Ideally, a bicycle officer can ride along with the cyclist and ask them to stop. An officer in a patrol car can follow until a cyclist pauses or stops in traffic and then address the rider verbally. An officer who has reviewed the bicycle and traffic laws should have minimal difficulty with either group.

Areas of focus for enforcement of the bicyclist:

- Driving at night without lights or required reflectors
- Riding the wrong way in a traffic lane or on the wrong side of the road
- Running a stop sign or red light
- Failing to yield the right-of-way
 - o Riding out mid-block
 - While turning right or left
 - Abruptly entering a crosswalk, too fast for the approaching motorist
- Failing to signal an abrupt turn.

Targeting the Motorist:

Few motorists go out of their way to deliberately hit or frighten pedestrians or bicyclists. However, an equally small number really appreciate the impact they can have on the safety and comfort of those around them who are outside the protection of a steel cage. Motorists are on the lookout for threats to their safety and so are scanning for other vehicles - they may not be paying attention to the cyclist or pedestrian ahead of them in the road. They may not realize that speeding through a neighborhood prevents people from crossing the street or feeling comfortable riding up to the shops. When overtaking a bicyclist, motorists are worried about how close vehicles in the adjacent or oncoming lanes are rather than how close they are coming to the bicyclist - and they are certainly in too much of a hurry to stop and wait for a gap in traffic before pulling out and safely passing a rider.

EVERY police patrol officer should watch for these violations while on routine patrol and take enforcement action when they observe them.

Areas of focus for enforcement on the motorist:

- Driving while impaired by drugs or alcohol
- Failing to yield the right-of-way
 - o When turning left at intersections or at driveways
 - When turning right at intersections or at driveways
 - When entering roadway
- Seeding, along commercial corridors and particularly in neighborhoods and near schools.
- Overtaking bicycles in areas where it cannot be done safely ("squeezing by")

The foundation of a good traffic safety program is a strong and continuous program to rid the streets of aggressive and alcohol impaired drivers. This will protect pedestrians along with everyone else.

Real danger is created by the aggressive, inattentive or indifferent driver. Many are going to fast and fail to look out for pedestrians.

Motorist compliance with crosswalk right-of-way laws is often poor. Officers should watch for these violations. Officers should also be alert for crosswalk violations by drivers making turns. The pedestrian "sting" tactic is an effective way to combat these violations.

A deadly threat to pedestrians is created when a driver overtakes and passes a car stopped at a crosswalk to let a pedestrian cross. Officers who observe these violations should issue a citation in every case.

Danger to children comes from drivers going to fast near schools or in neighborhoods where children live. Many of our streets are designed to a "high" standard that allows for cars to move fast. Sadly, one consequence of this is that kids can't be near the street or are in danger of being killed.

It is impossible to police speeding on all the many miles of residential streets in our cities. There are too few police and too many speeding drivers. The real solution here is traffic calming.

Police should vigorously patrol for speeding cars around schools, an area where children are concentrated.

Problems with enforcement against the driver:

Unfortunately, the law enforcement officer is most likely having to make up for the failure of traffic engineers to properly accommodate bicyclists in roadway design, or for our failure to train motorists to deal safely with bicyclists, or for a lack of bicyclist education. If a bicyclist is "holding up" a motorist by riding in the middle of the travel lane, the chances are the bicyclist would be more than happy to be riding in a designated bike lane or on a paved shoulder, but none exists. Many motorists are uncomfortable passing a cyclist because they were never really taught how to deal with that situation when learning to drive.

Bicyclists are often held in quite low esteem by other road users - the image of the errant cyclist running stop signs and red lights pops easily into almost everyone's head. Thus, stopping a motorist to cite them for a traffic violation involving a cyclist is, on the face of it, going to win the officer very few new friends. Indeed, many motorists will be completely unaware of what they have done wrong even after being pulled over. The first task for the officer, therefore, is to make sure the motorist does understand and appreciate the impact of behavior that causes danger to a bicyclist. If the driver seems to get the message, a warning may be all that is necessary.

Some drivers, however, won't get it. They will steadfastly refuse to accept that a cyclist - any cyclist - should be on the road, particularly that road, in front of them. They may even claim to be acting in the cyclists' best interest in telling them to "get off the road" for their own safety. Even if the officer wouldn't ride on that road themselves, they should help the driver understand that the cyclist has a legitimate right to be on the road and that riding in the gutter or on the sidewalk (assuming one exists) is likely much less safe. If the driver still fails to see the light, a ticket may be the only option.

Officers should beware of the defense that "the cyclist was all over the road". Certainly some cyclists do weave around and are unpredictable. More often than not, the cyclist is simply trying to avoid a pothole, dodge a rock or broken glass, or stay away from a crack in the road between the gutter and the asphalt. Cyclists are not required or expected to ride in the gutter, and are not required to get out of the way of motorists. Equally, a cyclist should not deliberately hold up a motorist when there is space for safe passing.

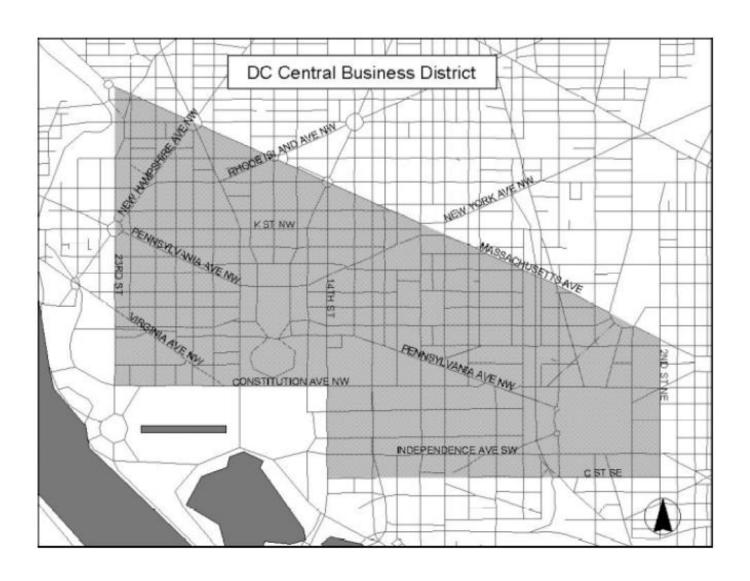
Source: Pedestrian and Bicycle Information Center, 730 Airport Road, Suite 300, Campus Box 3430, Chapel Hill, NC 27599-3430 phone - 919.962.2203 fax - 919.962.8710 www.walkinginfo.org or www.bicyclinginfo.org

<u>District of Columbia Pedestrian & Bicyclist Safety Citations:</u>

User	Statute Number/ MPD T-code	Citation	Description			
Driver Citations						
Motorists	50- 2201.28(b) (T-759)	Failure to stop and give right of way to pedestrian at signalized intersection	b) A driver of any vehicle shall STOP and give right-of-way to a pedestrian who has begun crossing on the "WALK" signal to continue to the opposite sidewalk or safety island, whichever is nearest. (T-585 Colliding with pedestrian \$500.00/6 pts.)	\$250/ 3 pts.		
Motorists	50- 2201.28(a) (T-011)	Failure to stop and give right of way to pedestrian at un-signalized crosswalk	(a) The driver of a vehicle shall STOP and give right of way to a pedestrian crossing the roadway within any marked crosswalk or unmarked crosswalk at an intersection.			
Motorists	2221.5 (T-781)	Overtaking a vehicle stopped for a pedestrian at a crosswalk	Whenever any vehicle is stopped at a marked crosswalk or at an unmarked crosswalk at any intersection to permit a pedestrian to cross the roadway, the driver of any vehicle approaching from the rear shall not overtake and pass the stopped vehicle.			
Motorists	2207.1 (T-782)	Failure to yield right- of-way to pedestrian on sidewalk	- The driver of a vehicle crossing a sidewalk or			
Motorists	2200.4 (T-585)	Failing to use due care	In every event speed shall be controlled as may be necessary to avoid colliding with any person, vehicle, or other conveyance on or entering the street or highway in compliance with legal requirements and the duty of all persons to use DUE CARE.	\$50		
Motorists	4013 (T-116)	, ,	vehicles shall be allowed when facing red traffic			
Motorists	2213.4 (T-013)	Failure to give full time and attention to the operation of a vehicle	An operator shall, when operating a vehicle, give full time and attention to the operation of the vehicle	\$25		
Motorists	(T-206) intersection <u>crosswalk</u> unless there is sufficient other side of the intersection or <u>crosswalk</u> accommodate the vehicle without or passage of other vehicles or pedest		No vehicle shall enter an intersection or marked crosswalk unless there is sufficient space on the other side of the intersection or crosswalk to accommodate the vehicle without obstructing the passage of other vehicles or pedestrians, not withstanding any traffic control signal indication to proceed.	\$50		

(relating to (T-083) perm		permitting door to open on traffic side	No person shall open a door of a vehicle on the side where traffic is approaching unless in can be done without interfering with moving traffic or pedestrians and with safety to himself or herself and passengers.		
Motorists (relating to bicycles & pedestrians)	elating to (T-210) of way to vehicle at shall yield right of way to any vehicle approaching cycles & intersection when from the opposite direction which is so close as to		\$25		
Motorists (relating to bicycles)	2202.2 (T-219)	distance	he driver of a vehicle overtaking another vehicle roceeding in the same direction shall pass to the eft at a safe distance(new 3' bike passing law)		
Motorists (relating to bicycles)	(P-385)	or parking a vehicle in a bicycle lane	ehicle bicycle lane, except when necessary to avoid		
Motorists	2200 (T-118- 125)		On all streets and highways, unless otherwise designated in accordance with 2200.2, the maximum lawful speed shall be 25 MPH.	Varies	
Motorists	2405.1 (P-010)	or Sidewalks	No person shall stop, stand or park a vehicle in any of the following places, except when necessary to avoid conflict with other traffic, in compliance with law or at the direction of a police officer or traffic control device: a) within an intersection, b) on a crosswalk, and f) in any driveway, alley entrance, or other way when stopping, standing or parking would obstruct the flow of pedestrian or other lawful traffic upon any sidewalk.	\$50	
		Pedest	rian Citations		
Pedestrians	2303.2 (T-528)	Walking suddenly into the path of a vehicle	No pedestrian shall suddenly leave a curb, safety platform, safety zone, loading platform or other designated place of safety and walk or turn into the path of a vehicle which is so close that it is impossible for the driver to yield.	\$10	
Pedestrians	2302.3 (T-575)	Walking against the "Don't walk" signal in the direction of a "Don't Walk" signal.		\$20	
Pedestrians	2304.1 (T-576)	Crossing between adjacent signals			
Pedestrians	2304.2 (Use T-528)	Crossing between intersections- Failure to yield ROW	Each person crossing the roadway at any point to other than within a marked crosswalk, or within an unmarked crosswalk at an intersection, shall yield the right-of-way to all vehicles upon the roadway.		

Pedestrians	2305 (T-577) (Obst. Trfc.)	Walking in the street (when sidewalk provided)	Where sidewalks are provided, it shall be unlawful for any pedestrian to walk along and upon an adjacent roadway	
		Bicycli	st Citations	
Bicyclists	1201.1 (Various)	Violating basic vehicle rules	Every person riding a bicycle on a highway shall be subjects to all the duties applicable to drivers of motor vehicles	\$25
Bicyclists	1201.10 (T-609)	Riding on sidewalks prohibited within CBD	There shall be no prohibition against any person riding a bicycle upon a sidewalk within the District, so long as the rider does not create a hazard; provided, that no person shall ride a bicycle upon a sidewalk within the Central Business District	\$25
Bicyclists	1201.10 (T-607)	Failure to yield ROW to pedestrians on sidewalks	Any person riding a bicycle upon a sidewalk shall yield the right-of-way to pedestrians and shall travel at a speed no greater than the posted speed limit of the adjacent roadway; Provide that such speed is safe for the conditions on the sidewalk	\$25
Bicyclists	1201.2 (a) (T-068)	Failure to ride with traffic (Hazardous driving)	A person operating a bicycle shall comply with subsection 2201.1 of this title requiring drivers to be on the right half of the roadway and shall not operate on the left facing traffic coming from the opposite direction except when authorized by that section.	\$25
Bicyclists	1201.13 (T-071)	Sidewalk Ride-out	No bicyclist shall suddenly leave a sidewalk and rid into the path of a vehicle which is so close that it is impossible for the driver to yield.	\$25
Bicyclists	1204.2 (T-623)	Failure to ride with headlight at night (Violations not enumerated)	Each bicycle, when in use at night, shall be equipped with a white lamp on the frontvisible from at least 500 feet and a red reflector on the rear(a rear red lamp may be used [1201.3])	\$25
Bicyclists	2101.15 (T-072)	Failure to obey traffic control sign or signal (Violations not Enumerated)	No person shall operate a bicycle except in obedience to the instructions of official traffic control signals, signs, and other control devices applicable to vehicles, unless otherwise directed by a police officer or other person authorized to direct and control traffic.	\$25



Target Intersections for Street Smart Enforcement:

Intersections with the highest number of pedestrian crashes (2005-2008):

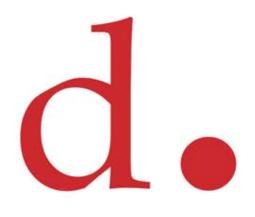
			# of Peds	Ped
*Ranking	Locations	Qdr	struck	Fatlities
1	14TH ST AND U ST	NW	18	
	BENNING RD AND MINNESOTA AVE	NE		
2	7TH AND H ST	NW	15	
3	NORTH CAPITOL ST AND FLORIDA AVE		13	1
4	HOWARD RD AND MLK AVE	SE	12	
5	FOURTEENTH ST AND IRVING ST MOUNT EAST CAPITOL ST AND BENNING RD	NW	11	1
6	9TH ST AND PENN AVE EIGHTEENTH ST AND COLUMBIA RD	NW NW	10	
7	SPRING RD AND 14TH ST 16TH AND L ST 8TH AND H ST	NW NW NW	9	4
	SOUTHERN AVE AND SOUTH CAPITOL ST			1
8	14TH AND K ST 17TH ST AND MASSACHUSETTS AVE 19 ST AND M ST CONNECTICUT AVE AND L ST M ST AND WISCONSIN AVE MOUNT OLIVET RD AND WEST VIRGINIA AVE FOURTH ST AND M ST NORTH CAPITOL ST AND K ST NORTH CAPITOL ST AND NEW YORK AVE	NW	8	1
	SIXTH ST AND H ST 7TH ST AND G ST	NW	7	1
	PENNSYLVANIA AVE AND SEVENTH ST TWELFTH ST AND K ST FIFTEENTH ST AND PENNSYLVANIA AVE			2
	U ST AND SIXTEENTH ST CONNECTICUT AVE AND N ST	NE		1
	4TH ST AND RHODE ISLAND AVE CLAY PL AND MINNESOTA AVE 25TH ST AND GOOD HOPE RD	NE SE		
9	MINNESOTA AVE AND PENNSYLVANIA AVE			
10	MASSACHUSETTS AVE AND TWELFTH ST AND 20 MORE WITH 6 CRASHES	NW	6	

High Ped Crash Corridors

- 1. 7th Street NW/Georgia Ave NW from Florida Ave. NW to Van Buren St. NW.
- 2. 14th Street NW from R St. NW to Missouri Ave. NW.
- 3. Pennsylvania Ave. NW from 15th St. NW to 4th St. NW.
- 4. Columbia Rd. NW/16th Street NW from Connecticut Ave. NW to Shepard Street, NW.
- 5. Florida Ave./U Street, NW/Benning Rd. NE from Connecticut Ave. NW to the MD line.
- 6. Massachusetts Ave. NW form 22nd Street NW to 9th Street NE.
- 7. The Downtown CBD. Many of these intersection have 1-3 crashes each from 2002-2004.
- 8. Good Hope/Naylor Rd. SE form MLK Ave. to MD line.
- 9. Minnesota Ave. from Benning Rd. NE to Good Hope Rd. SE.
- 10. M Street NW and Wisconsin Ave. in Georgetown.
- 11. Alabama Ave. and Stanton Rd. SE corridors.
- 12. Connecticut Ave. NW and Wisconsin Ave. NW in the upper Northwest.



Effective Pedestrian & Bicycle Safety Enforcement



October 20, 2011

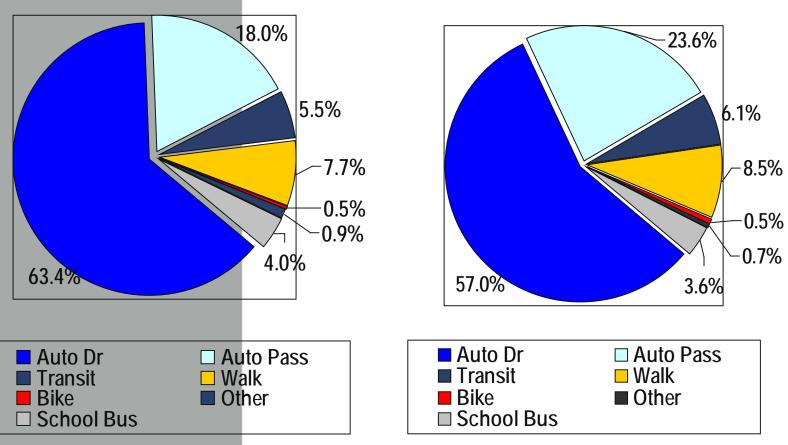
George Branyan
Pedestrian Program Coordinator
District Department of Transportation

Increasingly multi-modal region



Change in Daily Trip
Modal Shares
(1994-2007/2008)
1994

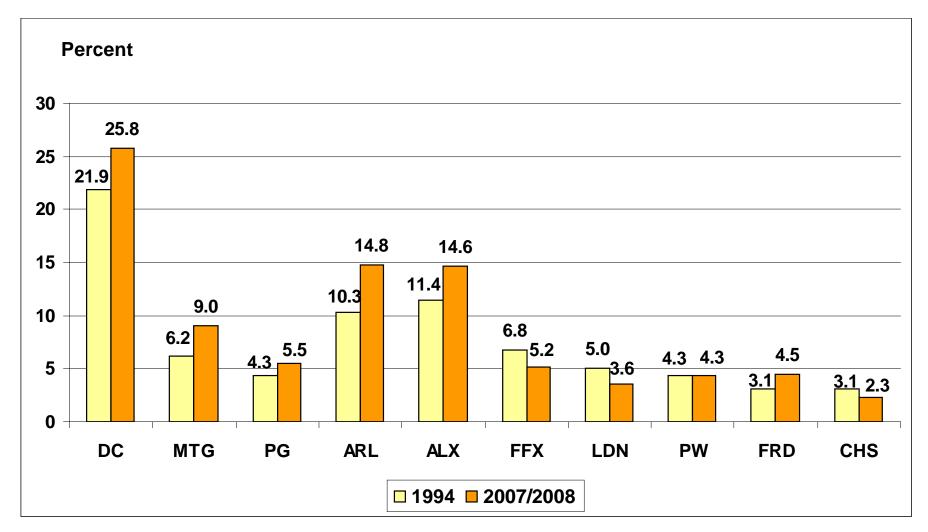
2007/2008



Source: 1994 and 2007/2008 TPB Household Travel Survey



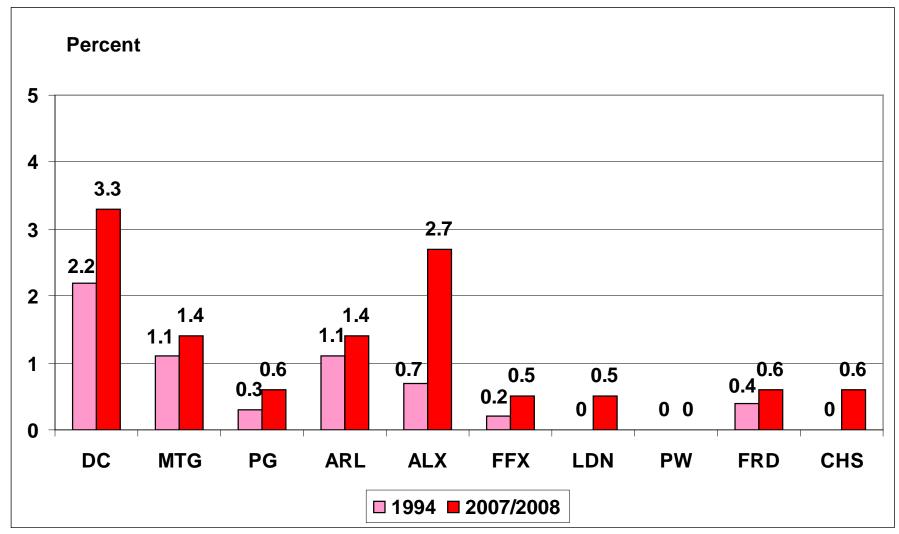
Daily Walk Trip Share by Jurisdiction (1994 – 2007/2008)



Source: 1994 and 2007/2008 TPB Household Travel Survey

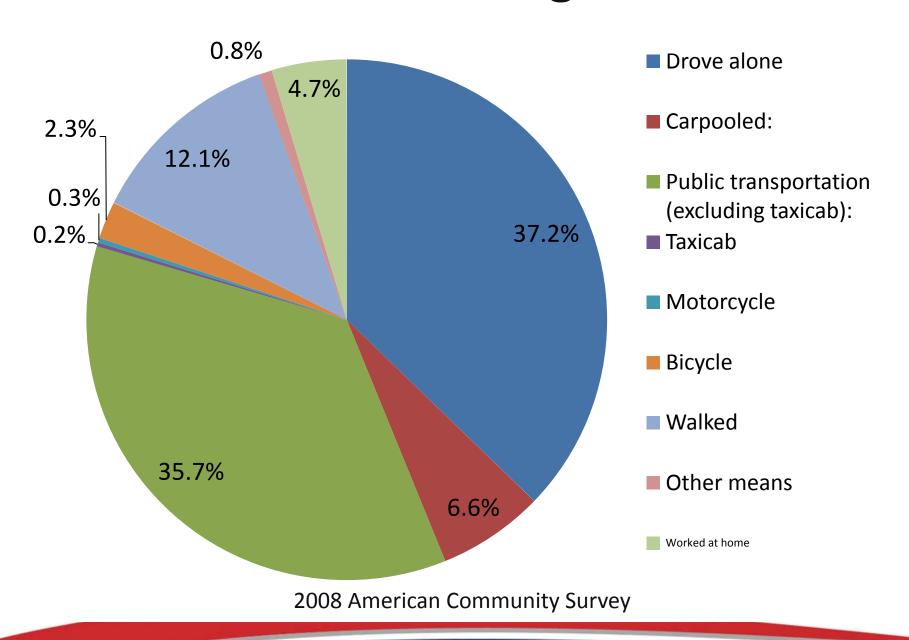


Bike Commuting Share by Jurisdiction (1994 – 2007/2008)



Source: 1994 and 2007/2008 TPB Household Travel Survey

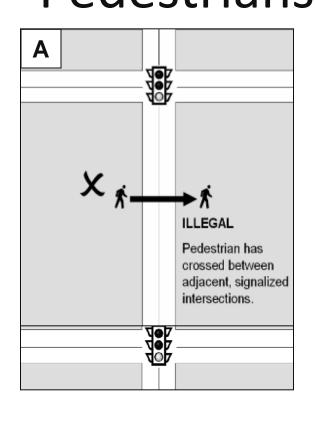
How do DC residents get to work?

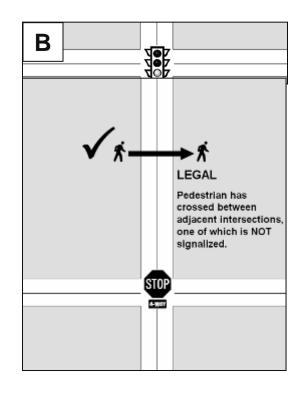




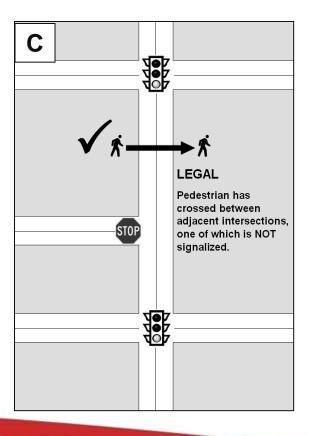
Effective Enforcement Strategies

Mid-block Crossing Law for Pedestrians





Is this distinction meaningful in practice?





Strategies for Effective Jaywalking Enforcement

- Focus primarily on people who walk into the path of a vehicle with the right of way.
- Look for jaywalkers who put themselves in a hazardous situation by interfering with a driver's right of way



Officer Discretion and Effective Jaywalking Enforcement



- Beginning crossing on a flashing Don't
 Walk signal:
 - As long as a person is out of the crosswalk when the opposing traffic gets a green signal, no action need be taken.



- Crossing mid-block, from between parked cars, etc:
 - As long as a crossing pedestrian yields to vehicles legally on the street, no action need be taken.

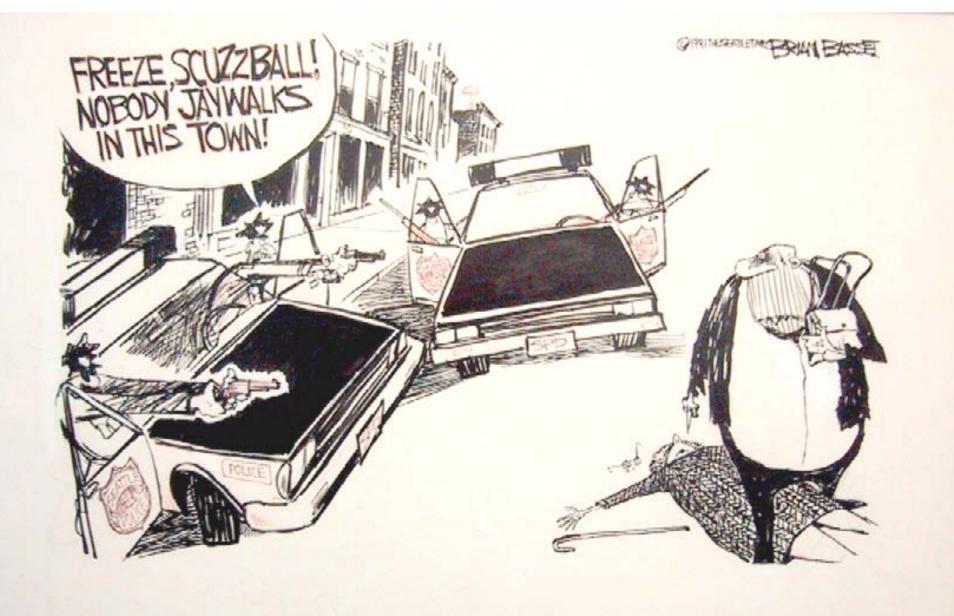
Officer Discretion and Effective Jaywalking Enforcement

- Crossing against a signal with no vehicles approaching:
 - In many cases this does not require action. A verbal warning may be sufficient. Can depend on the type of pedestrian.
 Steady





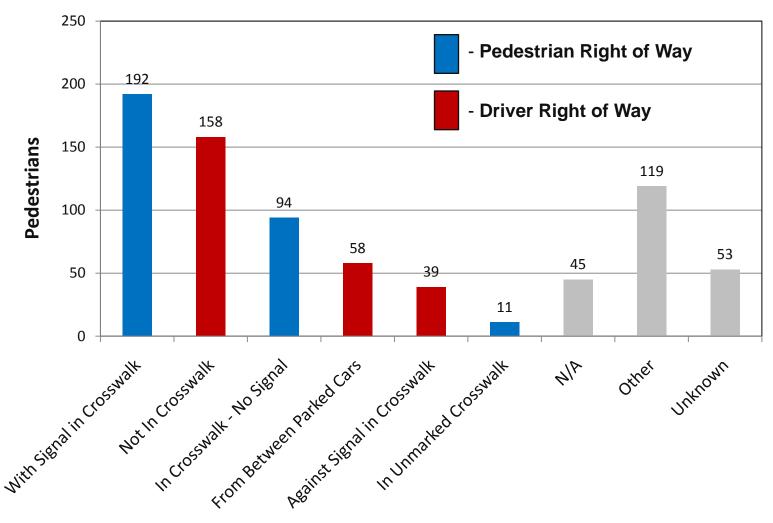
Pitfalls of Jaywalking Enforcement



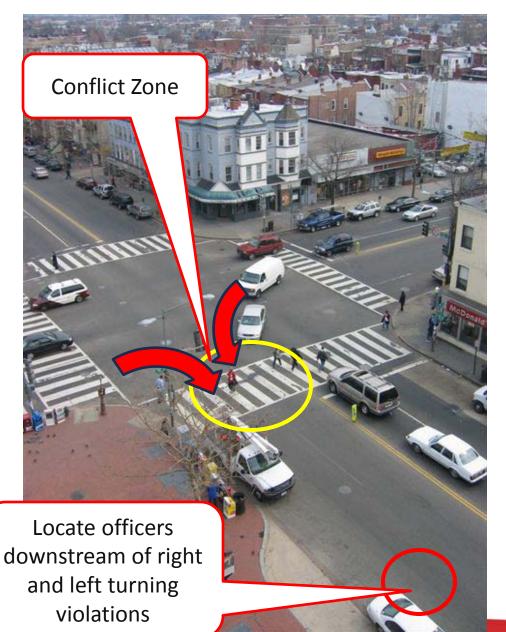


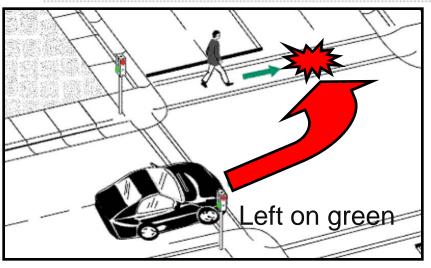
Pedestrian Crash Types

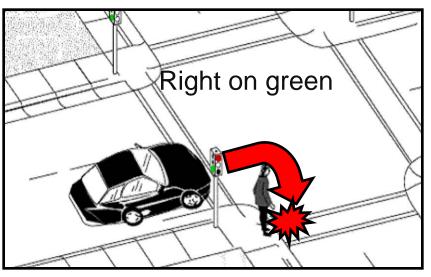
Pedestrian Action, 2010



Enforcement at Signalized Intersections







Enforcement at Signalized Intersections- Turn on Red without Stop



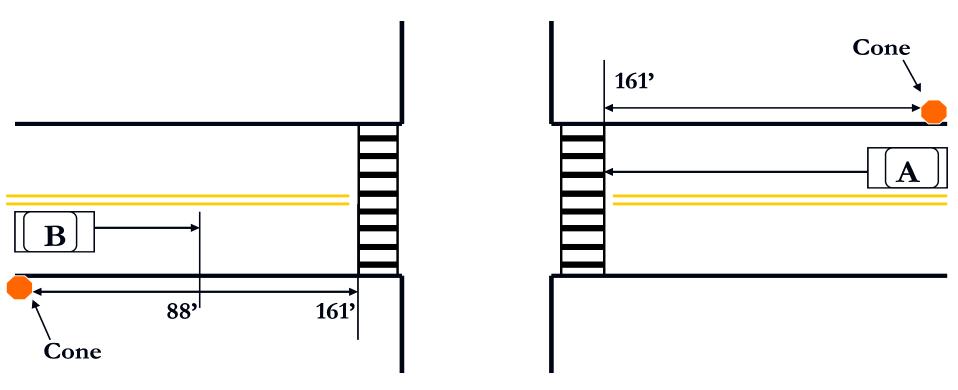
Enforcement at uncontrolled crosswalks



Locate officers downstream of crosswalk violations

Setting up a Targeted Crosswalk Enforcement Operation

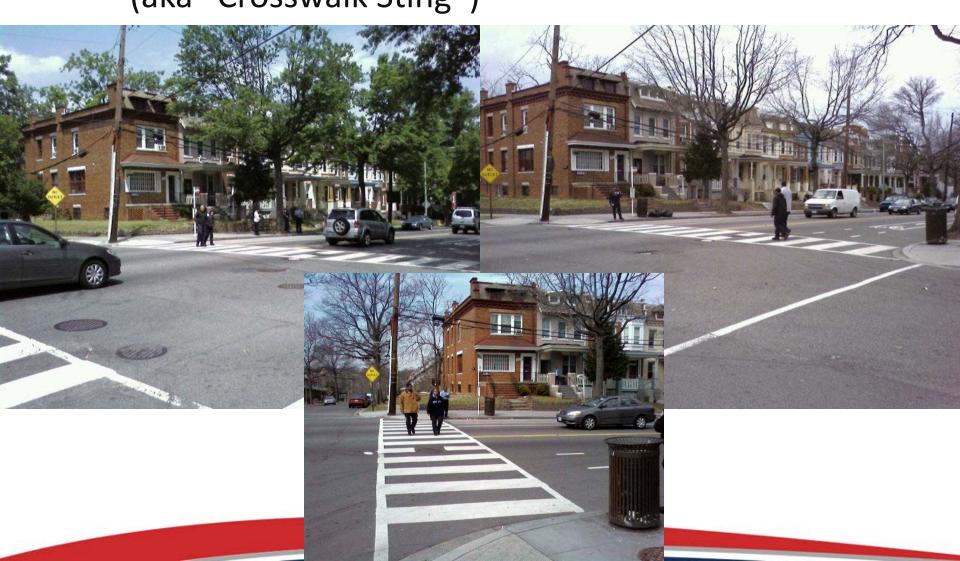
(aka "Crosswalk Sting")



Location: Best locations are collector and minor arterial streets in mixed commercial/residential neighborhoods with posted speed limits of 25 mph and 2 or 4 lanes maximum.

Setting up a Targeted Crosswalk Enforcement Operation

(aka "Crosswalk Sting")







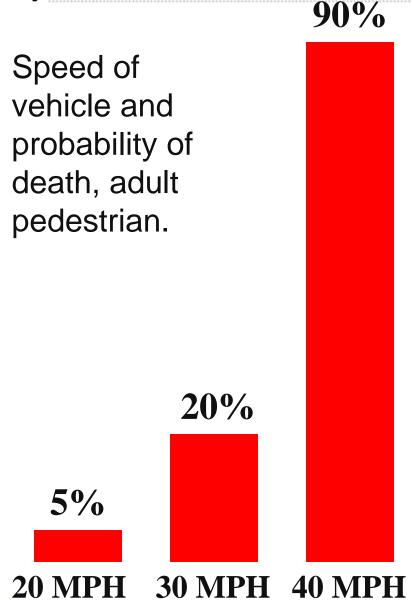
Pedestrian Crash Types and Injury Severity

Pedestrian Action	Fatal	Disabling	Non Disabling	Complaint not Visible	Other	No Injury	N/A	Unknown	Summary
With Signal in Crosswalk	0	15	44	98	6	22	4	3	192
Not In Crosswalk	5	20	47	61	5	8	3	9	158
In Crosswalk - No Signal	0	15	34	29	1	12	3	0	94
From Between Parked Cars	1	7	22	16	3	6	0	3	58
Against Signal in Crosswalk	1	8	11	10	0	4	2	3	39
In Unmarked Crosswalk	0	3	4	2	0	1	0	1	11
N/A	1	2	4	12	1	18	7	0	45
Other	1	14	23	53	8	12	4	4	119
Unknown	5	4	15	20	3	3	1	2	53

2010 Data

Speed Enforcement is Key!

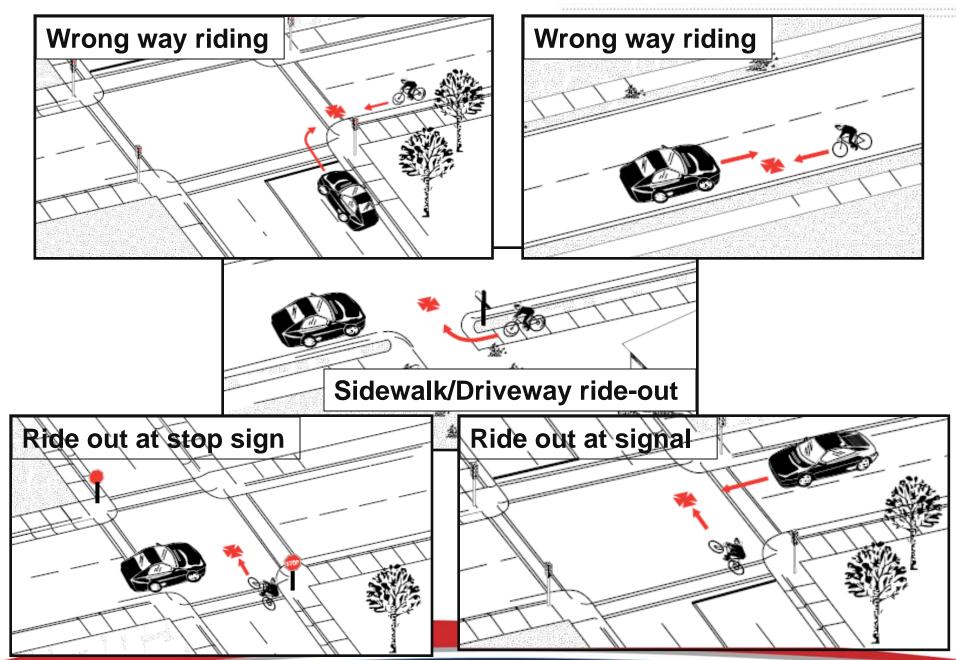




Speed Enforcement is Key!

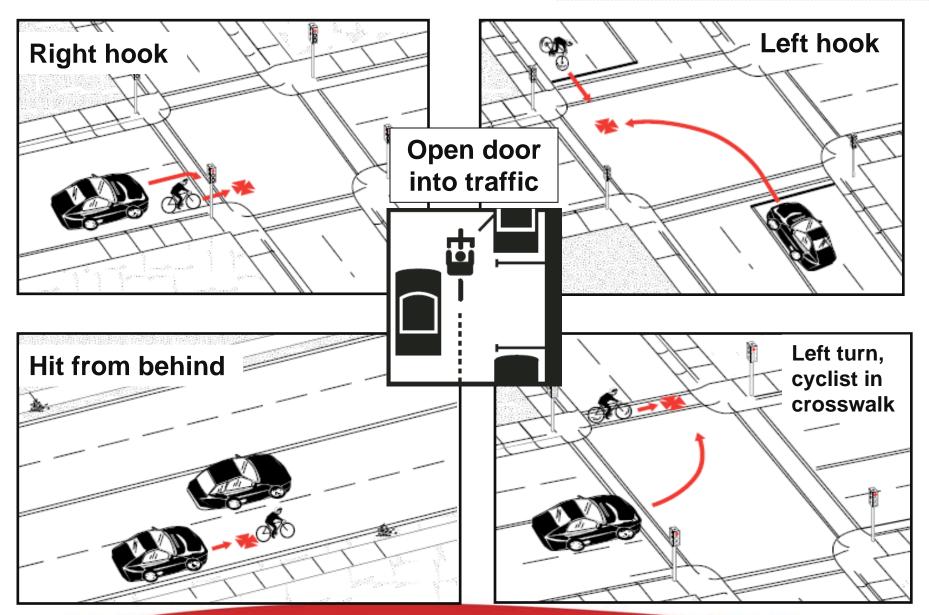


Target Bicyclist Behaviors:





Target Motorist Behaviors:





DDOT/MPD Pedestrian-Bicycle Safety Enforcement Program



DDOT/MPD Pedestrian-Bicycle Program:

- Training Program: Over 600 MPD officers have received a half-day training on pedestrian and bicycle safety enforcement.
- Mandatory Pedestrian/Bicycle distance learning module went on-line in spring of 2011. All MPD officers must complete the course.
- DDOT overtime funds for traffic safety enforcement
- DDOT Traffic Control Officers
- Identification of high crash locations
- Educational Resources

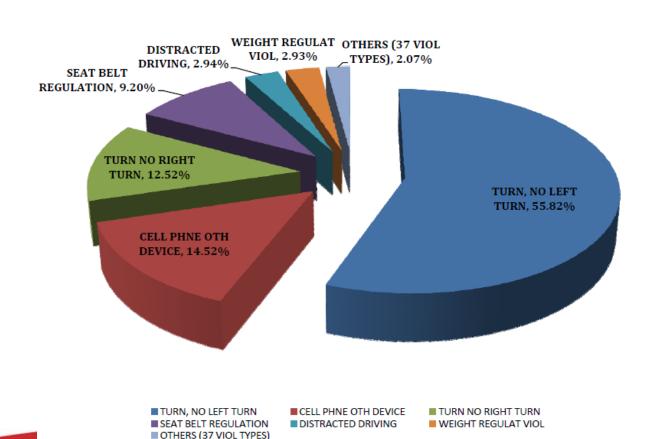




DDOT Traffic Control Officers (TCOs)- DDOT "PD"

7,200 moving violations written in FY 2010

FY 2010 MOVING VIOLATION BREAKDOWN BY TYPE



TCOs on Bikes!

- DDOT TCOs have been trained on Ped/Bike enforcement
- MPD-led bike training ongoing
- On-bike enforcement activities beginning this fall





Enforcement Stats Example Summer, 2010





washington DC washington DC 2010 Ped Enforcement

VIOLATIONS	# OF CHARGES
Distracted Driver (Cell phone)	225
Fail to Clear Intersection/Obstructing	33
Crosswalk	
Fail to Give Full Time/Attention	10
Distracted Driver (all except cell phone)	
Fail to Give Right of Way to Ped \$250.00	85
Failure to keep to the right (bike)	1
Fail to Yield Right of Way (auto/bike)	30
Hazardous Driving (bike)	1
Opening Door to Traffic	
Parking Violations [Abreast, in crosswalk,	1
too close to inters, bus zone, on sidewalk]	
Passing red light (auto/bike)	31 (5 bikes included)
Riding on the sidewalk (bike)	
Right Turn on Red (auto)	5
Speeding (all)	28
Walking against the do not walk (ped)	169
Walking into the path of vehicle (ped)	151
Walking in street/sidewalk prov (ped)	
Seatbelt Violation	361
ALL OTHER MOVING	616
ALL OTHER BIKE	
ALL OTHER PEDESTRIAN	
Total Number of Violations	1,747
Total Number of Arrests	23

Educating Pedestrians & Drivers

Street Smart educational handouts.

SAFETY

For Drivers, Pedestrians, and Bicyclists

FOR DRIVERS:



at crosswalks and be careful when passing stopped vehicles.



 SLOW DOWN and obey the posted speed limit.



 YIELD TO PEDESTRIANS & CYCLISTS when turning.



 LOOK before opening your door.



 ALLOW 3 FEET when passing bicyclists.

STREET SIVART streetsmart.mwcog.org

FOR PEDESTRIANS:



 CROSS THE STREET AT MARKED CROSSWALKS and intersections.



BEFORE CROSSING, LOOK left, right, then left again.



 USE PEDESTRIAN PUSHBUTTONS.



BEGIN CROSSING THE STREET ON "WALK" signal.



STAY VISIBLE AFTER DARK and in bad weather.



WATCH OUT FOR TRUCKS AND BUSES backing out of parking spaces and driveways.

FOR BICYCLISTS:



 OBEY ALL REGULATORY SIGNS and traffic lights.



NEVER RIDE AGAINST TRAFFIC. Ride with traffic to avoid potential accidents.



USE HAND SIGNALS to tell motorists what you intend to do.



RIDE IN A STRAIGHT LINE to the right of traffic and about a car door width away from parked cars.



ALWAYS WEAR A HELMET. Helmets dramatically reduce the risk of head injury in a bicycle accident.



 USE LIGHTS AT NIGHT and when visibility is poor.

Pedestrians and cyclists should watch for turning vehicles.
 Motorists must yield to cyclists and pedestrians when turning.

Enforcement Resources

Crosswalk Law Card for Motorists



A. At crosswalks and intersections without traffic signals:

 The driver of a vehicle shall STOP and give right-of-way to pedestrians crossing the roadway within any marked crosswalk or unmarked crosswalk at an intersection.

DC Code §50-2201.28(a) (2008)

B. At intersections with signals:

 When proceeding on a circular green signal, drivers turning right or left shall STOP and give right-of-way to pedestrians lawfully within the crosswalk.

DC Code §50-2201.28(b) (2008)

PENALTY: \$250 & 3 points IF COLLISION: \$500 & 6 points

C. Right Turn on Red After Stop:

 A vehicle facing a steady red signal may cautiously enter the intersection to turn right <u>after stopping</u>. The vehicle shall yield right-of-way to pedestrians within an adjacent crosswalk and to other traffic lawfully using the intersection.

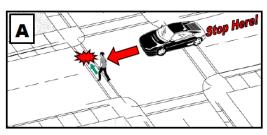
18 DCMR §2103.7(c) (1995)

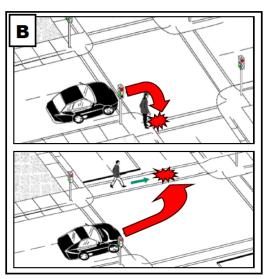
PENALTY: \$50 and two points

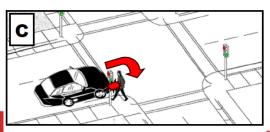


Metropolitan Police Department www.mpdc.dc.gov District of Columbia Department of Transportation Telephone: (202) 671-2730 www.ddot.dc.gov











DDOT Targeted EnforcementEducation Behavior Safety



Howard University Transportation Research Center

Four high ped/vehicle intersections with

DDOT CCTV available:



16th &Columbia Rd. NW



16th & U St. NW



16th &Irving St. NW

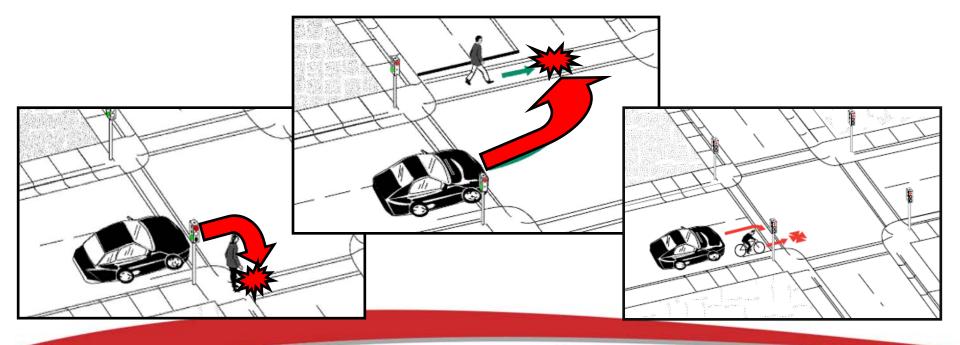


Georgia Ave. & New Hampshire Ave, NW

Pre-Post Surrogate Study

Variables:

- 1. Pedestrian-vehicle conflicts (turning vehicle/ped in crosswalk with signal)
- 2. Right-Turn on Red conflicts (ped in crosswalk with signal)
- 3. Pedestrian violations (crossing against the signal)
- 4. "Right Hook" bicyclist-vehicle conflicts
- 5. Cyclist violations (wrong way riding, running red lights, etc.)
- 6. Red light running (drivers)



Targeted Education:

- Transit shelters at each location displayed Street Smart ads
- Metrobuses serving each location displayed Street Smart ads
- Mobile Billboard circulated through each location several times a day
- DDOT TCOs handed out Street Smart 3-fold brochures on one day at start of enforcement period.



Targeted Enforcement- (1 week):

MOVING VIOLATIONS SUMMARY	TOTAL
Distracted Driver Cell Phone or Distracted Driver	172
Failure to stop and give right of way to pedestrian in crosswalk	67
Fail to clear intersection (driver)	43
Crossing between adjacent signalized intersections	19
Hazardous Driving (bicyclist)	0
Passing red light vehicle	9
Riding on sidewalk in Central Business District	0
Overtaking vehicle stopped at crosswalk for pedestrian	5
Passing red light bicycles	2
Stopping, standing or parking vehicle in a bike lane	4
Walking against the don't walk signal	36
All other violations (moving, driver) specify on the rear of this activity sheet*	255
Total Violations:	612

Results- Georgia Ave. & New Hampshire Ave. NW:



Figure 13: Snapshot of Video Files at Georgia Ave. and New Hampshire Ave

Table 4: Results Summary- Georgia Avenue/ New Hampshire Avenue, NW

Surragata Variables	Moving V	iolations	Sample Size	
Surrogate Variables	Before	After	Before	After
Pedestrian-Vehicle Conflicts	54	24	8114	8370
Right-Turn On Red Conflicts	121	54	8114	8370
Illegal Pedestrian Crossing	122	150	451	441
"Right Hook" - Cyclists-Vehicle Conflicts	0	0	8114	8370
Cyclists Violations	51	87	120	151
Red Light Running	8	8	8114	8370

Overall Results:

Proxy Variable	Percentage <u>Reduction</u> Range	Percentage <u>Increase</u> Range	No. of Intersections with Statistically Significant Reduction	No. of Intersections with Statistically Significant Increase
Pedestrian-vehicle conflicts (turning vehicles)	50% - 60%	15% - 18%	1. GA Ave & NH Ave 2. 16 th & Irving St.	0
Right-turn on Red	50% - 100%	None	 GA Ave & NH Ave 16th & Irving St. 16th & Columbia 	0
Illegal Crossings	19% - 23%	7% - 23%	0	0
"Right-Hook": cyclist-vehicle conflict	None Observed	None Observed	-	-
Cyclists Violations	5% - 51%	43% - 62%	16 th and U St.	0
Red-light running violations	40% - 50%	40% - 50%	0	0

The Moral of the Study?

- The combination of visible and aggressive enforcement, coupled with educational messages, <u>CAN</u> modify behavior of road users.
- Indicates that the impact of Street Smart would be enhanced with more enforcement.





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Pedestrian Program Coordinator
DC Department of Transportation

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Thank you!

Montgomery County Pedestrian Safety Program

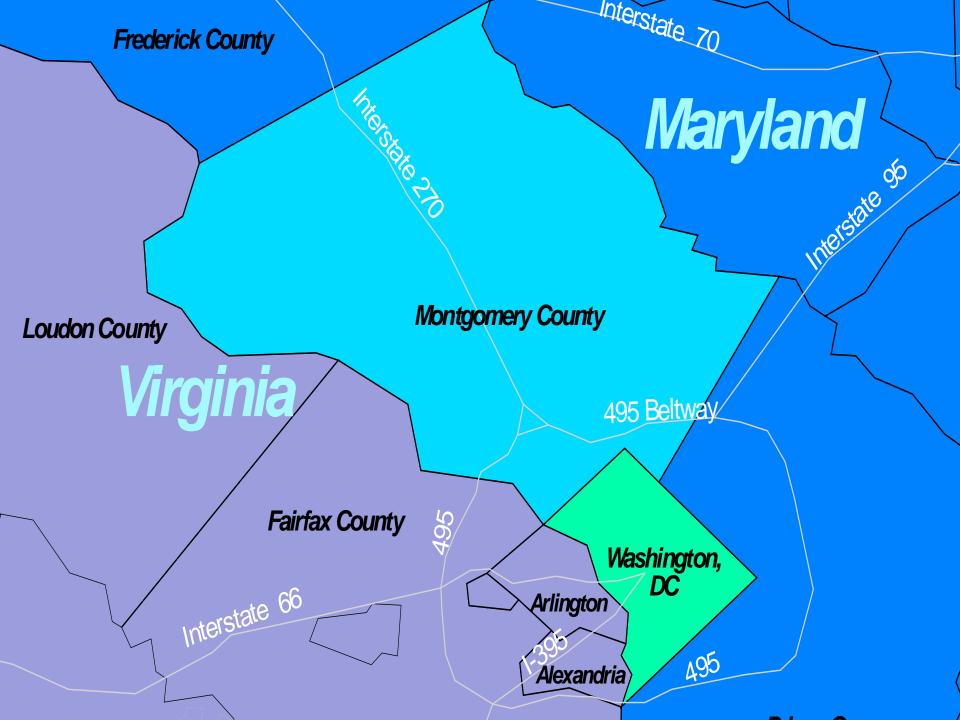


COG Best Practices Presentation October 18, 2011



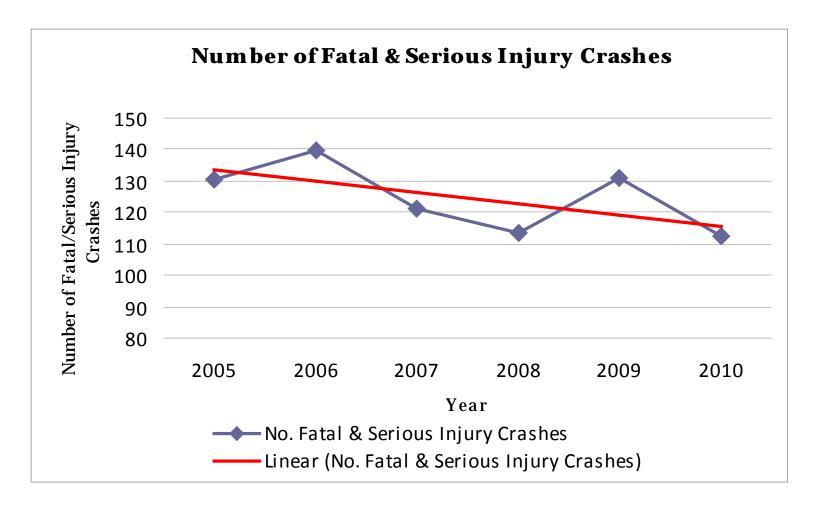
Bad Days

- When a car and a pedestrian try to occupy the same space.
- Car always wins over 2,600 vs 0
- We experience 12,000 crashes annually and over 400 pedestrians
- The County is suburban and not "Planned"
- Statistics show downward trend



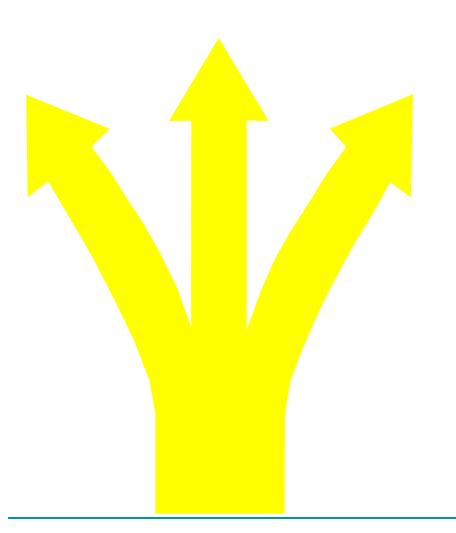
Pedestrian Crash Trends - Severity





The 3 E Approach





- Engineering
- Education
- Enforcement

Pedestrian Safety Program



Engineering

Education

Enforcement



Engineering Strategies



Traffic Calming

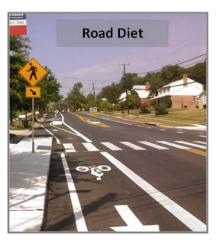
Safe Routes to School

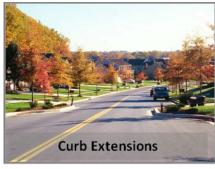
High Incident Areas (HIA's)

Traffic Calming: Typical Treatments



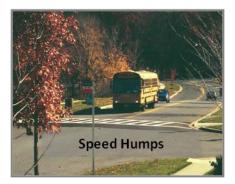
- Roundabouts
- Pedestrian Refuge Islands
- Curb Extensions
- Chicanes / Chokers
- Enhance signing and marking
- Speed Humps
- Edgelines

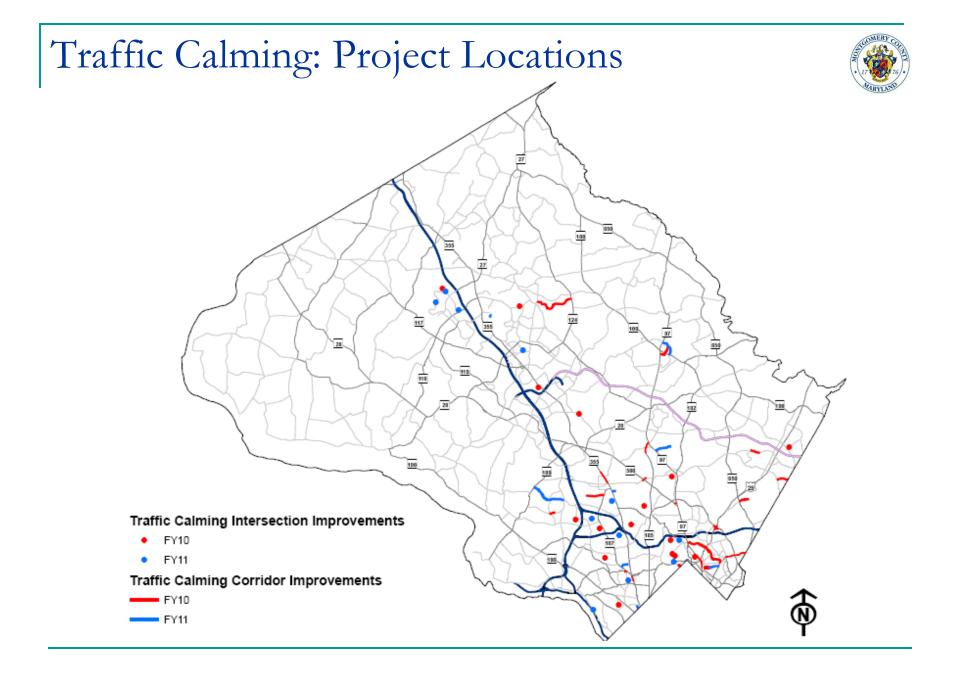












Traffic Calming: Results

	Speeds (MPH)			Collisions 3	Time period	Collisions		
Project Name	ject Name Completion Date Posted Avg. Avg. Before After		Years Before Treatment	Since Treatment	Since Treatment			
Connecticut Ave	July-07	40	48	40		10	3 yrs.	4
Aspen Hill Rd	May-08	30	35	34		14	3 yrs.	3
Arcola Ave	Aug-08	30	42	32		3	2 yrs. 10 mos.	3
Fairland Rd	July-09	40	53	42		2	1 yr. 11 mos.	0
Calverton Blvd	July-09	30	41	35		1	1 yr. 11 mos.	1
Lockwood Dr	July-09	30	40	30		0	1 yr. 11 mos.	1
Sligo Ave	Sept-09	30	34	31		1	1 yr. 9 mos.	3
Carroll Ave	Nov-09	25	33	27		2	1 yr. 7 mos.	1
Spartan Rd	Nov-09	30	40	33		0	1 yr. 7 mos.	0
Dale Dr	Aug-10	30	39	34		0	10 mos.	0
Prince Phillip Dr	Jun-11	30	36	31		0	1 mo.	0

> or = 5 mph reduction

Safe Routes to School: Overview



Since 2005, over 80 schools have had comprehensive assessments conducted and improvements implemented.

SRTS activities include:

ENGINEERING

- Evaluate signing and marking for upgrades
- Establish suitable walking routes
- Work with schools to improve drop-off/pick-up operations
- Provide ADA ramps and improve sidewalk connectivity
- Install curb extensions and pedestrian refuge islands
- Consider parking restrictions to reduce pedestrian/vehicle conflicts

EDUCATION

• Coordinate with schools to promote involvement in pedestrian safety activities and programs (109 Elementary Schools & 31 Middle Schools).

ENFORCEMENT

 Work with the police to implement targeted enforcement at schools during arrival/dismissal.

Focused resources that improve pedestrian safety and mobility have resulted in the evaluation of over 100 specific safety concerns and reducing pedestrian collisions.



Safe Routes to School: Observations



- Demonstrated success of reducing pedestrian collisions.
- Working relationship between SRTS Coordinator and school officials, such as transportation representatives, principals, and safety officers.
- Increased opportunities for children to walk and bicycle to school.
- Benefiting schools, crossing guards and the greater community.

Safe Routes to School: Results



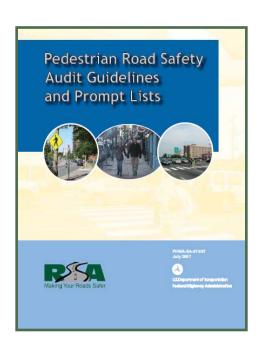
	3 Years Before T	reatment	After treatment		
School Name	Time period	# of ped collisions	Time period (up to Jun 2011)	# of ped collisions	
Stone Mill ES	3/2006 – 3/2009	2	2 yrs - 3 mos.	0	
Olney ES	2/2006 – 2/2009	1	2 yrs - 4 mos.	4	
Georgian Forest ES	3/2006 – 3/2009	6	2 yrs - 3 mos.	1	
Kingsview MS	3/2006 – 3/2009	12	2 yrs - 3 mos.	1	
Thurgood Marshall ES	3/2006 – 3/2009	1	2 yrs - 3 mos.	0	
Flower Hill ES	6/2006 – 6/2009	7	2 yr - 0 mos.	0	
Greenwood ES	4/2006 – 4/2009	2	2 yr - 2 mos.	1	
Rosa Parks MS	4/2006 – 4/2009	2	2 yr - 2 mos.	0	
Cannon Road ES	6/2006 – 6/2009	3	2 yr - 0 mos.	0	
Clearspring ES	4/2006 – 4/2009	1	2 yr - 2 mos.	1	
Total	360 Months	37	262 Months	8	

Although ¾ of the 3-year "after" period has passed for the schools above, only ¼ the total number of pedestrian crashes have occurred when compared with the "before" period.

High Incidence Areas: Strategy



- Examine crash data yearly to identify HIA's.
- Conduct Pedestrian Road
 Safety Audits based on FHWA
 Pedestrian Road Safety Audit
 Guidelines.
- Implement physical improvements in HIA's in partnership with the MDSHA and others.
- Conduct Enforcement and Education targeting the HIA's.



High Incidence Areas



What is a Pedestrian Road Safety Audit?

A pedestrian road safety audit is a <u>formal</u> <u>safety performance</u> examination of an existing or future road or intersection from a pedestrian perspective by an <u>independent audit team</u>.

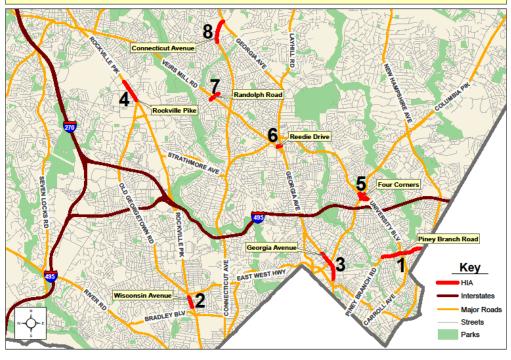
High Incidence Areas: Strategy Overview



- Targets funding for <u>Engineering</u>, <u>Education</u>, and <u>Enforcement</u>

 (the 3 Es) where it can have the greatest effect on reducing pedestrian collisions
- The highest rate of pedestrian collisions is along State roads, so this strategy engages the State in targeting pedestrian safety activities within the County where the rate of collisions and severity are highest
- Creates opportunities to leverage multiple projects in target areas with cost-sharing between multiple agencies

Montgomery County High Incidence Areas



- 1. Piney Branch Rd
- 2. Wisconsin Ave
- 3. Georgia Ave
- 4. Rockville Pike

- 5. Four Corners
- 6. Reedie Dr
- 7. Randolph Rd
- 8. Connecticut Ave

High Incidence Areas: Wisconsin Avenue

Background

- Wisconsin Ave from Montgomery Ave to Leland Ave in Bethesda CBD
- PRSA conducted in Dec 2008

Observations

- Drivers at fault in most crashes
- Crashes mostly at intersections
- Most crashes involved turning vehicles
- High concentration at Montgomery Ave

Updates

- Countdown Pedestrian Signal Upgrades (5 intersections)
- Pursuing other traffic signal improvements with MDSHA
- MDSHA resurfacing project (Fall 2011)
- Education & Outreach Plan (In Development)
- PRSA Report approved by MDSHA



Countdown Pedestrian Signal Upgrade: Bethesda Ave (2010)



MD 355 Resurfacing Project (2011)
MDSHA



Countdown Pedestrian Signal Upgrade: Waverly St (2010)

2005	2006	2007	2008	2009	2010
6	6	10	3	4	3
	Pre-Audit	Post- Audi	t Avg = 3.5		

High Incidence Areas: Piney Branch Road



Background

- 1st HIA: Piney Branch Road from Flower Avenue to the PGC line
- PRSA conducted in Oct. 2008

Observations

- Many uncontrolled mid-block crossings
- Pedestrian at fault in most crashes
- Pedestrian Facility Issues
- Limited roadway lighting
- Narrow sidewalks

Updates

- Two sidewalk improvement projects completed
- Lighting upgrades (17 streetlights)
- Two pedestrian crossings with flashers (Under Design)
- MDSHA resurfacing project (Fall 2011)
- PRSA Report approved by MDSHA
- Education & Outreach Phase II



Countdown Pedestrian Signal Upgrade at Carroll Ave (2011)



MDSHA Piney Branch Rd & University Blvd Intersection Improvements (2009)



Sidewalk Improvement Projects: Flower Ave to Greenwood Ave (2010) Greenwood Ave to Arliss St (2011)



Lighting Improvements: University Blvd to PGC Line (2011)

2005	2006	2007	2008	2009	2010
10	10	8	7	8	3
	Pre-Audit	Post Audit	Avg = 5.5		

High Incidence Areas: Collisions



High Incidence	Number of Pedestrian Collisions								
Area	Date of PRSA	2005	2006	2007	2008	2009	2010	TOTAL	
Piney Branch	Oct 2008	10	10	8	7	8	3	46	
Wisconsin Ave	Dec 2008	6	6	10	3	4	3	32	
Georgia Ave	Mar 2009	4	7	5	7	10	4	37	
Rockville Pike	June 2009	11	4	3	9	8	2	37	
Four Corners	Jan 2010	4	4	7	5	0	1	21	
Reedie Drive	Apr 2010	2	0	3	3	7	2	17	
Randolph Road	Sep 2010	3	2	1	4	4	1	15	
Connecticut Ave	May 2011	6	4	5	6	2	2	25	
Total		46	37	42	44	43	18		

Year of PRSA Audit

Although there is a documented history of pedestrian crashes, the audits for these HIAs were conducted relatively recently.

Pedestrian Safety Program



Engineering

Education

Enforcement



Education: Activities



- Pedestrian Surveys within HIA's
 - Piney Branch Road (2009)
 - Four Corners (2011)
 - Wisconsin Avenue (2011)
- Police Outreach "Shop with a Cop" Promotes Parking Lot Pedestrian Safety
- Street Smart Campaign
- Transit Shelter and Bus Advertising
- Pedestrian Safety Movie Ads -Innovative Strategies
- Variable Message Boards Flash Safety Message



Education: Outreach Strategies



Pedestrian Safety Promotion Teams- Bilingual

- Teams Intercept Pedestrians
- Address Unsafe Behaviors
- Explain How To Be Safe



Coordination with Schools

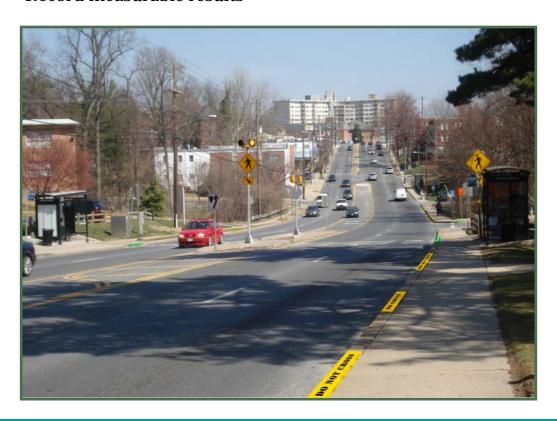
- Involves youth demographic in message development
- Currently developing Outreach & Education plan with Montgomery Blair H.S.



Education: Innovative Strategies

Curb Markings with Pedestrian Safety Warnings

- State endorsement for experimental use
- Use pedestrian safety promotion teams
- Coordinated education & enforcement
- Record measurable results







Pedestrian Safety Program



Engineering

Education

Enforcement



Enforcement: Pedestrian Crash Totals



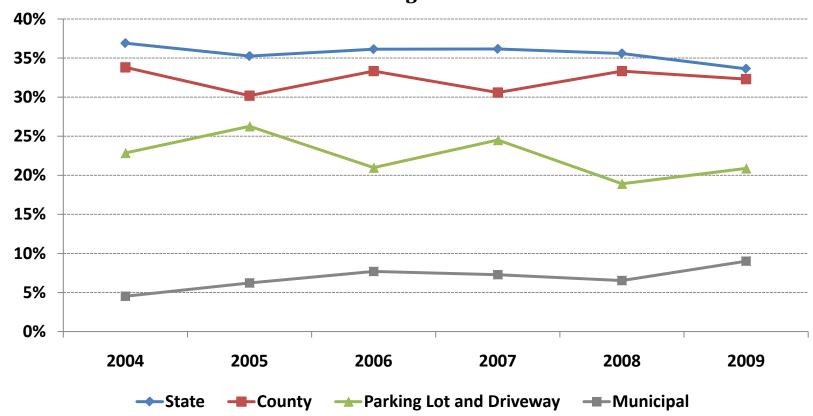
	2005	2006	2007	2008	2009	2010	2011
January	36	31	32	48	34	34	28
February	28	28	33	30	37	39	27
March	37	28	34	37	31	33	38
April	26	25	35	34	28	33	36
May	27	36	34	47	46	33	28
June	41	33	29	24	41	33	17
Jan-Jun Subtotal	195	181	197	220	217	205	174
July	24	29	20	37	36	33	
August	28	37	26	36	32	26	
September	39	39	38	35	30	41	
October	48	42	37	31	41	44	NA
November	48	49	60	38	46	43	
December	52	52	34	47	52	44	
Total Collisions	434	429	412	444	454	436	174
Per 100,000	46.7	45.9	43.8	46.6	46.8	44.9	NA
% Level 4 & 5 (serious	30%	33%	29%	26%	29%	26%	24%
Total Fatalities	10	18	17	19	14	13	4
Per 100,000	1.1	1.9	1.8	2.0	1.4	1.3	NA

Source: Population estimates based on US Census data.

Enforcement: Pedestrian Crash Totals



Percentage of Pedestrian Collisions by Controlling Jurisdiction

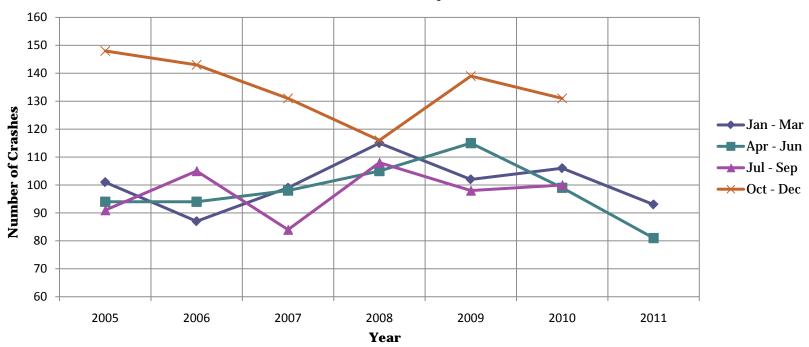


MCPD Observations: The percentage of pedestrian collisions by controlling jurisdictions is consistent over time and location type.

Enforcement: Pedestrian Crash Totals



Pedestrian Crashes by Quarter



The months of October through December consistently have a greater rate of pedestrian crashes. Recent enforcement and education efforts are taking these seasonal patterns into consideration.

Enforcement: High Incidence Areas



Highlights and Recent Developments

Pedestrian Safety Enforcement Strategy – Two Phases

Phase 1: "Contacts"

 Phase 2: Augment "Contacts" with Citations

Pedestrian Safety Enforcement Strategy – Four Elements

- Pedestrian Safety Initiative (Street Smart)
- Rotating Monthly Enforcement
- Random Enforcement
- SRTS Enforcement

Pedestrian Safety Initiative Enforcement Statistics (FY11)

Drivers	Oct-Dec	Jan-Mar	Apr-June	Total
Contacts	30	39	47	116
Citations	2	4	5	11
Total Intercepts	32	43	52	127
Pedestrians	Oct-Dec	Jan-Mar	Apr-June	Total
Contacts	476	926	1196	2598
Citations	2	6	3	11
Total Intercepts	478	932	1199	2609

While enforcement occurred in previous quarters, documentation of these efforts began in the 2^{nd} quarter of FY11.

After an emphasis on "contacts" with drivers and pedestrians about appropriate behaviors, MCPD is entering the next phase which has a greater emphasis on citations (active enforcement) as part of a new Team-Based, Zero Tolerance strategy.

Summary



- Declining pedestrian collisions, fatalities, and accident severity
- Targeted resources engineering, education, & enforcement – producing results in specific locations
- Close collaboration with State resulting in leveraged investments
- Better analysis helping to facilitate data-driven decision making
- Multi-agency team contributes to success and momentum

Arlington County Police Department

Pedestrian and Bicycle Safety

Chief M. Douglas Scott

Presenter: Lieutenant Patrick Donahue

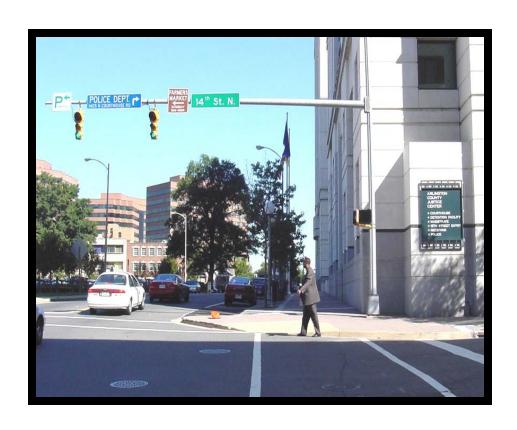
Special Operations Section

Arlington County

- ➤ Arlington County encompasses 28.5 square miles.
- ➤ Population as of July 2010 was over 213,000.
- > Density of over 7,400 people per square mile.
- > 11 Metro stations on the Blue and Orange line.
- > 113 miles of bike lanes, trails, and routes.
- > 5 bridges connecting Arlington with DC.

Arlington Police Resources

- > First District
- > Second District
- > Third District
- > 6 Patrol Squads



Special Operations Section

Pedestrian and Bicycle Accidents

	<u>2009</u>	<u>2010</u>	2011 (YTD)
Total Pedestrian Involved Accidents	103	100	79
Total Pedestrian Injuries	104	99	77
Total Pedestrian Fatalities	4	1	2
Total Bicycle Involved Accidents	66	54	61
Total Bicycle Injury Accidents	62	47	51
Total Bicycle Fatal Accidents	1	0	1



Efforts Toward Safer Pedestrian Travel

> Awareness

➤ Engineering

≻ Enforcement



> Media releases

> Pedestrian safety flyers





Public Service Aides/ Auxiliary Police

Citizen / Teen Police Academies 301.652.902 301.652.902

> Variable message boards

Civic Association Meetings

➤ Portable speed trailers





Permanent speed display units

➤ Photo red light program





Engineering



> Collaborative effort

> Multiple county agencies

> Exchanging of ideas

Engineering



> Enhanced Crosswalk Locations



Engineering







➤ Neighborhood calming measures

Enforcement

> Traffic Enforcement



- Failure to yield to pedestrians/ bicycles
- Red light violations
- Speeding violations
- Improper turning
- Highway sign violations

Enforcement

> Participation in regional enforcement programs



- Click it or Ticket
- DMV grant funded enforcement
- Street Smart Pedestrian and Bicycle Safety

■ Drive Smart Virginia



Enforcement Results

Results of the 2011 Back to School Campaign coupled with the Bicycle and Pedestrian Awareness Week (Sept. 6th – Sept. 16th):

Patrol Squads	District Teams	Special Operations Section	Overtime Officers	Total Citations
1,072	136	407	196	1,811

"Hands On" Enforcement

- > High volume intersections
- Manual direction of traffic, pedestrians and bicycles
- Heavy traffic congestion at peak rush hour times
- Not a ticket producer but generally well received



Our Goal for Pedestrian Safety

- Arlington County remains committed to providing a safe and walkable environment for pedestrians and bicycles.
- The goal of the Arlington County Police Department is to reduce the number of crashes between vehicles, pedestrians, and bicycles so that all may share the road safely.

Some successes....

➤ In 2005, the American Podiatric Medical Association named Arlington #1 on its list of Top 10 Best U.S. Walking Cities.



➤ More recently, Arlington County was designated a Walk Friendly Community by the Pedestrian and Bicycle Information Center (www.walkfriendly.org)

....but more work needs to be done!

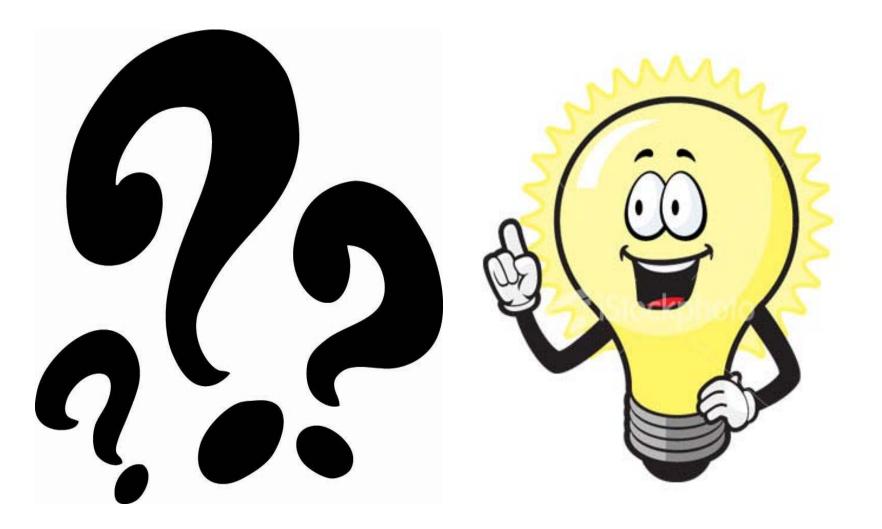
Arlington County Police Department



Questions??

Questions





The Police Role in Bicycle Safety

John Brandt

Bicycle Coordinator
Univ. of MD Dept. of Transportation Services
Regents Drive Garage, Bldg. 202
College Park, Maryland 20742
301-314-BIKE
ibrandt@umd.edu





The Problems:

- Crashes injuries and deaths
- Uneven enforcement and crash investigation
- Wasted patrol time and court time
- Internal investigations
- Litigation, lost public trust, public embarrassment

Our Solution:

- Collect stake-holders
- Develop a standardized training product and testing
- Product should reach all MD police officers
 - in-service vs. entry level training
- Reward for Participation
 - in-service credit
- Ability to track attendees

Primary Tasks:

- Find the money
- Contract with video production company
- Form planning committee
- Develop Outline (NHTSA model is 2 hours)
- Write script
- 1,800 video clips
- Animation
- Voice-overs
- On camera narration
- MPTC certification of material

Contact Information:

Michael Jackson:

Maryland Department of Transportation Director of Bicycle and Pedestrian Access 410-865-1237

mjackson3@mdot.state.md.us

- NHTSA Video:
 - Enhancing Bicycle Safety: Law Enforcement's Role
 - FAX video request to 301-386-2194

R4-11









OF

